

Computer Games and New Media Cultures

Johannes Fromme • Alexander Unger
Editors

Computer Games and New Media Cultures

A Handbook of Digital Games Studies

 Springer

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Contents

1 Computer Games and Digital Game Cultures: An Introduction	1
Johannes Fromme and Alexander Unger	

Part I Computer Games and Game Analysis

2 The Mediality of Computer Games.....	31
Stephan Günzel	
3 Computer Games as a Comparative Medium: A Few Cautionary Remarks.....	47
Connie Veugen	
4 “And What Do You Play?”: A Few Considerations Concerning a Genre Theory of Games	61
Felix Raczkowski	
5 Interface Analysis: Notes on the “Scopic Regime” of Strategic Action in Real-Time Strategy Games	75
Serjoscha Wiemer	
6 Computer Games as Works of Art	93
Daniel Martin Feige	
7 A Theory of Non-existent Video Games: Semiotic and Video Game Theory.....	107
Paolo Ruffino	
8 Free Market Economy and <i>Dino Crisis</i>: The Production and Circulation of Knowledge in Strategy Games.....	125
Rolf F. Nohr	
9 The Strange Case of the Misappearance of Sex in Video Games.....	143
Tanya Krzywinska	

10	Growing Game Worlds	161
	Michael Nitsche	
11	Virtual Worlds: Game or Virtual Society?	173
	Caja Thimm	
Part II The Player–Game Relation		
12	MMO Morality	193
	Richard A. Bartle	
13	Inside and Outside the Game	209
	Dominik Härig	
14	Egoshooting in Chernobyl: Identity and Subject(s) in the <i>S.T.A.L.K.E.R.</i> Games	219
	Souvik Mukherjee	
15	Personality Development Through Immersion into Intermediate Areas of Digital Role-Playing Games	233
	Katharina Stephenson-Mittlböck	
16	Symbolic Interaction in Digital Games: Theoretical Reflections on Dimensions of Meaning Construction in Digital Gameplay	249
	Regina Friess	
17	Playing by the Visual Rules: An Ecological Approach to Perception and Video Games	265
	Betty Li Meldgaard	
18	The Effect of Authentic Input Devices on Computer Game Immersion	279
	Daniel Pietschmann, Georg Valtin, and Peter Ohler	
Part III Users, Uses and Social Contexts of Computer Games		
19	Digital Games in the Context of Adolescent Media Behavior	295
	Dorothee M. Meister, Jörg Müller-Lietzkow, Eckhard Burkatzki, and Sonja Kröger	
20	Online Games: Modern Media Worlds of Young People	317
	Jan Keilhauer	
21	Playing Together: The Player’s Repertoire, an Obstacle to Learning	329
	Steve Dahlskog	
22	The Right Game: Video Game Choice of Children and Adolescents	343
	Sven Jöckel and Leyla Dogruel	

23 The Challenge of Measuring the Use of Computer Games..... 357
 Christopher Blake and Christoph Klimmt

**24 A Critical Interpretation of a New “Creative Industry”
 in Turkey: Game Studios and the Production
 of a Value Chain 371**
 Mutlu Binark and Günseli Bayraktutan

Part IV Game and Player Cultures

**25 Mergence of Spaces: MMORPG User-Practice
 and Everyday Life..... 395**
 Elke Hemminger and Gareth Schott

**26 Interpretation, Conflict and Instruction in Online
 Multiplayer Games: Lessons from Warsong Gulch..... 411**
 Diane Carr

**27 ‘Pity There’s So Few Girls!’ Attitudes to Female Participation
 in a Swedish Gaming Context..... 425**
 Malin Sveningsson

**28 The Gender-Offensive: Female Gaming Cultures
 Between Shooters and Marketing..... 443**
 Jutta Zaremba

**29 Playing Computer Games as Social Interaction:
 An Analysis of LAN Parties 465**
 Judith Ackermann

**30 Playing Computer Games as Electronic Sport: In Search
 of a Theoretical Framework for a New Research Field..... 477**
 Tanja Adamus

**31 Machinima Filmmaking as Culture in Practice: Dialogical
 Processes of Remix 491**
 Lisbeth Frølund

32 Modding as Part of Game Culture 509
 Alexander Unger

**33 Digital Game Culture(s) as Prototype(s) of Mediatization
 and Commercialization of Society: The World Cyber
 Games 2008 in Cologne as an Example..... 525**
 Jeffrey Wimmer

Part V Educational Approaches and Learning

34 Social Interactions in Virtual Worlds: Patterns and Profiles of Tween Relationship Play 543
Michael T. Giang, Yasmin B. Kafai, Deborah A. Fields, and Kristin A. Searle

35 The Instructional Design and Motivational Mechanisms of *World of Warcraft* 557
Karsten D. Wolf

36 Learning Through Play – A Delicate Matter: Experience-Based Recursive Learning in Computer Games..... 571
Konstantin Mitgutsch

37 Learning Instruments: Baroque Music Gets Game..... 585
Jennifer Jenson, Suzanne de Castell, Nicholas Taylor, Milena Droumeva, and Stephanie Fisher

38 Using Simulations as a Starting Point for Constructing Meaningful Learning Games 603
Eric Klopfer and Ravi Purushotma

39 School-Related Computer Game Pedagogy: Core Subjects and Tasks..... 619
Matthias Bopp

40 Learning to Play: Video Game Literacy in the Classroom 633
Danny Kringiel

41 Digital Games and Media Education in the Classroom: Exploring Concepts, Practices, and Constraints..... 647
Johannes Fromme

42 Why a Game Canon for Game Studies Education Is Wrong..... 665
José P. Zagal

About the Authors..... 679

Index..... 693

Part I
Computer Games and Game Analysis

Chapter 2

The Mediality of Computer Games

Stephan Günzel

The Computer Game as a Medium

With the publication of Mark Wolf's *The Medium of the Video Game* (2001), a shift in computer game studies became apparent. Until then, and arguably even for some time after, game studies had mainly focused on the question of whether computer games are, first and foremost, digital *games* or interactive *stories*. The initial debate on principles within the young branch of computer game studies is known as the aporetic opposition between ludological and narratological approaches (Juul 1999). To both positions – the narratological (Ryan 2001) as well as the ludological (Frasca 2003) – a computer game is not categorically different from what already existed before the age of computational technology: a text or a game. Computer games therefore are taken as a transformation or transposition of something old into a new medium; the text becomes an interactive text and play becomes virtual play. Both groups therefore tried to define computer games in terms of another aspect: while narratologists regarded them as combinations of signs, ludologists looked at them as a set of rules. Both took for granted – and likewise neglected – the fact that computer games are based on computers. This is exactly what Mark Wolf highlighted: video games are a *specific kind of medium*. One could add that they are a new medium of their own.

Yet the reader who takes a look inside Wolf's book will find a strange doubling of the concept of medium. The first chapter is entitled "The Video Game as a Medium," which could have been meant as an introduction but is not. "Medium" thus actually means *technical* medium. Today, this is quite a common definition.

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But why, then, is not the whole book about the history of computer game consoles and input devices? The main part of the book contains entries like “Space in the Video Game” or “Time in the Video Game.” Why do such topics appear in a book on the *medium* of the video game? The answer is that Wolf had something different – and important – in mind: he undermined not only the debate between ludologists and narratologists but also the accepted practice of limiting discussion of a medium to the description of its mere technical properties. Only Wolf had no term for what was at stake with this approach – something that can be referred to as “mediality” (Mersch 2008).

Medium and Mediality

The mediality of video games is what makes that medium a distinct medium. As a technical medium, one may not be able to distinguish a gaming device from any other computer. This is why the computer has aptly been referred to by Alan Turing’s term of a “universal machine”: a computer can literally be anything. Based solely on the hardware and even the software, one cannot distinguish between a video game and any other machine or program. This is due to the fact that a computer game (programs) does not differ essentially from a simulation or a text editor in the technical respect. But a computer game *does* differ from these according to how the program is *used*. What makes computer games different from any other artifact in the world is their specific mediality, that is, *the form in which content is mediated*.

The form of computer games again does not solely depend on the way data is processed, but rather on how content appears. In other words, the question is not *why* it appears *technically* but *how* it appears *perceptually*. The answer is that it appears as a simulation, or, rather, a simulation that is present on a screen. What is meant by this is that computer games are pictures with which the user has to interact in order to perceive them as something other than a movie or a static picture (Fig. 2.1).

At this point, it could rightly be argued that this is also true of any flight simulator, and not only a flight simulator on a home computer, but, more importantly, those used for pilot training. Chris Crawford (1984) had argued that a simulation is the opposite of a game, as for him, *Microsoft’s Flight Simulator*, for instance, is not a game since there is no aim or goal in the game other than learning how to fly. On the contrary, games like *SimCity* are sometimes referred to as “simulation games” because they provide tools for anticipating future developments on the basis of empirical values and a working model. However, neither of the two usages is appropriate; following Crawford, a first-person shooter like *Doom* would not have to be considered a game because the interactive picture only simulates the use of different weapons. Conversely, the second usage of the term applies to nothing that is specific to computer games (even though “city-building simulation games” are a designated



Fig. 2.1 *MS Flight Simulator X* (Source: <http://www.microsoft.com/games/flightsimulator/>. Accessed 16 Dec 2010)

game genre). Like any other “simulation,” that is, in the social sciences, a simulation can also be calculated without the aid of a computer.

From the Freedom of Play to the Immanence of Playing

If a flight simulator cannot be considered a computer game, there must be another factor that makes computer games as simulations a medium of their own. Here, the ludological approach offers important insight, in that it sees computer games as digital versions of games. This proposition needs a slight modification: it is not that games have become digital,¹ but rather that *the digital has become a game*. According to classical ludology, a game can be defined as something that has a meaning in and of itself. In 1938 in his book *Homo Ludens*, Johan Huizinga states that it constitutes a world of its own, drawing a distinction in time and space between itself and the real world. And Friedrich Schiller 1801 in *Aesthetic Education of Man* simply announces that through play, people can conceive of themselves as “free.” In both game theories, the important factor is that of the immanence of playing a game.

¹ Though traditional games, such as chess, are available on the computer, the majority of computer games have no precursor.

To put it in modern terms, something becomes a game when it is not used *in reference* to something other than what it is.² This can easily be explained in the case of the flight simulator as well as the text editor: a flight simulator is a game and is not a game depending on its respective uses. When used for pilot training, the flight simulator – and especially the image on the screen – *refers* to actual airstrips or flight corridors and the behavior of real planes. On the contrary, when a flight simulator is *played*, the gamer solely makes use of the interactive picture as such. Its properties and contents could be derived from actual airstrips and flight vehicles – in fact in most cases they are – but the features of the software program are not used in regard to flying a plane after leaving the simulation. At this point, the medium does not differ, but the mediality does. To be more specific, the mediality becomes present through interaction with the hardware and software.

Aesthetics and Pragmatics of Computer Games

Just as Schiller contended that to play means to be in an aesthetic state, when engaged in a game one does not refer to something outside the game, but rather to what the game is: a specific setting with certain rules. In most cases, games are meant to be played, but one could also play with things that are not meant to be played. This is the case with a word processing program: the everyday use of such a program is mainly referential. Just as this text has been typed in order to be presented at the conference and to appear in the proceedings, one uses certain software to publish and edit texts. But editing in particular can be done playfully, as when, for example, one tries out a new program to learn its various features by playing around with the settings, changing fonts and format, etc. In these situations, the software is being used *as a game*; it is just not thought of as a game – mainly because the packaging says something else. Thus, when we use things for play, we make use of what they offer in terms of properties: in the case of the flight simulator, the properties of a virtual machine; in the case of the writing program, the properties of different styles.

This means, in turn, that just because something is sold as a computer game, it does not have to be used as a game. One could certainly use it, for example, to train to kill people, as some people believe to be the case when video-game-playing youth commit school massacres. In fact, players of the game *America's Army* are, in essence, training to act as a team in combat situations and use actual war tactics. But no matter how realistic the simulation, it does not follow that a user will use the game in reference to something else. It is thus entirely possible to play *America's Army* purely as a game (Fig. 2.2).

What is important here is that neither use is interchangeable; one *can* make use of a simulation as a game without using it referentially, but one *must* use a simulation

²For a dissenting point of view, see Ruffino (Chap. 7).



Fig. 2.2 America's Army (Source: <http://www.americasarmy.com/aa/media/>. Accessed 16 Dec 2010)

first by using it as an interactive picture. In other words, one cannot use a simulation without using it on the basis of its medial structure, which its specific aesthetic features constitute. This is because the medium is simply the thing that lies *in between*. And this “in between” is because of mediation. The very forms of mediation get tied to the external world in the *state of not gaming*, and they are free in the *state of play*.

Mediality and Empirical Research

The benefit of focusing on the mediality of computer games is less directly an empirical one. Indeed it should be mentioned that the state of pure play is very rare and cannot be anticipated or derived from the medial structures. Nevertheless, those structures that are unleashed in playing a game can be described. And such insights would be useful not only in addressing ontological questions, like “what is a computer game?” – a question that can be transposed into “when is a game a computer game?” – but also for empirical research in the social sciences, in particular in psychology and education. Just as a report from the University of Southern California summarizes: Over the past 30 years, there has been a large body of research on the effect of computer games on (mainly juvenile) users, which has investigated only the medium’s *contents*, but there has been almost no research on the effect of medial *forms*. In other words, the depiction of killing someone has, in the past, led to the

assumption that the user takes this particular meaning of the image at face value, whereas the *way* the action is depicted – what type of projection system is used, what perspective is used, etc. – has been neglected (see Lee and Peng 2006).

Medial Properties of Computer Games

In this vein, some recent developments in game studies (informed by ludology) can be understood as descriptions of medial properties, which could lead to a new understanding of computer games beyond the particular realm of game studies. For example, Espen Aarseth (2007b) proposed to distinguish between three aspects of computer games: *fictive*, *simulative*, and *real*. Examples of these three aspects would be the door of a house in a game labyrinth that cannot be opened – *fictive* – as opposed to a monster that appears and can be killed, and which is thus *simulative*. But the weapon with which the monster is shot is *real* in the sense that it has the power to affect the simulation.³

Given that the main mediation form of computer games is that of an interactive image, Aarseth's categories can be ascribed to the pictorial layers of a computer game; in most games the background is fictive, whether it is a receding horizon or the wall that delineates the space of action in the game. However, when such a wall is invisible – as is the case in shooter games like *Half-Life*² where an overwhelming outdoor scenery is playable only within defined tracks – the fictiveness of the picture is mainly perceived as a limitation of interaction, which in turn is a feature of the simulative aspect of the game. Whereas the fictional part can be found mainly in the background of the picture, the simulation itself is, in most cases, in the center, where objects the user can interact with appear. Nevertheless, those objects (monsters, soldiers, boxes, etc.) are necessarily fictive, too, insofar as they have a certain “skin.” But the way they behave when acted upon is simulative (Fig. 2.3).

The weapon in the foreground has fictive as well as simulative aspects, but then it is also real in the sense that it can affect the simulative parts of the picture. The weapon in a first-person-shooter game, however, is an interesting case as it seems to fall into both categories, placing it between the pictorial level of simulation and the level of the real. The display in the foreground is not part of the game world but represents a “real” or nonfictional element of the game (see Wiemer, Chap. 5). At the same time, it is a displayed picture, just as the game world is. In its function as an information bar, it indicates to the user how many remaining lives or how much ammunition he still has. As Alexander Galloway (2006) has shown, this level of the picture of computer games is increasingly masked through its inclusion in the game world (Fig. 2.4).

³ The main criterion which, for Aarseth, allows us to attribute realness is the fact that weapons and other items – as in MMOs like *World of Warcraft* – are sold outside the game just like any other goods.



Fig. 2.3 *Half-Life²* (Source: <http://gamerlimit.com/wp-content/uploads/2009/03/half-life-2-hovercraft-500x375.jpg>. Accessed 16 Dec 2010)



Fig. 2.4 *Tom Clancy's Ghost Recon: Advanced Warfighter* (Source: <http://reviews.teamxbox.com/xbox/1137/Tom-Clancys-Ghost-Recon-Advanced-Warfighter/p1/>. Accessed 16 Dec 2010)

To put it in film studies terms, the extradiegetic features of the simulation picture become intradiegetic. The most striking examples of this are “Head-up Displays,” which are now the standard in shooter games. The information on the real status of the player’s virtual power in the game world appears as a fictional or even simulated part of the game world, just like the weapon in first-person shooter games.⁴ But this is not the only line that is crossed. With the environment becoming more interactive, the line that divides the level of the fictional from the simulated is also blurred. And a more interactive environment calls for relevant objects to be highlighted, in other words, marked relevant – and thus “real” – in the context of the game, as is already the case with the various power-ups that appear intradiegetically as boxes.

Pictorial Semiotics of Computer Games

Beside the distinction between these (ontological) levels of computer games as pictures with interactive as well as passive parts, another distinction can be made in respect of the simulative level itself. In Nelson Goodman’s (1976) semiotic terms, this is the difference between *denotation* and *exemplification*. It designates the difference between two ways of using things as signs. While denotation entails the asymmetrical use of an element, the exemplificative use is symmetrical. This means that the element used to exemplify bears the same features as what is exemplified, whereas in a denotation the relation can be totally arbitrary. In a chess game, for example, neither the size of the figure nor the size of the game space matters. The interaction is based on symbolic conventions of what can be done with a certain figure.

On the contrary, in a shooter game the metric space between objects and their relation to the point of action matters. The size of the objects can also be relevant, even if it can also be symbolic. This is the case with most of the “boss enemies.” Even though they may appear twice as large as regular enemies, it is not that they are twice as difficult to fight. There might be only a certain spot that players have to hit to vanquish them. This phenomenon could be described as an incorporation of a symbolic convention into the diegesis of the game world.⁵

Games as Interactive Pictures

It is striking that no one yet has noted the fact that computer games are images; hence, their medial form is that of an interactive picture: only a related argument has been made on this, stating that computer games are immersive by means of their

⁴ As such, all real elements of computer games nowadays appear as hybrid elements. A weapon is an intradiegetic extension of the display, and the HUD is a projection of the real onto the simulation.

⁵ A similar analysis could be made of game perspectives, which also tend to be integrated in the diegesis – regardless of the perspective concerned.

presentational aspect. In her article on *Immersion, Engagement, and Presence*, Alison McMahan (2003), for example, makes an important claim: she points out that one has to distinguish carefully between immersion in a *diegetic* and immersion in a *non-diegetic* sense. In the diegetic sense, “immersion” designates the aspect of someone being fascinated by the narration of the game or the game play. Apart from this, on the non-diegetic level, “immersion” indicates the aspect of someone having the feeling of what McMahan, with respect to Jonathan Steuer (1992), calls a “being there.” Immersion is thus understood as the illusory impact of the medium. However, immersion in the non-diegetic sense describes only a contingent and empirical fact of someone losing the feeling for the difference between (medial) content and its (natural) surroundings. Therefore, immersion actually says nothing about the medium, but rather something about the user. And that means that immersion is not an attribute, which can be applied to the game’s design, but rather to the psychological condition of the gamer.

Nevertheless, McMahan provides a hint as to which aspect of the game as a pictorial artifact is a necessary precondition for immersion, namely, *presence* (or in the words of Steuer, who refers back to Marvin Minsky (1980) “telepresence”). To McMahan, the feeling of “being there” is only achieved when the virtual space in which the player immerses is presented artificially. Presence, however, is a central feature of images; what images do is present objects that only exist on behalf of the image. Just as a record can artificially present sound to the human ear, pictures artificially present things that are only visible to the human eye. But, as opposed to objects of the real world, image objects can only exist or not exist. They cannot be absent like a person who is not here at the moment. Objects that are presented to a viewer by a picture are either present or they do not exist. In addition, pictures thus do not show things that are now absent and present somewhere else in the world, but they add new things to the world right here and right now.

Presence in/of Computer Games

The same is true for computer games; they do not show something that is absent, instead they *present* something that has not existed before without being visualized. Video games present a virtual reality. But unlike other types of images, computer games offer images, which have to be used (which links up to the referential pragmatics of games): one must therefore think of computer games as something *that must be seen in order to be played*. Without that particular performativity, a computer game is not different from a movie or even a photograph.

Furthermore, this means that there exists a significant difference even *within* computer games; on the one hand, there are games that could also be played without a computer (such as strategy games or role-playing games); on the other hand, there are games that cannot be played without an image. But, as opposed to photographs, paintings, or even films, computer game pictures are *interactive*. The mode of reception of a computer game is therefore *not contemplation*, but rather *interaction*.

And what the player does when he or she interacts is actually an interaction with the image, that is, with the objects presented by the picture.

Images in general should be addressed that are transformed by the user. To put it more strictly, the way a simulation picture is received is the user's interaction with the picture. This means that, in contrast to a movie image, a simulation image does not reproduce movement, but rather produces it. In a theoretical respect, it furthermore can even be considered to be a systematic nucleus of computer games; what makes computer games different from all other artifacts is the fact that they present objects that someone engages with on the basis of *pure visibility* (Wiesing 2009). It would thus be more specific to call those artifacts "*video games*" and not only "computer games," not referring to the technical difference between digital games played on a television and digital games played on a personal computer but between the medium and its mediality.

Case Study: The First-Person Shooter as an Interactive Image

The aspect of the image is essential to the question whether computer games should be thought of as something new. A proof can be given by answering the question whether there are any computer games in which the gaming principle is derived purely from the structure of the simulation picture itself. If the response to this question is positive, then this is the proof for the conjecture that computer or video games are phenomena *sui generis*: games, which prove that computer games have, in fact, brought about something new are first-person shooters; in a shooter game, the interaction is strictly derived from the formal organization of the visual image. Furthermore, an interactive image, which is designed according to the principle of central perspective, can only provoke that particular usage of "aiming and shooting" as the essential form of interaction. Any other usage does not derive from that very composition of the picture.

The First Person as a Philosophical Problem

The perspective of the first person itself has offered a problem to philosophical reflection since the classical era. Undoubtedly, the most prominent theory of subjectivity or self-consciousness is the Cartesian concept of the *res cogitans*; in his *Meditations on First Philosophy* from 1641, René Descartes thinks of the world as something opposed to the spectator. Even the body of the ego is only a part of the extensional world, which separates it from the mind. That is the reason why in Descartes' skepticism, the existence of the body can be doubtful, but not the existence of the *res cogitans*. To put this in terms of the computer game, Descartes' ontology is that of a game in which the visible world appears as a *res extensa*. This is the case in computer games like *Pitfall!* (1982), in which the origin of action is part of the objective world. It is presented as an extended corpus among other objects that persist within the

Fig. 2.5 Pitfall! (Source: <http://www.videogamecritic.net/2600pq.htm>. Accessed 16 Dec 2010)



virtual world. That corpus is what is called an “avatar.” Even though the avatar can be steered freely by the player, the figure itself is part of the game world and subordinated to its defined physical conditions. Freedom only exists on the side of the player and on his or her side of the screen. The player is situated in the *res cogitans*, whereas the avatar is located in the realm of the *res extensa* (Fig. 2.5).

Representation as a Pictorial Form

This is a major reason why many video game theorists – including Wolf (1997) and Aarseth (2007a) – tend to speak of computer game spaces as “representational spaces.” In many games, the interaction with the objects that appear is based on a representational relation in the Cartesian sense. Thinking of Descartes’ model of vision, which is based on the functionality of a camera obscura (Crary 1990), one can be tempted to believe that the human mind is an entity, separated from the world and looking at its objects on a screen. As in the camera obscura, the viewer is settled inside an apparatus that represents the outside world. To a player of a classical computer game, the visual presentation of that virtual world appears to be a representation of it. One does not steer oneself, but rather steers *an agent of the self*. In philosophy, such a situation provokes the so-called homunculus fallacy: if the mind observes the world (hence, a representation of it) from the inside, who or what is the instance perceiving what the mind sees?

Concepts of the Self

The Cartesian concept of the self has been heavily criticized throughout modern philosophy. One of its critics was Immanuel Kant, who in the *Critique of Pure Reason* from 1781 argued that the self is only an idea that allows us to ensure consistency

among our perceptions of the world. To Kant, it is, however, a transcendental condition (for the subject to be). Reacting to Kant, Ludwig Wittgenstein in 1921 wrote in *Tractatus logico-philosophicus*: “The subject does not belong to the world but it is a limit of the world” (Prop. 5.632). By some interpretations, this quotation – in the light of the “linguistic turn” – is an argument against the existence of the subject. In particular, Margaret Anscombe – a follower of Wittgenstein – in her essay on *The First Person* has argued that when someone says “I,” he or she does not make use of a proposition that designates anything that exists as an exclusive object in the world; anybody can say “I.” She conceives of the subject as a “grammatical illusion” that occurs in the search for the cause of a particular “happening” (Anscombe 1975, 64).

Subjectivity as a Medial Form

Unlike Anscombe, Wittgenstein could also be understood in a different way: taken as a proposition, “I” is not, in fact, something that articulates an individuality; but taken as something that is articulated by a speaker, *saying* “I” (or “me”) is something exclusive to the person who speaks. “I” is thus not a proposition but an expression of the first-person status. It follows that that relation can no longer be explained within language. Wittgenstein argued that the ego (or the solitary situation) is nothing that we can truly speak of, but rather something that is true because we can *see* it: “In fact what solipsism *means* is quite correct, only it cannot be *said*, but it shows itself” (ibid., Prop. 5.62).

What Wittgenstein addresses here is the truth of the self, revealed to a person being in the world and, furthermore, also being aware of himself or herself as the “border” of his or her perspectival view of the world. What is relevant in respect to video games is the fact that, according to Wittgenstein, the truth of solipsism – that is, that the world is *my* perspective of the world – cannot be deduced from the linguistic proposition “I,” but rather *shows itself*. In other words, it is a world that is *presented* as an exclusive world (solely) to the ego. The I first person is hereby conceived of as a relational self; the world stands in relation to the subject, and thus, the subject is an entity in relation to the world – what Wittgenstein calls the “border.” According to Franz Brentano (1995), this very structure can be addressed as “intentional”: in contrast to Descartes’ model of the self as a *res cogitans* that is separated from the world, the self is understood as something that exists only in relation to the world and to objects in the world (Fig. 2.6).

In a phenomenological backlash to analytic philosophy, Hector-Neri Castaneda and Roderick Chisholm in particular drew on Brentano’s idea of intentionality. Castaneda (1999) reminds us that “I” is not a proposition at all, but furthermore a pronoun. As such, “I” has no reference or *Bedeutung* but is an indicator for the situation of the first person. And as a reaction to Chisholm (1981), the utterance of “I” rests upon the conviction that “I am,” which in turn provides a matrix for the belief that a proposition can be true.

Fig. 2.6 Self-portrait of Ernst Mach (Source: Mach 1897)



The Concept of First-Person Shooters

Now what a first-person-shooter game as an image achieves is to *show* this intentional relation of a self to the world and its objects. But it does not only “show” it, as Wittgenstein says, but furthermore forces the player to make use of the picture as if the self existed. This is the key point to the argument made in this chapter: The claim is not that “I” or the self exists in the metaphysical or even in the biological sense, but *the simulation picture of a first-person shooter demands that the user behaves as if I existed*. And this behavior or interaction with the image objects presented by the computer game derives from the perspectival organization of the simulation picture. The main characteristic of this image is the alignment of the vanishing point with the junction of the crosshairs in the viewfinder of one’s weapon. It is by virtue of this fact that the image presents intentionality (Fig. 2.7).

The movement in virtual space thus is secondary to this primary interaction: for the predominant action is when the player has to make an object coincide with the vanishing point. Factually, he or she does not move in space, but rather primarily moves space itself. In the simulation image, the line of sight is centralized and fixed, and what is steered by the interface is the virtual space around it. The simulation picture of the first-person-shooter type thus visualizes intentionality and, furthermore,



Fig. 2.7 *Tom Clancy's Ghost Recon* (Source: Author's screenshot)

uses it as the major basis for interaction. And this interaction derives from the image's composition alone. Thus, this form of mediation or type of mediality finally is the proof that computer games are a medium on their own.

Conclusion

Developments in graphical design, which have often been (inadequately) described as the increasing reality of computer games, are interesting not only for the history of game design but also for empirical research. Just as it took film studies quite some time to emancipate itself from theater metaphors, computer game studies are about to enter a new paradigm, which will use a language for description sufficient to address the mediality of computer games (see Veugen, Chap. 3). The argumentation results in two consequences: on the one hand, computer games should be analyzed as images or pictures. Through such an analysis, one may find a third way: approaching these artifacts neither as a form of narration in a new medium nor as a rule based in the virtual realm. On the other hand, it has been demonstrated how this approach offers a contribution to the philosophy of computer games: taken as (interactive) picture, certain video games have the potential to give a proof in the form of an image for the existence of a highly disputed philosophical entity, namely, the self.

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Chapter 3

Computer Games as a Comparative Medium: A Few Cautionary Remarks

Connie Veugen

Introduction

When computer game studies were emerging as a separate academic field, many of the research methodologies and terms used were borrowed from other academic fields. The methodologies most suited depend(ed) on the kind of game being studied. If we look back at game history, we can see that roughly two categories of computer games arose: visual action-based games that sprang from the 1962 game *SPACE WAR*¹ and maze-like story games that started with the 1975–1976 game *THE COLOSSAL CAVE ADVENTURE*. Eventually, these two types of games evolved into what Juul dubbed *games of emergence* and *games of progression* (2005, 5). As the latter were basically story-based games, it is clear why, for the analysis and study of these kind of games, research methodologies and terms were borrowed from literary and film studies. However, present-day games of progression are primarily computer games as opposed to interactive stories, or even interactive films as they once were called. Nevertheless, as these games employ narrative practices comparable to those used in books and films, we can still borrow techniques and terms from literary and film studies, provided that we remain aware of the differences, as every medium has its specific techniques for telling a story. On the one hand, this means that audience expectations are media specific; on the other hand, we have to take into account that every version is the product of at least three modifications – the choices made by the creator(s) of this version, the

¹ As I use examples from a selection of media, both original creations as well as adaptations which often carry the same name as the original, typography will be used to identify the different media. I shall use *italics* for (comic) books and graphic novels, SMALL CAPS for films and *ITALIC SMALL CAPS* for computer games.

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‘language’ of the medium used and the restrictions posed by the medium. In this chapter, focussing on the terms genre and *mise-en-scène*, I would like to show how the ‘borrowing’ of terms from literary and film studies might pose problems when analysing computer games from a comparative point of view.

Computer Games as a Comparative Medium

It is a well-known fact that computer games as a medium now rival or even surpass other media in popularity such as film and literature (see Günzel, Chap. 2). Large media corporations now regularly release films (or even TV series) with an accompanying computer game (e.g. *007 QUANTUM OF SOLACE* 2008) or adapt games into films (e.g. *MAX PAYNE* 2008).² Although they may seem to be a recent phenomenon, computer game adaptations of titles from other media have a long tradition as can be seen from early games like *THE HITCHHIKER’S GUIDE TO THE GALAXY* (1984) based on the 1978 series of radio plays by Douglas Adams. The adaptation to and dissemination over different media is what Jenkins now calls convergence culture:

...the flow of content across multiple media platforms, the cooperation between multiple media industries, the search for new structures of media financing which f[a]ll at the interstices between old and new media, and the migratory behavior of media audiences who [...] go almost anywhere in search of the kinds of entertainment experiences they want. (2005, 2)

Related to convergence culture is another trend where a narrative is told across different media, aptly called transmedia storytelling:

...a process where integral elements of a fiction get dispersed systematically across multiple delivery channels for the purpose of creating a unified and coordinated entertainment experience. Ideally, each medium makes its own unique contribution to the unfolding of the story. (Jenkins 2007, n.p.)

Already featured in the *STAR WARS* and *POKÉMON* franchises, transmedia storytelling came to the fore with the simultaneous release of *ENTER THE MATRIX* computer game and the second film in the *THE MATRIX* trilogy, *THE MATRIX RELOADED* in 2003. After this successful dissemination over multiple media, more transmedia games were released, with storylines that progressively became more independent from the ‘original’ such as the above-mentioned Bond game *007 QUANTUM OF SOLACE* were ‘the game story goes well beyond the movie plot’ (Griffith 2009).³

In light of these developments, it is only natural that computer games are increasingly studied from a comparatist or cross media perspective (see Frølund, Chap. 31).

² Or graphic novels (e.g. *World of Warcraft Graphic Novel* 2008) or even books (e.g. *Assassin’s Creed Renaissance* 2009).

³ This was not the first ‘original’ Bond game. As early as 1983, games were released that were not directly derived from a Bond film or book.

However, present-day games are far removed from the games we played even ten years ago. As long as adaptations are being compared within the same medium, for instance, a remake of a particular game or a newer game in a series, this usually does not pose any problems. But when applied to different media, the same term may mean different things and thus lead to problems of interpretation. Therefore, when we compare games to their story counterparts in other media, we have to take into account possible media-specific differences.

Genre

Both from a theoretical point of view as well as from a practical point of view, the term genre is generally used to categorise media objects (see Raczkowski, Chap. 4). However, in genre theory, categorisation usually is based on formal properties, whereas media audiences and producers use the term to distinguish media objects based on paradigms related to their iconography and themes.

Literary studies, where the term originated, distinguishes three basic genres: epic, lyric and drama, which stem from Aristotle's theoretical framework (Heath 1996). Literary genre theory, therefore, distinguishes genres based on the form and function of the text, not on its content. Up until the seventeenth century, the term genre was used as a classificatory, genealogical and prescriptive term. However, as more and more new subgenres, such as the letter, the diary and especially the novel, were introduced, the classical distinction became blurred (Herman et al. 2008).

In the twentieth century, a more functionalist approach was developed based on new theories especially those put forward by Bakhtin in *The Dialogic Imagination: Four Essays* (1982). These not only expanded genre to include all types of discourse such as instruction manuals, news reports, political speeches, etc., but also incorporated the social context that produced the text. As a result, in literary theory, genre is not fixed; it constantly changes according to the needs of the social group that produces the text. In addition, genre does not only concern production; texts also serve the social use and interpretation of the audience. Furthermore, literary genres are not exclusive, as can be seen in modern works such as Joyce's *Ulysses* (1922) and *Finnegans Wake* (1939) or Puig's *El Beso de la Mujer Arana* (1976), which blend different genres. In the latter case, where the text is mostly dialogue, it is even open to discussion to call it a novel at all. Consequently, genre is no longer exclusive and prescriptive: texts now participate in one or more genres according to genre marks applied by the reader (Derrida 1980). The general reading public, however, uses the term genre in a more informal way to distinguish works of fiction based on shared conventions, for which literary theory uses the term *genre fiction*. Genre fiction, also called formulaic fiction, denotes genre categories such as mystery, fantasy, horror, detective, adventure, etc. This categorisation is based on certain expectations the reader has (reception), which in turn influence production.

Present-day film theory uses genre⁴ to denote categories that are, to a certain extent, comparable to those distinguished by *genre fiction* in literary studies: a set of expectations and conventions, this time shared by producers, the industry and audiences alike. However, as Bordwell and Thompson put it ‘genre is easier to recognize than to define’ (2001, 94). Some genres derive from the subject matter or theme of the film (the Western, the gangster film and the science fiction film); other genres are differentiated because of their manner of presentation (the musical) or the type of plot (detectives). Still other genres are based on emotional impact (comedy, thriller). Thus, genre in film is not prescriptive: ‘Filmmakers, industry decision makers, critics, and viewers all contribute to the formation of a shared sense that certain films seem to resemble one another in significant ways’ (ibid.).

Again, genres are fluid: ‘Genres also change over time, as filmmakers invent new twists on old formulas, and defining the precise boundaries between genres can be tricky’ (ibid.). A good example is *GLADIATOR*, (2000) which was not another *sword and sandal* film but an epic narrative about revenge and the afterlife playing against a historic background. Film genres, like literary genres, also mix. As Altman (1989) points out, mixed genres go back to the singing cowboy films from the 1930s (western musical) and films such as *GUYS AND DOLLS* (a gangster musical from 1955). In short, we can say that film genres are hybrid, intuitive, fluid and cyclic – that the public uses them to determine what to watch, film producers what to make and film distributors what to screen – and that genres both mix and change, constantly sprouting new (sub)genres along the way.

Computer game genres, on the other hand, heavily depend on the technical advancements of the computer industry. *SPACE WAR* (1962) and the games that followed were at the time called arcade games because you normally played them in an arcade hall. With the emergence of the home console, these games still relied on dexterity and quick reactions because they were designed to be played in a limited amount of time. So these games became known as ‘twitch games’. Later, they were termed action games and/or platform games. The second basic genre followed when the *COLOSSAL CAVE ADVENTURE* (1975–1976) was uploaded to the ArpaNet. Although the original game was about exploring an underground maze, the addition of treasure, puzzles and score points turned it into the new genre of the adventure game. Initially, these games were text only, but when they were imported to the home computer, they eventually all became graphical. The gameplay itself, however, still relied on exploration, finding objects and solving puzzles. Later, when computer memory, graphic capabilities and storage grew, new subgenres arose like action adventure games and stealth adventure games, where the focus of the gameplay shifted to other skills (Veugen 2004).

So, computer game genres are based on the gameplay skills the gamer needs rather than on visual or narrative differences: ‘video game genres themselves tend to

⁴ What I present here is a more classical take on genre, as manifested mainly in the Hollywood film. Genre studies that look at genre form a more semiotic and structuralist approach have produced alternative theories on film genre.

involve challenges to players that are common to most games of the genre' (Pulsipher 2008, 1). On this, most game theorists agree.⁵ Unfortunately, there is no consensus on the number of genres there are and their formal definitions. Crawford (1982) lists two basic categories: skill-and-action games (with six subcategories, amongst which are combat, maze and sports games) and strategy games (also with six subcategories such as adventures, war-games and educational games). However, he is very clear about the fact that his is only one of the possible categorisations. Since then, many other genre taxonomies have been put forward. Wolf (2001) lists as many as 40 genres, Poole (2000) 9 and Egenfeldt Nielsen et al. (2008) as few as 4.

Audiences, developers and producers also categorise computer games in terms of gameplay. The game database Mobygames⁶ gives seven genres: action, adventure, educational, racing/driving, role-playing, simulation, sports and strategy. This categorisation does not include one of the most popular genres: the first-person shooter (FPS) which has been put under the category of non-sports themes, along with arcade, fighting, medieval/fantasy, etc. However, the affordances gamers expect in FPS games – different types of weaponry, foraging for new weapons/ammunition/rations/medical kits, killing other gamers and multiplayer elements – are inherent to the gameplay of the FPS. The same cannot be said of other subcategories in the non-sports genre, such as fantasy, which one finds in many other game genres (each with their own distinct set of affordances).⁷ Why then is the FPS not a genre? Probably because, as with other media, the term genre has become fluid and hybrid. Recently, genre categorisation has become even less transparent. A modern so-called 'next-generation' game like *ASSASSIN'S CREED* (2007) has been called a sandbox game, a shooter (although it is set in medieval times), an action adventure game, an action game, a stealth game and a fighting game. As the game includes affordances of all these categories and as the gamer, to a certain degree, can play the game as belonging to any one of them, it would be impossible to choose one over the other. *ASSASSIN'S CREED*, therefore, is a good example of how producers, writers and the influence of gamers change the way we play computer games (and hence their categorisation) once new technology allows it.

A new problem with the term genre in connection with computer games is that a discrepancy is emerging between the makers of the games, who tend to start from a particular genre: 'Many video games originate with a genre. "We want to make a real-time strategy game", or "let's make a shooter"' (Pulsipher 2008, 2), and the new game demography who do not think of categorisation in this way:

Another hypothetical model in common use throughout the games industry is the genre model. In this, we assume that the audience primarily buys games of a particular type, and those types are referred to as 'genres', much as films and books are divided into genres

⁵ Lately, new taxonomies have been proposed; see Elverdam and Aarseth (2007) or Djaouti et al. (2008).

⁶ www.mobygames.com.

⁷ If we only consider the various *LORD OF THE RINGS* games, we find the genres action, adventure, role-playing and strategy.

according to their tone and content. [...] However, an essential problem exists. [...] the Hardcore is game literate, but the Casual market is not. In this sense, the Hardcore can connect a game with its genre type, but the Casual market does not buy on the basis of genre at all, looking instead for a game that appeals to them on other terms. (Bateman and Boon 2006, 18)

The main problem for the comparatist, however, is that genre categories do not mean the same thing for each medium. As we saw above, in fiction and film the term is based on content. So in the adventure genre, the story centres on a hero, still usually male, who finds himself in a tight spot and has to use his ingenuity and (in the case of an action adventure) physical skills to overcome the obstacles placed before him. On the contrary, in the adventure game genre, the term bases on the game skills exploration, locating objects and puzzle solving. The content of an adventure game, on the other hand, can centre on many different themes such as science fiction, detective, horror, fantasy, espionage, history and the like. Conversely, media objects that belong to one genre in popular fiction or film can be realised in many different genres in computer games. Tolkien's *The Lord of the Rings* (1954–1955), for instance, has been realised as several (action) adventure games; strategy games; RPGs and MMRPGs. Similarly, George Lucas' STAR WARS trilogy (1977, 1980, 1983) can be found in almost every game genre, even as *STAR WAR CHESS* (1993). So, on the one hand, we have formulaic fiction and film where the term bases on content, and on the other hand, we have computer game genre where the term is based on gameplay. Jordan Mechner, creator of the original *PRINCE OF PERSIA* action adventure games, pinpoints this difference accurately when he talks about the film *PRINCE OF PERSIA: SANDS OF TIME* (2010):

If you summarize the movie in one sentence, it sounds identical to the first *Sands of Time* videogame, but scene by scene it's actually completely different. It has to be, because games and film are such different mediums. On the surface they're deceptively similar – you can watch 5 min of an action-adventure videogame and think 'this could be a movie', or vice-versa – but structurally the requirements are totally different. Here's one example: The game kicks off with a cataclysm that basically destroys the world and turns all living creatures except for the three main characters into raging, murderous sand monsters. That was a great setup for the gameplay we had, which was 'acrobatic Persian survival horror'. But if you put that setup in a film, it would be a 'B' movie, and that's not the kind of movie *Prince of Persia* should be. Our model is classic epic, swashbuckling action-adventure movies like *Raiders of the Lost Ark*, *Zorro*, and *Thief of Baghdad*, with humor and romance and full of memorable characters. You can't get there if you turn everybody into sand monsters on page 15. (cited in Spry 2007, n.p.)

However, he is still speaking from a game developers' point of view. Dyack, however, speculates that the meaning of genre for games might eventually change: 'In 5 to 10 years I don't think there's going to be a shooter genre. It's going to be more literary: there will be horror, drama ... a shooter would just be "action"' (in Kumar 2008). Part of the reason this might happen is an ongoing decline of hardcore gamers and the genres that cater to this group and an increase in novice gamers who are demographically more mixed and whose preferences tend to lean to other genres.

Mise-en-scène

The term *mise-en-scène*, literally ‘to put something in the scene’, was first used for plays and later adopted by film. In the scope of this chapter, I cannot discuss all the particular aspects of *mise-en-scène*. I will therefore focus on setting, as this will suffice to show how games differ from films. Setting, according to Bordwell and Thompson, ‘plays a more active role in cinema than in most theatrical styles’ (2001, 159) as cinematographers and directors use it as a narrative device.

A major part of setting is the location where the action takes place. In films, this can be a real world place, or a studio setting, or both. In both cases, the cinematographer can use blue or green screen to leave out part of the setting (and of the actors) to fill in later with scenes from other takes or with computer-generated images. In games, the whole setting has to be created. This does not mean that game designers cannot recreate existing places. Designer Jane Jensen and her team are known for the careful recreation of real-world locations in their *GABRIEL KNIGHT* series. More than just a backdrop for the story, these locations are interwoven with the narrative and the gameplay so that they function as ‘evocative spaces’ (Jenkins 2004). Location can also be used to aid in gameplay tasks; in *SYBERIA* (2002), for instance, locations include a library and a graveyard, places that create atmosphere and allusion. But their familiarity also helps the gamer to know which information he or she might find there.⁸ Of course, one of the great benefits of having to create a place ‘from scratch’ is that games can accurately recreate historical places, based on archaeological evidence, for instance, to enhance the gameplay with educational aspects as in *TIMELINE* (2000) or to create compelling architectural escape routes as in *ASSASSIN’S CREED* (2007).

Such hyperrealistic renditions of location as in *ASSASSIN’S CREED* and even more so in its sequel *ASSASSIN’S CREED II* (2009) have not always been possible. Over the years, games have moved from a single screen with fixed boundaries to freely navigable 3D spaces. And whilst graphics started life as simple black and white pixels on a TV screen,⁹ the graphically most sophisticated console to date, the PS3, now uses full HD resolution (1,920 × 1,080 pixels) in true colour.¹⁰

As the setting in most games has to be navigable, it has to be rendered in real time.¹¹ This means that the setting depends on the technical specifications of the hardware the game is played on. Over the years, designers have learned to adopt

⁸ See Adams (2003) for a detailed description of the use of architecture in computer games.

⁹ Note this is not black and white as in film (a wide range on a scale of grey). This literally is only white (light on) and black (light off).

¹⁰ Some well-known computer display standards over time have been CGA (640 × 240 pixels with 2 colours or 320 × 200 pixels with 16 colours), EGA (640 × 350 pixels; 16 colours out of 64), VGA (640 × 480; 16 and 256 colour modes), SVGA (800 × 600; 16 and 256 colour modes) and XGA (800 × 600; 65,536 colours and 1024 × 768; 256 colours).

¹¹ As cut-scenes are usually not rendered in real time, the issues addressed here do not affect them. They are therefore left out of the discussion.

the hardware limitations to develop a particular visual grammar that best suits the gameplay of that specific type of game; and gamers have learned to read this grammar (Veugen and Quérette 2008). Moreover, different types of gameplay call for different types of interactive views. Whilst the action-based gameplay of *ASSASSIN'S CREED* (2007) benefits from the detailed, fluid and realistic rendition of the settings, finding objects in an adventure game is notably easier when the gamer can see a whole screen at a time (ibid.).

One of the major differences in the setting of present-day games is the way the setting is framed by the 'camera'. In film, the director and the cinematographer carefully plan camera position, angle, etc. for every shot, and after shooting, the editor turns these into a visual story. In contrast, in a modern game the gamer controls the camera, so he or she chooses the best angle from which to operate. This practice emerged with 3D games. In older games, the 'camera position' was dictated by its suitability for the gameplay and the technical limitations at the time. Nitsche observes that in *METAL GEAR SOLID 2: SONS OF LIBERTY* (2002):

the camera moves down to eye height and behind the main hero whenever the player-avatar hides behind a wall. The shot quotes a cinematic tradition from thriller and action movies that use the depth of the composition to juxtapose the player-avatar in the foreground and the target moving on a level deeper in the picture. (2008, 88)

Hideo Kojima, the creator of the *METAL GEAR* series, is known for his cinematic style. Therefore, the above camera position might well quote a cinematic tradition. However, *METAL GEAR* games are stealth games and camera position is designed to help gameplay. The oldest *METAL GEAR* game (1987), for instance, uses a top-down perspective. A more sophisticated view was not possible at the time, but as the gamer could see a whole screen at a time, this did not matter, as it was sufficient to sneak up on enemies or hide to avoid them. Top-down perspective, contrary to what one might conclude from the above quote, is also the prevalent position in *METAL GEAR SOLID 2: SONS OF LIBERTY* (2002). As the game is graphically much more sophisticated than the first game and therefore could have used a different camera angle, one can only conclude that a top-down camera angle benefits the stealth game. The latest *METAL GEAR* game, *METAL GEAR SOLID 4: GUNS OF THE PATRIOTS* (2008) however, uses a gamer-controlled camera. As a result sneaking up on enemies feels more real. The drawback to this freedom is that you now often end up facing the wall your game character Snake is crouched up against; a far cry from the beautiful cinematographic stance described above. This camera position is now only present when a cut-scene takes over. The 'more directed camera style' of the previous game, which limits 'the interactive access of the user to camera control' (Nitsche 2008, 102) has been abandoned in favour of an interactive camera use, which the new hardware now supports.

Another important component of setting for the cinematographer is colour. Until fairly recently game designers could not use colour in a sophisticated way, as the number of colours available were limited by technical issues. That is why *WOLFENSTEIN 3D* (1992), the game that put the FPS genre on the map, uses bright colours, as it had to use the VGA colour palette (see note 10). Its legendary successor *DOOM* (1993) could look gloomier as the designers now knew how to tweak the

VGA palette. *QUAKE* (1996) used the then new SVGA graphic card. Consequently, it was the first FPS that used polygons instead of pixels, which made the graphics look a lot smoother. Nevertheless, the number of colours was still limited to 256. Fortunately, this palette has more dark hues than bright ones. When using darker colours, you lose detail. For the programmers, this meant that they could achieve the same effect with fewer polygons, that is, fewer calculations by the graphic processor, which in turn meant smoother real-time graphics. Therefore, taking advantage of the limitations of the hardware, they not only created a smoother running game, they also created the dark-toned dungeon-like colour scheme so typical of the genre.

Since then, colour and graphic detail have moved significantly forward. Consequently present-day games like *ASSASSIN'S CREED* (2007) can now use subtle colour differences:

The city [Jerusalem] had been under siege by the knights and soldiers for almost 3 years. We've added a cold blue filter to give this city a more modern look and its own unique personality (post war atmosphere). Each city in the game will have its own filter so players will be able to tell them apart in a glimpse of an eye. (Jade Raymon interview in Seif El-Nasr et al. 2008, 14)

But it seems that gamers are not yet cued to the cinematic use of colour as one reviewer wrote:

The seemingly sandbox design of the environment is loaded with the same NPCs [Non Player Characters] and same locales, everything looks the same. If you look real careful, you're going to see it's not all the same. The architecture actually varies depending on the predominant religion in the city, but the color palette, the beige overtones; it just makes everything look the same. (Jojic 2007, n.p.)

The reason a gamer does notice the predominant religion of a city, or to put it more accurately the occupying force (Arab, French or English), is because this directly affects the state of the city's buildings which in turn affects the avatar's movements and consequently gameplay. Colour does not affect gameplay and is therefore overlooked.

The final elements of the setting Bordwell and Thompson discuss are props – objects that play an important part in the visual narrative, for instance, the paperweight that shatters at the beginning of *CITIZEN KANE* (1941) or the girl's balloon in *M EINE STADT SUCHT EINEN MÖRDER* (1931). In games, even if a prop is part of the narrative, it is also and more importantly, an item that is necessary for the gameplay. In adventure games, it is an object you have to take with you because without it you cannot end the game; in shooters, they are rations, medical kits, weapons and ammunition which you need to survive, and in role-playing games, you can use them to upgrade your character, change your appearance, etc. Moreover, contrary to film, the avatar cannot deftly pick up props, because that would cost too many lines of code as you handle every object differently. So usually, you just run over items or you click on the object and it magically becomes part of your inventory. Alternatively, in case the object is very important to the narrative, a cut-scene follows, where you see the avatar handling the object in close-up. Gamers are queued to this use of in-game objects, so there is no great need to change the practice. However, as computer graphics have become more and more sophisticated, special objects no longer have

to stand out graphically from the rest of the setting, for instance, by adding bright red markings or by giving them more detail. This means that gamers have to learn a new visual grammar to find them. For instance, in *THE DA VINCI CODE* (2007), the designers use subtle lighting cues to make props stand out, in a similar way as this is done in cinematography, photography or painting, but, as with *ASSASSIN'S CREED* (2007), not all gamers pick up on this (Veugen and Quérette 2008).

Why should a comparatist have to be aware of these differences? The use of colour, as discussed above, is a good way to illustrate this point. When discussing older games, the film theorist, who has been trained to notice colour cues in film, might be tempted to say that the use of colour in *QUAKE* heightens the feeling of anxiety and claustrophobia of the gamer, but that the bright red blood and bright red markings on some of the 'props' lessen this effect. Or the theorist could interpret the contrasting red colour of the blood as part of the cinematography of the horror genre.¹² A comparatist versed in the technical history of computer games would know that the real reason the blood and markings stand out in the game is that with only 256 colours, the contrast between the overall dark tones and the few red tones the palette offers becomes more pronounced. The motivation for marking the 'props', thus, is part of the visual grammar mentioned above. Even though the game uses polygons, the graphic detail is still very coarse. This makes finding objects in a hurry quite difficult. With the red markings, the items are more noticeable. This is very handy when you are running around and desperately in need of ammunition or a medical kit. However, as with camera position, the gameplay dictates which colour cue is more suitable. In the explorative context of the adventure game, subtle lighting effects enhance the atmosphere and give the gamer a sense of accomplishment when he or she picks up on them. In a fast-paced action adventure game like *ASSASSIN'S CREED II* (2009), important objects need to stand out because you usually have a limited amount of time to find them.

Concluding Remarks

As I have shown above, audience expectations are media specific. This, perhaps, is the main reason why, although similar media techniques apply, their exact meaning is media dependent. Therefore, a comparatist discussion of the genre of a media text has to take into account that the term has different meanings for literature, film and computer games. Especially in relation to films and games, genre can easily lead to misunderstandings as games use both their own definition, where an adventure game indicates that the gameplay centres on exploration, finding objects and solving puzzles, and the 'borrowed' term, where an adventure story has the lone hero overcoming adversities to reach a happy end. A simple solution to this problem is to talk about game types instead of game genres, when comparing games to the media

¹²The film theorist could not mistake them for symbolic props (see the contrasting red coat of the little girl in *SCHINDLER'S LIST* (1993)) as their proliferation excludes this interpretation.

film and literature. However, the term genre is also problematic as genre taxonomy by its very nature bases on conventions that change over time and that depend on unwritten 'laws' agreed on by different groups of people. In game studies, matters are further complicated by the newly emerging game audiences who are not aware of the gameplay definition of the term and therefore select games on other grounds. For this, there is no simple solution.

Using film theory to discuss mise-en-scène in computer games has also become more difficult, as the introduction of new powerful hardware means that games have increasingly become gamer driven. Thus, when the gamer controls the in-game camera, cinematographic analyses of camera position and framing no longer work. The technical capabilities of the hardware also have to be taken into account when specific meaning is attributed to the use of colour and props. And, although modern games on the PS3, Xbox 360 or a heavy-duty PC show that designers can use the visual grammar of film, gamers will only notice this when it benefits their gameplay. Furthermore, subtle cinematographic cues do not work for every type of game. Consequently, as far as mise-en-scène is concerned, (comparative) game studies is dealt a mixed hand. In some cases, knowledge of film theory will benefit the analyses of certain games of progression. In other cases, however, game studies should use their own analytical framework.

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Chapter 4

“And What Do You Play?”: A Few Considerations Concerning a Genre Theory of Games

Felix Raczkowski

Introduction

Since Aristotle first discerned different *kinds* of poetry in his *ars poetica* and defined tragedy and comedy on the basis of a comprehensive list of criteria, the ordering, differentiation, and categorization of cultural phenomena have become inherent parts of theoretical discourse. While this discourse continues to this day in the study of literature, it has since spread to other fields of study. Aristotle’s term *kind* has long since been replaced by the French *genre*, which can mean kind as well as gender.

Literature, music, film, and television studies attempt to systematize and describe their objects according to genre and thus the term has been popularized beyond the confines of scientific language – genre has become a commonplace denotation that gets produced and reproduced especially through reviews and reports in popular media (e.g., film reviews in the daily newspaper). The terminological universality of genre has led to most recent cultural phenomena being approached by attempts to systematize them according to the notion of genre, as is the case with computer and video games. However, the economic success, the wide distribution, and the cultural influence of electronic games precede any attempt at academic discussion or analysis by more than 10 years – the first computer game genres are not products of a scientific, but rather of a popular discourse. Keeping that in mind, it appears all the more astonishing that in game studies so far there is neither a genre theory nor an attempt to scientifically analyze the popular genres. Although the academic discussion in fact uses the popular game genres, they only get reproduced and not analyzed or questioned according to their development, effect, and influence. On the following pages, I develop some initial thoughts toward a genre theory of computer

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games. The focus of my remarks is the culturally developed genres that serve as a background for most, if not all, theoretical and popular discourse. These structures and the instances that generate them need to be described and characterized in order to pursue an academic discussion of game genres that is not purely theoretical and without any connection to the practical reality of the notion of genre.

In the course of the next few pages, I will point out where today's game studies are lacking regarding their handling of game genres, clarify a few basic qualities and problems of the notion of genre, and provide a rough overview over game-genre-defining factors and their influence. Finally I want to describe the core challenges a genre theory of games is facing.

Defining Genre

When talking about genre in any context it appears vital to define the concept (see Veugen, Chap. 3). Such a definition may strike most people as redundant, especially since "genre" is a concept that is universally known and that everyone associates certain qualities with. This diversity of opinion combined with the heterogeneous blend formed by different theoretical approaches is precisely what makes a broadly accepted definition hard to achieve. So instead of presenting a polished definition, I prefer to opt for a set of theses, which, in my opinion, encompass the core qualities of genre:

1. Genre exists independently of its theoretical processing.

For Aristotle, "kinds" of poetics were part of the natural order of things; he just tried to describe and sort out what in his opinion existed anyway. Later, theorists like Brunetière began to adapt the theory of evolution to the study of literature and thus conveyed the concept of existing, distinct species and gradual development to the cultural realm. While I do not support the notion of genre as natural and text immanent, I still think it important to note that genres do solely exist through or get constituted by discourse.

2. Genres are not stable.

Genres are no transhistorically fixed categories. Early on, Aristotle had described the genesis and development of comedy (Aristotle 2003, 17); later, the changing properties of certain genres were more explicitly mentioned, as in the evolutionist metaphors of the late nineteenth century and the literature, film, and television studies of the mid-to-late twentieth century (Todorov, Altman, Mittell). These theories not only include the emergence and disappearance of genres, but encompass hybridization as well.

3. Genres are not exclusive categories.

The same text can belong to more than one genre at the same time (especially since genres are no longer exclusively defined according to the classical notion of form, but can also touch upon content: for example, "animation" in film is a

formal genre whereas “thriller” characterizes film with regard to content). As Derrida puts it:

Every text participates in one or several genres, there is no genreless text; there is always a genre and genres, yet such participation never amounts to belonging. (Derrida 1980, 65)

4. Genres are not solely textual.

While the study of literature naturally views genres as textual phenomena, film and television studies recently began to broaden the field of generic discourse by locating genre not only in textual form and content but also in the production, marketing, and reception of texts and films.

This list is by no means exhaustive and probably no real alternative to a precise definition, constrictive as it may be, but it demonstrates (especially through the first and fourth theses) a central quality of modern genre analysis: it always works on two (interdependent) levels, the empirical one and the purely theoretical one. Genres, as Alastair Fowler remarks, “do not cease to function just because some genre critics run short of ideas” (Fowler 1985, 25). On the other hand, a theoretical view is necessary to understand the functionality of genre and to integrate the notion of genre into a higher system of poetics. Tzvetan Todorov postulates something similar when explaining his notion of genre:

Genres are therefore units that one can describe from two different points of view, that of empirical observation and that of abstract analysis. In a society, the recurrence of certain discursive properties is institutionalized, and individual texts are produced and perceived in relation to the norm constituted by this codification. A genre, literary or otherwise, is nothing but this codification of properties. (Todorov 1976, 162)

This chapter, like that mentioned above, is going to focus on what Todorov calls the “empirical observation” of genres, since that is where – at least in my opinion – every academic discussion concerning game genres has to begin. The game studies have so far failed to provide that perspective, a flaw that becomes evident when looking at different game-centered publications. Surprisingly, this does not mean that genres do not appear at all in academic discourse; in fact, terms like “first-person shooter,” “role-playing game,” or “adventure” appear in numerous papers, sometimes even corresponding to central points within the argumentation – for example, in narratological analysis, the adventure is described in terms of a narrative structure and thus a certain relevance for the problem while the ignorance of “strategy games” is justified because of their alleged lack of narrativity (see Kücklich 2002, 37). However, these uses of genre amount to mere reproduction of popular genres, a fact that was already acknowledged by authors like Neitzel¹ or Järvinen:

The whole question of genre is largely unexplored in game studies. Generally it is accepted that computer and video games constitute a cultural genre as such, but the distinctions, continuums and variations within that cultural genre remain uncharted. The popular genre conceptions originate mostly from game journalism, not systematic study. (Järvinen 2002, n.p.)

¹Britta Neitzel asserts the lack of a genre theory in game studies in her PhD thesis (Neitzel 2000, 205).

Approaches to Game Genres

The few attempts that have been made to sketch a system of game genres remain unsatisfactory, like Mark J.P. Wolf's effort to develop an exhaustive list of scientifically verisimilar game genres (see Wolf 2005, 193–194). Wolf proposes to categorize games according to their interactive qualities, since to him this seems to be the common feature of all computer games; however, he ends up compiling an extremely expansive and incoherent (e.g., game-adaptations from films or literature having the same generic status as adventure, board game, platformer, or pinball) list of more than 40 individual genres that can hardly be thought of or used as a groundwork for further study.

A recent and more promising approach is taken by Dominic Arsenault, who starts by pointing out the incoherence of commonly used game genres (Arsenault 2009, 152–153) and the theoretical endeavors taken to systematize them. He concludes that “[g]enre study, when understood in this way, is the history of repeated attempts from academics, critics and institutions to impose order onto a chaotic, messy and fluctuating mass of terms that respects no authority – or at least, no apparent authority, and certainly not theirs” (ibid., 158). Arsenault, however, sees (and in that his proposal is comparable to my own) some merit in a historically contextualized analysis of genre development. He conducts an exemplary case study regarding the origin of the generic phrase “first-person shooter” (ibid., 164) through the number of occurrences of the term in Usenet discussions (ibid., 165). This implies a particular perspective regarding the origin of generic terms in general since it suggests that genres (and generic terms, respectively) are often coined through fan discourse. Arsenault further argues that genres like “first-person shooter,” albeit popular, are incoherent and imprecise regarding the wide range of fairly different games they are supposed to describe (especially regarding “shooters,” since there are a lot of games to be found in this generic tradition that allow for close-range combat (ibid., 167) – making the term itself somewhat incorrect). Arsenault's own perspective on game genres seems to be a predominantly aesthetic one: since game genres cannot serve as precise descriptions or analytical terms, they need to be understood as “the codified usage of particular mechanics and game design patterns to express a range of intended play-experiences” (ibid., 171). While I agree with the central problem pointed out by Arsenault, I remain unconvinced regarding his suggested solution. By thinking of genres as the embodiment of abstract design principles, Arsenault effectively ignores his own conclusions regarding the origins of generic terms as defined by players. If we do not assume game designers to be the sole decisive factor regarding the origin and development of game genres and generic terms, we have to ask ourselves who else participates in the generic discourse, and to what effect.

Game genres, it seems, share some of the properties of film and tv genres in that they, too, can be considered as *contested territories* in a sense that they are “cultural categories” (Mittell 2004, 1) with constantly shifting meaning and relevance to different groups. As Mittell (2004) and Altman (1999) have pointed out for television

and film, respectively, genres can (and probably should) be understood as discursive constructs, influenced and fabricated through, among other things, politics, economics, and critique. This means that genres are frequently subject to (context-related) redefinition. One text/film/game does not necessarily always belong to the same genre: as perspectives, circumstances, and influences change, so do generic descriptions. To once again invoke Derrida, even the term “belong” might in some cases overstate the relationship between genres and the artifacts they are attributed to. On the other hand the same generic term does not always have to encompass a fixed type of game, and this can be exemplified by the notion of simulation. “Simulation” as a game genre is defined completely differently depending on which source one is looking at. The term can either describe games reproducing certain logistical and economical aspects of some microcosm like a zoo or a shopping mall. Or it is used to describe a very broad group of fairly different games all approaching their respective themes – which can be as diverse as driving, flying, the martial arts, or shooting – as realistically as possible. So simulation does either stand for a very precise type of game or for the aspired realism of very different games. Both meanings are frequently used as generic descriptions.²

Protagonists in the Process of Genrefication

So, after this rather abbreviated overview of some of the key qualities of the elusive concept of genre, the question remains to be asked what this specific notion of genre means for game studies. To accomplish this, it might be helpful to take a closer look at the above-mentioned “contestants” that are influencing the “genrefication” of games. While my account does by no means claim to be complete, I would like to look more closely at the details regarding – in my opinion – the most influential instances in genre conception:

- Industry
- Critics/press
- Players

Game Industry and Genre

From the industrial viewpoint, games, like movies or books, are cultural goods (see Binark and Bayraktutan-Sütçü, Chap. 24). Cultural goods differ from “common” goods in a number of aspects, the one relevant for my argument being the fact that

²For example, in the genre-categorization system of the popular game-review website “ign” (<http://uk.ign.com/index/top-reviewed.html>, Accessed 30 April 2010) or the Wikipedia article regarding “simulation video games” (http://en.wikipedia.org/wiki/Simulation_video_game, Accessed April 30, 2010).

cultural goods are opaque to the customer. Their “purchase” poses a risk: I can go buy some noodles in the grocery store and I am sure of what I will get; but if I go to the movies instead, everything is about not knowing what will happen in the movie. Thus, the cinemagoer takes the risk of not being entertained by a movie he does not know. So to make his decision easier, at least in theory, studios rely on specific generic terms which, through their general acceptance, serve as a guideline for customers (see Hediger and Vonderau 2005, 240–241). However, as has been shown during recent years (see Altman 1999), this belief at least partly contradicts the studio’s economic interests. Specific, fixed generic attributes significantly complicate the differentiation between the studio’s own product and similar movies from other studios. Besides, there is no direct increase in value to be attained by popularizing a certain genre through one’s own movies because genres have no registered trademarks. For the film industry, brands are much more rewarding and thus relevant than genres (ibid., 54–55; 115–116). In fact, if you are going to the movies today, you will hardly find any explicit generic terms on the posters.

With computer and video games, the case is a little different. Of course, they are cultural goods as well, and their consumers are taking risks, too. The relationship between industry, genre, and generic terms, however, turns out to be different, as can be demonstrated with a few advertisements for different games. The first two examples originate from the early 1980s, two ads for *Pitfall 1* and *2*, respectively (Figs. 4.1 and 4.2):

These ads differ from today’s video-game marketing in one central aspect: they employ quite a lot of text. The second paragraph reads like a job specification for prospective adventurers – and for the player.

You will not have much trouble assigning a familiar genre to this description, though when *Pitfall!* was first released in 1982, generic terms like “jump’n run” or “platformer” were not that common, so advertising did not use those. Instead, they relied on extensive descriptions of the gameplay and its challenges. In this respect early advertisements and video-game press are alike, as will be shown later on. However, this approach has changed extensively and leads to current advertisements like the ones for *WorldShift* and *Universe at War* which include prominent and precise references to the products’ genre: the *WorldShift* slogan reads “Real Time Strategy meets MMOG” while *Universe at War* apparently is “A Real Time Strategy Game by Petroglyph.”

So why do film and game industries differ in their use of generic terms? In my opinion, the respective meaning of the notion of genre for the consumer is different. Film genres only influence my decision to visit a certain movie insofar as they allow me to put the movie in the greater context of my personal taste and preferences and facilitate the recourse to certain viewing habits. Other factors influencing my decision like stars, the director, or awards are largely independent of genre.

In simple terms: from the consumer’s perspective film genres are about what I like to see. With games, it is not only about what I like to play but about the skills



Fig. 4.1 *Pitfall!* (Source: Advertisement for *Pitfall!* (Activision, 1982))

I already have and the skills I am willing to acquire. Game genres are always job specifications too: a “jump’n run” needs a certain amount of hand-eye coordination, an “ego-shooter” requires short reaction times, “strategy” and “tactic games” call for planning, and “adventures” assume some power of deduction. Of course, one might argue that these abilities, in most cases, are taught in the course of the game – but even then, the determination to learn and a certain frustration tolerance are required.



Fig. 4.2 Pitfall 2 Lost Caverns (Source: Advertisement for Pitfall 2 Lost Caverns (Activision, 1982))

With a movie, I am taking the risk to have a bad time or to be bored. With a game, it just needs bad luck and I will not advance over level 1. According to this, information on the demands that a game makes on its players is the decisive factor for consumers. This demand for information is behind the long advertisement texts in the 1980s game ads as well as the subsequent broad use of generic terms. A contemporary development in this tendency is marked by the success of “casual games,” which unite completely different games under one term with generic function. There is no need for a detailed description of the particular game as long as it is referred to as “casual,” which already points to its low requirements and to a certain ease of learning.

Now, having referred to the importance of brands and franchises for the film industry at the beginning, it seems necessary to comment on the meaning that franchises have for the game industry. Of course, registered trademarks and their high recognition value are desirable for the game industry; however, there are only comparatively few game series that have their names so strongly attached to their respective type of gameplay that they are advertised without any mention of genre.

This may be connected to the relatively high pressure on innovation within the games industry: there is constant demand for changing gameplay. Probably only very few series persist unchanged long enough to unmistakably link their name to a certain gameplay, like “Super Mario” is synonymous for “jump’n run.” Beyond singular game series, we can observe the attempt to establish the developing studio itself as a kind of brand with typical games. Here, the attribution of genre becomes obsolete as well because the consumers connect games developed by Studio X with specific features and requirements. To cite a few examples of this, there is Blizzard Entertainment in the USA and Square-Enix in Japan. In fact, Blizzard’s branding of their own name was successful enough to lead to the replacement of Vivendi’s name in the Vivendi-Activision fusion³; in the meantime, Blizzard even established their own exclusive exhibition, namely, fan convention. Now, this approach has an advantage compared to singular game series: the developer may, at any time, release a new product that is not part of any established series and still reckon on a success because of the studio’s name.

I assume that in the future we will see quite a few developers marketing themselves and their products as their own brand and without additional generic terms. The meaning of genre for the game industry will decrease with this tendency of developers to accent and distinguish themselves.

Press

The second important “contestants” are the games-related media and critics, which since the early 1980s are embodied by a continuously growing number of publications. In film history, critics belong to the most influential instances for the emergence of certain genres: since film studios were promoting their movies ambiguously to attract the broadest possible audience, critics had to be all the more precise in their texts, describing and categorizing the films accurately, thus furthering the emergence of genres. Looking at video-game magazines of the early 1980s, we can observe a similar, albeit significantly faster process. In the first issue of “Crash” from 1984, the most certainly important information of a video-game review is combined in the extensive paragraph “What you do,” but generic terms are nowhere to be found. Although when one takes a closer look, one can see that similar games

³<http://www.marketwatch.com/story/activision-vivendi-games-merge-to-create-video-game-giant>, Accessed 30 April 2010.

are already described by similar terms. If compared to the *Pitfall!* ad, it is easy to see that video-game publications at this time are working in the same way as advertisements for games: they are extensively describing the player's role.

In a magazine that was first released 1 year later,⁴ there are many references to later well-known game genres to be found. These are not always used in the same way they get applied today (which points to some of the qualities of genre that were mentioned earlier), and they are not yet firmly integrated into the magazine's layout. The genrefying processes, however, are already under way, as can be seen from the following two examples:

At the beginning of the sometimes rather short reviews there are references to comparable games, and this is an outcome of a canonization that is taking place, a necessary development for the constitution of genres (Fig. 4.3).

"This game, while original in concept, tends to remind you of many other games: from the defender-style first level, through the scramble-like caverns, to the fort apocalypse mapping, and the choplifter-type men."

Thus, some of these grouping effects have already led to generic terms, as can be seen perfectly in a feature article about "adventures" in the first issue of "Computer Gamer." The definition for adventure that was developed there reads as follows:

An Adventure Game involves the player in exploring and understanding an imaginary scenario in order to succeed in some pre-determined task. The scenario created by the author (or programmer) may be underground, in a ship (space or otherwise), in a near-deserted town – in fact anywhere and anytime. It is normally divided up into a number of discreet locations. Your task may be as simple as getting out of the town or as complicated and involved as controlling a spaceship while in suspended animation. Exploring Adventure Games is normally done by interacting with the program (usually with the use of text inputs – more later) in such a way that you move from location to location gathering [sic] information and objects as you go. (Bishop and Wooding 1985, 64)

Partly, this definition characterizes pretty precisely the gameplay we associate with adventure games today, although especially the paragraph's first part reads more like a description of computer games in general, and key terms in today's notion of adventure (e.g., "point and click") are not yet established. Interestingly, the definition uses content (possible scenarios get mentioned) as well as form (a task has to be followed, the controls use text inputs and collecting is a core game mechanic) and even mentions an author who supposedly intended (and created) the game to be played as an adventure. This demonstrates that even in the nontheoretical history of game genres classical⁵ concepts like form and content prevail as means to differentiate between types of games. In the course of a few years, we can observe rapidly advancing genrefying processes in the press which again lead to their adoption by advertisements in these same magazines. I think it is safe to assume that a great part of the early conception of game genre has been promoted by the respective specialized press.

⁴Computer Gamer, 1985.

⁵Although of course the classical literary genre theory considers genre solely as the difference according to form (see Frye 1957, 246–247) and the notion of an author is a problematic one not only in game studies.



Fig. 4.3 “Computer Gamer 02” caption (Source: *Computer Gamer* (1985), 1(1), 48. *Argus Specialist Publication*)

Players

The last aspect I would like to discuss concerns the players themselves and their relation to and influence on game genres (see Unger, Chap. 32). I distinguish between the way an associated genre influences the playing of the game and the conclusions regarding a game’s genre that can be drawn from the interaction between player and game.

Obviously, if a game is advertised or reviewed with a specific generic attribution, this evokes the player’s recollections of past playing experiences and knowledge of

typical genre characteristics. This prior knowledge determines the general approach to the game, and it is this background that underlines the importance of genre as a marketing tool. In a game known to the player as a “jump’n run,” he is probably not going to try sneaking and hiding to pass the levels. In that respect, genre determines the way games are played.

However, the other, opposite case is much more interesting. Just as genres in literature are only to a certain extent text-immanent phenomena, this can also be said of game genres. I suppose that consistently with my explanation up till now, it should be apparent that I do not conceive genres as features that are just programmed into games. But one could still suppose that genres are like stamps that are imprinted on games through instances like press or industry; and from that moment on, they are determining our handling of the game. This does not necessarily have to be the case, as demonstrated in the following, a discussion surrounding the online game *World of Warcraft*.

In early 2008, a *World of Warcraft* player posted a thread of complaint on the official forums. While people are doing this all the time, his concern was rather special because he had reached the gold limit. His character could not store or earn any more gold, the in-game currency of *World of Warcraft*. The course of the subsequent discussion revealed two things: First, obviously the developers themselves were taken by surprise by this accomplishment since they without doubt had not intended anyone to reach the cap until a game expansion had increased it. Second, the player’s fortune was indeed so astronomical that it struck most other players as completely absurd. However, the player had accumulated the gold in a legal way and when asked how he had done it, he explained that he had played the game the way that was the most fun to him: he had used the in-game marketplace to trade goods. While his fellow players acted as the developers Blizzard intended – solving quests and killing dragons – he traded. To him, as he said in his opening post, *World of Warcraft* was a business simulation.⁶

So, the way we are playing a game obviously influences its genre. The way a game gets actually played does not have to correspond with one of its previously assigned genres. Besides, the developers increasingly show the tendency to grant the player more freedom in the interaction with the program – genre thus takes on a performative notion. This change is gradually reflected in terms like “open world game” and “sandbox game.” However, in my opinion, these descriptions differ extensively from the previous generic terms:

The old terms are exclusive categories; they are descriptions of a particular, very precise gameplay which excludes many approaches from the outset. If something is called a “beat’em up,” one is not even going to try to achieve one’s goals the diplomatic way. “Open world games” and “sandbox games” are open descriptions that do

⁶See <http://forums.wow-europe.com/thread.html?topicId=2405181322&sid=3&pageNo=1>, Accessed 30 April 2010.

not suggest a particular method of solution. While games in the past have been described according to what you *have* to do, today they are increasingly about what you *can* do. I am not saying that the traditional generic terms are going to vanish, I just want to point out that we are going to experience a change in the interaction of players with their games resulting from a greater variety of options. This may include unpredicted use as well as playing freely in sandboxes intended and designed for it. In my opinion, a genre theory of computer games should allow for these developments.

In this short article, I only briefly discussed the different instances that contribute to the conception of genre. Nevertheless, I hope some of the fundamental idiosyncrasies of game genres became clear: game genres function as job specifications in press and marketing. They are requirement profiles providing orientation and reducing complexity, which makes them invaluable for industry and press. The pressure of innovation and the rapid technological advancement cause the typical generic change processes⁷ to take place much faster for games. In addition, the player's creative interactions change game genres in a performative way and in the long run contribute to the emergence of new generic forms. Genre does not only influence the way we play – our playing influences genres.

What is the significance of these brief observations regarding the broader context of a genre theory of computer games? The theoretical examination of genre in the game studies should not (and, as Arsenaault aptly demonstrates, cannot) aim to develop a genre theory that compares to similar endeavors in literary or film studies. Generic terms are too diverse and inconsistent and they change and develop too quickly to allow for systematization and a categorization of games. Besides, an exhaustive list of precisely defined genres does not necessarily help the emerging game studies because it promotes thinking along the lines and within the confines of arbitrary limitations: games will be considered and dismissed for analytical purposes according to the genres they are said to participate in, thus ignoring potentially interesting games because they do not fit into the generic corset.

Yet genres arguably dominate the way we talk about games – and because of this, they demand analytical and theoretical attention. Instead of trying to assess which features constitute a certain genre, we should focus on the way genres influence the computer game discourse and on the functions they fulfill for different participants in the said discourse. In this respect, genres need to be considered as highly volatile (in some cases even as performative) constructs that mirror a diverse set of interests regarding games – including, but not limited to, economic, political, or medial factors. This approach to genre in game studies is of course in need of further elaboration, but it promises to lead to interesting findings and questions touching on the way we relate to games.

⁷For example, Altman (1999, 54–55).

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Chapter 5

Interface Analysis: Notes on the “Scopic Regime” of Strategic Action in Real-Time Strategy Games

Serjoscha Wiemer

Introduction

This chapter argues for the necessity of a refined interface analysis of popular computer games, focusing on real-time strategy games (RTS). To begin, though, I will describe the broader theoretical assumptions that provide a context for interface analysis and its use in video games.

For several reasons, video games in general are extremely complex objects when it comes to media analysis. First, video game aesthetics have been significantly influenced by traditional media, such as film, television, comics, and literature (see Veugen, Chap. 3). Additionally, video games are connected with their own growing aesthetic traditions, which have been evolving since the rise of video games in the early 1970s. Beyond these influences and traditions, we must take into account the procedural and dynamic character of computer games as time-based interactive media, namely, the fact that the course of a game sequence is dependent on the actions and decisions of the player within the restrictions specified by the program code. As such, a game sequence, as a kind of audiovisual text, and the related production of meaning are constituted in a process that can be described as a coproduction of signs, actions, and technical arrangements.¹ The prominent Norwegian game researcher Espen Aarseth referred to this process as “a symbiosis of sign, operator, and medium” (Aarseth 1997, 55).

German game researcher Britta Neitzel has analyzed the procedural involvement of a player in the production of actions and meaning in video games as a relation

¹For a design-oriented approach to the problem of meaning making in relation to game design, see Friess, Chap. 16.

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between “point-of-view” and “point-of-action” (Neitzel 2008, 100). “Point-of-view” describes the level of visual representation and the gaze and “point-of-action” relates to the positioning of a player as a relative agency within the game world.

For the purpose of game analysis, all of this information points to the necessity of paying attention to a player’s actions within the game. Aarseth, along with Markku Eskelinen, proposed the term “user function” for this purpose. Aarseth and Eskelinen distinguish between three main user function types: explorative, interpretative, and configurative (see Aarseth 1997, 64; Eskelinen 2001, n.p.). Following these assumptions, Lauri Taylor has pointed to the importance of the spatial dimension in video games as a main area of game experience, writing, “video game spaces [...] are experiential spaces generated through code and the player’s interaction with the execution of that code through the medium of the screen.” Taylor calls for a “theory which explains how the player operates both on the game space and within the game space” (Taylor 2003, n.p.).

Espen Aarseth has introduced the term “ergodic” to describe the specific work of players navigating their way through a game or a “cybertext.” The term “ergodic,” according to Aarseth, derives from the Greek *ergon* and *hodos*, meaning “work” and “path.” It describes the characteristics of certain media products, where a “nontrivial effort is required to allow the reader to traverse the text” (Aarseth 1997, 1). If we apply this concept of the ergodic to video games, the interface plays a key role since the actual “work” of the performing players is always mediated by the interface. The user interface of a game can be seen as a kind of conduit, through which the players gain access to game-specific information, options for actions, game events, as well as access to the game world in general, and more specifically to its audiovisual representations.

Furthermore, it is the interface that defines the pragmatic dimensions of the explorative, interpretative, and configurative “work” of a player. It also defines the particular interlacing of the point-of-view and point-of-action of a given game, an interlacing that characterizes computer games as digital media products. In other words, the ergodic nature of a video game, understood as the necessary “work” of players on the way through a game, is always a work on the interface or “with” the interface.

But even if all the actual “work” in computer strategy games is always arranged and mediated by the interface as an overall structure, we might still not grasp all the dimensions of meaning that a game produces, implies, and resonates with just by analyzing its interface. On the other hand, it is very likely that we will miss the specificity of computer games as cultural artifacts if we do not take into account the role of the interface as a key element of computer-mediated experience and digital aesthetics.

The analysis of the functioning of interfaces can be regarded as one of the central elements of almost any approach to the issue of “interactivity.” This is because the handling of an interface is a necessary precondition of access to any participatory aspect of computer games. Its mastery is in many ways directly interwoven with the promised pleasures of the game world (e.g., as ergodic obstacle, as implicit telos or challenge, or as “ludic poiesis” – an action that transforms and continues the game world).

Thus, games do require a specific “knowledge of action” that must be adopted by understanding the “meaning” of various interface elements and their pragmatic functions.

Despite this central importance of the interface, its analysis is almost completely ignored or only treated marginally in many computer game approaches.² Regarding the lack of interface analysis, my argument would be that without the attention to basic interface structures, their functions for the actual game action, as well as their semantic and affective implications, any concrete analysis of video games – at least if we want to take into account the specificity of their procedural and performative characteristics – will remain necessarily incomplete.

Focus on Strategy Games

In this chapter, I will discuss some of the functions and meanings of interface structures of video games with respect to their performative, semiotic, and cultural dimensions. For several reasons, I want to limit this discussion to the common interface structures of real-time strategy games. I adopt this specific focus on a single genre because of its direct relation to the framework of the research project “Strategy games: management techniques and strategic action in popular computer games (on the example of economic, military and reconstruction simulations),” initiated and directed by Prof. Dr. Rolf F. Nohr.³ In this project, we are evaluating certain methods of game analysis and focusing explicitly on strategy games and on specific discursive formations of strategy and strategic thinking. In this context, we find it necessary to ask even some very basic questions like “What is strategy?,” “What is a strategy game?,” “What is a game genre?,” “How does a society communicate about strategy and what are the means and media employed to stabilize and to distribute certain – culturally formed and historically changing – concepts of ‘strategy’?” (for an elaborated model on the circulation of strategic knowledge in such games, see Nohr, Chap. 8).

My focus on strategy games is therefore also motivated by the specific demands of our research project. But at the same time, the limitation to a single genre also offers some serious theoretical advantages that are directly related to the approach of interface analysis. In what respect? We have observed that video games are, first, very creative and diverse when it comes to their interface designs. No other form of

²There are only a few approaches to game analysis that attempt to include the study of interfaces within their methodological framework. One noteworthy exception can be found in Consalvo and Dutton (2006). Mia Consalvo and Nathan Dutton describe a general framework for qualitative game analysis, offering a “toolkit” for the study of video games. “Interface Study” is one of the main, but still underdeveloped, categories within the “toolkit” of Consalvo and Dutton. The approach developed in this chapter can be read as a contribution to this toolkit and as a specific elaboration on the category of “Interface Study.”

³More about the project can be found online: <http://www.strategiespielen.de>. Accessed 23 Feb 2011.

popular media possesses such a broad spectrum and substantial variation of interfaces and is so deeply dependent in its aesthetic expression on specific concepts of user interfaces. And second, we find that certain games differ from each other or resemble each other formally precisely by their interface aesthetics (this includes hardware interfaces, game controllers, menu structures, game-related navigation, visual information styles, etc.).

If we, in the field of game studies, still rely on the concept of “genre” as a specific category to sort games into groups and to make some useful generalizations, we do this with regard to the immense diversity of computer games. Usually, we look for certain family resemblances between different games, which occur very often as structural homologies at the level of interface structures. From the point of interface analysis, we can suppose that there is a simple rule that connects interfaces and genre formations: *The repetition of interface structures is part of the process of stabilizing a genre and its corresponding “grammar of action.”*

Therefore, I think it would be possible to show, through a comparative study of different genres, that the emergence of genre conventions in computer games is associated with the establishment of common genre interface structures and metaphors, along with thematic, narrative, and ludic elements.⁴

If, in addition, one considers the interface as a conduit for the effective conduct of players in the game, as I have argued with regard to the meaning of the term “ergodic,” then the important question is about the relation of genre-specific game requirements (the work of the player) and common interface structures.

Interface as a Form of Cultural Grammar

Today’s computer games share a specific feature with contemporary graphical user interfaces (GUI) and operating systems (Mac OS, Windows, Linux): technically, they are optimized for fast response times, and their design principle allows for the manipulation of data structures through the manipulation of visual objects.⁵ Today, in most of the computer games, the dominant paradigm of graphical interfaces defines playful action as action performed on and with images. This is realized on the side of the machine through on-screen visualizations and initiated on the side of players through physical acts using controller devices such as the mouse, keyboard, joystick, gamepad, and others. For the theoretical analysis, both sides belong together.⁶

⁴For a distinct approach to the notion of “genre” with respect to computer games, see Raczkowski (Chap. 4) or Veugen (Chap. 3).

⁵A technical concept that dates back to the work *Sketchpad* (1963) by Ivan Sutherland.

⁶Despite this theoretical assumption, the scope of this chapter is, however, more or less limited to the side of on-screen structures, the images, and the graphical user interface. To analyze the side of player actions demands a different set of methodological approaches, which is beyond the reach of this chapter.

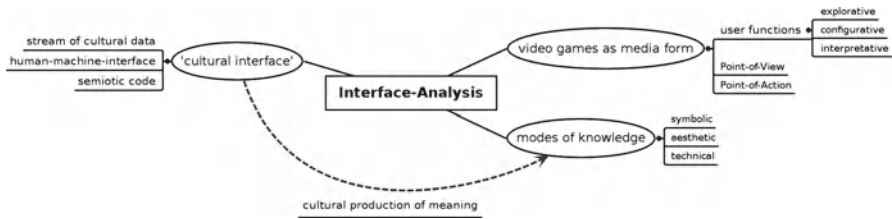


Fig. 5.1 Basic scheme interface analysis (Source: Author’s illustration)

Scholars in cultural and media studies claim that an interface should be understood as a complex code and as a meaning-making system. There is no such thing as an “intuitive” or “natural” interface since all interfaces need to draw heavily on cultural conventions and metaphors to be effective. At the same time, though, interfaces are attached to specific technical, symbolic, and aesthetic modes of knowledge.

Media scholar Lev Manovich wrote in his popular work *The Language of New Media* that “in semiotic terms, the computer interface acts as a code that carries cultural messages in a variety of media [...]. A code may also provide its own model of the world, its own logical system, or ideology; subsequent cultural messages or whole languages created with this code will be limited by its accompanying model, system, or ideology.” Based on this concept, Manovich coined the term “cultural interface” “to describe a human-computer-culture interface – the ways in which computers present and allow us to interact with cultural data” (Manovich 2001, 70). German media scholar Petra Missomelius further described the interface as a “complex of meaningful contexts” (Missomelius 2006, 89) (Fig. 5.1).

These theoretical approaches point forward to an understanding of the user interface as a type of cultural grammar. User interfaces are able to create a semiotic space in which perception, action, and technology are linked together in an interconnection of man and machine, thus constituting temporal manifestations of a “cybernetic continuum” (Millington 2009, 622). It seems clear that this specific mode of cultural knowledge holds some relevance for computer game analysis, especially since user interfaces are a key element to the understanding of the ergodic dimensions of video games.

To understand what features can be activated and controlled qua interface and how they are related to the objectives and tasks of the game environment, functions and meanings must be mutually linked. June H. Park has described this interrelation as the central “semiotic aspect” of the interface (Park 1999, 53). The elements of an interface would thus be interpreted not merely as signifiers that point to a virtual object or function, but as representations related to action within a specific semantic context.

To summarize this theoretical starting point: a functioning interface (according to the GUI model) can be understood as a form of cultural grammar, as a semiotic space, which conventionalizes perception, action, and operative functions in the

coupling of man and machine. As a “complex of meaning” (Park 1999, 53), interface structures include forms of cultural knowledge, and inversely they feed back particles of signification into a constantly changing pool of cultural production of meaning. The interface analysis therefore must not be restricted to the functionalist description of icons, objects, and symbols, but can include all forms of meaning production and all actions of players in relation to the structural and aesthetic organization of the inputs and outputs of a game.

Real-Time Strategy Games

Real-time strategy games (RTS) are one of the most successful subgenres of contemporary computer strategy games. RTS evolved as a discrete and recognizable subgenre in the early 1990s with quick commercial success. More than ten million units of top-selling games like *Starcraft* and *Command & Conquer: Tiberian Sun* have been distributed to players around the world.

The market for real-time strategy games is highly differentiated, but nevertheless clearly dominated by a few companies, among them Blizzard Entertainment and EA – Electronic Arts, both based in California, USA.

The most important characteristic of RTS as a subgenre is the specific game system, which can be described as a combination of war game elements combined with elements of a simulated economy. These elements become fused into a new formula that can be defined as *harvest* → *build* → *destroy*. Before going into battle, players must build production chains and attend to unit logistics, war equipment, and other supplies (Fig. 5.2).

In order to start a production chain, players must harvest natural resources. The exploitation of raw materials such as lumber, grain, and metals is used to build

Subgenres of Computer Strategy Games			
	main objects of strategic decisions	Popular Examples	Subsubgenres
Wargames	Army, Fighting Units	Gettysburg, America's Army, Rainbow Six Series	Historical Wargaming, Tactical Shooter, ...
Realtime-Strategy-Games	Economy and Army; Production Facilities, Infrastructure and Fighting Units	Command&Conquer, Warcraft, Starcraft, Age of Empires	Different 'Theming' (Fantasy, History, SF, ...)
Managment-Games	Company, Industry, Financial Transactions	Zoo-Tycoon, Football-Manger	Business-Simulation, Sport-Management, ...
God-Games	City, Country or Society; Economic, Cultural and Military Investments	Civilization, SimCity, Spore, Anno Series	Gouvernment-Games, Creature-Games, ...

Fig. 5.2 Subgenres of strategy games (Source: Author’s illustration)

infrastructure, factories, or weapons systems. So-called investments in research and development, as well as upgrades, result in shorter production cycles, more efficient utilization of resources, and more effective weapons systems. Controlling these production chains, and aiming at maximum exploitation and efficient processing of raw materials, defines the characteristic order or sequence of game events and the corresponding player actions in RTS games, with their three phases of (1) development, (2) expansion, and (3) battle.

The Work of Strategists: Production Management and Monitoring

What kinds of strategic action and strategic knowledge are culturally produced and reproduced in RTS? What is the player doing? More specifically, what configurative practice of the player becomes strategic action?

First, the cycle of *harvest* → *build* → *destroy* found within the game system itself predominantly defines most of a player's strategic work. Constant monitoring and control in order to ensure maximum productivity is part of the typical ergodicity of RTS.⁷ In order to optimize all relevant operations, the control and surveillance of single objects and their characteristics (micromanagement) is necessary as is economic decision making and the manipulation of complete unit formations (macromanagement).⁸

Due to the economic aspects of RTS, a key element of the strategic task that a player has to accomplish is the adaptation of economic routines. Further, ongoing cost-benefit analyses, planned system refinement, management of resources, along with the prospective calculation of future supplies are all required actions. In addition, the game is simultaneously about the logic of surveillance and control. As strategist, the player is always planner, supervisor, and manager. The precise control of the activity of individual characters in RTS games, wherein detailed game play elements must be manually addressed by the player, is similar to the understanding of *micromanagement* in business, where a manager closely observes or controls the work of the employees. Conversely, *macromanagement* requires decisions to be made at a higher level, usually regarding general economic aspects of the game or strategic planning about how to use larger formations of fighting units.

⁷ For a more detailed discussion on “ergodicity” with regard to its relevance for the concept of genre in video game analysis, see Apperly (2006).

⁸ The terms micromanagement and macromanagement are used to describe certain tactical and strategic actions in RTS. The terms are derived from economic theory. A detailed description is provided by Wikipedia: [http://en.wikipedia.org/w/index.php?title=Micromanagement_\(gameplay\)&oldid=318927077](http://en.wikipedia.org/w/index.php?title=Micromanagement_(gameplay)&oldid=318927077). Accessed 9 Oct 2009; <http://en.wikipedia.org/w/index.php?title=Macromanagement&oldid=300439780>. Accessed 9 Oct 2009.

The Work of Control, Controlling the Workers

Let us take *Age of Empires* as an example. Part of micromanagement in *Age of Empires* is to command single human figures to chop wood, go hunting, till the soil, and work with a pickaxe in the mine in order to acquire basic resources that will be used to further progress in the game. If a single unit is selected in the classic RTS game *Dune II – Battle for Arrakis*, it responds in a military tone, shouting, “Yes, Sir!” The focus on raising productivity by activating and controlling single units is also literally audible in the ever-popular *Warcraft III*. In this game, the Peons, the working class of the Orcs, respond to the player’s commands with the unmistakable exclamation, “Work! Work!”

One of the main strategic tasks of the player is to ensure high productivity. In fact, one of the main strategic tasks of players is really to reach and uphold an increased labor productivity rate. From this rate, it follows, that idle subjects are a waste of time and resources and they point to a less than optimal exploitation of productivity capacities. Idle nonplayer characters (NPC) can be kept track of by a critical glance at the map or corresponding visual displays.

Age of Empires II incorporated a special button to make it easier for players to ensure high productivity and to fulfill the task of controlling the workers. It is labeled “Idle Workers” and is placed right next to the mini-map. With a few clicks of the mouse, players navigate to the NPC’s position, where they can activate the workforce and (re-)integrate the virtual workers into the machinery of production. If all NPC are always working and the screen is filled with images of optimized productivity, the player-manager may rest for a second, feeling secure that he or she will master the coming challenges of the game.

RTS-Interface Analysis: The Logic of the Map

The spatial and visual aspects of the interface are extremely relevant to all of these operations. The spatial order of the RTS game, which is linked to the cultural tradition of cartographic representations of space and territory, puts the player in a powerful position from which he may command the ongoing game. The cartographic view and oversight offer instant access to a huge number of single working and fighting units (Fig. 5.3).

Indeed, it is the dominant logic of the map that informs the interface paradigm on several levels. Let us take a closer look at the typical interface structure of RTS.

This screenshot (Fig. 5.4) shows the recognizable pattern of the user interface, common to most of the RTS games on the market. The screen is split into different areas. First, there is a separation between the area dedicated to navigation and control and the main-map/main view of the territory.

The area of navigation and control again is separated into three different areas. First, there is the mini-map, dedicated to navigation and overview. Next to the mini-map is a second area that provides information about the selected objects in the



Fig. 5.3 Screenshot of *Age of Empires III* (2007)

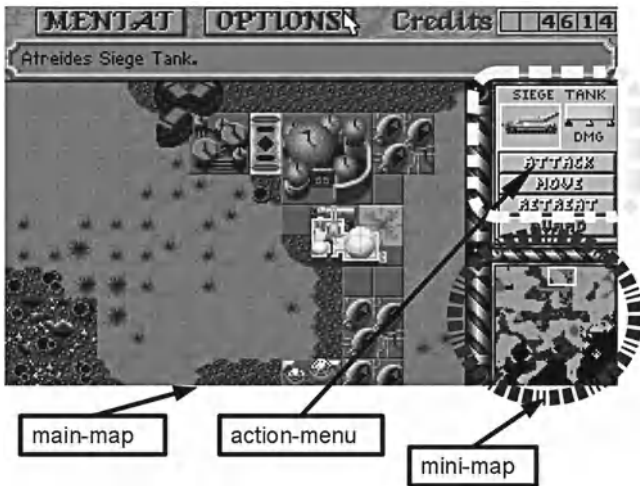


Fig. 5.4 Common RTS game interface: screenshot of *Dune II* (1992)

main-map. Third, there is a complex menu with icons of selectable objects, especially buildings. This third menu area also offers a variety of actions, depending on the selected class of objects.

Interestingly, almost every RTS game uses two separate cartographic views that correspond to different cartographic functions and player actions. The main area of the interface or main-map is largely identical with the actual on-screen playing field and occupies the major part of the screen. The often used mini-map is of a different scale and often represents a complete view of the total on- and off-screen playing field, which is, in the idiom of gaming culture, simply referred to as “the map.”⁹

The main-map is mostly the area for direct actions on the represented characters and objects, such as the mining of resources, the building of bases, and tactical battles. The mini-map, in contrast, is used for overview, fast navigation, and specific information management.

As I mentioned, the spatial arrangement of RTS is connected to the cultural tradition of cartographic representation of spaces and sceneries. The cartographic view gives the player a powerful position from which he can control the ongoing game events. This overview is a kind of power of the gaze, giving access to a variety of individual “screen agents” that are at the command of the players and are to be regarded – within the narrative framing of the game – as labor forces. Thus, the model of the map constitutes the dominant interface paradigm of real-time strategy games.

Corresponding to the requirements of gaming, the interface serves as an iconic window into illusory spaces and a virtual control board (Missomelius 2006, 79). This correspondence points to a shift in which the map becomes an interface. “The map,” wrote Norman J. W. Thrower in *Maps and Man*, “is a sensitive indicator of the changing thought of man, and few of his works seem to be such an excellent mirror of culture and civilization” (Thrower, as cited in Wilford 1981, 14). This is also true of the map-as-interface in RTS, as it incorporates a cultural tradition of maps as means of power and knowledge, at the same time showing the transformation of this tradition in contemporary digital media.

Players not only learn how to read and interpret maps but also how to use them, specifically by navigating through virtual space with the use of the mini-map and the main-map and by activating construction icons in the control area to place buildings on the main-map.

What represents a very important shift is that maps have become directly linked to the ability to change the territory. Orders on the map are instantly executed on the territory and vice versa. In this regard, maps and territories are rendered the same within the virtual realm. The key function of the map becomes obvious if we realize that any user function related to strategic actions is either performed directly on the graphical representation of a map or is related to the territory, which itself is symbolized or represented by a map in a cartographic mode.

⁹This interface structure is found consistently in numerous games of the genre and can already be found fully implemented in *Dune II* (1992), which is widely considered one of the most influential ancestors of contemporary RTS.

Scopic Regime of Real-Time Strategy

The presented screen space and its graphical displays form a specific visual order that can be described – borrowing a concept coined by the cultural historian Martin Jay – as a “scopic regime” (Jay 1988). The concepts of control, monitoring, and economic productivity are part of the strategic work of the player and are key elements of the “scopic regime” that is established and reproduced in real-time strategy games.¹⁰

As I will argue in the following analysis, the scopic regime of RTS is characterized by the interplay between two different and in some ways opposed cultural concepts of space. *My thesis is that the ability to switch fluently, seamlessly between these spatial concepts is one of the core elements of the ergodic requirements of this genre.*

The different concepts of space show a structural correspondence with the two versions of the map, mini-map and main-map. One notable difference can be found in the concept of navigation and its relation to information, space, and territory. Hence, the navigation through virtual space presents a striking field through which we can observe the differences between these two modes of map-as-interface and as spatial metaphor (Fig. 5.5).

While one moves through space using the main-map, all attributes of the crossed terrain remain recognizable (visible). Mountains or lakes, for example, are obstacles within a given territory. With the mini-map, in contrast, space tends to dissolve into merely abstract positions.

Navigation on the mini-map, first of all, means solely navigating the gaze over the territory of the game. With very few mouse gestures, a player can jump to the farthest places with the speed of thought, no matter what the concrete attributes of the territory may be. Further, the territory has no resistance to the flexibility of the gaze.

¹⁰ Martin Jay used this term to discuss the historical and cultural variation of visual regimes. In his famous essay *Scopic Regimes of Modernity* (1988), he discusses the specific dominance of the visual as characteristic of western modernity. The starting point is the question of western ocular-centrism and linear perspective as a cultural perspectivation of the world with numerous philosophical, aesthetic, and cultural implications (in art history, Erwin Panofsky investigated some of them in his famous essay on *Perspective as Symbolic Form* (1927); in philosophy, they are associated with the ideas of Descartes, query, etc.). Jay contributed to the ongoing discussions about the concepts of a dominant visual paradigm and a specific “order of vision” in modernity by arguing for a pluralist point of view; he argued against the idea of a solitary regime and pointed toward the variety of numerous modes of perspectives and perspectivation, constituting a “contested terrain”; modernity could thus be characterized by “a differentiation of visual subcultures” (Jay 1988, 4). But Jay is not the inventor of the term “scopic regime”; he borrows it from French film theorist and semiotician Christian Metz, who studied cinema as a specific “scopic regime.” According to Metz, cinema can be characterized by the fact that it gives us “a primordial *elsewhere*, infinitely desirable (= never possessible) on another scene” (Metz 2000, 59). In psychoanalytic film theory, which was deeply influenced by Metz’ work, the idea of “scopic regime” is associated with the voyeurism of cinema, curiosity, and the Lacanian concept of “lack.”

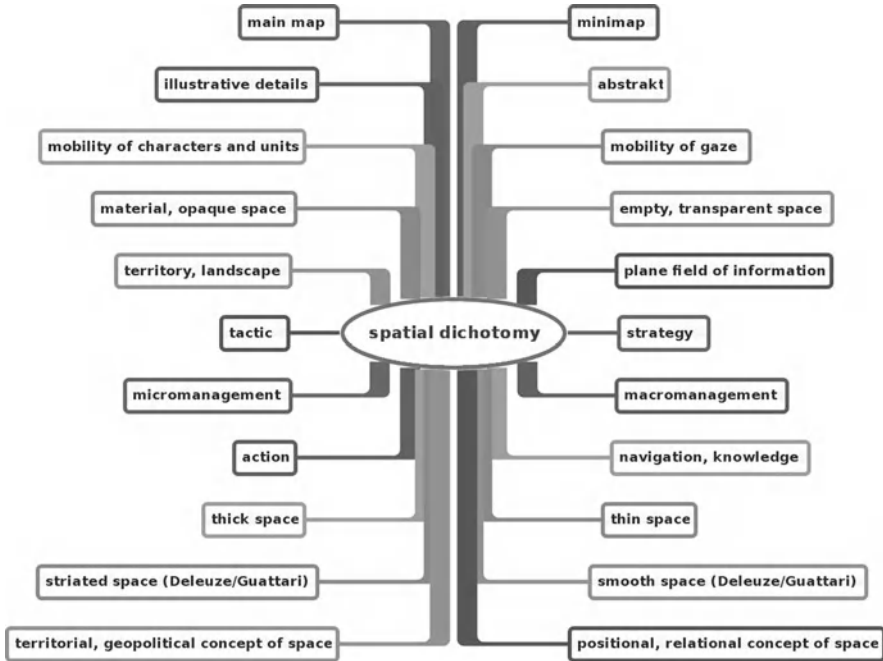


Fig. 5.5 Spatial dichotomy in RTS (Source: Author’s illustration)

The mini-map transforms the perception of space into the perception of an abstract field of information. Characters, buildings, objects, and topographical markers are reduced to mere positions and a palette of symbolic colors.

Also, the immersive properties of the two versions of a map are very different. On the main-map, a player may experience the feeling of being directly involved in the action, sucked in, so to speak, but might not have the same experience with the mini-map. The mini-map acts primarily as a de-territorialized information space and field of navigation. The main positioning of a player is characterized by distance and oversight.

Oscillation Between Territory and Cybernetic Navigational Space

Throughout the game, a permanent oscillation usually takes place between the mini-map and the main-map, and thus between a disembodied gaze and the attachment to graphical (game) characters as representations of the player’s agency within the game world.

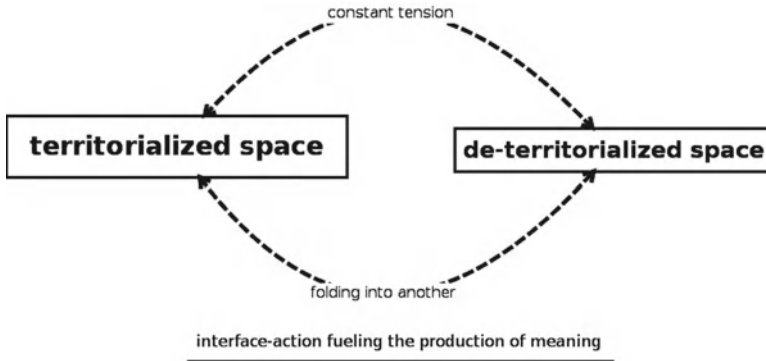


Fig. 5.6 Shifting spaces – lubricant to sociocultural ideologems (Source: Author’s illustration)

The strategic paradigm and its ergodic dimension require a player to oscillate constantly between an abstract space of navigation and information. At the same time, the player must navigate the territorial sphere of action, a space that must be traversed and conquered. There is thus an oscillation between the logic of the map and the territory, between smooth and striated space, between the disembodied gaze and subjected agency.

The strategic paradigm and its ergodic dimension constitute a semiotic structured space of perception and action that can be applied to fictitious desert planets (*Dune II*) in the same way that the historical and political geography of European colonialism is represented in *Age of Empires*. Primarily, this represented space comes into action with a view toward controllability and governability. This view condenses into the concept of cybernetic space, as defined by the mini-map interface.

The corresponding de-territorialized gaze is similar to a kind of machine vision, defined by the processing of data and symbols. At the same time, the de-territorialized mobility of the gaze, mediated by the mini-map, configures vision as an abstract and disembodied function. The visible space is subjected to the controlling eye that gains power by erecting a cybernetic prosthesis. Vision slides into a mere function as it is steered into a posture of navigation and control.

In a different way, however, the interface promotes an extensive re-territorialization of the produced and imagined spaces, depending on the narrative context. There is a key role in the interplay of point-of-view and point-of-action with respect to the symbolic representation of the political geographic spaces. By performing actions on the map that lead to instant changes of the presented territory and by ensuring that these events are valued, the interface is constantly reattached to elements of narration. The map-as-interface defines the screen space, sustained by conventional iconography and narrative embedding such as displays of nations, planets, cities, and cultural or phantasmatic landscapes. Political assessments and cultural values are attached by these operations to the re-territorialized cartographic spaces through actions of competition and control (Fig. 5.6).

The military and economic competition is then explained, justified, and often ideologically naturalized by changing micronarratives. Depending on the desired

“flavor,” this can be the everlasting struggle between adversarial “races” (*Starcraft*), the retelling of Greek Mythology (*Age of Mythology*), the virtual history of European colonialism (*Age of Empires III*), or themes from common fantasy worlds (*Warcraft*).

The characteristic split into different views of a map can first be understood as purely functional, and in terms of its specific options for on-screen action and corresponding tasks, these structural elements of the interface are seemingly indifferent to the narrative content of the games. This kind of “indifference” is part of why this interface structure could serve successfully in a whole range of real-time strategy games. The interface appears here first as “merely functional” and “neutral” compared to the respective narrative contents and actions. But if we consider the production of meaning qua interface, then it seems that it is precisely the practice of switching seamlessly between information space and territory that constitutes the plane on which the historical, political, and economic narratives of expansion, conquest, and control are connected with the practical knowledge of cybernetic interfaces and merged into symbolical dense space. The interface here acts both as a vehicle for a playful adaptation of strategic knowledge, economic imperatives, and attitudes of perception like monitoring and as a lubricant to the ideological reconnection of the data space/virtual space with sociocultural and historical ideologems.¹¹

Conclusion

Interface analysis offers some promising starting points for a hermeneutics of digital media, especially with regard to conventional genre structures. In RTS, even a short analysis suggests an intense interlink of strategic know-how with the regulation of visual perception or, in other words, with a specific scopic regime. Essential to RTS, this scopic regime may enforce specific actions while inhibiting others. A successful performing player will change constantly between two opposing modes of gaze, two different views that are mutually folded into one another. These opposing modes of gaze correspond to different cultural concepts of space that must be engaged in the process of strategic action. The distinction between these concepts is materially condensed within the structure of the interface, namely, in the separation of the mini-map and main-map.

The sophisticated alternation between mini-map and the main playing field corresponds to the combination of the basic tasks of micro- and macromanagement. Therefore, the territory is folded into a cybernetic control space and vice versa.

Both strategic knowledge and strategic action in real-time strategy games are defined by a specific order of map and territory. There is a tension between the cybernetic control on the one hand and the “dense” space of the playing field on the other

¹¹ Ideologems are modular building blocks of ideologies.

hand, where the participating agents (players and NPC) compete against each other in the struggle for expanded zones of influence and power. It is a playing field that is more than saturated with re-territorialized symbolic and cultural propositions and where the interface structure has influence on the specific production of meaning within the gaming process. Since the user interface draws heavily on cultural traditions of spatial representation, strategic knowledge and strategic action are formed within a specific media arrangement and its conditions of agency and perception.

The production of meaning can be considered a kind of machine fueled by the tension within the interface structure. The tension between the cybernetic control space and the thick space of the main-map, a space characterized by competition between players trying to expand their spheres of influence (re-territorialized space), is saturated with cultural-symbolic propositions.

If we examine other genres than real-time strategy games in order to compare different game genres, we find that the general notion of “genre” is deeply interwoven with specific modes of representation, information management, and specific grammars of action. *First-person shooters*, for example, share some crucial interface characteristics that are part of the specific genre structure. Usually, space is constructed with linear perspective in a manner that puts the focus on the player as the *origin* of space by enhancing the power of the gaze as a key element of the formal representation of space. Stephan Günzel therefore described first-person shooters with regard to a phenomenological tradition as a formal representation of an ego, “I” or “Egoleib” (Günzel 2009, 343), while other authors have argued that the first-person view in games could be interpreted as the return of a transcendental, “Cartesianesque” subject and the “myth of the autonomous self” (Shinkle 2003). In each case, the interface is interpreted by its ability to define a typical subject position.¹² In first-person shooters, this subject position is characterized by the specific constellation between point-of-view and point-of-action as well as by the genres specific “grammar of action.”

If critical interface analysis can contribute to the understanding of games, it is necessary to go beyond the concept of the interface as a means to an end, a mere tool. Instead, we need to pay more attention to its structuring capacities because the interface is in many ways affected by different modes of cultural knowledge. Increasingly, the various user interfaces appear entangled within a certain excess of meaning production and its social machineries. In turn, our user interfaces have themselves become part of the production of meaning: They are a decisive component of our technologically mediated experiences and of the social machinery of cultural (re)production.

¹² Taken as a formal setting, a preset of any individual player action, interfaces can be analyzed as a force of structuring the preconditions of any actualization or instantiation of individual game sessions. One could say that interfaces define the possible ranges of “empirical” player subjects by structuring their “ideal” positioning. Therefore – at this stage of game theory – interface analysis as an approach to game analysis is not a tool for the examination of socioempirical player behavior but for the analysis of computer games as complex media forms, their specific way of reproducing and transforming sociohistorically and culturally defined player positions.

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Chapter 6

Computer Games as Works of Art

Daniel Martin Feige

Introduction

Despite the significant quantity of prohibitive statements on the media landscape, we can witness the formation of a new way of talking and thinking about computer games. This change of perspective is not only represented by high-profile public statements. The chair of the German Cultural Council, Olaf Zimmermann, recently claimed that computer games should be understood as cultural products (Zimmermann 2008). It is also represented through the young scientific tradition of game studies, which take computer games seriously as new cultural and media phenomena. From a philosopher's perspective, this chapter aims to pursue the question whether computer games can be seen as certain specific cultural products, namely, works of art. An answer to this question can enrich the discussion within game studies because it is helpful to understand potential functions of certain kinds of computer games. The answer to this question depends, of course, on the definition of the two terms in question. Also, in the realm of questions of definition, philosophy can prove valuable for the discussion within game studies. Thus, in the first part of my chapter, I will outline some considerations concerning a general theory of art. In the second part, I will discuss some central dimensions of computer games against the background of the question how to define computer games and how this question has been dealt with in game studies so far. Finally, in the last part, I will provide an answer to the question whether computer games are or are not art.

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Works of Art

Let me approach the topic from the perspective of philosophical aesthetics and at the same time give a short introduction to some of its major questions. Philosophical aesthetics is a general and nonempirical discipline. It can be separated from specific aesthetics, which, for example, deals only with one form of art or with the aesthetics of nature. It can also be separated from empirical aesthetics, for example, in the area of cognitive psychology. In a broad sense, the method can be described as conceptual analysis: philosophy as a whole tries to clarify our understanding of certain concepts ‘that are key to human practices and activities’ (Carroll 1999, 3). Thus, philosophy seeks to clarify concepts that are central to the understanding of ourselves and of our world. Philosophical aesthetics, of course, looks back on a long tradition. Baumgarten is usually regarded as the founder of modern aesthetics in the middle of the eighteenth century, even though reflections on the nature of art and aesthetics can be found in the Western world dating back to antiquity. My subsequent thoughts will only refer to modern aesthetics, and I will defend a certain concept of art that specifies some basic thoughts to enlighten our contemporary art practices.

Two possible starting points can be identified in the tradition of modern aesthetics. First, aesthetics can be practised as a general theory of sensual perception and aesthetic experience in a broad sense, that is, concerning aesthetic properties of objects and events that are not exclusive to art. The whole realm of aesthetics of nature belongs in this category. The concept of beauty is thereby no longer taken to be the founding or central concept, but just one aesthetic predicate among others (see Wittgenstein 1966). Second, aesthetics can be practised as a theory of art in the narrower sense. How should the relationship of these two branches in the tradition of philosophical aesthetics be understood? My proposal is that they should be *separated*. Primarily, American analytic aesthetics has convincingly shown that sensual properties are not necessary conditions of art (for this argument, see Danto 1983). The best known examples of works of art that cannot plausibly be reconstructed in terms of sensuous properties are Marcel Duchamp’s ‘Fountain’ and Andy Warhol’s ‘Brillo Boxes’. The notion of sensuous properties also seems to be inadequate if we think about certain kinds of literary prose: these works do not exist through sensuous properties, and we normally do not evaluate them by pointing out the graphical or phonetic properties of the language used here (in the context of German aesthetics for this argument, see Reicher 2005, 35). Of course, this does not mean that there is no prose that embodies those properties: there are of course many novels and poems in which phonetic properties or graphic properties play an important role in understanding and evaluating them. My only point is that these cases cannot be generalized. To regard something as a work of art is not simply a matter looking or hearing. Thus, the two areas of aesthetics should be separated: we need to look for relational properties rather than for intrinsic properties.

Some remarks about the criteria for the adequacy of the subsequent answer have to be made. First, the answer has to present a concept which marks *informative*

distinctions between art and other cultural entities such as mere aesthetic objects. Second, the answer has to *be consistent with common and paradigmatic uses* of the notion of art in our practice. Otherwise, instead of clarifying our concept of art, we would just give the word ‘art’ a new conceptual content. Third, the answer has to take seriously the *heterogeneity* of the arts as well as the historical heterogeneity of what has been produced in one art form and the emergence of new art forms. If we, for example, say that it is a necessary condition for something that in order for it to be art it has to have a narrative or that art hinges on the expression of an emotion, we do justice only to *some* kinds of works of art. There are nonnarrative works of art, for example, many forms of music, some experimental movies or movies whose point is to present certain kinds of attractions (see Gunning 2008). There are works of art which do not express emotions, such as many abstract paintings (see Goodman 1976, 48). Our general concept of art would be too narrow and too exclusive: many entities that in our practice are understood as works of art would no longer count as works of art. Finally, as a fourth point, the answer to the question has to take into account the fact that the concept of art is somehow a *normative* concept. This means, we often use the notion of art in an evaluative sense. In my opinion, the answer to the question has to take this normative dimension seriously, but it should not by itself become normative in a prescriptive sense: formulating a theory of art should be understood as an enlightenment of our understandings, not as a judgement about the quality of different works of art.

I will try to clarify the concept of art in three steps. The first step (1) concerns the kind of entities works of art are, that is, the *ontology of art*. I thereby refer to questions of ontology not separated from reconstructions of our practice: philosophers as different as Hegel (1977), Heidegger (2008) and Wittgenstein (2009) have convincingly argued that ontology should be understood on the grounds of our practice and not vice versa. Thus, talking about the ontology of art is ultimately talking about our understandings of art that are embedded within a historical and intersubjective practice of interpreting and evaluating works of art. The second step (2) concerns the historical-cultural *function* of art. This second point can explain the normative dimension of the concept of art as well as the question why we often disagree about interpretations and evaluations of certain works of art, without becoming normative in a prescriptive sense. A final third step (3) concerns the specific *mode* in which art fulfils the function I reconstructed in the second step. It tries to acknowledge the fact that works of art are embedded within a practice of understanding that is different from other practices of understanding, for example, of everyday things or the propositional understanding of philosophical and other texts.

1. Concerning the ontology of art, we have to distinguish between the question of ontological features of one specific kind of art and the question of ontological features of art as a whole. These are two different questions, and I will only try to give a short answer to the second question, even though much could be said concerning the first question. We have to acknowledge the fact that the way works of art exist cannot be compared to the way that, for example, physical

objects exist. If there were no humans, there would not be any art – an insight already put into words by Kant (see Kant 1978). But this characterization of works of art as *relational entities* is not sufficient. Works of art are relational entities in a much stronger sense: their existence is not only dependent on the cognitive and sensuous capacities of humans in an anthropological sense or the subject in the spirit of the transcendental philosophy, but their existence is dependent on *shared practices of interpretation in historico-cultural forms of life*. This can explain the processual and dynamic nature of works of art, which is not due to their possible material basis, but depends on their existence as highly cultural and historical objects. They change with our practice of interpreting them. New properties and new possible meanings can be discovered while other properties and possible meanings may be obscured (for this point, see Danto 1997; Gadamer 2005). Works of art are *constructed via interpretation* – an idea that has also been put forward by the American philosopher Arthur C. Danto (Danto 1983). The idea of works of art as constructed via a shared practice of interpretation tries to acknowledge the intuition that only *certain* properties of works of art are in fact properties of the respective work of art. Even though many kinds of works of art have physical properties, these properties are normally not the properties that are constitutive for understanding them as works of art. The physical weight of a sculpture by Auguste Rodin is not important to this sculpture *as* a work of art, just as the physical sonic waves that can be measured during the performance of a composition by Bach is not constitutive for an understanding of Bach's composition. As Arthur C. Danto has also argued (Danto 1983, 33–34), our understanding of works of art – in contrast to dealing with everyday things – always allows us to ask what a specific work of art is *about*. While asking this question regarding a simple snow shovel in our garage is absurd – it is just a simple snow shovel, even though it has aesthetic properties – it is never absurd to ask this question, for example, in the light of Duchamp's ready-made 'In advance of a broken arm' (see also Carroll 1999, 6–7). There is something *to be understood* in our encounters with works of art.

It is thereby obvious that the matter of giving plausible answers to the question what a work of art might be about depends on capacities that subjects have not only as participants in forms of life, but that are dependent on area-specific training that subjects mostly tacitly acquire during their encounters with certain kinds of art. The immediate understanding of works of art is a myth and only psychologically true; the fact that certain kinds of literature, paintings and music can be understood in a modest way by most people from our culture presupposes an acculturation (for this argument, see Dickie 1997, 79) and the fact that these kinds of works of art are omnipresent. Tonal classical music, classical narrative novels or representational paintings are examples. It is a matter of being familiarized with certain kinds of works of art.

2. The former points of clarification do not of course answer the question about the *function* of art. Museums, concerts and performances are all but self-evident when seen from an ethnological point of view of our own culture. Of course, works of art can fulfil many different functions. Our interest in works of art can

be diverse and sometimes also brought about only by subjective interests. But we would not declare all possible functions to be relevant to works of art as works of art on a conceptual level. For example, works of art are lucrative assets in the art market, and they can display the social status of a person. These are *external functions* of works of art. Concerning external functions, it can be conceptually differentiated between those external functions that are nevertheless *dependent* on the work of art – think, for example, of using a certain symphony in a commercial – and those external functions that are *independent* on the work of art, think, for example, of putting a sculpture on a weighing machine to get a certain weight on one side. In order to understand a certain work of art, we do not need to refer to its external functions. In line with the Hegelian theory of art (Hegel 1998), which tries to outline the logical place of art in the human world, I would like to separate these functions from an *internal function* of art. This does not imply a hierarchy between external functions and the internal function, but it implies that the concept of art cannot be reconstructed by simply referring to external functions. The classical *topos* of the autonomy of art means, in fact, that art is autonomous concerning certain potential functions when compared to another specific function.

This internal function can be called *Selbstverständigung*. The concept of *Selbstverständigung* means that art is a source of self-understanding. Art has to be understood as a *reflexive practice*, and while engaged in understanding the work of art, we gain *understanding of the understandings that we already have as participants of a historico-cultural form of life*. Thus, art always concerns us and our position in the world, that is, in the most general sense, what the topic art is about; even though works of art can be about many things, they are also always about us and our position in the world. Of course, we do not draw our self-understanding only from our experience of works of art, and we also only do it with certain works of art. Works of art are *candidates* towards an understanding of ourselves. Thus, not every work of art fulfils this function with regard to every subject, so the status of something as a work of art is always disputable. This characterization can do justice to the normative dimension of the concept of art without being itself normative in the wrong, that is, prescriptive, way because it is not saying what works of art should look like and it is not saying what they should let us understand about ourselves – these are questions that can only be answered within interpretations of individual works of art.

3. Of course there are a lot of cultural practices that fulfil the function of coming to understand ourselves. Apart from art, Hegel listed philosophy and religion. Whatever may count as a device for understanding ourselves, it is necessary to reflect on the manner in which it fulfils that function specifically. We have to ask how the *mode* of art fulfilling the function of *Selbstverständigung* can be specified. For a start, it is possible to characterize the specific way in which works of art are means of self-understanding, by saying that the understanding of works of art cannot be taken for granted, because they pose challenges to the understanding of the recipient. We have no practice that embodies definitive rules of interpretation of works of art, but every interpretation has to do justice to the

individuality of the work of art – or, concerning certain art forms like music and theatre, also the performance. That there are no definite rules is due to the fact that works of art establish an *inner logic of their elements* that require the recipient to follow it in order to understand the work (Adorno calls this the *Formgesetz* of the work of art; see Adorno 1984, 197). This inner logic can be described in such a way that each work of art specifically constitutes what counts as an element for it as well as articulating the differences between those elements. Thus, a self-referential use of camera angles in an artistic movie, variations on a theme in artistic music, and the emergence of colours in artistic paintings become elements of an artwork by its differential relations to other elements and by the way the work articulates these differences. Talking about the interpretation of works of art thereby always concerns the question of the elements of the work. Thus, if materials like notes, stones, camera angles, body movements, colours and so on are used within the context of a work of art, they are never the same thing that they are outside of the work. Of course works of art also rely on and play with the connection to meanings of its materials that these materials embodied within the dynamic traditions they have been used in within traditions of art or in everyday medial practices. The materials of works of art are never innocent – this is most apparent for works of literature, which use words that rely in most cases on our everyday usage of words (see Seel 2004, 106), but it is also true of music since we are acculturated into a practice of understanding certain sounds and rhythms. But while following the inner logic of a work of art, these materials are transfigured into elements of the work. In following the inner logic of the work, the recipient's understandings undergo a transformation because he has to adjust his ways of seeing, thinking, etc. to the ways of seeing, thinking, etc. and what the artwork demands in its specific constitution of its elements (the *topos* of transformation has been developed by Heidegger's theory of art; see Heidegger 2002). A subject who arranges his life in contact with certain types of works of art will thus establish new modes of seeing, hearing, thinking, acting and so on (in the context of German aesthetics for these considerations, see Bertram 2009).

Computer Games

Much more could be said about the question of defining art, but for now I leave it at that and turn to the second term of the initial question, namely, computer games (I use this term as a generic term also to refer to video games in every sense). Within the interdisciplinary field of game studies, certain approaches to computer games have been dominant. The question of *defining computer games* has thereby not been the main interest of the discussion and has often not been approached directly (an exception being Newman 2004, 9; for a philosophical discussion, see Tavinor 2009, 15). Computer games have mainly been dealt with from a *narratological* (see Murray 1997; Wolf 2003; Jenkins 2004; in the German context, see Neitzel 2009)

and *ludological* (see Frasca 2003; Aarseth 1997; Juul 2005) perspective. There are other approaches, of course: in the German context, Kringiel (2009) has, for example, applied major perspectives on *May Payne 2*, and questions of the mediality of computer games are for instance discussed by Günzel (see Chap. 2) or Veugen (Chap. 3). But it is my aim to make some general points of definition. None of these perspectives can claim to offer a definition of computer games in a strict sense: either they are *too inclusive or too exclusive*. The situation is comparable to the question of defining art: if, for example, we say that it is a necessary condition for something that in order for it to be art it has to be representational, we include street signs but exclude abstract paintings and most kinds of music; thus, this definition is too inclusive and too exclusive (apparently, the same holds true for art-as-expression theories; Adams 2007, 256). Let me spell out this argument for the narratology (1) and ludology (2) and then try to draw some conclusions out of it regarding the question of defining computer games (3).

1. Concerning *narratology*, it is easy to see that it can handle important aspects of the early text adventures by Infocom, as well as it can handle important aspects of games like *Baldurs Gate 2* and *Monkey Island*. These games are narrative games. Obviously, the specific way computer games narrate in contrast to movies or literature has to be clarified. Thus, the theory has to make informative distinctions. A general theory of narration is a useful project but is a different project from spelling out a media-specific theory of narration concerning the definition of computer games; otherwise, the theory is *too inclusive*. But even if this would be done convincingly, narratology in the realm of computer games would still fail as a definitional project because there are *counterexamples*, namely, games that are nonnarrative by different degrees; thus, the theory is *too exclusive*. To refer to first-person shooters like *Unreal Tournament 3*, to classical 2D-shoot-em-ups like *R-Type*, or to puzzle games like *Tetris* as narrative games is a mistake: those games are possibly accompanied by narratives, but these narratives are not the central properties of those games. The poor story of the first *Quake* game is legendary, but even if it had been good, this would hardly have been a reason for its success. Thus, while a lot of computer games are substantially based on narration, some computer games are just loosely based on narration and some computer games do not feature any narration at all – think of *Tetris*, for example. Thus, narratological theories understood as a definitional project are either not informative, because they are too inclusive, or they are plain wrong, because they are too exclusive. This argument against narratological concepts of computer games also holds true for theories of interactive fiction (not every game is fictional), architectural theories of computer games (not in every computer game can the player control his view through a representational space by himself), image theories of computer games (early text adventures cannot be described as interactive images in a reasonable sense) or theories relating to the movies (not every game draws on visual styles and conventions of certain kinds of movies) when they are applied to the realm of computer games.

2. Concerning the *ludological* perspective, it seems obvious that it tends to be *too inclusive*. This holds true even for more specific definitions like Aarseth's much discussed concept of the ergodic (Aarseth 1997) because it cannot differentiate between games, computer games, cybertexts and even performances in a sufficient way (for a critical discussion, see Tavinor 2009, 44). Jesper Juul's similarly much discussed thesis, that computer games are game/fiction hybrids (Juul 2005), also suffers serious definitional problems on the game front: it is more than counterintuitive to situate open-ended simulations like *Sim City* on the border of games (Juul 2005, 43) because this typology is stipulative inasmuch as it comes into conflict with our established way of seeing *Sim City* as a full-fledged computer game. These problems of ludology are due to the fact that some computer games seem to share more of their constitutive properties with movies (think of the interactive movie games), literature (think of early text adventures), etc. than with traditional noncomputer games. It is more than questionable whether the concept of game can be reconstructed in a homogenous way that would allow for an informative definition in terms of jointly necessary and sufficient conditions. The same holds true for the dimension of interaction in computer games: it seems hardly possible to define interactivity in a homogenous way that would apply to all kinds of computer games (for this argument, also see Tavinor 2009, 32). If we think of all the interactive movie games in the mid-1990s, not only there were just slight degrees of interaction, but this kind of interaction is quite different from the interaction in first-person shooters like *Call of Duty* or isometric turn-based strategy games like *Jagged Alliance 2*.
3. Neither narratology nor ludology can be understood to offer a definition of computer games in terms of jointly necessary and sufficient conditions. How then should we handle the question of defining computer games? At the beginning, I drew a comparison between questions of defining art and questions of defining computer games. I want to exploit this comparison further and offer an alternative to proposals that try to define the concept of computer games within the definitional framework of jointly necessary and sufficient conditions. I want to offer a perspective for a *nonessentialistic conceptual framework* for questions of defining computer games.

In the 1950s, the philosopher Morris Weitz formulated the argument that even if something fails in terms of a definition of art, one can nevertheless point out central dimensions of certain kinds of works of art (see Weitz 2004). In line with this argument, we should understand the above-mentioned narratological and ludological approaches in terms of accentuation of *central and important dimensions of certain kinds of computer games* and not as definitions of what a computer game is. Morris Weitz also made the point that a definition of art in terms of jointly necessary and sufficient conditions is not possible and applied the Wittgensteinian concept of *family resemblance* (Wittgenstein 2009) to the question of defining art. Even if this concept is confronted with serious problems concerning the question of defining art (e.g. see Davies 2004), it can nevertheless in my opinion do a good job concerning the question of defining computer games because it can take the huge dissimilitude

of different computer games into account. Wittgenstein illustrates the logic of family resemblance by discussing our use of the concept of games. Regarding our different uses of this concept, he comes to the result: there is no set of jointly necessary and sufficient properties that is exemplified by all games. Some games have rules while others have none; some games are played on a board while others are not, and so on. While game 1 might exemplify property A, B and C, game 2 might exemplify property B, C and D and game 3 might exemplify property D, E and F. Thus, what we have instead of a clear-cut definition is a complex of similarities and relationships. Of course, Wittgenstein is not saying that all of our concepts are ruled by the logic of family resemblance – but some are and we can find out which ones when we look at our common use of these concepts.

In my opinion, an application of the concept of family resemblance to questions of the definition of computer games is helpful insofar as it offers the possibility for a *nonessentialistic exploration of central dimensions of singular computer games*. Furthermore, it stays open to possible new inventions in the realm of computer games and possible new migrations from other media into the realm of computer games. It also places us in a position where we can avoid all the varieties of a historiography of games that operates with a linear model of progression or regression of games: despite the short history of computer games, the cultural artefacts that fall under the category of computer games are incredibly dissimilar. There has already been a development of different lines of traditions of gaming, which in many cases are interconnected. The differences between these games are not only differences of age and thus technique: the gaming mechanics are quite different; the character of interactivity is different; their themes, tasks and conventions are heterogeneous, and the amount and ways of using narrative, visual, cinematic and literary devices and styles vary.

Computer Games and Art

So much more could be said about computer games, but let me stop here and put the pieces of an answer to the initial question together. Concerning the heterogeneity of computer games I just outlined, one needs to state: asking whether computer games are works of art or not is *the wrong question!* The concept of *the* computer game as art is as problematic as the concept of music *in general* as art. The only intelligible question is whether *some* computer games are works of art. The same holds true for other media: some pieces of music are art while others are not; some literature is art while some is not. The question whether some computer games are works of art can be answered affirmatively as long as these computer games can be shown to fulfil a certain function in a certain way, as I outlined in the first part of my paper. *Thus, it is their possible role as a source of self-understanding by means of a specific mode in which they establish their elements that makes them candidates for being appreciated as works of art.* Thus, the fact that computer games are products of collective work and that technically skilled computer graphic artists contribute to them as well

as musically well-educated composers neither makes them art or nonart. Their use of visual and audible materials does not make them works of art either. This only makes them well-crafted aesthetic objects.

The answer to the initial question is in fact the same answer that is the answer to the question whether music or literature is art. In short, *some computer games are candidates to be received and appreciated as works or art, while others are not*. This question is also connected to the question of a *genre*-theory of computer games (see Raczkowski, Chap. 4). While sports games may be well designed and have a distinctive artistic design and a great sound design, they are not normally candidates as works of art, just as a football match is not normally a work of art even if it might be an aesthetically rewarding event. The same holds true for puzzle games, just as playing chess is not an engagement in the realm of art. Of course, this is not meant to apply to intrinsic properties, because a football match might become a part of an artistic performance like playing chess is a part of Duchamp's performance 'Reunion'. But this playing is no mere playing, because it is transfigured into an element of the work – which is always possible. Thus, potentially everything *can* become part of a work of art ('Reunion') or simply become a work of art ('Fountain'). But this neither means that everything *is* a work of art nor does it mean that simply playing puzzle games or sports games has something to do with art. Yet we have to understand the difference between art and not art as a *normative* difference: we do not need to understand the difference between computer games that are candidates for being perceived and appreciated as works or art and those that are not candidates for this as a matter of hierarchical normative judgements, but simply a matter of *different kinds of objects*. Thus, saying *Tetris* is not a work of art does not imply that it is not a great game.

It is not possible to make a list of computer games that are works of art, because the status of being a work of art is neither something fixed nor something that can be decided without considering our whole network of intersubjective and historical art practices and ultimately the function of these artefacts. It is also always debatable which computer games are candidates for being appreciated as works of art. In a short closing comment on some computer games, I will nevertheless try to roughly outline the perspective just developed about some computer games. None of the following short characterizations are meant to be essentialist. Rather, they are to be understood as perspectives on these games that try to open up potentials for self-understanding through these games within our contemporary form of life. The fact that I refer to properties of these games in order to characterize their arthood does not stand in conflict with the developed concept of computer games as characterized by the logic of family resemblance: these properties are not understood as necessary and sufficient conditions for something to be a computer game but are understood as central properties of these specific kinds of computer games. Let me discuss three examples, one of them being evidently a work of art, while concerning the other two this might be to a lesser extent evident: *Sod* (1), *Planescape: Torment* (2) and *Bioshock* (3).

1. The first example is *Sod* by the art collective Jodi from 2000. This is a modification of a famous early first-person shooter (*Wolfenstein 3D* by Id; its expansion

being *Spear of Destiny*). The game mechanisms and conventions of this genre in *Sod* become elements of a work of art: they are alienated and thematized by *Sod* so that the differences in distinct dimensions of games – for example, visual, auditory dimensions and game mechanisms – become articulated by reassembling these elements in a way that does not allow for traditional playing anymore. If you are accustomed to playing first-person shooters (FPS), when playing *Sod*, you will be able to notice how much you have tacitly internalized some of FPS's game mechanisms and conventions: even if *Sod* has no representational iconography anymore, the player tends to see certain graphical aspects of this game as constructing a fragmented and unreliable 3D environment and tries to associate it with the auditory dimensions of the game. Thus, *Sod* alienates and thematizes the ordinary logic of playing FPS and lets the player discover aspects of his ordinary playing of these games. The player thereby comes into a position that allows him to discover specific aspects of these games that prior to that could not become thematic. On a more general level, *Sod* lets us reflect upon aspects of a medial world disclosure that has already taken place tacitly and, by reflecting it, transforms our usual ways of seeing, hearing and thinking.

2. Let me turn to another example that is without doubt a full-fledged computer game (whereas *Sod* might be considered to be placed within the context of media art) – the computer role-playing game *Planescape: Torment*. This game was released in 1999 by the now-defunct Black Isle Studios of Interplay, the German game designer Guido Henkel being its producer. The game deploys traditional mechanisms of computer role-playing games (advancing in level, character creation, achieving goals and subgoals and so on) and can be played like conventional dungeon crawlers. But, as arguably most who have played this game might agree, if it is played in a traditional way, central and constitutive dimensions of this computer game would be ignored. These mainly concern the dimensions of its story, a certain visual style, its elaborate and exotic NPCs and its unique soundtrack and sound design. I want to draw attention to some aspects of *Planescape: Torment* that mainly concern the narrative dimensions of this game. It is nevertheless important to note that the narrative dimension can only be reconstructed adequately if it is understood as an element that gains its specific contour with regard to its relation to other central elements of the game. The narrative dimension has to be understood through its specific relations to the distinctive use of auditory and visual aspects of this game and its unique fictional world that is based on the AD&D multiverse Planescape (which also raises and thematizes a lot of epistemological issues). These dimensions become elements of a work of art through their specific and irreducible interrelations. At the beginning, the scarred protagonist and avatar of the player, the so-called Nameless One, wakes up in a morgue. He is immortal and has lost his memory. Narratively, this exposition is a clever move because the protagonist does not know more than the player about the outlandish world. The protagonist experiences the strangeness of this fictional world, and the player experiences it likewise. During the course of the game, the Nameless One finds out how his former actions have shaped the lives of the other inhabitants of this world as well as those of the potential

members of his party in an ethically problematic way: his scars metaphorically begin to speak as mnemonic devices. This is realized through many extensive conversations between the protagonist and the members of the party, who, little by little, reveal information about themselves if the player acts in their spirit. Within the fictional world of this computer game, the player is forced to confront himself with the intersubjective consequences of his actions, because in some sections, the game is highly nonlinear and demands decisions from the player that show dramatic consequences within the fictional world. As the protagonist, who during the course of the game comes to accept his primordial guilt and thus undergoes a change, the player undergoes a change himself during and while playing *Planescape: Torment*: in following the inner logic of the unique relationship of narrative, visual, musical and other elements, he gains new perspectives of ethical practice and possible handling of guilt within our way of life. These perspectives are bound to the constellation of elements presented by the game, and the transformation applies to cognitive and emotional aspects likewise.

3. I would like to take up one last example, which might be even less evidently a work of art: the FPS/RPG Hybrid *Bioshock* which was released in 2008. *Bioshock* depicts a fictional dystopian enclave during the 1960s: an underwater city named Rapture which was built by a business man to realize economic, scientific and artistic freedom without restrictions. This freedom ultimately turned into bondage when riots were stirred and genetic engineering had been applied to the inhabitants. By the time the player arrives at the underwater city after he has survived a plane crash, nearly everyone in the city has suffered mental and physical degeneration and has gone insane. On a narrational level, the game offers a particular technique of narrating events – a technique that has already been proven to be original in *System Shock 2* – namely, that the player learns about the events by finding and playing audio logs as he explores Rapture. Also, the story offers a lot of twists and turns, including one self-reflexive moment late in the game that has rarely been seen in mainstream first-person shooters, which narratively thematizes aspects of tutorials and the general gameplay mechanisms of Ego-Shooters. I do not want to reconstruct this narrative complexity in detail, but I want to point out the specific atmosphere of the city of Rapture that *Bioshock* creates through a unique interplay of visual, narrative, auditory and further devices. The art design borrows heavily from Art Déco and merges these elements together with futuristic elements. The art design is characterized by a distinctively ruptured retro style that also contributes to the strange and claustrophobic atmosphere of the game. Obviously, this dystopian enclave mirrors and reflects tendencies in our societies. While and through playing *Bioshock*, the player is not only engaged in myriads of gun fights, but is sensitized to the dangerous potentials of *our* historical civilization process in the wake of the enlightenment and the ambivalent potentials of our use of technological progress and genetic engineering.

The interpretation of these three games may be elliptic, but nevertheless they can show that we can get certain aspects of computer games into view if we discuss

them within a framework of the philosophy of art. Thus, the appli-ance of philosophical questions of definition and considerations concerning the philosophy of art can enrich the field of game studies. Also, the question *whether* computer games can be works of art has been answered. The question *which* computer games are works of arts is however an intrinsically open question.

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- Max Payne 2. (2001). Remedy Entertainment (Dev.); Rockstar Games (Pub.).
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- Quake. (1996). Id Software (Dev./Pub.).
- R-Type. (1987). Irem (Dev./Pub.).
- Sim City. (1989). Maxis (Dev.); Infogrames Europe (Pub.).
- Spear of Destiny. (1992). Id Software (Dev.); FormGen (Pub.).
- System Shock 2. (1999). Irrational Games/Looking Glass (Dev.); Electronic Arts (Pub.).
- Tetris. (1989). Bullet-Proof Software (Dev.); Nintendo of America (Pub.).
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Chapter 7

A Theory of Non-existent Video Games: Semiotic and Video Game Theory

Paolo Ruffino

Introduction

Game theory has been concerned since its early stages to differentiate video games from other media. Strong claims have been made in order to postulate this difference as being an essential one. Aarseth (1997), Juul (2005) and early studies in video game theory aim to find a new path for a newly born discipline or field of study. This claim is based on critical differences video games have compared to other media or experiences. It is indeed true and important to maintain that video games are not books, films or ‘analog’ toys. Narrative, as has been argued in early studies in video game theory, is important but not essential, and a narratological approach cannot exhaust an analysis of a video game. Nonetheless, I would like to argue that this initial approach has biased the understanding of video games, or at least our conceptual tools for discussing and analyzing them. I would like to propose an approach based on semiotic studies. Quite interestingly, a semiotic approach was disregarded at an early stage as not suitable for the new experience provided by video games. I argue that the main incompatibility of semiotic with more popular approaches in video game theory is due to its tendency to ‘find similarities’, rather than differences. A theory that pretended to be ‘new’, because its object of enquiry was a new one, could not be at ease with a theory concerned about finding common characteristics in any kind of meaningful experience. I will explain what this approach may offer to video game theory starting from a seemingly paradoxical case, the one of *Cheetahmen 2*.

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The Video Game That Never Was

Cheetahmen 2 is the official sequel of *The Cheetahmen*, a Nintendo NES videogame released in 1991 by a small software house, *Active Enterprises*. *Cheetahmen 2* is popularly considered one of the worst games, or even the worst game ever. Still, this game could prove a seminal work for the establishment of game theory. The guys at Active Enterprises had a quite ambitious plan: they wanted to create a brand that the teenagers of the early 1990s could love even more than the *Teenage Mutant Ninja Turtles*. The overall quality of the game made it clear that the product had missed the debugging phase. Out of the six stages, only the first four were actually available, as the fourth boss did not trigger any switch to a new setting. Yet, the experience of the game succeeded in being even more frustrating, thanks to a terrible collision system that made every single jump a matter of pure luck.

Poor graphics and a bad gameplay made the perfect mix for a game that could have easily been forgotten. One single element of the game, however, saved it from oblivion: the game's soundtrack was surprisingly appealing. As soon as a few videos of the game were published on YouTube in 2007, the soundtrack positively struck the audience and became an instant classic. The soundtrack was recycled by several groups of independent game designers and DJs, while websites devoted to *Active Enterprises* started to appear on the Internet. *Cheetahmen 2* became an overnight reference for *machinima*¹ makers and a legend in the gamers' community (because of its ugliness, because of its wonderful music or because of the combination of the two opposites). Up to now, I have described *Cheetahmen 2* as a particularly interesting and creative case of consumer reception and production. Thanks to many people, this game is having a second life. However, this is far from being the most interesting point in the full story. The point is, *Cheetahmen 2* never had a first life. In other words, *Cheetahmen 2* has never existed (Fig. 7.1).

Cheetahmen 2 never reached the shelves of the game market. The product was so terrible that the designers decided to save what was left of the money and not to distribute the game. The few printed cartridges were stored in a garage. After more than 10 years, these copies were distributed to Nintendo's collectors who started a hunt for the rare cartridges. This is when the first videos of the game were released on YouTube: they were meant to show a never released game to the gamers' community. There was an obvious interest in the game, not only because of the limited number of copies available, but also because the game was introduced as 'the worst ever' by the very first user who uploaded a video. During the same period, there was

¹ A machinima 'is a collection of associated production techniques whereby computer-generated machinery (CGI) is rendered using real-time, interactive 3-D engines instead of professional 3-D animation software. Engines from first-person shooter and role-playing simulation videogames are typically used' (<http://en.wikipedia.org/wiki/Machinima>. Accessed 7 Feb 2011).



Fig. 7.1 The introductory scene of *Cheetahmen 2* (Source: Pictures ripped from one of the few available ROMs of the game)

a new trend of video-reviewing awful games on YouTube for the fun of it.² Thanks to this series of events, the video spread over the Internet and a plethora of modifications started to appear. The soundtrack was remixed, used in different contexts and

² Probably the most interesting and famous case is the channel *Angry Video Game Nerd* (<http://www.youtube.com/user/JamesNintendoNerd?ob=1>. Accessed 7 Feb 2011).



Fig. 7.2 The game was supposed to be released with an introductory comic book

so on, until the game became popular among most of the gamers.³ This is the full story, and this is Cheetahmen's second life as well. The first one, as already stated, is missing (Fig. 7.2).

How Do We Talk About *Cheetahmen 2*

It is possible to talk about *Cheetahmen 2*, and even to evaluate the game, as the gamers' community does. It is possible to talk about the game and describe it using the average lexicon used in every game review, and we may have at the end an overall idea of what the game was like. *Cheetahmen 2* is an interesting case exactly because

³ The popularity of this story has encouraged some Cheetahmen fanatics to emulate the game. From the few available cartridges, a group of NES fans was able to get and distribute a very rare (but more easily accessible than before) ROM image. Saying that 'nobody ever played it' is thus not completely true, but the emulated version is still played by a very minority of all those who discuss, talk and make any kind of reference to the game.

we can talk about it, and we actually do. The YouTube video⁴ can be considered as a text, that is, to use Francois Rastier's words, as a 'linguistic and empirically attested sequence, produced in a determined social practice and fixed on a support' (Rastier 2001, 39). This text works as a comment on a previous text. More precisely, it works as a documentation of a prototypical performance, and it provides an evidence of its existence. According to Genette (1982), a text that works as a comment on a previous text belongs to the category of *meta-texts*. A meta-text is a commentary on a text: it does not need to cite the commented text, and it is an independent text, but it has some kind of debt towards its predecessor. Meta-textuality is part of the larger category of *trans-textuality*, as stated by the scholar, and should be seen as a *necessary* property of any kind of text. Trans-textuality is, generally speaking, a certain number of productions that make a text *belong to the world*. A text needs a meta-text or some other kind of trans-text in order to be present, to have a life (Genette 1987).⁵

According to Genette, these elements are essential for a text because they are the only way a text can be defined and put a limit to itself. The author included in this category all the 'works that disappeared, or were stopped during the production or the ones we only know by name, as it happens for several post-Homeric epics or classical Greek tragedies' (Genette 1987, 6). *Cheetahmen 2* may be added to this list. The videos documenting and showing the game need, in their turn, other texts in order to be presented – like the ones from a YouTube page, giving information about how many people have watched the same video before, what other videos can be linked to this one and what are the comments of the spectators. Every single piece of information specifies the video's particular time, place and context. It should be evident now that the notion of *trans-text* is not an accurate one. Genette clearly states that a trans-text is not something that exists or does not exist, neither something one can spot with an ultimate definition. It is, instead, a series of practices and effects that are made pertinent to a peculiar analysis, but may change according to the interests of different analysts. The trans-textual elements, in other words, *justify themselves*. When it comes to *Cheetahmen 2*, all the videos, the music and remakes, all the paratextual and inter-textual practices (comments and modifications to comments alike) could not be more pertinent than they are now, because they make it possible for the game to be known and recognized. These are all texts that make *Cheetahmen 2* a video game, even though it never was, as much as an identification document makes a person an existing one from a legal and bureaucratic point of view. The para-texts of *Cheetahmen 2* are all pertinent, because they modify the source text.⁶

⁴ The video can be found at <http://www.youtube.com/watch?v=0H2QpaHjO-Q> Accessed 7 Feb 2011). It is not necessarily the very first one but is the most complete and exhaustive.

⁵ In Genette's *Introducion à l'architext* (1979), the transtextuality is called 'paratextuality' ('because there is not, so far, a more precise word', as the author comments). In Genette (1982), paratextuality becomes a category of transtextuality. In this work, we will adopt the more detailed terminology used by Genette (1982).

⁶ For an exhaustive explanation of Genette's theories, applied to the videogame *Death Race* (1976), see Benoit Carbone (2006).

Taxonomies and Game Genre

What kind of game is *Cheetahmen 2*, then? Or at least, what kind of game could it have been? The answer to this question can be found in any description of the videos, which show much less than what gamers pretend to know about the game. The very same community of gamers never questioned the legitimacy of a description or judgement of the game. A good question would rather be: How is it possible to know for sure that *Cheetahmen 2* is a game such as this particular one, and not a different game altogether?

The meta-text of the game, while showing it, is silently placing it in a *taxonomy*. The video shows enough to provide expectations, and at the same time, it locates the game crystal clear on the right shelf to look for in the large library of video games (plus books, films and much more) known as the *archi-text*. The notion of *archi-text* is a quite complicated one. Not just for its explanation, but because of the faceted conceptions and definitions that it received during centuries of critical studies. Francois Rastier explains its origin with this opposition: ‘the Romantic ontology conceived only two different shapes for the totality: the monad of the work – from where the modern conception of Text as a closed structure started – and the “enade” of the Intertext (or *archi-text*) – that included the globality of Literature’ (Rastier 2001, 381). The *archi-text* is basically a group of hierarchically organized texts in which every new experience can find its own place. This act of placement is similar to a process of genre attribution; it is like labelling and immediately connecting a text with a group of different texts that are evoked, attracted and suggested by the previous one. It is a useful process for a text, through which it can easily make itself recognizable and recognized as something that belongs to a better-known family of similar works.⁷ In this case, *Cheetahmen 2* belongs to a notorious family of texts, the one of *bidimensional shoot’em ups*,⁸ with a touch of *platform*⁹ and *shooting*¹⁰ in the mix (the scenario recalls *Super Mario Bros (1985)*, but the *Cheetahmen* are also armed with firearms). Regardless of the publishing phase, *Cheetahmen 2* becomes a video game as soon as this process is realized. It can be argued that unless the *para-text* is put into action, the text is not identifiable, because it is the *para-text* which allows its labelling and gives it an identity.

⁷For the concept of genre, also see Raczkowski (Chap. 4) and Veugen (Chap. 3).

⁸According to Wikipedia, ‘shoot’em up’ is a game ‘in which the player controls a vehicle or character and fights large numbers of enemies with shooting attacks. The style of the game may range from cute to serious, from fantasy and science fiction to historic settings’ (http://en.wikipedia.org/wiki/Shoot_%27em_up. Accessed 7 Feb 2011).

⁹A platform is ‘a videogame genre characterized by jumping to and from suspended platforms or over obstacles. It must be possible to control these jumps and to fall from platforms or miss jumps’ (http://en.wikipedia.org/wiki/Platform_game. Accessed 7 Feb 2011).

¹⁰A *shooter* is a game that ‘focuses on the actions of the avatar using some sort of weapon. Usually this weapon is a gun or some other long-range weapon’ (http://en.wikipedia.org/wiki/Shooter_game. Accessed 7 Feb 2011).

The debate on the status of the archi-text (Is it transcendent with respect to the texts? Is it a list of categories that comes before the real texts? Do genres regulate the rule immanent to the texts?) should not be considered as a fundamental issue for this argumentation. Just to clarify the position of the authors cited so far, however, we can report that according to Genette the archi-text is a group of transcendent categories; according to Rastier, on the other hand, it is neither a class nor a type, but a set of rules established inside the text.¹¹

A Possible Text

What needs to be taken into consideration is how, thanks to a genre attribution, *Cheetahmen 2* becomes a possible text. To exist as a *possible* text is not an uncomfortable position at all. Louis Hjelmslev (1943) thinks about the possible or yet-to-be-written texts as the subjects and ultimate testing field for any attempt at a theory of language. A good theory should be able to discuss possible texts, whatever the language used to write them. It is rather obvious, however, that a possible text does not have any evidence, and as a consequence of this, an interpretation process cannot start directly from that. Nonetheless, it is also true that an interpretation process can start from whatever provided evidence or para-text. From there, one can wonder how the experience of the original, missing text would have been like. It is enough to have a corollary, an appendix, a comment or a derived text. Indeed, it is also true that the result of such starting points cannot be anything but a *text type*. A possible text is a *type*, not an occurrence or an *attested text*. The distinction between a type and an occurrence text is crucial for this argumentation. Being a type does not imply any puzzling consequence for an interpretation process. At least, it does not have any as long as one chooses to adopt the conception of semiotic relation used by the Stoic philosophy and later by interpretative semiotic. Umberto Eco states that:

The semiotic relation is a law that connects an antecedent type to a consequent type. [...] Being a relation between types, it is independent from the channel or material medium where the actual occurrence is transmitted.

Eco discusses, as an example, a relation between fire and smoke:

The Stoic sign is incorporeal, it is the implication between two propositions ('if there is smoke, then there is fire'). [...] The sign is not created because a particular smoke is connected to a particular fire: it is the general class of occurrences that can be recognized as

¹¹ Louis Marin used the term 'archi-text' much earlier than these two authors, to name the 'text from where every other text comes from, its source and environment where to install itself' (*Pour une theorie du texte parabolique*, in *Le Recit Evangelique*, Biblioteque des sciences religieuses, 1974). Genette discusses the use of the same word in his own terminology and points out that what is described by Marin is more similar to what he calls a *hypotext*.

smoke to be connected to the general class of the occurrences recognized as fire. The relation is between types and not occurrences. (1985a, 23–24)¹²

It is the independence from the channel or medium that allows *Cheetahmen 2*, a video game type, to be documented by occurrences on different supports such as the videos on YouTube. The law, in this case, would sound like this: ‘if there’s the comment of a game, then there must be a game’. Consider that a relation is not of a necessary nature, and that it connects types. In a novel, a character may see smoke up in the mountains, and the reader may argue that a fire is burning. The relation is still valid, because it is made between types (and the smoke described in a novel is a type, not an occurrence). What is more is that it is possible to produce a fake smoke and pretend that a fire is actually burning. A type does not need its occurrence, that is why it is still possible to have a *Cheetahmen 2*-type notwithstanding the absence of its occurrence. ‘The sign’ – comments Eco – ‘can be used to lie on a state of the world’ (Eco 1985a, 23).¹³

Two aspects, which are dealt with in this paper, should be made clear. The first one, which should by now be quite obvious, is the will to legitimate a discourse on things that *do not exist*. This is not a revolutionary aim, as discussions on objects that never existed are quite common in almost any field. Furthermore, this is not just a prerogative of academic argumentation: it is in fact very common, even in the most pedestrian discussions, to consider objects that could have been, are soon to be or should have been. It would be rather unfortunate if this sounded as an extravagant proposal only in the context of computer game theory, in which the study of games that never existed has not been proposed yet.

The second issue is a post-posed premise, one that has to be clarified in order to preclude the objections of the reader. This paper does not pretend to claim that publishing a video game is meaningless or irrelevant to its interpretation, nor is the idea accepted according to which a process of interpretation could be based on nothing. Quite simply, this does not happen under any circumstance. That is why a strong stress was put on the presence of a documentation of the game, which provides an evidence for its discussion. A video game is defined also by the complete set of comments that are made about it and by the way it circulates in the community of the users. In front of *Cheetahmen 2*, the player works like a detective who cannot find the weapon of the murderer; however, having so many clues leading to the

¹² Original text: ‘La relazione semiotica è dunque una legge che correla un antecedente *tipo* a un conseguente *tipo*. [...] Il fatto che la relazione semiotica intercorra tra tipi fa sì che essa sia *indipendente dal canale* o medium materiale in cui, o attraverso cui, vengono prodotte e veicolate le sue occorrenze corrispondenti. [...] Il segno stoico è un *incorporale*, ed è la relazione di implicazione tra due proposizioni (“se c’è fumo allora c’è fuoco”). [...] Il segno non è dato dal fatto che *questo* fumo mi rinvii a *quel* fuoco: la classe generale delle occorrenze riconoscibili come fumo rinvia alla classe generale delle occorrenze definibili come fuoco. La relazione intercorre tra tipi e non tra occorrenze’.

¹³ Original text: ‘Il segno serve anche *per mentire* circa gli stati del mondo’.

Fig. 7.3 One of the many fan artworks about the game – if *Cheetahmen 2* was so successful, despite its non-existence, why not imagine a third game? (Source: <http://suckerfreegames.com/forums/index.php?topic=17.0>. Accessed 10 Mar 2011)



butler, he or she is feeling confident about the final accusation. Publishing a game is exactly like providing the weapon of the murderer: it is not essential for a detective/interpreter, but still very helpful (Fig. 7.3).

Semiotic and Game Theory

At the beginning of this paper, I claimed that *Cheetahmen 2* was a seminal work for game theory: now, that claim has probably become sensible. Game studies often tried to work in an opposite way, analyzing the direct experience and trying to get a list of invariants out of it. It is not a biased approach to try and define the object of one's study, even by proposing a definition. But the issue at stake, at least as far as it concerns the present argumentation, is the general premise that states that there is a difference between computer games and other objects of the natural world, to the point that this premise is used as a base and as a final goal for the whole speculation.



Fig. 7.4 A series of action figures was supposed to expand the brand of the *Cheetahmen*

The discovery of the first video game ever, for example, shares the same aim as the attempt to have a definition of gaming: both are based on the belief that a boundary line can be found in the very object of analysis.¹⁴ The effort to define the first video game is based on the assumption that there are essential qualities that necessarily place an object on one of two sides divided by a boundary line.¹⁵ According to Juul, there are six elements for determining if an object is a video game. These are (1) the rules, (2) a variable, quantifiable outcome, (3) the valorization of outcome, (4) the player's effort, (5) a player attached to outcome and (6) negotiable consequences. Putting together this factors, Juul proposes a definition of gaming (not limited to the digital kind) and calls it *Classic Game Model* (2005, 36) (Fig. 7.4).

What is taken outside of the scheme, for example, is that the free-form play, gambling and games of pure chance are borderline cases, mostly because of the lack of the player's effort. Juul argues that all these properties can be simulated on a computer, and, therefore, digital gaming is conceivable inside the game

¹⁴ The literature about this topic is large. Among all, see Kent (2001a, b).

¹⁵ Daniel Martin Feige has a similar point while arguing about video games as works of art. The artistic value of a text cannot be determined by the support, and the very distinction between media is established on arbitrary properties (see Feige, Chap. 6).

model. A new experience of a game can be placed inside or outside the definition, independently of the medium that it uses, and it can then be called game, non-game or borderline case. Such an approach, even if it may seem very simple and useful, is based on the fallacy that a series of differences are considered as essential, and they are not seen as accidental, as determined by the context of analysis. For example, a scarcely structured form of playing would probably be called a 'game' by its participants, with no fear of misunderstanding. The players would probably adopt a use of the word according to their own context and interests. Furthermore, all players would know that a continuous series of determinations of every single word used in a language is potentially endless. Definitions have no end, theoretically, as they can produce an infinite series of additions and sharpening. That is why an approach such as the *ludological* one promoted by Juul is destined to be continuously revisable, as it can introduce differences of an unlimited number.

The differences are endless because they are useless for a project of this kind. In his paper 'L' Antiporfirio' (Eco 1985b), Umberto Eco discusses the idea, attributed to Porphyry and popular in the Middle Ages, of creating a representation, in the shape of a tree, of the Aristotelian theory for determining the exact properties of the essential nature of the objects of the world. As Eco states, the fallacy in a 'Porphyry's tree' is that it will always be affected by the contexts, and thus, it may never become an always valid tool, like an ultimate dictionary. Every time a differentiation is introduced, the tree is split, but the difference is external from the model; it is not essential but accidental, thus 'of an infinite, or at least indefinite quantity' (Eco 1985b, 383). As soon as the glance on the same object changes, then a new set of differences is introduced: thus, such a tree has an endless number of ramifications and roots (it becomes, basically, a rhizome, as conceived by Deleuze and Guattari 1980).

The very evolution of ludology testifies to a similar challenge between its followers. At the beginning, the narrative side of games was claimed irrelevant for a study of gaming. Later on, the academic debate loosened, and the narrative side was regarded again as of importance (see Juul 1998, 2001).¹⁶ Indeed, neither of the sides is wrong: they both show that the pertinence of a component is determined by the aim of the research. The narrative side can be very relevant or completely ignored, depending on the interests of the analysis. The video game *Half Life* (1998) may be considered for its plot in a literature study, for its graphics by a technological review, for its interface by a design analysis. None of these properties are essential; none of them are useful or useless unless they are made as such.

The very classic game model connects different approaches, some of them belonging to a description of how a game works, others related to the practice of

¹⁶ Later, the debate tried to find a compromise (see Tosca 2003). Later, Juul introduced a study of fictional elements in gaming, although he states that 'it is possible to discuss rules mostly without mentioning fiction; [however] it is not possible to deal with fiction in games without discussing rules' (Juul 2005, 121).

fruition and value setting. That is why Juul divides the six elements into those that concern 'the game as a formal system', 'the player and the game' and 'the game and the rest of the world' (Juul 2005, 37). Each feature belongs to one of the categories (the rules belong to the game as a formal system, the negotiable consequences belong to the relationship between the game and the rest of the world); and one of them, the player effort, belongs both to the game as a formal system and to the player and the game. According to the argumentation provided so far, the three categories, synthetically called 'the game, the player and the world', are three approaches or points of view. As such, they cannot be determined in a finite number. For example, the historical importance of a text, its economic success, the distribution system, may all contribute diversely to the perception of a game. Even the player's effort may be irrelevant, unless it is decided that a proper definition must consider as key the very practice of playing, an execution and fruition that saves the game from being just software, pure *flatus digitalis*. Any research for invariants in video games would fail in its aim if it were not able to discuss about *Tetris* (1984) in the same way as *Cheetahmen 2*. The 'non-existent game' may easily fit in the categories provided by Juul and is actually a good case for a *classic game* definition. If this happens, however, then it means that the scheme does not categorize games as such, and it does not help in the analysis of their evidence: it works only as a tool for understanding video games as *types*: the scheme inscribes games not as occurrences, it does inscribe them only as long as they correspond to their very own, most intuitive descriptions.

The game studies approach has difficulties in conforming to other epistemologies, as shown by many seminal works. Espen Aarseth's *Cybertext* (1997), one of the most influential, tries to inspect at the beginning of his argumentation all the other approaches used before it. The real object of enquiry of Aarseth's work is the 'ergodic' literature: that is, those texts in which an effort of the reader is required in order to let the reading go through. The word 'ergodic' derives from ancient Greek words 'ergon' (work) and 'hodos' (path). It is the peculiar effort required from a reader of a cybertext: a text that has a feedback loop with the reader (although the terms 'reader' and 'reading' are being critiqued for their inappropriate use in regard to cybertexts). The semiotic theory is suddenly seen as inadequate for the description of a cybertext: 'for semiotics, as for linguistics, texts are chains of signs and, therefore, linear by definition' (Aarseth 1997, 26). The cybertext is described, instead, as a non-linear text. Aarseth uses Hjelmslev as a reference. It is true that the Danish philosopher insisted on the study of the process as opposed to a study of the system, but that is quite different from the conception of linear and non-linear used by Aarseth. The process is the actual realization of an expression, and the system is the virtuality of a language: Hjelmslev moved the focus of a theory of language to its manifestations. On top of this, for a semiotic theory, a sign is not given, is not something just present in the text, waiting to be spotted. The interpreter (may he or she be a scholar, viewer, reader or player) sets and establishes the sign, as he or she supposes or argues that something is standing for something else: a sign does not show itself, it is established by an interpretative act.

Thus, an ergodic literature would not necessarily need a new theory: a new theory is not necessarily determined by a new object; otherwise, it would fall into the same technological determinism that it tried to escape from.¹⁷ Indeed, the role of the reader changes in a text as the ergodic one described by Aarseth. But the degree of this change can easily be disputed, and in any case, it does not justify the establishment of a new terminology. While this is no claim on semiotics as an elective tool for understanding cybertexts, it is beyond doubt that this discipline may approach them as much as other approaches do. The research provided by Aarseth is useful even for semiotics, for it distinguishes the details of a new kind of text like an ergodic one; however, Aarseth does not show in any way a real need for creating a new theory and excluding others as not consistent.

The game theory approach, if it was accepted completely, would probably result academically in a quite non-ambitious one. To find a distinction in what may be called a 'game' and what may not is not a very useful move in the context of such a completely unknown and immense concept. Games exist and have been played since the beginning of humanity, and this happened with no need for definitions or schemes. Even if it were possible to have an ultimate definition of games and computer games, that would be a starting point, not a conclusion. Instead of finding a distinction between games, romances or films, it would be much more interesting, and really ambitious, to find out what makes them similar, what makes it possible to compare them. By the way, the approaches based on the creation of a difference are so common that someone may raise the question of what suggested this need. The doubt is that maybe a similarity was so evident that a desire to belie it arose. Maybe, it is time to enquire into this evidence.

Cheetahmen 2 has exactly this kind of problem, because it can be accepted as a case study only if video games are considered as subject to the same rules of the interpretation process of a human being in front of the external world. *Cheetahmen 2* can be discussed only if considered for its similarities with other texts that 'are not' *Cheetahmen 2*. Exactly as it happens with the books whose copies disappeared or were destroyed, but that we know of for the commentary on them. As it happens for lost films, or those that are close to be screened in theatres. As it happens with the books we never read, but feel authorized to discuss, or even criticize, or for the

¹⁷ The examples provided by Aarseth of a semiotic approach to cybertexts all share a misunderstanding. The ideas by J. David Bolter, or Jens F. Jensen, as described by Aarseth, stating that an interpretation process can be found in a computer are indeed quite difficult to accept, as an interpretation process that happens in a mechanical system can easily be reduced to a stimulus-response scheme. Such a communication process lacks a difference between the expression and the content, so does not start any semiotic process. Indeed, it is a process that happens below the threshold of semiosis (Eco 1975). It is easy to agree with Aarseth's criticism of these studies, but the conclusion, that a semiotic theory has nothing else to say, is quite puzzling: the examples used were failing attempts to study a machine process with a semiotic approach, but they do not exhaust the full potentialities of the method. If those studies misunderstood the basic premises of a semiotic theory, it is their weakness, not of the theory as a whole.

video game previews and all the other vaporware cases.¹⁸ To accept that *Cheetahmen 2* can be discussed means to accept the idea that video games can be the subject of a semiotic study, upon which the categories of a general semiotic can be applied. In other words, it means that the foundation of a new epistemology for digital gaming is neither necessary nor based on sound reasons. Ultimately, video games do not have an essence that can justify a unique dictionary definition. It may be useful to make our speeches clearer, but after that, it may go on only for the sake of reasoning: this method will not conform itself to the natural world of reference.

To state that video games do not need a new epistemology is not the same as closing or erasing any research. On the contrary, it is a starting line. The path that can be seen from here on is even more fruitful, as it allows the new game theory to start a dialogue with other disciplines and compare video games with other forms of human creativity. Earlier, it was stated in this chapter that the categories of a general semiotics can be applied to video games. A general semiotics is a study that is not based on a specific object, but postulates general categories that can be applied to several meaningful cases (Eco 1975). It does not work on singularities, it needs comparisons: a sign, as soon as it is established, connects (at least) two different points. Semiotics investigates how something is connected to something else, and it can be used for understanding digital games as long as they are conceived as part of a system of objects of a different nature.

The connections are expressed by the logical process of inferring; they are guided by the evidence of what is perceived by the viewer and, according to the kind of approach that is adopted, they may bring out many different points, rising to more than 1,000 *plateaus* (Deleuze and Guattari 1980). Thanks to this process of inference and comparison, it is possible to determine a genre, to give a judgement, to establish a continuity and then, for example, to decide to introduce alterations and remix the original work. The art of remixing, as well as remaking, would not be possible otherwise, and it all starts singling out a few pregnant points of interests and establishing a path of detour from there. A semiotic approach is opposed to a Porphyrian tree or any ultimate dictionary and adopts, instead, a model similar to one of the encyclopedias, or of the rhizome, as described by Deleuze and Guattari (1980). A rhizome has no borders, thus we are involved in it, and the only way to move around it is to have partial visions, inferring and moving from one point to another. A perfectly analytical approach needs to be detached from the object and have a view of the totality. Instead, according to a semiotic stance, a view is always partial, and if adopted in a study of gaming, it means that the illusion of having an ultimate understanding must be rejected.

From a different perspective and more recently, Jack Post (2009) acknowledges that video game theory needs to take again into account, if it ever did, semiotic theory. While analyzing the *Tetris* (1984) case in relation to the opposition between narratology and ludology, Post acknowledges that this distinction is useless, and it is much more fruitful to analyze the game through the semiotics of discourse. This

¹⁸On the same topic, see Bayard (2007).

Fig. 7.5 The ‘Angry Video Game Nerd’ gave a very severe video review of *Cheetahmen 2*, contributing to its popularity (Source: <http://cinemassacre.com/>. Accessed 10 Mar 2011)



means acknowledging the presence of narratives in a deep level behind discourses of every kind. In a similar fashion to what I am proposing here, Post maintains that an enquiry into what makes different occurrences similar to each other, rather than different from one another, is a more reasonable and interesting approach for a theory of video game study. Without claiming an elective role for semiotics in the analysis of video games, scholars have maintained in the last few years that semiotics can play a role in this research from a variety of perspectives (Fig. 7.5).¹⁹

Conclusions: Livin’ Large!

Cheetahmen 2 is not an isolated case. Actually, it enjoys the very good company of many illustrious literary cases. Most of the works described by Aristotle in his *Poetics* are unknown to the readers of today, and even Aristotle’s treatises had to be collected and organized by Andronicus of Rhodes, in the first century BC, who

¹⁹The publication of a special issue about video game theory by the Italian Association of Semiotic Studies (AISS) is significant from this perspective (see Compagno and Coppock 2009).

delivered them to public knowledge. Francois Rabelais completely invented the library of Saint Victor, in his work *Gargantua and Pantagruel*, and filled it with books that do not exist, but somehow could exist, like the *Ars honeste petandi in societate* (the art of farting decently in public) or the *Modo faciendi boudinos* (on the art of making puddings). Video game history and critique is full of similar cases. *Duke Nukem Forever* is one of the most famous video games that was never released, despite being announced several times (the first one about 11 years ago).²⁰ Nintendo captured the attention of its audience for about 1 year, avoiding letting it pass to a competitor, announcing new improvements on *The Legend of Zelda: Ocarina of Time* (released in November 1998). After more than 1 year, a few scenes of the game were shown, but some of them never appeared in the final game – for example, a largely awaited scene where the main character, Link, received the Triforce, the most important magical tool of the series. The game, where Link finally got the Triforce, existed as a narration for about 1 year: if the possibility of discussing a story that was never published is still disputed, then it is preferable to take a look at the thousands of comments written in game community forums during that period.

Cheetahmen 2 enjoys the company of a very interesting character, too, one with a quite long name: Agilulf Emo Bertrandino of the Guilddiverns and the Others from Corbentraz and Sura, Knight of Selimpia Citeriore and Fez. Agilulf (which is how he is going to be named from now on) is the main character in one of the best novels by Italo Calvino: *The Nonexistent Knight* (1959). Agilulf is a brave warrior who fights for Charlemagne and who does all he can to serve his king, armed with a shiny white armoured suit. Agilulf is a perfect knight, the ideal one: he comes directly from the Carolingian literary tradition of poems of war. The only problem is that he does not exist. Inside the armour, one cannot find anybody. When Charlemagne questions Agilulf about how this is possible, the knight shows that beyond his visor, there is simply a vacuum. Agilulf is so brave that he overcomes his handicap and outdoes his fellow soldiers. Unluckily, he is doomed to be disregarded by the other soldiers, because they are made of flesh: thus, they are very far from being perfect. They get jealous and annoyed by the zealous Agilulf, and they start to question his origins. As soon as the legitimacy of his title as a knight is undermined, Agilulf ceases to exist. It is enough to question the bureaucratic foundation of something that exists only as a name, as a title, to make it disappear. The pieces of his armour would be collected later by the young Rambaldo, a boy who had joined the army in order to revenge the murder of his father. He would soon find out that there was nothing that endured beyond names, but the name of an object is still all we can get: maybe, one can be the armour he wears, as if it would be with a mask. The poor knight who never existed would share with the Cheetahmen the same ending they would deserve if the videos and the documentation about their existence were to be disputed or erased. Italo Calvino showed in this story how most of what we deal with in our lives corresponds to just its narration.

²⁰ The video game was finally published in 2011, two years after the submission of this paper.

Whether something exists or not can be verified by direct experience, but *how* something exists, this is a semiotic issue. Video games are part of this group, and the consequences of this for game theories are large – starting from a much-needed awareness about the fact that video games are also, in fact, the very language used to describe them.

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Chapter 8

Free Market Economy and *Dino Crisis*: The Production and Circulation of Knowledge in Strategy Games

Rolf F. Nohr

Introduction

“How do video games affect us?” is a current question that is being discussed in diverse parts of our society involving quite different arguments and statements. The answering of such a question challenges not only the public, but furthermore all academics that feel capable of reflecting on the function and structure of media as well as on acting with it. As we all know, this subject also calls those into action whose capability is more recently in opinion formation than in doing conclusive epistemological research.

But the following text is not about disproving arguments and attitudes that are – at least within the media studies – familiar as having been brought forward concerning every new technical mass medium that has occurred in the media culture during the last 100 years without any relevant variation. In the following, we will conceptualize the question “How do video games affect us?” in a more precise way. Since we know, not only from Douglas Adams epistemic works, that one has to consider the precise formulation and conceptualization of the cognizance itself in order to avoid ending up (in the aporia of) having to answer the question about “the video game, the playing, and all the other stuff” by saying “42” – or in a more fashionable way by saying “Counter Strike.” To give a better answer than this, two essential determinations have to be made: First, we need a theoretical framework that fits the object “video game”; second, we need to have a differentiated look at “the medium.”

Regarding the question of method, I would like to suggest the use of the critical discourse theory and especially some special thoughts tracing back to Jürgen Link. The interpretation of video games under the assumptions of a critical discourse analysis (CDA) puts the focus on the working out of common samples, forms,

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symbolisms, meanings, or narrations, which pull crosswise to obvious differences and levels of articulations through and within societies. Media discourse analysis cannot thus be occupied with individual works or texts. Such an analysis wants to reveal hidden structures of meaning which flow through the narrative, ludic, aesthetic, and technical levels of a video game. Thus, the “meaning” of a game would not be implicit in the conception of a distinct object “game” but has to be thought as a broad class of very different objects. To analyze a game, we have to look at paratexts to the game (e.g., manuals, walkthroughs, Internet-based fan talk, or game reviews), at reference texts (like films, books, pictures, or myths of similar content), or at other notes and materializations of the meaning and knowledge. The entire repertoire of articulations of a culture is examined to get an idea of what influences the knowledge and meaning of a game. The key topic of discourse analysis is nearly always the whole setting of meaning structures in a society. It is not an analytic procedure, which can be focused on a single and distinct object. The product of the CDA is always a surplus of meaning. Every cut-scene, every line of dialogue, every action of the player, and every word of team-speak has to be understood as a discourse fragment in the context of other discursive fragments, which are together building an elementary discourse or a disposition.

In other words, the search for such knowledge reservoirs refers not to stereotypes or formal samples, but to the collective knowledge supplies of a society. The advantage of discourse analysis for answering the question about “the meaning of the media” is, however, the conception of an *intersubjective knowledge* of a society not as immaterial common sense, but as “elementary discourse” that is also conceptualized as a visible and material inscription. For the discipline of media studies, the acceptance of such material instances and institutions is important because media are brought together with *materiality*. In the perspective of a CDA, we have to proceed from the condition that video games are always materializations of *intersubjective knowledge configurations*. I also want to set out from the idea that video games always can be understood as negotiation of social and operational knowledge. I suggest a model that particularly covers the translation shift of knowledge. This model proposes how one could theoretically approach the transfer and the interdependence of subjective knowledge, social knowledge, and “the intention of the author.”

This leads to the question about “the media.” How can we conceptualize the interrelation between a system of articulations and a wide range of meanings affected by these articulations? How can we understand the fact that there is “something” medial happening, and that this “something” seems to affect those people who are exposed to this “something” in a certain kind of way? Basically by realizing that we live in a *media culture*. This initial position refers first of all to the assumption that the shared knowledge of a culture like ours is not negotiated within a dialogue including the physical presence of all those who participate in this society but within and via the media. According to this understanding, the media record the inscription of utterances and statements of single members of society that are read and handled by other members of this society. That is, what is said by one becomes what is heard by another without both having to be physically in the same place or

chronologically at the same time. This is meaningful in two ways: First, the media are mechanisms or devices that are able to overcome space and time. Second, they are based on codes and coding, in the most elementary case in the form of speech or writing.

But the crucial point of this presumption about media culture is the following: A medium is no neutral carrier of such codes. In the first place, the selection of what or who shall be allowed to articulate it/oneself in the media is important because medial culture is an exclusive process that includes only those statements that are considered to be relevant or capable of winning a majority. Being able to speak in or through the media is a privilege that is more or less applied as a one-way channel. Media-based communication is not an equal dialogue. Furthermore, the media culture is first and foremost defined by an effect adopted from its predecessor (the highly idealized process of negotiating the terms of politics in direct interaction – the concept of the Grecian polis): that the codes carried by the media are not unquestionable or indubitable laws but positions that the participating subject can work on. Media communication addresses the subject and is an intersubjective kind of communication at the same time. What is said and what is written are neither speaking between equal conversational partners nor the submission of unalterable statements but a proposition formulated (in the case of the media community) out of a prominent position according to which the subject can act in an affirmative, an interpretive, or a dismissive way.

Communication is [...] that basic operation, coordinating action and cause community. It is conceptualized as a *reciprocal* process of social interaction. The answer to the problem how intersubjectivity is possible is the dialog that advances to the primal scene and causes its norm; the ambition of dialog is agreement. (Krämer 2008, 14; author's translation)

So, media communication (concerning video games, too) is on the one hand idealized according to the conditions of the dialogue and on the other hand obliged to be understood as a form of *one-to-many* mass communication.¹ In addition to that, one has to consider the fact that a medium is no neutral carrier of messages or codes but takes the role of an actor in this process. Articulated, one could say that the medium itself is (co)present as its message: “the medium is the message” (McLuhan 1992).²

¹The mention of the term “mass communication” should not be misunderstood as an argument to conceptualize video games as objects that can be described by (simplistic) terms of taxonomical, typological, or distinct forms of order. On the contrary, my conceptualization of video games tends to an understanding of games as unspecific forms of a materialization of meaning, knowledge, and power, which are part of a highly dynamic, complex, and (in its hierarchical structure) unsorted circulation of articulations, actions, and underlying forms of social knowledge. To sharpen this argument, there is no consistent definition for “the video game”: Every single medial articulation has to be described in its own specific form. There are not many criteria shared between *Space Invaders* played on an Atari 1040 and an online session of *World of Warcraft*.

²Such a conceptualization of media refers back to a metaphysical understanding of mediality, as it is, for example, presented by Krämer (2008) as well as in poststructuralist or cultural studies-based theories.

From this point of view, our question “How do video games affect us?” can already be focused upon more clearly. Video games are a specific form of articulation within a media community. A prominent position of articulation (rather diffusely named an “author”) applies a proposition to a society by a nonneutral instance (the media “messenger”). The members of this given society read the proposition and generate its meaning by negotiation, whereas it is mostly unnoticed in what way the articulation of the author has been influenced by the messenger.

So, in the first place, the “effect of a video game” could be seen as the initiation of a process in which the subjects reading a video game deal with the meaning suggested by the author in an intrasubjective as well as in an intersubjective and therefore negotiating way. In short, the subject not only interprets a message but reads it according to his or her own conditions. But obviously, that arouses an analytical problem: The mere object of analysis – the distinguishable video game as a program, product, or text – dissolves for the benefit of its context in production and reception (Nohr 2008, 19–45). So, how can we answer the question of the “effect” of video games if there are no more objects but rather contents, practices, and economies? How can media effects be described if the production and reception of (medial) meaning are no longer separable (Stauff 2009)?

This ideal of constituting the subjective, social, and cultural knowledge in the negotiation of medialized knowledge has to be limited in at least three points, and these influence the work on the question “How do video games affect us?” massively and reintroduce a more pessimistic and critical view. Our society is an *economic-based community*. That means concretely that the media-based communication is always a relationship of exchange in which the generating value plays a certain role. In this context, “exchange” and “value” do not necessarily mean the exchange of goods for money. Also, a more abstract good as “attention” can become a relevant factor in exchange (see Franck 2004). Therefore, the production of meaning during the playing of a video game is also an economic process of exchange, as I have to spend money in order to play and as I also have to invest attention in order to play.³ A second relevant factor that undermines the free circulation of meaning in this economy is the essential barrier of *access*. Access to the production of meaning is not free but bonded with restrictions and obliged to investment as well. Not only the investment of buying a game but also the investment to acquire the knowledge to make this game work on your PC or the investment of being attached to a network (see, e.g., Rifkin 2007). It seems to me that our question about the effect of the game as a medial form is essentially influenced by these two economic perspectives of exchange value and the conditions of access. Furthermore, I would like to enlarge upon a third restraint that is also based on the economic constitution of the society. This concerns the complex dynamics with which an economic media society produces its *norms* and *cultural values*. So, how is an orientating, normalizing, and regulating knowledge generated within the circulation and production of meaning in video games?

³Toward the problem of an extended economy of games, see Nohr (2008, 217–230).

Strategy Games/Playing Strategy

I would like to outline this question by having a look at strategy games and management and construction simulations. The choice of the object being studied is for a simple reason: The “genre”⁴ of strategy games is on the one hand very popular and on the other hand thought to be kind of “innocent” within public discourse. No one would blame *Sim City 4* according to the apprehension that simulating urban regulation and construction operations was linked to the writing on the wall that supposes the ruin of our society nowadays. Though – that is the thesis of our research project⁵ – right there, just as in every other video game, a specific negotiation and stabilization of subjective and socially shared knowledge can be found. According to this, I would now like to propose a model for discussion based on management and construction simulations that at first only suggest functionality for this “genre” but which is furthermore conceptualized for claiming an overlapping validity.

The link between strategy and game is based on the perspective that understands strategy as a specific form of thinking. The strategic thinking, to sketch this aspect more clearly, is a prior requirement for strategic action. Strategic action distinguishes itself by being the result of deliberating upon diverse options of action and fixing the goal to aim at. Therefore, the constitution of the strategic is bound to a mental and conceptional space of operability and optionality. The development of a strategy requires the weighing of different possible decisions. Besides, the strategy will implicitly be based on presupposed objectives from which the requirements for victory can be derived (Nohr and Wiemer 2008).

But such a definition makes two things clear: First, the term “strategic game” is not to be found exclusively in one particular genre. In fact, every kind of playing implies a certain way of strategic thinking. Second, it becomes clear that strategic playing is a concept of acting that not only demands the preliminary design of options for action but also suggests a dynamic exchange of guidelines and expectations for orientation between the player and the game, and that the process of this interaction is neither linear nor one-dimensional. Therefore, common models of media communication that suggest a linear “transport” of information have to fail.

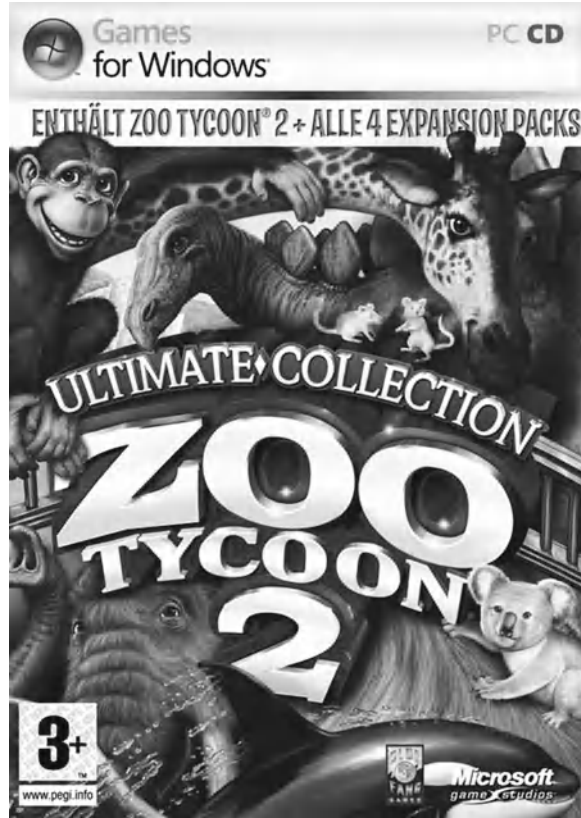
Knowledge and Game

The strategy game orientates its player in the first place for instance by – examining it very naively – giving the information about the requirements for winning the game. In turn, the player develops a guideline for action based on this information in order to achieve the requirements for himself or herself. But more important is the

⁴Toward the problems of genre concepts in video games, also see Wiemer (2008), Veugen (Chap. 3), or Raczkowski (Chap. 4).

⁵See www.strategiespielen.de (accessed November 22, 2010).

Fig. 8.1 Cover shot of *Zoo Tycoon 2* (Source: Zoo Tycoon 2 - 2004)



fact that the game also communicates what kind of knowledge is needed in order to do so. And even more important is what kind of knowledge is needed to gain a victory and to experience the anticipated pleasure, because every game presupposes the knowledge about its concept of the world in order to be sensibly playable (Fig. 8.1).

I would like to clarify this proposition sketchily on the basis of *Zoo Tycoon 2* and its add-ons *Endangered Species*, *Dino Crisis*, and *Marine Mania*. I would like to lay my focus primarily on the negotiation of certain forms of knowledge through, with, and in the game because the discussion of every form of general (cultural and subjective) meaning production would be too overwhelming for this short description.⁶

In this simulation, the player slips primarily into the role of a zoo manager and has to construct a functional and appealing zoo. Donations and entrance fees reward good management. At the same time, the player gets recompensed for protection of

⁶A concentration on the topic of “knowledge” seems to be currently reasonable because the idea of knowledge as a form of “transportable” and “structured” meaning is not only a central idea of philosophy, pedagogy, or linguistics – it is also one key argument in the public discussion about how video games affect us. The question of the agency of a video game is most often a question about what this game “teaches” its player.



Fig. 8.2 Main interface of *Zoo Tycoon 2* (Source: Author's screenshot)

species and livestock breeding by achieving additional items for designing his park (Fig. 8.2).

In more abstract terms, we find most varied kinds of knowledge in *Zoo Tycoon* that the player has to have, gain, or activate the knowledge in order to play reasonably well:

- The player has to have knowledge about a free market economy in order to administrate his zoo effectively (Fig. 8.3).
- The player is instructed about the pretended functions of a zoo in our culture, that is, protection of species, appropriate keeping of animals, and livestock breeding (Fig. 8.4).
- The player is able to revise his or her “objectively” employed knowledge about management and economy by revising the outcome of his or her action out of a subjective position and by revising the aesthetic, functional, and pragmatic qualities (of experience) inside his Zoo (Fig. 8.5).
- Additionally, the player needs intuitive and conventionalized knowledge about menu navigation, keyboard controls, and functions of interface in order to be able to play the game effectively, even if situations occur that are not typical for the genre. In the add-on *Dino Crisis*, for example, the player has to switch into the patterns of action typical for first person shooters suddenly besides having a wide knowledge of interface conventions of strategy games and construction simulations or the reading of statistical charts or mini-maps (Fig. 8.6).



Fig. 8.3 Screenshot of the income interfaces of Zoo Tycoon 2 (Source: Author's screenshot)



Fig. 8.4 Screenshot of the zoo encyclopedia of Zoo Tycoon 2 (Source: Author's screenshot)



Fig. 8.5 Screenshot of the subjective view of *Zoo Tycoon 2* (Source: Author's screenshot)



Fig. 8.6 Screenshot of the subjective view of *Zoo Tycoon 2 – Dino Crisis* (Source: Author's screenshot)

Beyond such rather concrete kinds of knowledge, the player needs also intra- as well as intersubjective knowledge about, for example, nature-culture understanding, the functions of economy, the functions of simulation environments, an abstract idea of the potential of trial action, and so on. In short, in *Zoo Tycoon*, we are confronted with a situation in which most diverse kinds of knowledge “interact” with one another. In this case, the player cannot be thought of as a mere economist but as an eager scholar in terms of protection of species, as a customer in his own zoo, as a photographer, and as an action hero. Social knowledge, subjective knowledge, and the “intentions of the author” (here to be worked on as “enunciated” knowledge)⁷ intermingle. At the moment of playing – so goes the thesis – this mainly enunciative and preformed knowledge and subjective, already existing, or during the playing generated knowledge collide in the form of a *discursive coupling*.

Reservoirs of Preformed Knowledge in the Game

Therefore, in the following, I will employ the term interdiscursive coupling, as it has been introduced by Siegfried Jäger (2004), Jürgen Link (1999), and others, in order to follow up the complexity of this “knowledge-meander.”

We cannot conceive a regulated and bounded “discourse about the zoo,” in relation to our example. We can instead identify most diverse kinds of knowledge, forms of speech, forms of action, and discourse: discourse about animals, the zoo, the culture, the economy as a technology of control and regulation, and the playing as a simulation but also discourse about instructing and learning itself as well as about mediums and their use. These (in each case historically and situationally distinct) forms of knowledge do not “materialize” ultimately in the concrete form of the message but in a diffuse “swarming” of most varying forms of articulation and representation.

But a discourse is not just the sum of all that has been said. Nor can a discourse embody everything that is utterable.⁸ Imperceptible procedures define what it is

⁷By “enunciation,” I mean the production of a position of speaking that cannot be put on the level of an ideal subject but rather on the level of an abstract instance that tends to be invisible. Quite simply put that means that one cannot reasonably talk about the position of an author in the process of the production of video games based on division of labor.

⁸The theory of discursive coupling emanates from the “classic” definition of discourse (referring back to the work of Michel Foucault): Thus, a discourse is “a specifically-historic and special, regulated formation of propositions [...] that are allocated to a specific and special thematic field” (Link 1998, 50–51; author’s translation). Discourses can be understood as articulating practices that “do not represent social circumstances passively but constitute and organize them as a flow of social knowledge through time” (Jäger 2004, 23; author’s translation). A discourse is therefore to be understood as a “somehow” regulated link or formation of utterances. The term “utterances” does not mean description, grammatical sentences, or speech acts, but the entirely individualized, contingent, anonymous, pure, and tight materiality of something “really” said at a certain time and in a certain place.

legitimate to say in a given society. Of course, the question is how such a procedure is negotiated and stabilizes what is legitimate. How do the different kinds of knowledge activated by the subject in order to play *Zoo Tycoon* intertwine with the author's intentions and the mediality of the game itself? Furthermore, it is an important finding of the discourse analysis that the subject is formed and "appliquéd" by the discourses.

Discourses contain so-called "application parameters" for the forming and the constitution of the subjects, their consciousness and with it for their activities and actions. It is therefore the people that design reality, so to speak as agents involved in the social-historic discourses. (Jäger 2004, 22; author's translation)

Various factors of different shapes build or stabilize most different "speech forms," statement forms, and complexes of knowledge. Such a differentiation is based on the conviction that modern societies can be characterized by functional differentiation, that means by the development of distinguishable and specialized fields of knowledge and practice, each forming unique and distinct structures of utterance as specific discourses of knowledge. These places are dominated by specialized language forms – the so-called special discourses. In short, in certain partial segments of a society characterizing itself by specific knowledge (e.g., about protection of species and animal breeding or about economics and effective management), this knowledge is expressed or "spoken" in a special language.

The special discourses' methods of dissociation (from one another as well as from common sense) go together with integrating procedures that link these distinct spheres in a kind of "compensation." These connective structures are traded under the name of *interdiscourses* within the discourse theory of Link.

The most important function of such cultural interdiscourses is the production and the supply of connecting elements and by their application the production and reproduction of collective and individual subjectivity that allows survival in highly differentiated societies based on division of labour without getting disrupted by various specializations and professionalizations all the time. (Parr and Thiele 2004, 265; author's translation)

The legibility of such interdiscourses evolves from a kind of a double coding. What is expressed has to be "readable" in each of the two discourses. My proposal would be to conceptualize *Zoo Tycoon* (as typical of many video games) as such a "procedure of integration" and therefore as an interdiscourse.

According to that, the knowledge that is located in the enunciative-narrative part of the game could be characterized as special discursive knowledge. It tends to a maximum of immanent coherence and to wall itself off against external discursive material (see Link 1998, 50).

Special discourses tend to be dominated by denotation and clarity especially because of the speciality of their knowledge that is more or less linked to technical operability under modern circumstances, whereas interdiscourses serve connective, integrative functions and are mainly linked to subjective appropriation which explains the domination of connotation and ambiguity. (ibid., 155)

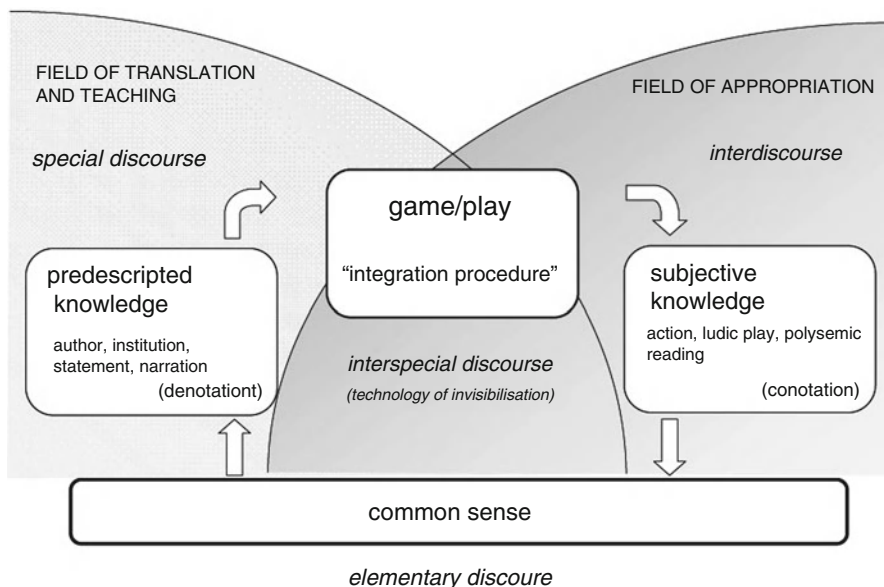


Fig. 8.7 The model of interdiscursive coupling (Source: Author’s illustration)

That means that the knowledge about the protection of species or effective management is a kind of “professional” “secret,” primarily to describe as denotative knowledge⁹ that which has to be “taught” within the play as an interdiscourse.

On the playful side (the subjective player’s), this knowledge establishes forms of appropriation, or more precisely, an intersubjective form of appropriation for the provided special discursive knowledge. This knowledge is now much more generated and shaped by connotation. “Reading” the game can hardly cope with the requested domination of denotation, because especially the game/play emerges always by communication as well as by social and subjective practices. Figure 8.7 purports to summarize the model (in a very reductive way).

Nonetheless, the proclaimed ambiguity does not imply a semiotic or textual polysemy or a generally critical form of appropriation but merely a discursive variation.

⁹A differentiation between denotation and connotation is an idealized and reductive form of description. I use these terms in a very open sense: *Denotation* should point to the use and interpretation of a symbolic form beyond a specific situation – the fundamental, “lexical” meaning of a word. *Connotation* means the contextual (intra- and intersubjective) meaning, association, or paratextuality, for example – the negotiated meaning of a word. But such a division is unsustainable in a narrower sense of symbolic logic (see Winkler 1989). Also such a clear division is more or less senseless in linkage to a concept of discourse, which marginalizes the idea of the possibility of a pure subjective production of any kind of denotative meaning or knowledge: All meaning is produced through and with intersubjective discourses and dispositives. The use of this term is not driven by the search for a dichotomic conception but as a fuzzy description. Denotation is an innuendo of the institutions of power, connotation a promise by the discourses itself.

That means that even the narratively most terminated strategy game cannot per se be understood or read in a denotative way. Therefore, the theoretical concept of interdiscursive linkage of strategic knowledge in the transition between the enunciator and the player does not imply an arbitrary interpretability of the “coded” knowledge. Actually it deals with the per se given open modulation of the text corpus within a medium or a public (popular and elementary) field of discourse. The primary connotation of a strategy game is always the existence of a strategic special discourse.

In contrast to special discourses, interdiscourses are complexes of knowledge that are not terminated but circulate variably and flexibly through all other discourses in a connective way. Then, the game itself would be – according to Link’s model – an interspecial discourse. This interspecial discourse contains special discursive elements (denotative discourse elements) that occur in several interdiscourses (e.g., connecting statement complexes from the military sector or the logic of regulation, etc.).

So, the quite vague term “naturalization of knowledge” in the model (Fig. 8.7) can now be described more precisely as a superimposing of special discourses to interdiscourses. The link between (strategic) knowledge and the subject within the game could be reconstructed according to the example as follows: The game avails itself of an existing social knowledge and superimposes this knowledge as an “offer” in the form of a “knowledge-algorithm” dedicated to the communication and the active appropriation by the player.

Application Parameters: Adaptation of Knowledge by the Player

So, the interspecial discourse of the game as a “black box” is more a “complex of simplification” than a complex of rationalization from that point of view. But an evident and naturalized type of knowledge can only evolve on the basis of such a “rationalization-framework.” A knowledge that is implemented in the system of discourse transition “slides” on the symbolic level “below” the threshold of being suspected as something “made” or “constructed” and normalizes itself toward a (pretended) experiential knowledge. Besides, the intended and negotiated knowledge, also and especially the not-intended formations of knowledge, generate a dominant effect in the game and play.

A game like *Zoo Tycoon* not only circulates obvious discourse formations about the zoo, the protection of species, and the economics of a free market system. To me, it seems more important that also abstract formations of knowledge that are on the one hand less visible and on the other hand massively overlapping the narration of the game should be negotiated and stabilized inside such a circle. Concerning the present example, we could therefore guess whether we, as a zoo manager, are not exceedingly confronted with the logic of the interface, regulative and circles, models of economic determination, and control or the functionality of the computer itself.

A quite abstract term for such an accommodation while playing on the computer could be named with the keyword *problem-solving procedure*.¹⁰ In the way in which the video game attracts us to the computer itself by playful means, we also establish problem-solving procedures for nonplayful computer problems: An unknown software or an unknown application gets “rehearsed” by skillful users through “playing around” within the framework of the general, conventionalized “usability” of software.

As a consequence of repetitive actions and adaptation, it is assumed that most of all, a form of immediacy of experience is generated by the game/play on the level of the subjective absorption of subliminal and “invisible” knowledge of regulation as well as by ideological elements of a media-technical a priori and common sense. The playing occurs as intuitive and natural activity belonging to the game’s immediate field of experience with the aid of material and arbitrary architectures.

Monitoring

Let us look at the example *Zoo Tycoon* again, in order to clarify this quite abstract postulate. At the beginning, I defined the strategic game as a prescription of action referring to the stated requirements for victory. Now, what are these requirements for victory in *Zoo Tycoon*? First, we would suggest the construction of a functional and aesthetic zoo or the breeding of a certain species to be such a requirement. But in order to reach this goal, a far more rudimentary goal is much more important, that is, the consequent inflow of money, respectively, the continual generation of profit. So, in the functional and narrative setting, the player is “only” subdued to the control of money: He or she is, as a zoo manager, responsible for a balanced budget.

The general playability of the game does not evolve by superimposing the narrative or the option of constructing and designing a complex zoo but much more plainly in the continual generation of profit. Only a permanently balanced budget allows the player to play permanently. In so far as he or she has to optimize the regulative circles of the game in order to make the indirect or immediate factor of economic gain more effective – either by ensuring the monetary income or indirectly by the satisfaction of his zoo’s visitors – only by that can the ongoing running of the zoo be guaranteed.

Focused in this way, *Zoo Tycoon* is not a zoo simulation that deals with the design of a beautiful or functional zoo anymore but a mere business simulation that deals with the effective balancing of regulative circuits, satisfaction charts, investments for the future, utilities, and infrastructure. It is not so much the managing of animals and nature that is required for victory in *Zoo Tycoon* but the effective handling of regulative circuits and reference values. The “hidden curriculum” of

¹⁰James Gee (2000) argues analogically (even though with a totally different theoretical-analytical motive) when he declines the essential effects of video games in a way that makes the player always to “active problem solvers.”

Zoo Tycoon is a “constant monitoring” (Starr 1994, 6) of economically relevant parameters in cybernetic circuits. Hidden in this insight could be the key to the strategy games discussed here. By indicating the monitoring of regulative functions in *Zoo Tycoon*, a model of agency is referred to that seems capable of explaining the “strategic action” as an intersubjective “accommodation.”

Especially the process of intersubjectivation and appropriation of forms of order seem to be reasonable for research on games: How are these models of order and knowledge of such games internalized and naturalized?

Conclusion

In this case, providing knowledge for social orientation means – as in every socially legitimated key-medial function¹¹ – providing “abstract” patterns of knowledge for a “digital culture” that the subject can accommodate and according to which it can adapt itself. So, abstract, ideological, and discursive forms of knowledge are prepared. This preparing (e.g., of norms and cultural values) guarantees its effectiveness, making the grounding intersubjective forms of validity invisible: The adaptation of the subject to the regulative social norm “masks” itself with the pretended adaptation of the subject to constitutive convention.

Therefore, naturalization is not only an effect that makes machines and devices invisible but also and most importantly an effect of self-management. In this case, that is primarily the transition from a “wild” and “primal” *paidia* to a “disciplined” and “regulated” *ludus* (Caillois 1960) within the game/play itself, which abets such forms of subjective adaptation.

Video games do not orientate anybody by opinion leadership or by “inculcating” issues into discourses. Nor are they a motivating agency in a monocausal way. In fact – that is the position taken here – video games develop their knowledge-producing functions by normalizing and naturalizing their own status as symbolic-ideological, medial machines. So, they decline the current use of media primarily by paradigmatic enculturation of digital techniques. Referring to the “digital-netlike” media system, video games can furthermore establish the provision of social orientation knowledge.

So, how can we go about the question about the effect of computer games conceptually? In my opinion in the first place by the confession that video games are a genuine part of a technical mass media system, and that they are nevertheless a part of a more abstract system of articulation and negotiation of social knowledge as well. If we appreciate this position, we also have to appreciate that mediums are no neutral agents but instances of a society that are significantly involved in the negotiation and transformation of commonly shared knowledge. This knowledge is riddled with norms and cultural values. These norms and cultural values do not

¹¹Concerning the key-medial functions of games and tendencies of naturalization (see Neitzel et al. 2009).

appear from nowhere, nor are they laid down on the society as an a priori; on the contrary, they are negotiated – in the media, in video games.

Last but not least, we will have to think about where the conflict comes from that we consider ourselves to have autonomic control over our norms and cultural values, and yet must admit at the same time that most of these norms and cultural values are negotiated intersubjectively. Furthermore that mediums (and in this case video games) guarantee the naturalization of this social and discursive negotiation of knowledge on the one hand, and yet they are on the other hand articulators that provide these norms and cultural values for the society again and again.

A perspective of video games as a “machine” of production and stabilization of societal and commonsensual knowledge is of course not a specific perspective deriving from CDA. It is more or less a position which is opined by every poststructural or critical theory. What I would like to show with my theoretical outline is more an analytical tool to circumstantiate this position in a close “reading” of video games. CDA seems to be a good method for analyzing media artifacts in avoidance of only “interpreting” them in a (neo-) hermeneutical way. With the general ideas of CDA in mind, it is much easier to circumnavigate the problems of a closed object of interpretation or the omnipotent position of an author beyond every cultural context. CDA points to an understanding of video games as inseparable parts of a wide range of (mostly invisible) dynamic articulations which sprout from “the society” and common sense on the one hand – and which work on the building and stabilization of shared norms, values, and meanings of a society. With that in mind, it is senseless to analyze “only” the aesthetic surface, the inner-diegetic narration, or the techno-apparative history of a video game, if you want to answer the question of the specific evocation of knowledge, meaning, or action by a certain game. On the other hand, the advantage of the method is at the same time its big drawback. The emphasis of the discursive field, the underlying dispositives, the paratexts, and so on from the CDA turns the simple interpretation of a video game into a boundless exploration of forms of articulation.¹²

But when you bear this epistemological problem in mind, there is a great potential for the CDA to investigate the entanglement of video games in a media culture and the signifying practices of a society. Case studies have, for example, shown the production of specific forms of *normalism* through and with video games (see, e.g., Bruns 2003; Böhme 2008) or specific “narrational” structures of repetition (“reentry”) as dominant governmental structure elements in video games (see, e.g., Nohr 2011). Other works refer to the methods with which CDA tried to find references to the general question of the interference by and with video games.¹³

¹²And if you want to get really analytical about CDA – your analysis will never stop, and it will never be objective. Because of the highly dynamic structure of discourses, the results of a media discourse analysis will be outdated the moment you write them down. And they cannot be objective in any sense, because you as a researcher are part of the discursive system, you are analyzing.

¹³I used the ideas of CDA to analyze the underlying discursive forms and structures of the ‘violence-debate’ (Nohr 2008, 130–152) or the intertwining of play and work in rhythm-based video games (Nohr 2008, 104–129).

But the major question, “How do computer games affect us?” is far from having been answered entirely. The present proposal refers in a very general way to a structural model of potential production of meaning and knowledge in games and play but does not yield any significant statements about specific forms of production, yet. Essentially, it is primarily a rejection of generalizing and monocausal stimulus-response assumptions. But that might even prove to be a sustainable and target-orientated position in the present state of the discussion about the game-play-media culture.

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Chapter 9

The Strange Case of the Misappearance of Sex in Video Games

Tanya Krzywinska

Rhetoric of Sensationalism

The popular press has over the past few years attracted attention and made considerable capital from couching criticisms of video games in sensationalist rhetoric. One of the outfalls of the use of compellingly lurid rhetoric is the aggravation of fear: in this case, the fear that games pose a significant threat to our peer-driven yet otherwise innocent children and teenagers as well as, more generally, to our moral health and values. If the sensationalist rhetoric is believed, the impression gained is that video games are loaded with dangerous, corrupting, violent and sexual imagery.

‘Computer games will carry cinema-style age ratings to protect children from violent and sexual images, ministers said yesterday’ reports Tanya Byron in response to a UK government-commissioned report in 2007. Calls for greater regulation designed to gain the attention of the fearful are often served by yoking together sex and violence. British politics aside, this is a classic exploitation technique, and the rhetoric of exploitation thrives on a lack of knowledge: technology turns demon, and a medium becomes a portal through which will pour soul-eating, decivilising terrors. Where violence or sex does appear in games, and why not as these both play a core role in human imagination and experience, all sense that these are mediated and often highly contextualised in either gameplay or narrative terms is lost (factors more likely to be taken into account in relation to the more established media such as film or television). For those looking for easy answers or wishing to exploit the fears of those without understanding, through the rhetorics of sensationalism, video games can all too easily become responsible for the broader ills of society (Gauntlett 2005; Barker and Petley 2001).

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The game industry has benefited from sensationalist rhetoric in regard to sex before – in the perfumed promise of sexual utopia provided by new digital technology. During the 1980s, the term ‘teledildonics’ fell like honey from the lips of the pre-blogging chattering classes. Promising a garden of delights, virtual sex (with accompanying exclamation mark!) was presented as the new frontier, throbbing and pulsating controllers providing only a tantalising rumble of a future where bodies would be wired for perpetual orgasm. The pledge of ecstatic presence fizzled however in the cold light of a hand full of pixels and a few unemotional bleeps. Sexual promise is often made in relation to games – speculation of erotic possibilities transferred to Microsoft’s new hands-free interface, Kinect, after the disappointments of the Wii controller.

One of the most problematic aspects of sensationalist rhetoric when used as a tool to sway opinion is that it elides *complexity*. As psychoanalytic thought suggests, human sexuality is highly complex, and imagination is as important as physiology and drives. Working with the erotic imagination (which does not acknowledge in its inherent putative state limiting realities), sensationalist rhetoric regularly promises far more than it actually delivers. But when we look for the promised sex in games, it is far less apparent than suggested by the groaning and straining sensationalist copy. This point is very well made by Daniel Floyd’s entertaining animated essay (2010). Brenda Brathwaite also makes a similar argument in her design guide, *Sex in Videogames* (2007). However, one of the main arguments of this chapter is that both Floyd and Brathwaite overlook a more subtle and erotic presence in gaming and games.

My plan here is to take a more sophisticated and theoretically informed look at sex in games. While there is proportionally little sex in games in relation to other media, I will show that some games do have explicit sexual imagery, and that it is important to ascertain the types of rhetoric used within games to represent sex and sexual desire. Further, I aim to outline some of the context and conditions on which such a presence seems to rest and to address the libidinal economies of games – a term I have adapted for use in this essay that is borrowed from psychoanalysis generally and Lyotard specifically (1993). This work is important if we are to move beyond the reductive model of ‘effects’ theory. It is the principal claim of this chapter that games shouldn’t be measured simply by the use of explicit sexual imagery. Broader concepts of sex, sexuality and desire, using models that address the complexity of human sexuality, must be considered. I propose an approach to the study of sex and games that takes account of representation, rhetorics and conventions, game mechanics and the libidinal economies at work in games and the act of gaming. I distinguish between two spheres of game design: the representational external design (mainly in terms of audio-graphical style but also plot/story/character arcs where used) and internal design, meaning the mechanics of the game, including the particular procedural elements used, those parts which make the game precisely a game and an individual one. Working together, these internal and external elements constitute a game’s design and aesthetics. Examining the relationships between games and libidinal economies is made possible by using models and concepts

derived from psychoanalysis and discourse theory, enabling a fuller understanding of the way that sex, sexuality and desire are bound into games beyond the presence of explicit representations.

This chapter will address first the representation of sex in games, focusing on graphics and narrative. It then goes on to analyse the use of sex, overtly or implicitly, in terms of the design of game mechanics, followed by a concluding section arguing for a more diffuse and sophisticated understanding of the ‘erotics of games’.

Sex in the Sphere of Representation

In this section, our focus is on the way that sex and sexual desire occur in relation to games in terms of their representational dimensions; included here under the general rubric ‘representation’ is also the story-delivering elements of a game. I should point here that I don’t regard ‘representation’ as the *aesthetics* of a game – the aesthetics of a game are the sum total of representation, narrative and game mechanics in conjunction with the player’s participation.

Graphixxx and Dimensionality

Apparently games are awash with sexual imagery of an explicit nature, at least according to prevailing tabloid rhetorics, but for something to be ‘graphic’ in visual pornographic terms, there has to be a certain level of detail so that the anatomical features involved in sex are apparent. Graphical fidelity is therefore important if an equivalent of a human body is to be constructed in a game – in fact, the development of sex in games hinges on such. That is not to say that game bodies need to be depicted stylistically in a photographic way of course. Early 2D games did manage to manipulate a few pixels to look like human breasts and erect penis in a highly crude graffiti-esque style. Mystiques’ *Custer’s Revenge* is an example. The game’s graphics – the term ‘crude’ being here operative – could not really be put to any serious purpose in the depiction of sex (Fig. 9.1). Their abstract and exaggerated qualities came out of their 8-bit, exploitation production (indeed, Atari sued Mystique for defaming their brand). *Leisure Suit Larry* also made capital from crude graphics to connote sleaze. Evolving from pixels through a range of technologies to motion capture has given greater expressive means of portraying the human or humanoid body within digital arts. The palette through which sex and desire can be represented has broadened considerably. Bodies and their movements have become more refined and subtle, allowing games to be drawn on the types of images and representations of sex found in film-based media (Fig. 9.2).



Fig. 9.1 From pixels to motion capture: *Custer's Revenge* (1982) screenshot (Source: <http://listverse.files.wordpress.com/2008/04/s-custersrevenge-1.png>. Accessed August 2010)



Fig. 9.2 From pixels to motion capture: *Beowulf* (2007) screenshot (Source: <http://www.filmschoolrejects.com/news/new-restricted-beowulf-trailer-raises-eyebrows.php>. Accessed August 2010)

Digital Bodies and the Pornographic Imagination: Desire and Aspire

One of the ironies of video games is that we often see in games bodies that seem tailor-made for pornography, yet often these game bodies actively avoid sex – even where it might be a logical outcome of a relationship. Susan Sontag noted in her essay ‘The Pornographic Imagination’ (1982) that in written fiction designed to be consumed as pornography, a style emerges where everything is exaggerated.

The stories of the Marquis de Sade, for example, are populated with huge male members and engorged female genitalia. The exaggerative expressive form of the pornographic imagination is also evident in Japanese erotic art of which anime is an even more impossibly inflated successor. Silicone implants and the fashion for body building are keyed into the exaggerated mode – coded as fantasy, or, more properly, coded through fantasy, as if the tumescence associated with sexual arousal itself becomes translated into expressive form. Digitally produced bodies can be sculpted straight from the imagination. Unencumbered by real-life physics, unrestricted by flesh and bones, game bodies can be created impossibly ideal. While anything is possible potentially, it however is a very conventionalised binarised picture that emerges – large breasts, long legs, small waists for women and muscles for men. Strict bodily regimes are clearly in place, underpinned often by action and fantasy tropes where even if male and female characters are impossibly powerful, they conform to exaggerated, archetypal models of gender. In what seems very close to the conventionalised pornographic imagination, modellers and programmers seem to hone in on what they think will appeal – ‘breast physics’, for example, a much touted ‘technological development’ on the release of *Dead or Alive Xtreme Beach Volleyball*. A surprising number of games take inordinate care to ensure that female character breasts sway or move – providing an indication of a game’s assumed target market. While this can be claimed to make the character more real, the core reason is visual pleasure. Take, for example, the female Night Elf model used in *World of Warcraft*. When standing still, Night Elf female characters tend to jump up and down, impatient perhaps to be on the move while the tardy player is otherwise engaged, with the effect that their breasts noticeably jiggle up and down. In other regards, these are not very detailed figures, requisite to the demands of broadband and data pipelines; here, however, bouncing breasts hint at excitement and plenitude.

Most playable male characters in *World of Warcraft*, no matter what race (Gnomes excepted, often the laughing stock), are heavily muscled. While muscles are an attribute derived from popular fantasy genre, with roots deep in heroic mythologies, they are also air-brushed by the pornographic imagination where physical build and virility are implicitly tallied. The common presence of the hard-body male action hero, best typified perhaps by the likes of Conan or Beowulf, is in the gender rhetoric of populist games a cipher for power. Such heroes embody in the grain of their muscles and unflagging energy the imaginary phallus. Emblemising power, agency and skill, the muscled hero is deeply overdetermined. Acting as a model of *ideal* masculinity¹ (and therefore imaginary), the action hero has an extra dimension within the context of games. While we might watch Bruce Willis perform the impossible in the *Die Hard* films, in the tie-in game, the player, no matter what their gender, has to put the game character to work. Players have to ‘act’ and act in the hero’s guise – they must measure up. Our contract with the game is to develop the skills by manipulating the controls in a timely way in the correct sequence to allow the hero to come into being and for us to feel connected to his power. This is also

¹As Tyler acts as the narrator’s ideal in the film *Fight Club*.

the case with female action heroines such as Buffy or Lara. But here, the contextual conditions afforded by their gender provide a less conventionalised model, which may speak to players' experiences of gender dissonance.

Developments in graphics technologies therefore allow designers and artists to create for players alluring characters, providing support for being-in-the-world of the game by providing an object of desire and aspiration. The muscled, the agile and the powerful *represent* sex – they do not have sex. Governed by the economics of the ideal and the forward motion of games (see Atkins 2006), iconic characters act as our fetishes, objects that bring desire into existence to keep it in play and hungry; as a result, sex itself must remain off-scene.

Sex in the Story (or Not...)

With an emphasis on 'action', surviving often, it is not surprising that sex is rarely explicitly part of the storyline of games. If sex is not the main goal of a game, as it is with some Japanese 'dating' or 'Ero' games or where it is part of the progress or achievement structure of a game, then sex is more likely to appear in a cut-scene as part of a game's story arc. This is however relatively rare. Where Lara Croft interrupts her adventures in the film tie-in for sex, this never occurs in the games – not once in the course of over eight separate titles. She might be a red-blooded girl in terms of risk and thrills, but sex is kept off the game screen. This may be a way of avoiding market-limiting regulation or to preserve exclusively Lara's voluptuous assets for the imagination of her player.

By contrast, tactical squad-based shooter *Mass Effect* included a short sex scene that has some interactive features (this is only a very short sequence in a very long game). The inclusion attracted press interest, as it was no doubt intended to do. What is perhaps most remarkable about the sex scene is that its meaning is dependent on the character the player has chosen to play and who the player chooses to interact with. Recorded clips of each permutation can be found, at the time of writing, on YouTube. Shepherd is best described as a soft-spoken yet rugged hero, and Liara, a slender yet voluptuous alien. Their brief sexual encounter is presented as a touching expression of intimacy and intensity. In many ways, this pair conforms to the cinema equivalent of the 'proper couple', except of course this is cross-species sex. When a similar, alternate scene occurs between Ash (a human female) and Shepherd, the encounter is presented in terms of fun and playfulness (with a hint of S-M style power play), a pastime framed as affectionate but not seemingly an expression of deep romantic love or passion. A further permutation is one that occurs between Liara and a female Shepherd, again an intimate and passionate encounter, even if a classic pornographic trope designed mainly for male consumption. Sex is optional too; the player-character can choose to avoid such an encounter through the choice of their character's speech options (the only interactive element in these scenes).

The use of a cut-scene to represent these encounters allows the game to draw on the visual vocabularies used within cinema. Various camera angles are utilised

distinguishing the scene for the monolithic use of camera in the rest of the game. The pattern of close-ups and mid-shots present in the cut-scene between Shepherd and Liara places emphasis on their intimacy and eye contact, rather than on their genitals, as would be the case in most hard-core films. Seen in narrative context, the scene is clearly intended to figure greater pathos into the desperate situation the protagonists find themselves in. What is important to note here however is that sex has no impact whatever on gameplay, even though its presence is shaped and initiated by player choices.

Few games take *Mass Effect's* direct and adult approach to sex as part of their story however. *Fable 2* is worth mentioning here as this is also one of rare games where sex is regarded as integral to the player-character choices. More generally, fears that regulation would reduce the potential market for a game seem to lead to heroes who seem to have little energy directed into sex. Issues around regulation and the action orientation of games might help explain the plethora of asexual robots and cyber-thingsies of the likes of *Halo's* Master Chief in games. Are the otherwise testosterone-driven protagonists of the *Gears of War* franchise being fed bromide in their rations? Similarly, the hordes of cute yet asexual animated figures that parade across our screens seem symptomatic of the industry's general avoidance of sex. The androgynous adolescent Link from the *Zelda* series, for example, is suggestive of infantilisation in terms of sexuality, an apprehension that does not extend to violence and death. Brutality twinned with coyness is a pairing that informs a great deal of transnational popular culture.

Implied sex through romantic liaison is however common at the level of story in games. It is usually a back story rather than a motivating plot arc, although there are some exceptions of note including the female protagonist of *Primal* who is moved to search four worlds for her boyfriend who's been kidnapped (justification for a woman to get mean and demonic to rescue her love object). This is of course a twist on the more usual use of the heterosexual romance that, as Mia Consalvo (2003) notes, promotes 'rescue' storylines. Many beat-em-ups, like *Tekken* for example, pitch women and men against each other in fights, far from a rescue situation, but this can certainly be regarded as carrying potentially an erotic charge (games as a form of foreplay perhaps?). So what are we left with here? Game media is focused on action and doing; it often works on an economics of aspiration, underpinned by strong feedback loops often in terms of audiovisual spectacle that reinforces for the player the fact that they have acted, competed and progressed. Consensual sex between two people is too fragile for that perhaps...too contingent, too tactile and too subjectively bound. Best configured perhaps in the context of games as a prize?

Remediation

While the particular participatory nature of video games differs from other media, games do draw on established conventions and models. Lara Croft has been designed as a pin-up girl, a role also more recently taken up by the protagonist of *Bayonetta*.

Lara might be all action, but she is equally designed as potentially an object for erotic contemplation. What does it mean to see Lara nude? While she might be drawn or posed nude, what she is under the skin is a wireframe. What this reminds us is that digital characters are the product of an alchemic reaction between imagination, desire and technology. Lara is a goddess: ageless, tireless, infinitely capable of evolution and an embodied ideal. Lara could be anything, but the human imagination is limited it seems. As was also the case with Pygmalion's Galatea, Lara's form is shaped from a vocabulary of desire that has informed representations of the female nude from its early articulation in classical Greek sculpture, through to renaissance painting and 1950s cheesecake pin-up. Nudity is something however that cinema has developed techniques for dealing with. It might seem surprising but pre-Code Hollywood films presented a certain amount of nudity, seen for example in D. W. Griffith's *Intolerance*. With the implementation of greater regulation in the late 1920s, breasts were covered and a set of what we might call anti-graphical framing and editing techniques became used to disavow, elide and mask the sexual body. Many of these techniques have now become part of the general rhetoric used within various forms of screen media, including games. Such conventions have always carried something playful, even perhaps distantly transgressive.

Effectively remediating the masking techniques used within 'live-bodies' cinema to cover up offensive anatomical parts, two recent animated films mask the genitals of two male characters. In the case of *Beowulf*, the apparent choreography of the titular hero's fight with Grendel is staged to prevent the viewer from seeing Beowulf's 'pintel'. This stagey cover-up in fact calls attention to the power of the object and makes more obvious Grendel's visibly missing member (underpinning his otherness and lack of power). And in the case of *The Simpsons Movie*, Bart loses a bet with Homer that necessitates him skateboarding through Springfield naked. As with *Beowulf*, a raft of techniques are deployed to cover Bart's penis, including a sausage held up by Ned Flanders in praise of god, but as Bart skates passed a hedge designed to hide his genitals, a round hole appears, revealing – even spotlighting – a very simplified outline of a small penis. This sends up the whole masking convention but does so on the condition that this is NOT a real boy but a very obviously animated one (plus the choreography would be very hard to achieve using real bodies and objects). Of course, these two imaginary constructions don't have anything to mask because they aren't real bodies. But the knowing nod to the conditions of the real has an odd, twofold function – to help us suspend disbelief and recursively to remind the viewer in both cases that these are animated characters. As such, most of the nudity in games is in cut-scenes – framing at work in *Mass Effect*, where it does occur; otherwise, in RPGs, characters are rarely undressable beyond underwear (*World of Warcraft*, *The Lord of the Rings Online*) and not at all in games designed for family consumption such as *Wizard 101*.²

²There are some exceptions, however, admittedly in games that hover on the margins of regulation. In *Second Life*, the rather low-key genitals of a start-up character can be supplemented – penises and breasts purchased, mainly for the purposes of representing sex on screen for the purposes of cybersex activities. More explicit nudity within the context of sex can also be found in the Hot Coffee Easter egg and in various sex sims.

So what we've found is that the ways that sex and the sexual body have become conventionalised in their representation in film have found their way in games, even if some differences arise around the active role of the player. Cut-scenes that show animated filmed sex as in *Mass Effect* or embedded media (as in the porno clips found in the cinema of *Erotica Island*) are the most obvious. Story types and tropes are also borrowed from cinema (as well as other media), and like many other forms of popular fiction, 'romance' between a 'proper couple' provides the conditions that legitimise the presence of sex and, where missing, sensationalises sex, a meaning framework exploited by, for example, the *Grand Theft Auto* franchise. Romance is used to add pathos in revenge or rescue scenarios but is rarely the major theme. Like film, many games also use the legitimising and permissive effect of comedy, a framework that has often been used in pop culture to permit mention of sex and sexual desire. On the whole, games are less focused on sex and romance than action in the context of war or struggle. What we don't tend to see in games but which is found in other forms of popular media proves important to gaining a better understanding of game form and markets. In games, there is little sense of sex as tragic, traumatic, a form of self-empowerment – a common trope found in soft-core movies with female central protagonists such as *Emmanuelle* or *Story of O*, or a rite of passage, or as transcendent (although Shepherd and Liara's scene does take on something of this but is essentially a movie within a game). In some games, sex is suggested in conventions borrowed from cinema – the use of ellipse can be found in *Fable 2* and *Mass Effect* – games that do try to make their central characters more rounded and real through an articulation of sexual desire.

Symbolisation is another common device borrowed from film – the 'dance' of two adult piñatas seen in cut-scene as a prelude to the production of babies in *Viva Piñata* is a good example. Pre-existing vocabularies are therefore deployed in games. These range from those derived from mainstream, art and exploitation cinemas as well as soft-core and hard-core films. But, decisively, games also use sex in ways that extend beyond representation and narrative. It is to the place of sex as a game mechanic that I now turn.

Sex as Game Mechanic

It is important to make a distinction between games and virtual sex simulators (although the latter can be found in some games). While sex simulators are currently a growth area, with many found free on the unregulated net, in terms of market and form they are not 'games', even as they may have similar interfaces and use conventions found in games. Sex sims are generally designed to be consumed as porn, while the situation with games that incorporate sex within the sphere of game mechanics is more complex. Most of the games looked at here are those where sex is integral to their internal and external design and that can or could be bought on the High Street. These games use conventions developed within soft core, comedy and exploitation to depict sex.

Playboy: The Mansion has as its lead designer Brenda Brathwaite, an advocate of sexually explicit games for adults. The game is part of the Playboy franchise, bringing a well-known brand to the game and making use of it to inform the representational dimensions of the game. Aspiration and a tongue-in-cheek humour still prevail. In the guise of 'Hef' (Hugh Hefner, the magazine's 'playboy' owner), the player is tasked with building relationships with a range of visitors to his house in order to create copy (photos, articles and interviews) for a magazine.

Progress is made by holding parties, getting women to pose nude for Hef/player's in-game camera and persuading minor celebrities to write for the magazine or be interviewed. In this way, status and cash are accumulated – both overtly measured and keyed into the game's internal winning conditions. In terms of its internal game mechanics, *The Sims* is mixed with the basic principles of the *Tycoon* series, all wrapped in the mantle of the Playboy brand. Each NPC has a 'drive' meter which the player must manage to keep the character happy. This is done by choosing from the various 'verbs' provided by the game, thereby composing the nature of the conversation with those NPCs. Ego-soothing bunnies aid Hef/player's passage through the social encounters thrown up by the game, although if neglected, disgruntled NPCs leave the mansion. More prestigious people are attracted to parties once money is spent on furnishings and providing entertainment. Hef/player can also take photos of his managed female guests to place in his magazine. The player can cycle through various poses and site the model in a location with the click of a few buttons. The game also includes 'factoids' from the magazine's history and images of (real) past 'playmates'.

Much like the magazine, the game provides a highly regulated tease; sex is clearly the core theme, and its most explicit articulation can be found when Hef/player persuades a female NPC to have sex. The persuasion process takes a while, but eventually sex ensues. The handset vibrates to indicate orgasm as the woman sits astride Hef, whom we see in third person; her climax is comically indicated by an in situ backflip and a shout of 'weeeee', as if she was on a fair ground ride. Both keep their pants on throughout, making naked breasts the focus of attention, as was mostly the case with the Playboy images. There are no graphic cut-ins or close-ups of the type usual in hard-core film, inclusions that would place the game outside of regulatory systems. No risk is therefore taken with the franchise or investment.

One quickly learns that women with whom player/Hef has built close relations are more likely to readily pose and have sex with him. Relationship building is therefore central even in the context of the business and commercialisation of the sexual body. This is anti-Bataille rhetoric – business makes sex normative, and it is not as Georges Bataille, the philosopher of transgressive sex, so seductively suggests anathema to work. Sex here is couched rhetorically as unproblematic, that is, once appropriate smoothing devices have been deployed. Playboy sex, and sex in the context of a game, becomes precisely that – quantifiable and as something won. In a liberal sense, sex here is couched as a normal activity partaken of by consenting adults who do not necessarily have deep ties. If you know the rules of the game, you can 'make out' for pleasure and business. *Playboy: The Mansion's* version of sex is neither perverse nor transgressive. Based on the economics of good, well-managed

relationships, this is a long way off from de Sade. Brathwaite is permitted to make a sex game by the power of the franchise, and within that franchise, sex is legitimated and can thereby become central to gameplay.

Providing a useful contrast, and far less focused on the business of sex as commodity and 1970s playboy lifestyle, *7 Sins* takes a far less benign and normalising approach to sex. Here, sex is coated thickly in rhetoric of cynicism and transgression, as is indicated by the game's title. Sex is certainly not legitimated by romance and the 'proper couple' here. Unlike the *Playboy* game, the aim therefore is not to manage the drives of others. You play an 'unrepressed' man, and your task is to keep your character's 'sin' bars topped up, never letting one drive overwhelm the others. It is a far less slick and well-designed game than high-profile, big-budget *Playboy: The Mansion*, underlining thereby to *7 Sins* grimy, exploitation qualities. The short main game arc is supplemented with various mini-games made accessible at any time and designed to help balance the character's sin bars. Various possibilities are on offer: zoom in to 'perv' portions of a cartoonish female body, stealing money from a woman's flat, and – perhaps the most bizarre mini-game of the lot – is one designed to lower the Anger bar where the player-character urinates into a potted plant, aiming the flow to swat flies. The verbs that govern the game's internal design are composed of transgressive actions such as 'steal', 'grope' or 'perv', and in-game conversation options range from clichéd chat-up lines to abuse. In the first true level of the game, the player-character is tempted by all kinds of transgressive actions but must try to manage these in order not to get fired from the shop where he is working. The odd good deed can be done too to re-balance the sin bars. The game's internal mechanic derives from a model of sexuality associated with unconscious drives, drawing on the powerful notion that the sexual drive is disruptive and compelling. This conceptualisation of sex is one that informs older pornographic fiction, mirroring perhaps some of de Sade's monstrous fornicators. It is also a model that is found in psychoanalysis as well as in the Lapsarian notion of sex as shameful. As a genre, exploitation makes its capital from precisely this. The psychoanalytic idea of sex as a drive fits hand in glove in games with the need to have measurable events; a drive therefore is easily translated into the terms of a progress bar.

Playboy: The Mansion and *7 Sins* use design features drawn from management style games. A drive model of sex and desire means that 'management' becomes the dominant ludic. It might be said that a control/management mechanic is a response to the unruliness of sex and desire – games providing symbolic control by turning the complexities of human psychology into statistics or at least measurable equations. But more accurately, it is determined by the procedural nature of digital games, where events must be scalable and quantifiable.

This same approach is taken by Japanese Ero games easily on the Internet. Many of these appear as dating games but, in the case of *Ganguro Girl*, end up as pretty much a sex sim. *Ganguro Girl* is one of a type of game that is made in Flash, free to download, but demands payment for the hard-core version (quite literally therefore the money shot). Combining RPG elements with a sex sim, *Ganguro Girls* tasks the player-character with the pursuit of earning money and status, both needed to entice girls to date you. The overarching aim is to manage life in order to date girls and,

eventually, have sex with them. Although designed as a game, there is a clear intention for the game to be consumed as porn – but only on the condition that you have worked hard enough to gain access to sex. This type of game might be regarded as manual for teenage boys looking to work the ‘relationship’ system, as if relationships can be quantified and ‘maxxed’ if the rules are followed correctly. Yet perhaps such games with their strict regime of cause and effect provide an antidote to vagaries of dating and to the power of girls to accept or reject. Whatever the politics, in *Ganguro Girl*, alongside *Playboy: The Mansion* and *7 Sins*, sex does double duty. It is representational, promising thereby visual pleasure, but it is also shaped in such a way that it can become part of these games’ internal design.

Libidinal Economics: Erotics of Play

We are puppets of our hormones and genetic programs. But nature repays us with pleasure.
(Blackburn 2004, 125)

Sex may be in and out of play in terms of representation and gameplay mechanics, yet we might approach the topic of sex and games in a more subtle way by looking closely at the ‘erotics’ of the player-game relationship.

Playing games would on the surface look to be a very rational and controlled activity. Many theorists of games have defined games in terms of their rules, considering these their defining element. But rules are not the only game in town; games are more than these, and when addressing the erotics of play, we have to take into account not simply rules as procedural elements of the game but more generally as part of a ‘libidinal’ economy – to use Lyotard’s evocative phrase (meaning the psychic and emotional energy produced by drives). I have argued elsewhere that a great deal of the pleasures of playing digital games is had by the sensations and rewards associated with becoming a more skilful, prudently responsive player of a given game (2009). This entails responding to events appropriately and learning to read the cues offered by a game’s particular grammar. In addition are audio and visual elements, aiming to provide ‘colour’ by giving greater contextual meaning to the procedural. In this, we might regard games in terms of poetics (in the broadest sense of the term). In pursuit of understanding the libidinal economy of games, our focus is on the relationship between the player and the game. Game designers deploy a variety of ludo-poetic devices to please, tease and excite the player. Players may or may not respond to these as the designer intended – success depends of course on the players and the solicitude of their particular aesthetic, semiotic, semantic and epistemological frames of reference. These are of course individual and subjective, yet given that game design is centred around using the particular medium of games (and embedded in that the history of development of video game forms), it is assumed that these will be shared to some extent, at least with like-minded people with a similar outlook and knowledge base.

It has become quite common in text-based game studies analysis to regard games in terms of the verbs they proffer. As a means of aiding in the task to understand

Table 9.1 List of libidinally coloured verbs and adjectives

Expectation	Immersion
Intensity curves	Bodily control – condensed movements
Frustration/aporia	Concentration/focus
Elation	Skilful
Release	Drive
Reward	Enigma/revelation
Feedback	Epiphany – ‘aha’ moments

more deeply the pleasures of games, it seems helpful to also regard games in terms of *adjectives*. Appropriately these knit syntactically with a game’s mechanical verbs making up a game’s vocabulary. In chaining adjectives with verbs, my aim here is to show how ‘doing’ in a game becomes libidinally coloured. The particular grain of a given act couched within meaning-producing contextual qualifiers is designed to resonate and evocate. Actions in games are ciphers or metonyms, not full acts as would be the case in the real world, but instead actions made more potent by imagination. Prompted by physical actions and the events on screen, the player conjures from memory and imagination what it feels like to be doing that action. The libidinal economy of game is then, in part, dependent on a creative act by the player.

Below are listed libidinally invested verbs and adjectives that seem best suited to games. I will use these in a brief libidinal analysis of *Assassin’s Creed*. Some of the words listed here may be erotically charged in any media, but some are specific to games, and some have appeared in the work of other critics – Espen Aarseth, for example, makes use of aporia and epiphany (1997). Many of these words chime into Roland Barthes work *Le Plaisir du Texte* (1975). What is also notable here for the purpose of libidinal economics is that these all carry sexual connotation, words that we might find in an artful yet nuanced description of a sexual encounter. To that I will return a little later (Table 9.1).

For a moment, I ask you to take up the outlook of an artist or lover, looking passionately and attentive to all the nuances of line, form and correspondence. Let’s take *Assassin’s Creed* as a brief example – other games are possible of course. Perhaps the chief pleasure in this game is the kinetic energy afforded to the player through the character, renegade Assassin Altair. The player-character can scramble up buildings, jump gaps between them, climb high pinnacles to survey the environment, as well as run, sneak and wield various weapons. All these actions are needed to progress through the game. What this verb approach does not tell us is the qualities of how this is all achieved. All the characters are motion-captured, lending them an elegant and nuanced fluidity of movement. This invests vitality into the figures and animates them yet not in stilted or repetitive ways. Characters also move through intensively eye-arresting detailed environments. There are no clean horizon lines to be seen here or simple graphical planes; instead, the eye is kept interested by multi-layered objects such as would be expected when surveying a bustling medieval Arabic town through which vistas regularly appear into the far distance.

Altair moves with ultimate confidence and grace in this world (it is after all measured precisely to his computational and graphical physics). He is also the

embodiment of contradictions: conundrums that arrest the gaze and intrigue. He is extremely agile, leaping weightlessly across impossible voids, yet also steadily weighted, footfalls and arm movements solid, connected reassuringly with the world he so lithely inhabits. Chain mail presses down, working in juxtaposition with the fluidity of the light cotton tabard that dances around his legs, emphasising his movement and connecting him to the free and transcendent breeze. Kinetic power eroticised by the floating cloth provides for the player a figure that moves in mysterious ways, particularly in cut-scene sequences, leaping in faith, for example, from some precipitous minaret, where the player can do little but wonder at his physical assurance. Exotic, distanced, briefly he is ours to hold, a fetish to sanction our mesmerised gaze.

The same attention to kinetic detail is also found in Altair's fighting animations. Taking on a group, he whirls like a dervish, sword flying in balletic arcs. Killing softly, his primary mode is quiet assassination – an act always shown at once tender and brutal. Slitting the throat of one victim with one hand – with a spring-loaded blade replacing a severed finger that pops out from under his sleeve – his other hand strokes closed the eyes of his victim. Again the contradictions – a character made tender in his violence. In this, he is ambiguous – demonstrating that which is deemed, particularly in popular culture, feminine yet also masculine. The veiled face, silky-assured movements and the physical contact with those he shoulders past or fights all work to eroticise Altair far more effectively than the rock-hard cyborg figure of the Master Chief.

What can also be said to be present is a libidinal coherence around what psychoanalysis calls a phallic economy, more accurately pivoting around the eroticisation of the act of penetration. Sliding the knife in, slicing deep and intimately into the flesh of enemies, all this violent yet artful penetration balances with a more general economy of physical touch. There is therefore clearly an erotic dimension in play, perhaps just under the surface for some players, and of course as it is the player who puts the knife in, they too are implicated in this erotic, violent *danse macabre*. As with *Beowulf*, a certain type of sexual currency is apparent, one that links penetration with domination, sharpened in the case of Altair by his silken touch. This economy of domination is one that is far more complex, forged perhaps on the anvil of homosociality, and sidelines any notion of penetrative sex as an expression of equality and intimacy.

I am however not the only one to note the erotic economy at work in games that are not apparently about sex. In a rather different way, Hanna Wirman (2009) noted the erotic encouragements of the deep-voiced male narrator, intermittently purring 'good', building to 'excellent', at the player, alongside orgasmic explosions in *Bejeweled*, a game that has proved extremely successful in the casual game market and may well have used techniques designed to please a female market. More generally, designing games can be regarded in the same way that a theatricalised fetish or sado-masochistic scene may be choreographed; both are designed to take the participant on a journey with the game/scene designer-assigned power over the player/submissive through the contract of the game and who must submit to exacting demands.

According to Blackburn, the definitions of lust are the ‘anticipation of pleasure’ and the ‘pursuit of rapture’ (2004, 16). These work equally well in describing playing a game (Krzywinska 2009). Designers aim to keep players playing – to tease them onward– to project players forward in time to what will come (Atkins 2006). But many play to lose themselves in the heat of the moment, to feel the break in tension caused by the completion of a difficult task. Blackburn tells us that lust is ‘desire that is felt, the storm that floods the body. That heats and boils and excites’ (2004, 17). Gamers regularly speak of how they become immersed in a game, their perception of time distorted, suggesting that there is a link between a sense of immersion in a game and the medieval definition of ecstasy, standing outside of time and ourselves (see Härig, Chap. 13; Pietschmann et al., Chap. 18). While this might be a bridge too far for some who have a more prosaic approach to games, it is the case that games are loaded with textual seductions – prediction, revelation, progress and feedback, as well as kinetic and audiovisual pleasures. Cybernetic qualities are also libidinal qualities which become evident in a player’s synergic relationship with a game, mutual responses back and forth – a dance/conversation – much like sex. Like making music with others, playing a collaborative game in a group means riffing on events, timing actions to synchronise with others, knowing what they might do next, what their specialities are, reciprocal sensitivities creating a sense of synchrony – a particular kind of libidinally informed pleasure based on ritual and mutuality. In addition to all these dances, we are also offered impossible, idealised bodies to inhabit, promising to free us, yet perhaps also reinforcing the limitations of the flesh/ageing/gender/fatigue/illness, and all wrapped in a veil of the virtual as a form of safe sex...anonymous encounters afford by the masks and fantasies of the virtual.

Conclusion

Freud’s major contribution to human thought was to remind us that human sexuality is highly complex and mainly psychological, organised according to certain occulted logics and emergent in productions of the imagination in non-explicit and diverse ways. Could it be that the suffusion of libidinal energy within games is symptomatic of constraints on a more direct expression of sexual desire? Could it be that we are now inheriting the outfall from the fact that games have tended to avoid 18 ratings because that would limit their market? Is the traditionally conservative American market driving the sublimation of sex in games? The plethora of sexualised bodies and violent action could be regarded like the monstrous Caliban as the return of the repressed. Hollywood’s Production Code in the early 1930s certainly produced a sublimation of sex into other charged images/themes, particularly in melodrama and screwball comedy, which often relied on innuendo to speak in code about sex to its audience. Freud argues that repressed sexual desires always find a way to be aired. Having said this, do we really want ‘groaning fornication’ in games? Doesn’t the erotic thrive on the veiled, the suggestive, the hidden and forbidden? The outcome of the veiling of sex does however reinforce inadvertently ‘transgressive’ rhetorics

of sex. Perhaps this is symptomatic of an unconscious need to preserve the frisson of sex afforded by such rhetoric?

Games demand control of 'lust', and games always are a form of deferred gratification. Yet the promise of pleasure is always there, keeping us playing, hungry for more. Desire slaked is desire no more, gone its invigorating energy. Games are machines of desire that reinforce ourselves as desire machines. It is tempting to think that this is why there are quite a few sex management games on the market – these games make as their ludic mechanic the act of making, controlling and manipulating lust. Isn't that what we do when we defer gratification and practise to make better our skills when we play games? The lust-balancing mechanic of *7 Sins* then slots neatly in as a conceit about the nature of games and gaming. But before this gets carried away too far, this in itself makes use of age-old rhetoric that sees sex as 'lustful', in need of control lest we will somehow become unanchored, adrift in a sea of sensual pleasures and lost to work and family ties. Yet isn't this why we play games? To lose our anchors? To experience immersion and flow? There is certainly some capital here in seeing games as desire machines. They promise us pleasure, yet in return we subject ourselves to their rules and regimes of work. Many 'textual' and 'affective' devices get used in this process of promising the ecstatic – allowing us to be beside ourselves, immersed in a game. And this is why we might say that games have libidinal economies.

Sex has conditions where it appears in games. The conditions are limited and indicative of the main ways in which sex is shaped by contemporary commerce and cultural values. It is acceptable when it is wrapped in the silks of romance as either theme, narrative or activity motivator. Transgression seems less of a condition, yet it is a major way in which sex is shown in popular culture as sinful and with that comes sub-rhetorical conditions – exploitation or titillation, as grotesque or comedy. As Freud and Bakhtin show, these are generic means to render sex transgressive, yet capable of being spoken of. We have also seen a more complex rhetoric of sex at work in games that do not show sex directly – the kinetic and gendered economy of tumescence and penetration. Lastly, we have the notion that playing a game is like participating in an orchestrated BDSM scene, a mode that also seems to inform themes of domination and submission, particularly in games involving violence. The rhetorical conditions for sex in games read therefore like a list of affiliations and modifiers in a table-top role-playing game, and, as we have seen, it seems that sex is still deployed using the mannerisms of exploitation.

What I'd like to see is games that break dominant rhetorics – perhaps the new casual game market will make this possible. I hope we might see a deterritorialisation of sex in games by reference to body and affect instead of established rhetorics. So my advocacy for sex in games is that we need more diverse forms of sex and not be limited to a set of narrow conditions. There needs to be more widespread acknowledgement that sex is more complex than the 'act' and that it might be regarded in ways other than as governed by a quantifiable drive. Designers need to go beyond the anodyne romance model and the myth of complementarity to address the disturbing otherness of sex but without using unreflexively rhetorics of exploitation.

As game theorists, we need to account for the complexity of human sexuality to counter sensationalist ‘moral panic’ rhetoric about games. Viewing sex in more diverse ways enables designers to explore the potentialities of game media in relation to a core part of human life. And, finally, more broadly, such work would be part of a more general cultural process of engaging with, rather than disavowing, the radical strangeness of sex, desire and sexuality.

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Chapter 10

Growing Game Worlds

Michael Nitsche

Cyberspace Mindspace

Ever since the early days of digital media, visionaries saw them as a new space to access a world to explore. This essay aims to draw a line from the historical development of game worlds toward an outward-looking perspective that introduces a new relationship between virtual and physical parts of game spaces.

Howard Rheingold prophesized about the future of cyberspace that “people will use it to navigate through the dangerous complexities of the twenty-first century. It might be the gateway to the Matrix. Let us hope it will be a new laboratory of the spirit” (Rheingold 1991, 391). Other visionaries, like Timothy Leary, hoped that these new options had the power to bring a change in consciousness triggered by the new interfaces available through the computer: “the right kind of interface design can take advantage of the world’s evolving communications web and turn our screens into windows on one another’s minds” (Leary 1990, 233).

These prophets of cyberspace pointed to a conceptual space, one bound to deliver fantastic opportunities for each individual. Following this line of thought, the use of virtual environments for experimental psychology was predicted early on – and so was the questioning of our identity in relation to these worlds. These visions pictured cyberspace as a mindspace for human self-discovery, and in these explorations, they sensed promises for a cyberparadise, a New Jerusalem. While the original image of the “Heavenly City” was one of “knowing” as Wertheim argues so accurately (Wertheim 2000, 256), the cyberspace version is one of information – but information experienced. These spaces transcend the visitor: a believer is cleared from sins, a user from the body. They offered hope for a better society. “Ours is a world that is both everywhere and nowhere, but it is not where bodies live” claimed

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Barlow in his *Declaration of Independence of Cyberspace* (Barlow 1996). In its most extreme, cyberspace has been ascribed qualities of a final destination at the dawn of the postbiological (Moravec 1988) where bodies become obsolete. Mirroring these concepts, prominent media such as *The Matrix* movies suggested a transformative space to which we would plug in to “be.”

A more realistic approach saw virtual worlds as additional platforms for communication. As these announced virtual worlds started to manifest in consumer software, scholars in the late 1990s realized that these were not the worlds of the final promise but of ongoing debate and manipulation. Whether based on drama and story or creation and play, these platforms were not considered as alien but as connected to and remediations of existent media.

The first generation of game worlds consisted either of simple graphics or were text-based. Their spaces were presented to us in highly abstracted forms or textual descriptions. A wide gap seemed to open up between the virtual reality promises and the de facto available game worlds. We never really “plugged in” the way we might have expected to. In the same year that *The Lawnmower Man* promised mind enhancements through virtual reality and Neal Stephenson’s *Snow Crash* (1992) presented us with virtual viruses that affected real bodies, id Software released the seminal first person shooter *Castle Wolfenstein 3D*. Their differences are telling. *The Lawnmower Man* ends with the “birth cry” of the new being into a global data world that blocks every phone line in America, and *Snow Crash* includes a threat from neurolinguistic programming that includes a virus, not unlike a computer virus, threatening humankind itself. However, the reality of *Wolfenstein 3D* was that instead of a single enlightened mind finding a horrific fulfillment or a single virus that could erase our world, the early web became a utilitarian exchange place. Usenet and BBSs around the country lit up as countless players wanted to discuss, download, and play the shareware version of *Wolfenstein 3D*. *Wolfenstein*’s levels and game world suggested immersion¹ through the focus on the first person perspective, visual presentation, and interaction design, but our engagement with it remained extremely limited. Game worlds became projected fictional environments of limited scope instead of storage spaces for the “self.”

Constructing Fictional Spaces

However limited they might be, those resulting game spaces provided structural methods to answer a lot of the questions posed at games. One of them is the notion of narrative in game worlds. The design of the game level as a “contested space” (Jenkins and Squire 2002) outlined the idea of a predesigned potential experience that could support narrative comprehension as it goes hand in hand with the comprehension of this predesigned space (Nitsche and Thomas 2003). The game level

¹On the topic of immersion, also see Harig (Chap. 13) and Pietschmann et al. (Chap. 18).



Fig. 10.1 Virtual world of *Charbitat* (1) (Source: Author's screenshot)

becomes the vessel that contains a possibility space onto which players perform virtually localized actions that shape the gaming experience. In turn, this experience was seen as the basis for an evolving narrative comprehension. *Wolfenstein 3D* staged the player as the hero, American soldier of Polish descent, William “B.J.” Blazkowicz, to be precise, who was pitted against hordes of virtual Nazis. In such a setting, we thought, the task for a designer was to support the most effective virtual staging. *Wolfenstein 3D* was limited to interiors, and the game designer had to design the most engaging worlds to stimulate the player’s participation.

A less aggressive example for this approach is the author’s work on the research prototype *Charbitat*. *Charbitat* started off by introducing the main character, a young Chinese princess who is poisoned and falls into a coma. The game world represented this coma state, a mindspace of the heroine, wherein the player controlled the princess in a dreamlike environment and set out to cure the princess from within. Like a real coma state, the game world in *Charbitat* was potentially endless. *Charbitat* looked into a procedural 3D world generation of game space using the player’s behavior within this world as a seed value to create new space sections (Fig. 10.1). Players inscribe themselves onto the virtual world through their interactions as they attempt to cure the inner world of the princess to finally reawaken her. Based on this basic inscription method, we added the generation of procedurally generated quests in the virtual world as well as dynamic camera behavior in the spatial presentation (Ashmore and Nitsche 2007; Nnadi et al. 2008). The game



Fig. 10.2 Virtual world of *Charbitat* (2) (Source: Author's screenshot)

world arranged itself in relation to the player's behavior. The result was a reasonably smart in-game system dealing with game space, its functionality, and perception. At its center was the projection of the player into the virtual world that defined the play activity in the game space and its consequences.

However, in this chapter, I suggest that we have to reverse our ideas of game space design and not look into the game system and its polygon world but instead outward at the world of the player.

Charbitat was based on the idea of the player's engagement with the polygon world, assuming that players take on a role within a virtual environment (Figs. 10.2 and 10.3). This inherently built on an often-cited transformation of the player through participation in a game world (Murray 1997).

The same effect of transformation explains why players of *Second Life* call themselves "inhabitants" of a virtual world.² Successful narratives that describe the experience of *Second Life* (such as Douglas Gayeton's *My Second Life: The Diaries of Molotov Alva*, 2007) often display the same transformation of a character from the world of the physical "real" life to that of the "second life." Like during the transformation in *The Lawnmower Man*, the human flesh is lost in the process. But this time, the absorption happens not in some extension of the individual mind but through the exploration of the shared virtual space that opened up in the *Second Life* universe.

²For an attempt to understand *Second Life* as a hybrid between virtual world and game, see Thimm (Chap. 11).



Fig. 10.3 Virtual world of *Charbitat* (3) (Source: Author's screenshot)

In a much-discussed shift, the focus moved on from the hazardous levels of *Wolfenstein 3D* to virtual worlds as homes for new communities. It became clear that game worlds offer agoras, marketplaces, chat rooms, and arenas that allow their players to form new connections between each other, often sidestepping established social boundaries with the help of game engines. One could read this as the return of Barlow's ideals. However, these new groups were not a single improved form of virtually altered humankind. This was not the Jobe Smith of *The Lawnmower Man*. These were tribes and clans and guilds that formed in their respective game worlds shaped by the conditions of the game system. These connections can expand beyond the frame of the polygon worlds and into the physical world (Taylor 2006), but they grow on the Petri dish provided by the game.

This chapter recognizes the relevance of the gradual development of game worlds and the significance of each of the inherent stages. At the same time, it suggests a newer paradigm in this evolution. Instead of turning inward like the *Charbitat* project or the adventures of Molotov Alva, it suggests to embrace the physical space anew. What is needed is a reversed perspective that looks outward from the digital and into the physical play space in order to include it into our notion of game world.

The Player's Dimension in Game Spaces

A form of outward-looking approach has gained traction as the latest stage in the development of digital game worlds. It is a defining quality of Nintendo's Wii console to involve the player and the player's space in the design, technological realization,

and marketing of the game system. The introductory marketing campaign did not show the virtual game worlds but instead turned around and presented the players' actions in their living rooms as they were obviously playing video games offscreen behind the camera. The campaign literally reversed the established view. It claimed that the most important location for a game is not on the screen but before it. This reversal is supported by technological advances: We can trace a comparable attitude in other successful current game developments from many rhythm games and their interface design to the use of webcams or touch screens as input devices to increasingly transmedia-like interaction designs that incorporate multiple screens and interaction layers. However, it implies a necessary rethinking of our theories regarding digital game worlds.

The battle for the living room, which originally raged between different media and content providers, has literally become one for physical space in our homes. Playing *Dance Dance Revolution Extreme* demands a certain space, a rearrangement of furniture; using the eyetoy effectively demands sufficient lighting, a change in our living room's light set up which originally might have been much more dimmed to allow for a brighter screen image; *Rock Band* asks the player to set up a miniaturized band room in front of their TV, effectively changing the space usage of the room permanently. These games quite literally ask us to rearrange our furniture and living conditions to play them. Other game systems, like augmented reality games, have expanded beyond the confines of the living room, or they have left the television room as play space altogether. Alternate reality games, big games, and many handheld games that include locative information all build on this expansion of game space.

These game worlds reframe what might be considered our "reality" (which is a dubious term but will be used to simplify the argument) in relation to a "playity," a world where play defines the spatial behavior. When Alternate Reality Games claim that "this is not a game," then they also claim an end of the defined game space. Even if this statement might be a tongue-in-cheek part of the gaming situation (McGonigal 2003), it remains an integral part of the spatial definition of these games and has effects on their players.

The underlying reframing of a "reality" through games is not new. Games and play as social artifacts and activities always included an element of boundary blurring, one that has been explored by many activists and performance artists like Augusto Boal or Andy Kaufman. The merging of the here outlined spaces and their shifting dynamics are only another argument against the oversimplification of a pure magic circle. The sheer concept of a somewhat isolated magic circle, as a "space apart," "isolated, hedged round, hallowed, within which special rules obtain" (Huizinga 1950, 10), emerges more as an identification of the problem zone than a factual separation between the world of the game and that of the non-game, of physical and virtual. What this means for the here suggested outward-looking perspective is that we have to involve the physical dimension of spaces connected and defined by the presence of digital game worlds in our discussions, even if they are excluded from digital representation.

If an Orc Falls in Azeroth

What is the difference between the space of media usage and that of the fictional hybrid world that I am trying to shift into focus? Can we not describe the impact of digital technology on our living conditions in technical terms and see interfaces as parts of technologies that have always shaped our world? The introduction of better lighting technologies, for example, allowed for late night reading. Is there a difference between the adjustment of our living space for better reading versus playing a video game?

Like many other media, video games provide fictional worlds; and like those media, video games depend on a certain materiality to do so. Furthermore, there is little doubt, that their materiality affects our living spaces. Families huddled around the radio receiver with its single speaker, then they had to rearrange their living room to provide a good view at the television for all, and now, they might have to make even more space to play their *Wii Fit* games. However, a purely technological perspective cannot describe the interactions between physical and virtual spaces for video games that support our construction of a fictional world.

Unlike most other media (e.g., books), game worlds are not descriptions to be imagined into shape by the audience but provide for the construction of the space in a mix of theater stage and moving image assembly. Unlike most other media (e.g., film), the interaction with video games is not limited to active cognition and imagination, but we affect the game world and the game text directly. Because game spaces are illustrative audio visual as well as interactive texts, our experiences with them differ from those spaces we encounter in novels or audio plays.

Physical motion, whether it is in the form of a mouse click or swinging a controller, maps onto events in the virtual world. Physicality is part of the virtual game world construction and the construction of the fictional space. The material quality of a book can indeed be of relevance and has been used in manifold ways in masterpieces like Laurence Sterne's *Tristram Shandy* (1759), but it is incomparably more present in the interface design of modern video games. Turning the pages of a book affects mainly the book as a container of the text – pointing a light gun into the screen world of *Time Crisis* defines the development of the unfolding text itself in a way paralleled only by participatory theater productions. The NES game *Hogan's Alley* is in itself a remediation of a shooting range where players use a light gun to shoot virtual targets on screen. Cory Arcangel/Beige modified it for the *I Shot Andy Warhol* (2002) installation by replacing the original virtual targets with archetypical personalities, including Andy Warhol. Among other things, Arcangel highlights the game play as performance and stages the player in front of the screen as participator in that event. This chapter argues that *I Shot Andy Warhol* might emphasize the performative character of the play situation through its concept art approach, but the underlying logic is at work in video games at large. Through the kind of spatial quality that is established through the performance setting, games' fictional universes can spatially expand into the physical world. Murray used another light gun/shooting title – *Mad*

Dog McCree – as example for her point on transformation and self-confrontation: “the moment in which I was suddenly aware of an authentic but disquieting side of myself, seems to me to be the mark of a new kind of dramatic experience” (Murray 1997, 54). It remains a key argument of this essay to point to the spatial conditions of this experience and the transformation not only of Janet Murray into Annie Oakley but also of the arcade hall into a shooting range.

This expansion demands a certain spatial rearrangement, and this rearrangement is based not only on the logic of the interface (the presence of the *Rock Band* drum set in the living room, the distance between player and TV set in *Mad Dog McCree*) but also on a change of our understanding of that space (the fictional *Rock Band* concert stage expands to the real living room, or the arcade turns into one half of a shooting range). Game spaces become part of an architecture of illusion. Trompe l’oeil paintings draw visitors into a hybrid space where architecture and fictional world seem to merge once the visitor reaches the designated point of view. The designated point of view of digital game worlds is usually in front of a screen, but that does not mean that the surroundings remain untouched. The fictional game world leaves traces as it spreads into the physical.

The first consequence of this is a change of the meaning of the “real” space. The physical location becomes infused with new meaning that originated in a game world. The second step is that we have to realize the situatedness of this newly infused space. The point here is to highlight the impact of playing in virtual worlds on the conditions of the physical world. The virtual worlds of *Rock Band* or *Hogan’s Alley* reinterpret the physical space as the part of the staging grounds for events that are delivered to us mainly by the virtual game environments.

Into Performance and onto a Stage

Principles of “play” are part of both performance studies and game studies. In fact, they often emerge from the same sources (Huizinga 1950; Schechner 2002). However, the development of the practice of play in space has different histories in both disciplines. It might be the longer tradition of the performing arts, but they have addressed the insufficiencies of a “space apart” as performance space in more detail than video game studies have done so far. The debates on an artificial “fourth wall,” “invisible theater” (Boal 2000), or “liveness” (Auslander 2008) reflect an ongoing discussion of the localization of a performance and the constant crossing of these temporarily located borderlines. There are many underlying references at work in this debate from new technological developments to social and ideological agendas, but the unifying tenor is that play is far from encapsulated or exclusive to a given space, such as a theater. Instead, it can spill out into our streets, shops, communities, and homes. The constant morphing and rethinking of the performance space are something that digital media still can only aspire to.

From a game studies perspective, this opens parallels to the discussion of the “magic circle,” especially regarding its openness and boundary qualities. The designation of

a magic circle as a specific space in which play happens offers itself too easily as an inward-looking separation membrane. One defines the “magic circle” for a certain game and could be misled to believe that enclosed within it reside all the elements necessary to understand and analyze the game play. This approach has always been questioned (see, e.g., the seminal Salen and Zimmerman use of the term and its open condition in certain play situations) (Salen and Zimmerman 2003). The idea of a complete magic circle has been increasingly eroded; whether it is the role of social media and the practice of cheating that questions the magic circle (Consalvo 2009) or in parallel to fantasy role-playing games and LARPs (Copier 2005).

Continuing this line of thought, it becomes clear that the virtual worlds are not goals in themselves but meant to initiate a dual transformation: that of the player into a performer and the physical space into a part of the virtual stage. This shifts the role of the physical section of the play space into that of a performance space. The eyetoy, looking from the PlayStation into the living room, transforms the parlor to a performance space that is linked with the digital polygon levels of the individual game.

This constructs primarily not an “inner mind” space but one for “outer expression.” Like the stage design in a theatrical production, this space has physical attributes based on given socioeconomical as well as physical and personal conditions. Whether it is the arrangement of furniture, the color of the wallpaper, the shape of the room, or the scent in the house, all of these elements, outlined so eloquently in their role for the home by Bachelard (1994), are reframed by digital media that can turn them into props used during the performance. Players may become gunslinger Annie Oakley for a video game, but their living room may also gain a new context along the way.

Shifting Focus

The question, then, is how to include this space into the criticism, design, and theory on video games. What is the effect of this inclusion of the physical game space dimension? What are its advantages and disadvantages? Looking back, radio and television reshaped our social conditions much like Barlow’s ideal of a virtual society. How do game spaces differ from those conditions? One critique formulated against radio and television was that they broke open social spheres in a way that made the American audience unclear about their “sense of place.” Meyrowitz argues:

Evolution in media, I have suggested, has changed the logic of the social order by restructuring the relationship between physical and social place and by altering the ways in which we transmit and receive social information. (Meyrowitz 1999, 100)

Many discussions on video games, on the other hand, have identified the role they play as social media and gathering/communication space. To return to Rheingold: they become home to new “virtual communities.” In this regard, it seemed that video game worlds were the answer to Meyrowitz’s problem of finding one’s space and provided a new home. Why not locate this home online?

The resulting worlds open up for players to join them, to immerse themselves in a virtual homestead. But the problem of this argument is that it again looks mainly inward “into” the mediated world and situated communities in there. There is no denying that the new technologies helped forge new homesteads. However, we have to remind ourselves that at the same time, these virtual communities have a very real presence in our physical homes. They actively change our existing homesteads. This might be the more appropriate argument for a new sense of space and the relevance of video game worlds for our personal “social place.”

In the past, the combination of different arts in digital media has been often described in reference to Wagner’s idea of the *Gesamtkunstwerk* (Packer and Jordan 2001). The here suggested new concept of the digitally infused *Gesamtkunstwerk* still depends on the digital, which continues to provide a new multimedia frame. However, as the framing works both ways, our living rooms become part of the artistic transformation. Instead of a single solution to the question of where to stage a *Gesamtkunstwerk*, which Wagner answered by designing the Festspielhaus Bayreuth, game designers face millions of unique locations that are to be transformed into virtual stages, each one of them with its own spatial arrangements. These are spaces we have to design for if we take the outward-facing nature of game worlds seriously.

The predictions are bound to be fragmented, but some simple indicators can be identified to outline the first steps into that direction.

One thing needed to support this design is a form of effective sensing – whether it is in the form of motion in the Wii-controller’s accelerometers and gyro or in the visual computing of Kinect and webcams. While this sensing is currently concentrating on player bodies and their activities, one can expect that the same sensors will try to create an understanding of the space and condition of the playground. The ambience will become more important and used to blend the digital and the physical further. Physical objects and space will become infused with digital context as real world connections of games will become more imminent. Game worlds will spread into private spaces such as living rooms as well as public places like restaurants, prisons, or museums – not to offer a virtual window in some kind of “otherworld” but to provide a new perspective to the existing one. Ultimately, this is what these games will aspire to: to create new realities not in a virtual polygon world but in the physical and social spaces we live and breathe in.

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Part II
The Player–Game Relation

Chapter 11

Virtual Worlds: Game or Virtual Society?

Caja Thimm

Introduction

The number of virtual worlds in existence has increased dramatically in recent years (see Nitsche, Chap. 10). Over 40 different “worlds” have now been identified (see virtualworldsnews.com, accessed November 2010). Nevertheless, it was one specific virtual world which caught the attention of the public: *Second Life* (SL). SL managed to capture much more media attention than its competitors, and now enjoys a 17-million strong user base (see secondlife.com, accessed February 2011), out of which 850,000 access the platform at least once a week. Why would so many people join a digital platform populated by anonymous avatars?

Second Life, the virtual platform for a digital “second” life with self-designed avatars, became a media event for the mass media in 2006. Apart from highlighting its potential for self-fulfillment or entertainment, many print media in Germany emphasized SL’s economic potential. With headlines such as “Wealth from Nothing” (*Spiegel* 3/2006), “Got Rich in Second Life” (*Die Zeit* 2/2007), “Better Business in Second Life” (*Frankfurter Allgemeine Zeitung* 46/2006), or “Gold Rush in Second Life” (*Süddeutsche Zeitung* 15/2007), even serious media outlets gave recipients the impression that SL was a virtual gold mine.

After exponential growth and the realization that making money was not as easy as the media had predicted, the virtual community of SL exhibited a slow but distinct shift in motivations and interests: the primary motivation of the SL user was no longer the possibility of making money, but rather social interchange. In other words, community became the main reason for losing oneself in one’s second life, not commerce. For that reason, SL can rightfully be described as belonging to the Web 2.0 or “social media” trend.

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Around mid-2007, while both small and large businesses started turning their backs to *SL*, new kinds of activities based upon interpersonal communication became increasingly popular. The *SL* platform turned into a forum for schools and universities (about 500 universities have “digital outposts”), political demonstrations, and elections. Cities and even entire countries established themselves online, and museums placed their showpieces on digital exhibition. Moreover, the lives of the avatars became “more social” – they communicated about life, love, and hobbies above and beyond linguistic and cultural barriers. At the same time, the users’ behavior and activity shifted. What had started out as a simple game or a mere pastime had become a complex meeting place for social groups and was increasingly reflecting the strengths as well as the conflicts of its “real” counterparts: violence and destruction, assault and injury, crime, and distrust had become a part of the colorful digital world of *SL*.

Observing such structural and motivational changes to *SL* – and this is the central thesis of this chapter – bears proof that *SL* is becoming a virtual community in which social structures increasingly exhibit the traits of a civil society. At the same time, it appears that the borders between play and game are blurring ever more as the personal and political interests and (human) states of mind shift and the virtual world’s citizens (avatars) increasingly dictate its activities and structures. On the basis of these observations, one can draw some important conclusions: the constants of human communities exist even in virtual contexts, and computer games extend into virtual words and vice versa.

In this chapter, the position is put forward that *SL* is not a traditional computer game, but can be understood as a (first) attempt to establish a complex mode of social organization by “playing” with particular online structures and forms of entertainment. Moreover, the continual process of the virtual platform’s restructuring and expansion according to the utterly personal motives of its users and the content that results from them can be conceived as a kind of global experiment in creating a new (and better?) world. In this process, however, we need to consider what exactly makes virtual worlds interesting to that many people (see Keilhauer, Chap. 20).

Virtual Worlds

As news coverage of *Second Life* started spreading at the end of 2003, the notion of the “virtual world” became a topic of public debate. The term is now often used as a synonym for *SL*. As early as the late 1980s, virtual environments, or “virtual reality” (VR), had become the object of scientific study. Lanier (1991, 69) defined “virtual reality” as a computer-synthesized reproduction of reality into which one can transport oneself using a computerized suit. This definition clearly shows how VR research has tried to make immersion into a virtual environment using technological aids such as head-mounted displays (HMDs), wired gloves, and body suits seem possible. For example, users wearing a HMD were regarded as equipped for multisensory immersion

into a synthetic, 360-degree world that they could explore (Fisher 1991, 105). However, the expectations that VR research had for virtual worlds seemed unfulfillable: “Virtual reality will never be able to completely replicate a thing as complex, detailed, and alive as the world” (Aukstakalnis and Blatner 1994, 33).

But if so, what is the motive of over 17 million people to spend time in *SL*? One of the answers can be found in the change of activities in leisure time of both youth and adults. According to an estimate of Balkin and Noveck (2006), 20–30 million people regularly visit virtual worlds and spend almost 20 h per week in them, on average. They conclude tentatively: “Indeed, virtual worlds are believed to have implications that go beyond how we play, to also include how we buy, work, and learn” (Balkin and Noveck 2006; also see Bartle 2006). Others have asserted: “By the end of 2011, 80% of active Internet users (and Fortune 500 enterprises) will have a ‘second life’ (i.e., an avatar or presence in a virtual community like Second Life)” (Gartner 2007).

However, statements like those above are based upon the assumption that people visit virtual worlds primarily because of the intensity of the experience that comes from complete immersion into a virtual reality and from distancing oneself from nondigital everyday life. Although the core concept of immersion can still be understood as a plunge into the computer world and disengagement from the physical world (Bente et al. 2002, 1), VR research today has shifted its focus. A virtual world is now understood as an artificially created, three-dimensional, synthetic world (Castronova 2005, 11). Three attributes characterize the virtual world: *interactivity*, *physicality*, and *stability* (Castronova 2001, 5):

- **Interactivity:** The virtual world exists on one computer but can be accessed remotely (i.e., via Internet) and simultaneously by a large number of people. The command input of one person affects the command result for other people.
- **Physicality:** People access the program using an interface that simulates a first-person physical environment on the computer screen. That environment is generally subject to real-life laws of nature and is characterized by a scarcity of resources.
- **Persistence:** The program continues to run whether or not anyone is using it, and it remembers the location of people and things, as well as the ownership of objects.

Virtual world is thus used as an all-encompassing term to denote both popular and realistic (“laws of nature”) artificial worlds. In line with Porter (2004), Messinger et al. (2008, 6–7) propose a typology that identifies five aspects that comprise a virtual world:

1. **Purpose (content of interaction):** Type of information or content that the virtual environment contains. That information can refer to (a) a strategic, tactical, or thematic incentive; (b) whether the network is thematically organized – that is to say, connected in terms of a specific goal or purpose – or “open”; and (c) whether the platform targets a certain age group or is open to all ages.
2. **Place (location of interaction):** Either complete or partial virtuality with respect to whether user groups are geographically organized or are dispersed.

3. Platform (design of interaction): This aspect refers to whether communication is synchronous, asynchronous, or both.
4. Population (pattern of interaction): Size of the group as well as the forms of social connections within it.
5. Business model (return on interaction): Financial background of the virtual world. In general, a platform can be for-profit or nonprofit. More specifically, the business model varies according to whether (a) a one-time registration fee or (b) a pay-per-use fee is required, (c) whether it is subscription based or (d) advertising based, and whether the virtual world is financed by (e) payments for individual services including virtual goods (land, clothing, software) or (f) for secondary products (such as accessories).

According to this typology, *SL* sometimes appears twice in a single category. For example, although *SL* is not thematically organized as a whole, several distinct spaces have developed within it (such as education or erotica) that clearly have a thematic focus. Similarly, communication forms are variable. Although the chat function does allow for limited simultaneity, it does not enable or enforce communication with a large disperse group. The main foci in the starting years were clearly based upon the production and consumption of virtual goods – the sale of land and the equipment of avatars are both based upon the warehouse principle: goods are for sale, whether virtual or “real.”

SL offers an uncomplicated access to the immersive process. Rather than being simulated by technological means, immersion occurs cognitively. Neither a HMD nor wired gloves are necessary to log onto *SL*. Only the most basic technological tools – the computer screen acting as the interface between reality and virtuality, and the computer running the software – are required. The concept of immersion focuses upon the user by reflecting the user’s experience of being in a virtual world. Therefore, *SL* can be considered a “social virtual world” or “life simulation.”

As such, *SL* cannot be considered a computer game. It does not follow any written storyline or set forth any concrete objectives, nor is there an outcome with winners and losers. Users do not have to complete any specific tasks or levels to continue in the virtual world. Characteristic of *SL* are the social features like meeting and chatting, the creative construction and co-development of the virtual environment, the trade and sale of virtual goods, as well as *SL*’s potential as an educational platform.

To briefly summarize, immersion into the virtual reality of *SL* no longer requires users to attach a technological apparatus to their bodies. Social factors such as the communication with other users or the collective experience and discovery of the virtual world are the primary factors that enable users to do without gadgets such as HMDs and wired gloves to distance themselves from physical reality and “lose themselves” in virtual reality.¹

¹Conditions for immersion are also discussed by Hårig (Chap. 13) and Pietschmann et al. (Chap. 18). The importance of social factors is examined by Giang et al. (Chap. 34).

The Concept and History of Second Life

SL was initially developed by Linden Lab as a platform for researching virtual reality and new Internet technologies. Instead of charging a monthly fee, Linden Lab sold virtual space in the form of plots or “grids,” thus beginning a new era in the valuation of virtual goods (Kaumanns et al. 2007, 33). In an attempt to keep customers coming back to the platform, Linden Lab vouched to protect the intellectual property of users who created digital goods using its software. Thus, creators in *SL* were recognized as the legal proprietors of their own digital goods. A virtual currency, the Linden Dollar (Linden\$), was also introduced, facilitating the trade of virtual goods (Au 2007, 285). Second Life residents have built entire careers around the creation, marketing, and selling of virtual goods and services to other residents – from digital sneakers to simulated lap dances to lavish pretend mansions. The trade in virtual goods and services is facilitated by the Linden Dollar, a virtual currency that is bought and sold against the US dollar.

This basic concept of *SL* (in-world currency, rights to digital ownership, independent control over purchased virtual space) paved the way for the first wave of users – the “*SL* marketing phase.” In this first phase of development, well-known, real-world companies opened their virtual doors in *SL*. They discovered *SL* as a marketing and testing field for their products and services, new market models, and target group analyses.

Changes to *SL* since mid-2008 can be considered part of the second phase of development. Companies have been leaving the platform because – aside from appealing to the young and Internet savvy – maintaining a presence in *SL* has not fulfilled expectations. The job of maintaining digital stores has proved more expensive than it is worth. Although such a reaction does make good economical sense, it is shortsighted: *SL* is currently emerging as a social network that has by no means exhausted its potential. What role digital consumers (avatars) will play in the future remains uncertain.

SL is similar to other Web 2.0 applications in that the design and general rules of the “game” are dictated by the provider (see O’Reilly 2005). For example, Linden Lab only makes certain standard communicational and design features available in *SL*; the users themselves then develop those further and fill the virtual world with content. This principle of independently building and developing a virtual world reflects the main concept behind Web 2.0 – that of *user-generated content* (Kienitz 2007, 20). Web 2.0 users are not simple consumers; they are also simultaneously producers whenever they actively design and connect with other users to share common experiences. The new generation of the “prosumer” (Barucca et al. 2006, 136) represents a symbiosis between consumers and producers who desire to design, develop, and manage for themselves – and the concept behind Web 2.0 makes that possible in the first place.

The Avatars

For much of its history, the term *avatar* belonged to the realm of technobabble. It has only recently become increasingly popular in light of the attention *SL* received in the media, and of course even more so in 2010 with the record-breaking James Cameron movie “Avatar.”

US American science fiction author Neal Stevenson first used the term in 1992 to denote the bodily image of a real person in a virtual world. In his novel *Snow Crash* (1992), Stevenson describes a synthetic world inhabited by humans taking the form of avatars. Moreover, the term *avatar* can be used to denote a “virtual representative,” a “player,” or a “digital citizen” according to the context. Avatars are the vehicles that users use to explore a virtual world, navigate through it, and communicate with other avatars (via voice or text chat).

The process of designing an avatar is the primary step toward participating in virtual goings-on. During registration, the user must select from among basic types of avatars. However, choosing the avatar’s sex and appearance is unimportant, as avatars in *SL* can be freely modified and transformed. The basic types merely serve as models of how an avatar might look; particularities such as sex, body shape, and skin, hair, and eye color can be individually set and reset. One important element of an avatar’s design is its clothing. An interesting appearance and fashionable clothing are considered status symbols, just like in the real world. However, in this case, “fashion” is context-specific; what matters most is how much time and expertise goes into designing an avatar.

Every new user starts out with a basic configuration, which then can be adapted, styled, and dressed after one’s own wishes. However, producing digital pieces of clothing is time-consuming; a brisk market for clothing has emerged in *SL*. Thus, successful goods that form a particular market in *SL* are dedicated to the various fashion needs of avatars. Hairstyles are particularly valued, as they are a mark of expertise and status. Photorealistic hairstyles are in high demand due to the general impression that “the more detailed, the better” – that the avatar’s design translates to the time and effort the user put into creating it. It seems likely that the more effort a user puts into designing an avatar, the more that user identifies with “it,” the digital “ego.”

The avatar’s primary mode of transportation is *teleportation*. With a click of the mouse, an avatar can navigate from one place to another. Consequently, physical or geographic distances do not play an important role in *SL*. The user may also navigate his or her avatar with more precision around local virtual space using the computer keyboard. Also, besides being able to tread upon virtual space just as a human can tread upon physical space, avatars can also fly. By pressing the arrow keys, users can make their avatar fly short distances within their *sim* (locality), giving them a bird’s-eye view over happenings below. Users can also orient themselves using maps that are accessible from the main menu.

The various forms of interpersonal communication are central to *SL*’s popularity. Such forms include a text-based chat which appears in the lower third (i.e., captions) of the video screen, voice chat via microphone and headphones, instant messaging (IM), and *SL*’s internal news system.

The most commonly used form of communication is the text-based chat. By selecting the “chat” function within the main menu, users are able to type in messages which appear in the dialog field upon the screen when users tap the return key. The message is somewhat public, as avatars in the immediate vicinity are able to read and respond to it. Conversations between avatars that are not located in close proximity to one another can be carried out using a message service that functions much like an e-mail program. If a user sends an IM to another user that is not online at the time, the message from *SL* is then automatically forwarded to the absent user’s e-mail address. In this way, messages may be exchanged between the virtual and real world. Such cross-medial communication serves not only practical but also systematic functions: the communication between avatars is expanded to include e-mail communication between avatars and humans, which has become fully integrated into everyday life. One may speculate that in the future, users will receive the bulk of their mail from avatars.

Despite the introduction of voice chat to *SL* in 2007, text-based chat remains the preferred method of language input. Many avatars even have the voice chat function deactivated, preferring to remain vocally anonymous, since one can often derive information about a person’s sex or nationality from their voice. Ultimately, voice chat can lead to an identity crisis resulting from inconsistencies between the user’s virtual self and real self. Three-dimensional, face-to-face, or “avatar-to-avatar” (Castronova 2005, 135) communication is enriched with gestures and animations in *SL*. According to face-to-face communications research, physical appearance, mimicry, gesticulation, and body language are essential to forming an interpersonal impression (Argyle 1979). *SL* fulfills such requirements, as gestures and animations are carried out with the push of a button – avatars are capable of gestural and mimic communication. However, unlike in real-world, face-to-face conversational situations, users consciously perform gestures with their avatars. The subtle nonverbal aspects of avatar-to-avatar communication in *SL* are therefore limited to the outward appearance of an avatar, proving that Watzlawick’s assertion that one can never *not* communicate (Watzlawick et al. 1993, 51) also applies to the virtual world of *SL*.

A proper job market for avatars which is divided into services and trades has emerged in *SL* in addition to a product-oriented consumer’s market. Whereas services such as diverse as dancing or security can be performed by newcomers to *SL*, technical jobs call for special skills. Avatars possessing certain abilities in constructing objects may take on special orders or simply sell the goods they produce.

The Users: Motivational Structures

As mentioned above, a proper “media hype” surrounding Second Life occurred in 2007. Within 2 years, the number of registered users in *SL* rose from 230,000 in May of 2006 to over 16 million in 2010. However, the number of registered users does not necessarily reflect the number of active users, as only 1 in 20 registered users can be considered “active.” Only 30–60 thousand users worldwide are online



Fig. 11.1 Chatting in a café in SL (Source: Author’s screenshot (see Thimm and Klement 2009))

at any given time. Due to such low figures, the media hype surrounding *SL* quickly faded around the middle of 2008. After that, news coverage of *SL* reflected a sense of disillusion and disappointment. Still, the number of users continued to grow at a steady, though low, rate.

An analysis of user types and behavior reveals that apparently not all users are “classic gamers” who are interested in new 3D worlds, but rather people who are often considered to be “nongamers” such as women and older persons. Amann and Martens (2008) asked 500 German *SL* users about what motivates them to use *SL* and about their behavior in the virtual world. Their study revealed commonalities in the reasons for heavy *SL* use: chiefly, the desire to be creative (as realized by the possibility of freely designing the virtual environment and one’s own avatar), social interaction, and communication. Most strikingly, however, is the strength of the social interaction motive: whether it concerns “talking to other avatars” (76%) or “meeting other people,” it is the sociability of the environment which influences users to stay on. Meeting other people (=avatars) has become one of the main attractions of *SL*. Meeting places or ventures often enough resemble the real world: events, bars, and cafés like the one in (Fig. 11.1).

Once engaged in the virtual world, the user’s involvement with it is considerable. The frequency of use is high, with the study participants spending an average 3.7 h on workdays and 5.1 h at the weekend in *SL*. Spending over 30 h online on a weekly basis was not uncommon for them. Moreover, *SL* was accessed primarily from the home PC or notebook. According to Amann and Martens (2008), such high

frequencies of usage become stabilized over time. Usage becomes so habituated that a “wear-out” effect is hardly noticeable. Given such a high intensity of usage, the amount of time spent using other media and doing other leisure activities changes. Around 10% of those surveyed spend less time participating in social activities (such as spending time with friends or family), and about half of those surveyed admitted to spending less time watching television. Nevertheless, the number of truly active “citizens” of the virtual world remains (at least at present) of negligible importance when compared to the number of computer or video game users and traditional media users in general.

User-generated virtual worlds appear to produce or attract a new type of user. The reasons users gave for spending time in *SL* are revealing: 60% of those surveyed indicated that they logged on to *SL* when having previously arranged to meet with virtual and/or real friends and acquaintances; another 47% log on to participate in a particular, mostly social, event. One-fourth of male users and 17% of female users log on to *SL* to meet up with virtual and or real business partners, and at least 30% of users go online for work reasons – although work in virtual worlds is mostly poorly paid.

The study of Amann and Martens (2008) therefore provides empirical evidence in support of the aforementioned concept of “life simulation”: *SL* has become a significant social platform for creating and maintaining social contact(s). As such, *SL* can be considered part of the worldwide trend in using social media.

***SL* as a Virtual Society**

Virtual worlds such as *Second Life* link the Internet and the “real world” with the 3D world: the former by way of a simple transfer of Internet content into the 3D realm, and the latter due to the existence of a complete economic system with exchangeable currency. *SL* users gain ownership of the virtual products that they create, and may sell those products for virtual money that they can convert back into real money. In addition, numerous “real” companies, institutions, and organizations have established a presence in *SL*. The integration of other media into online 3D worlds is principally achieved in terms of a media convergence, as is in the case of audio or video streaming or game applications. Still, if games are defined as having a preset scenario and predefined objectives, then online 3D worlds cannot be considered games; rather, they are “synthetic worlds” that expand many real-world aspects into virtual space (Amann and Martens 2008). If *SL* is identified as a “synthetic world,” the question arises as to how that world is designed and, more specifically, to what extent that world will become a *virtual society*. The development of *SL* into a “life simulation platform” should, then, be observable in several areas, which Balkin and Noveck outline:

Although the development of these virtual worlds has been driven by the game industry, by now these worlds are used for far more than play, and soon they will be widely adopted as spaces for research, education, politics, and work. (2006, 26)

Second Life and Virtual Economy

As news coverage of Second Life began spreading, a large number of companies helped form the virtual world's image. Barnes (2007) compiled a list of 126 prominent real-life companies present in *SL* that includes IBM, Mercedes-Benz, Pontiac, Nissan, Dell, BMG, Deutsche Post, and various banks. 25,365 companies from the retail and service branches were maintaining a presence in *SL* as of February 2007, most of which were stores, clubs, or real estate. Also, 150 American institutions of higher learning owned property in *SL*, several of which actively used *SL* as a teaching platform (Graves 2008).

The possibility for *SL* users to freely design virtual objects and sell them formed the foundation for one key aspect of *SL*: users can become economically active. If one assumes that the purpose of a virtual economy is to optimize the rules of a virtual world to the point that they are attractive for its users (Hummel and Jansen 2007, 125–126), then *SL* attracts users by allowing them to trade and sell their creations. As was stated above, *SL* is dependent upon users' co-creations and co-designs. The possibility to sell them is a further motivation for users to help design the digital environment.

A virtual sale can take place with just a few mouse clicks in *SL*. In general, virtual products in *SL* are not displayed in 3D, but rather as a 2D image. The product's price is shown when an image of the product is touched by the cursor. A pop-up window then appears with a list of payment methods for the transaction. Any product bought will then land in the avatar's inventory.

Forms of Social Organization: Education

Comprehensive opportunities for learning have emerged in *SL* parallel to diverse opportunities for business and pleasure. These educational opportunities, in which inexperienced users are taught by more experienced avatars, are almost always free of charge and are offered by private providers in *SL*. Among the most well known are New Citizens Incorporated (NCI), Rockcliffe University Second Life Campus (RUSLC), Technical User interfacing (TU*i*), and Academy of Second Learning (ASL). Course instructors serve as mentors, much to the benefit of new citizens to *SL*. Anyone can draw upon the help and knowledge base provided by the social network. Moreover, the structure of *SL* is characterized by social involvement and a strong willingness for avatars to assist others.

Besides opportunities for learning which are in part created by users themselves, real-world educational institutions use *SL* as a tool for expanding upon their regular teaching tools. Renowned American universities such as Harvard, Stanford, or New York also maintain a presence in *SL*. Some of the benefits of using the virtual world for education include low costs and – due to the three-dimensional depiction of avatars – a feeling of being together. However, holding real-life lectures in *SL* is hampered by technical difficulties (system instability when large numbers of avatars

congregate) and complicated controls. Still, educational institutions that joined *SL* early on profited from the initial wave of attention that *SL* gained in the media.

Social networking is also a by-product of the educational opportunities in *SL*. In the course entitled “How to Start a Business in Second Life?” one learns about the secrets of other users who make money in *SL*. However, course instructor “Nancy Villota,” an educational avatar, explains that making money in *SL* is much more difficult than the press suggests. What is more important, according to “Nancy,” is that participants have fun and make friends in *SL* – a lesson that other participants gladly learn. In other courses, one can learn how to use various tools within *SL*. In the course entitled “Basic Land Ownership,” for example, users receive advice as to how and where they can purchase inexpensive virtual land.

Avatars as “Citizens”

One important criterion for weighing the many facets of play and the sociopolitical functions of virtual worlds is the functionality of societal organizations. Although *SL* does not have political leadership in the sense of an organized community, certain political features can be identified according to two main categories:

- In-world regulatory activities: for example, acting against violence and misuse in *SL*, adhering to social standards, setting and serving penalties for breaking rules.
- Extra-world activities: *SL* is used as a propaganda tool or platform for implementing an action pertaining to real-world issues (e.g., protesting fascism, protecting human rights, debating RL topics).

In-world media play an especially important role in in-world regulatory activities. The in-world magazine *AvaStar*, a tabloid-style digital newspaper published by the German company Springer, has excelled at covering problematic activity in *SL* (Fig. 11.2). Most notably, the *AvaStar* has covered the avatar-led protesting against child pornography in *SL*, which then echoed throughout the media landscape in the real world (also see Thimm 2009a).

Another phenomenon, which has been of increasing importance, is political activism. Many avatars seem to share a sense of democratic responsibility, thereby promoting good causes or social events. Even more so, they feel responsible for the political public in *SL* itself and try to make breaches in that unwritten concept of a pluralistic and antifascist concept of *SL* public. Some findings corroborate this hypothesis.

First, avatars massively protested the presence of the French right-wing politician Jean Marie Le Pen, a presidential candidate in France in 2008. They destroyed his in-world campaign center and attacked his avatar supporters (Fig. 11.3).

A second example would be the support of the freedom movement in Burma, which led to all kinds of *SL* activities, one of them depicted in the screenshot below (Fig. 11.4).



THE AVASTAR

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CHILD PORN: LAB DID NOTHING!



LINDEN Lab has allegedly come under investigation by German authorities over the child porn scandal that has rocked Second Life this week.

FULL STORY - PAGE 2

- LAB IS INVESTIGATED
- AGE PLAY NOW BANNED

NEWS p.2-11
 Sarkozy win sparks French celebrations in SL.

BUSINESS p.12-13
 US\$50,000 Amsterdam sale falls through.

STYLE p.16-21
 Linden's Hawaiian party - a What's Hot special

AVASTAR OF THE WEEK p.31
 Singer Kim Seifert on being a virtual star



INSIDE OPINION

"At the end of the day we'll have a PG and politically incorrect landscape, with 'herbs' where the few validated adults can enjoy themselves."

GAMMIE LLEWELYN p.7

"The reactions in the child pornography scandal from the community has been excellent. It is clear the Lab, who have often proven to be unable or 'too busy' to tackle the problem, need help from the community."

REGG BRAATHING p.10

WRITE FOR THE AVASTAR
 "If you're a story that you want to work for the Avastar and want to be big!" Send an email to news@the-avastar.com

NUMBERS OF THE WEEK

- 380 million avatars "walk the boards" in SL according to tall tales for the flight challenge.
- 14 winners of the Microsoft challenge won the first out of 100 largest prizes of land in Custom Content Neighborhood.
- 40 new avatars a chance to meet Isaac White in SL. Right-click on the sign for more info: www.secondlife.com/isaacwhite

IMPORTANT STEP FOR SL ART



ART fans no longer need to fly the globe to see the works of world famous artist Gotthard Helander. AI are now on display in his MIGA museum. See page 20

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CHILD PORN PROTEST



DEMONSTRATING RESIDENTS DEMAND ACTION FROM SL

OUTRAGED residents find up with Linden Lab's dismal failure to stamp out child porn are set to stage mass demonstrations behind the organized efforts to find the German pedophile at the centre of the scandal have been futile. Now shocked residents have been found to take on the responsibility of holding out child pornography and Age Play themselves. Following calls for a crackdown against child pornography in last week's Avastar, a series of large-scale demonstrations are set to take over much of SL on May 24.

ABUSES Sig Kid, the SL founder of Kockische AV, the RL German child protection institution behind the organized efforts to find the German pedophile at the centre of the scandal have been futile. Now shocked residents have been found to take on the responsibility of holding out child pornography and Age Play themselves. Following calls for a crackdown against child pornography in last week's Avastar, a

series of large-scale demonstrations are set to take over much of SL on May 24.

The creators of the new Berlin SIM, HOUJABEIN130, told The Avastar last week they had formed the 'Stop Child Pornography' group, and urged the community to take action against child abuse in SL.

REPUTATION The scandal has caused fury among residents from all corners of the globe. French resident and 'Stop Child Pornography' member Le-

murien Box is worried the negative RL reports could tarnish the reputation of SL. "The scandal is very serious and makes me concerned about SL's survival. LL needs to encourage all users to take responsibility for fighting child abuse in SL."

LindenLab have yet to release any further details regarding their efforts to locate the paedophile still at large in SL.

Fig. 11.2 Reports on avatar protests in the in-world magazine "AvaStar" (Source: Thimm and Klement 2009, 209)



Fig. 11.3 Avatars protest against the French right-wing politician Le Pen (Source: Author's screenshot)

In light of such activities, the question remains as to what role in-world media in general will play in the future. At least ostensibly, in-world media seem to carry out a political and critical function similar to that of real-world media. Such an observation lends support to the hypothesis that a critical public exists in *SL* which reacts to the aforementioned form of in-world publicity.

Verbal Interaction

Socializing in Second Life takes place continually. The more time a user spends in *SL* on average, the more likely that user will expand his or her social network to include new friends and acquaintances. *SL* supports social networking with a function that allows users to create personal profiles or establish groups. Because *SL* does not come with a general instruction manual, other users' knowledge becomes an important source of information. Problems are solved, and goals are attained in a coordinated effort.

One of the most neglected phenomena in *SL* is the fact that avatars engage in *verbal* interaction. Taking the results of the Amman and Martens (2008) study seriously, it can be assumed that it is the social exchange which motivates individuals to spend time in *SL*. This social exchange is based on language, which – often enough – is some rather basic English, depending on where the owner of the avatar comes from.

Verbal interaction in *SL* is mostly written interaction in a chat format. On the one hand, it is characterized by some of the typical problems of chat communication, like the lack of reference and coherence, or paralinguistic features. On the other



Fig. 11.4 Avatars as political citizens: the “Free Burma” protests (Source: Author’s screenshot)

hand, this kind of chat can be described as *accompanying chat interaction*, which is based on a visual contact between avatars. Enriched by the possibilities of avatars’ gestures and mimicry, *SL* chat is not detached from nonverbal communication, and avatars can rely on a second level of communication.

Typically, interpersonal interaction in *SL* follows the patterns known from face-to-face interaction and can as such be analyzed with categories taken from conversational analysis. As discussed in the famous paper by Sacks et al. (1978), individuals start with typical rhetoric of openings and closings. When meeting for the first time, specific openers are used to define the situation. In *SL*, there are some very specific patterns, which are frequently used to start a conversation. One of them is “asking for help.” The excerpt below demonstrates one of many interactions following this seeking-help-pattern:

- [13:31] You: Excuse me, could you tell me where I am?
 [13:32] You: You EFF Loon...
 [13:32] EFF Loon:/i am soyyr i dont even know where i am
 [13:33] EFF Loon: yes i am whos asking
 [13:33] You: Good to know, then we’re two
 [13:34] You: Anyhow, any plans to move or so..ß
 [13:34] EFF Loon: no just setting here
 [13:35] You: well, enjoy the view;-) need to get around. Any recomendations?
 [13:36] EFF Loon: no sorry
 [13:36] EFF Loon: have a good time
 [13:36] You: Never mind, enjoy your visit...cheers!
 [13:36] EFF Loon: it was nice t talk to someone as nice as you
 [13:38] EFF Loon: go to a place callef spunkys bt dance club
 [13:39] You: Oh thanx, well I don’t feel like dancing, maybe later...

[13:39] You: What about you...just sitting here?
 [13:41] EFF Loon: this is whwre i come to rest have been jumppng all over the plece
 [13:42] You: sounds good to me...what have you been doing here around?
 [13:42] EFF Loon: so many thins too try to remberter
 [13:43] You: where do you come from?
 [13:43] EFF Loon: usa
 [13:43] Pachi DeCuir: i am from spain
 [13:43] EFF Loon: a city called compton
 [13:44] You: Buenas noches;-)
 [13:44] You: Soy de Alemania...
 [13:44] Pachi DeCuir: hola
 [13:44] EFF Loon: only english
 [13:44] Pachi DeCuir: ok
 [13:45] Pachi DeCuir: ok
 [13:45] Pachi DeCuir: Hey!
 [13:45] Pachi DeCuir: Get lost!
 [13:45] You: English sure thing
 [13:46] EFF Loon: have you been in sl long?
 [13:46] You: I don't have a clue about the setting of this world
 [13:47] EFF Loon: well that makes two of us
 [13:47] You: cool;-)
 [13:49] EFF Loon: do u no mzny people here?
 [13:49] EFF Loon: many
 [13:49] You: not yet
 [13:49] You: not jet
 [13:51] EFF Loon: dont worry you will meet lots and lots of people your easy to talk to
 [13:51] You: I guess, how does somebody soundnd who is not easy to talk to;-)
 [13:52] EFF Loon: uijhgytgfred
 [13:52] EFF Loon: smile

Source: Author's transcripts

The opening phrase is characterized by a classical politeness phrase (“excuse me”) and directly addresses a nearby avatar. The following sequences demonstrate how these avatars enter into a “getting-to-know-each-other” phase of conversation. The avatars meeting in this sequence establish a relationship by discovering that they both feel a bit lost in the virtual world. They exchange helpful information and humor each other ([13:52] EFF Loon: uijhgytgfred). Support interaction is a frequent conversational topic in *SL*, as many avatars seek contact by revealing problems about their *SL* knowledge to others.

These long talks between avatars, most often not in a dialogical structure but rather in a multiparty conversation with frequent simultaneous phases, show how *SL* is more of a platform for social exchange than a game. The fun part is getting to know others, form friendships, and meet people from all over the world.

Conclusions

Computer games have become an essential part of daily entertainment, contact communication, and learning (Thimm 2009b). Virtual worlds, such as the one described here, are not necessarily computer games such as the traditional goal-driven shooter,

adventure, action, or role-playing games. They are, as it is argued here, creating a playful social environment, which is much more a “social media” than a game and therefore comes closer to a 3D Facebook than a regular computer game.

The term “Second Life” does not suggest a fundamental difference between the “first” and “second” life; rather, media coverage of *SL* has lent support to the vision that “normal” life is full of limitations and that a “new” life in a virtual world is full of possibilities. This vision gets put into proper perspective, however, when one acknowledges that the more *SL* resembles a social platform, the stronger its users will identify with and lose themselves in its goings-on.

Several distinguishing characteristics from the “first” world continue to dominate in the second. For example, the virtual world is divided into two sexes despite the fact that *SL* gives users the option of living sex-neutrally. Users generally make their avatars either female or male, and improvements upon the basic design, although labor- and cost-intensive, are usually based upon real-world ideals of beauty.

Social premises, too, apply in the virtual world just as they do in the real one. In *SL*, there is a demand for gestures that are recognizable from the real world. Gestures used in greeting, for example, hugging or kissing, are then programmed and made available.

Contrary to the media’s portrayal of *SL* in recent years, the driving force behind *SL* is the establishment of a virtual community with others. Friendships are formed, groups built, and collective activities organized. One can even declare a partnership and marry. These kinds of activities are not only important leisure activities but part of the social life of many avatars. Still, the negative effects of social life in the real world such as crime and violence appear in a near analogous fashion in *SL*. The absence of legislative, executive, or judicial powers in *SL* is substituted by operator Linden Lab’s ultimate power to boot off users in extreme cases.

Looking at the differences between a “classical” computer game and a virtual world like *SL*, we can come back to Caillois (1960), who isolates four central and defining categories for a game: competition (*Agôn*), chance (*Alea*), mimicry (*Mimicry*), and flow (*Ilinx*). Additionally, he introduced the distinction between *paidia* and *ludus*, thereby defining two extreme types of games. Following Caillois, games can be located between the four categories of *agôn*, *alea*, *mimicry*, and *ilinx*. *Paidia* symbolizes the principle of distraction, the free improvisation and careless joy – or briefly the spirit of the joy of life. *Ludus*, however, stands for the principle of restriction of the concepts attributed to *paidia* by conventions and rules, which limit the experience of careless freedom. Taking up the concept of *ilinx*, games can very well be distinguished by their degree of flow and excitement by extending *ilinx* to the notion of immersion into the game.

When applying the model by Caillois, there is at least one category which offers a level for distinguishing virtual worlds from computer games – the notion of competition. Even though it could be debated whether some games are low on competitive elements, it is still the idea of winning that drives most of the games at hand. Winning, however, is not a decisive motive for virtual worlds. There are no competitors in the sense of winning and losing, and the goal orientation is too diverse for each participant. We may even conclude that virtual worlds have no clearly defined goal at all, but derive their attraction from being playful without being competitive.

In this sense, virtual worlds are themselves a hybrid between game and social network – they offer playful elements, challenge the participants/avatars with various levels of expertise which can be attained by being an experienced member, and offer various ways of “being social.” When taking into account that the overriding motive for the participants is of a social nature (“meeting people, communication with other people”), the element of play comes in only secondary in the shape of its entertainment function. From this perspective, their hybrid status as mainly social worlds and the absence of competition might be the main attraction of the current virtual worlds.

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Chapter 12

MMO Morality

Richard A. Bartle

Introduction

This chapter concerns morality in massively multiplayer online role-playing games (MMOs). Almost all of what it says also applies to other games, but the longevity and evolutionary nature of MMOs makes them especially vulnerable to troubles in this area.

Miguel Sicart defines the ethics of computer games as follows:

The ethics of the game as a system of rules that creates a game world, which is experienced by a moral agent with creative and participatory capacities, and who develops through time the capacity to apply a set of player virtues. (Sicart 2009)

Sicart's methodology considers the ethics of computer games as a function of the ethics inherent in the game's design, how these ethics are exposed to players and players' own ethics. It is particularly sensitive to what it means to be a 'good' player, determined using a virtue ethics approach (Reynolds 2002; Sicart 2005a).

The argument I put forth in this chapter concerns a topic which only requires that the game designer and players are considered as real-world culturally embedded moral agents; it does not draw on matters arising from gameplay. Therefore, although it is compatible with Sicart's approach, it addresses a much narrower range of issues – but it does so in some detail.

The term *culturally embedded moral agents* presupposes that each individual has their own, personal, moral code which they strive to adhere to and that they feel is right.

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‘Morality’ here is not fixed or impartial, but is relative to the individual.¹ Now although different people can have widely different ethical standards, it is not the purpose of this chapter to make judgments about these; what is under consideration here is *not* morality itself – what is, in absolute terms, right or wrong – but rather the situations that arise when the morality of the designer and the players of an MMO are not in line. In particular, it is concerned with what happens when the designer pushes players further than they comfortably would wish to go, which leads to a moral issue that *is* under consideration.

Frames and Boundaries

The formal acronym for massively multiplayer online role-playing games, MMORPG, proved too long and unwieldy for everyday use, which is why today the term is usually further abbreviated to MMO. However, the missing RPG part is important: people do role-play in these games.

Speak to an MMO player about ‘role-playing’, and they’ll suppose you mean communicating in old forms of (in my case) English while trying to act as if you *really are* an elven druid. Now while that is indeed a form of role-playing, it’s what’s called ‘hard’ role-playing (Bartle 2003): the player attempts to become the character, but the character doesn’t change a great deal. Most players engage in ‘soft’ role-playing – they take on the role of the tank,² or the healer,³ or DPS,⁴ for example – in which the player and the character are both able to change in the light of experience. Players are pretending to be someone else (their character) in order that they can be and become themselves (Bartle 2005).

Through their characters,⁵ players can interact with the game world and with other characters (which is to say, conduits to other players). They will do things that they cannot do in real life, not just physically (no fireballs in real life) but also socially (age, race, gender and class barriers are different). They can experiment with being themselves, knowing that if they do mess up, well, ‘it’s just a game’.

This works, because MMOs present a conceit that the virtual world is separate from the real world. The players are aware that the virtual world *is* part of reality, of course, but they so *want* for it to be separate that they are prepared through strength

¹This does not have to be your view – you’re at liberty to define morality as fixed or God-given if you like. The point is, players all have their own views and act on them accordingly, irrespective of whether anyone else shares those views.

²Tank: ‘Don’t hit them, hit me’.

³Healer: ‘This will help stop you getting killed, tank’.

⁴DPS (damage per second): ‘Take *this*, varlet! And this! And this! Muahahaha!’

⁵Note that I don’t mean *avatars* – the graphical representation of characters – I mean the in-world entity that the real-world player controls, which acts as a conduit for their actions and interactions. You can have a *character* in a textual world, but you can’t have an avatar in one. Sicart calls these *player-subjects* (Sicart 2009).

of will to treat it as if it were. This is because the benefits they gain from treating it as a separate world with its own set of rules outweigh the benefits lost from no longer operating under all the social norms of everyday life.

In game studies, this is called the *magic circle* (Huizinga 1955) – an agreement between players to limit some behaviours in order to liberate others.⁶ Psychologists use a more general term for packages of meaning-in-context: *frames* (Goffman 1974). The supposition is that in order to keep decision-making manageable, individuals maintain multiple sets of details and related rationalisations and use whichever set is appropriate for the situation to inform their choices. Todd Gitlin describes them succinctly as

Principles of selection, emphasis and presentation composed of little tacit theories about what exists, what happens and what matters. (Gitlin 1980)

Frames occur everywhere in everyday life. If you were to walk down the street dressed in Elizabethan garb, people would stare and wonder as to the state of your mental health – there is dissonance with the expected ‘pedestrian’ frame; do it on stage in a production of a Shakespeare play, however, and your actions would pass without comment – the ‘actor’ frame kicks in and explains it. Sometimes, a frame can even be the norm: if you dress in a formal business suit during Mardi Gras in Rio de Janeiro, *you’re* the weird one. People can switch effortlessly between frames they recognise, even when the boundaries begin to blur, as can happen with MMOs and real life (Chap. 25 by Hemminger and Schott).

The protection of a frame allows people to cross otherwise socially enforced boundaries. When you say, ‘it’s just a game’, you can do things that you simply couldn’t do if it weren’t a game – the ‘game’ frame is extremely powerful in this regard.⁷ However, there *are* still boundaries.

For example, an entrant for the 2008 Nordic Game Jam⁸ was *Dark Room Sex Game* for the Nintendo Wii. This is a (now award-winning) game for two players, using Wiimote controllers but with no graphics. Players take it in turns to swing their Wiimote, which causes a sound of pleasure to be made (as if the players were engaged in a sex act). It’s essentially a co-operative rhythm game: players gradually speed up their swings until they are close enough together to trigger the ‘orgasm’ moment, and the game ends.

⁶For example, if I were playing white in *Chess*, then I could, on my first move, physically move my queen to where your queen is and remove your queen from the board, then move my queen back to her starting position. However, this would be against the rules of chess, and you would stop playing with me if I did that. If I want the benefit (in this case, fun) of playing chess, I have to give up the freedom I would ordinarily have to move around small objects (in this case, chess pieces) in my vicinity. While all players of a game are giving up their freedoms in order to gain benefits, the magic circle holds and there is a game.

⁷The sport of *Boxing*, for example, is a game that involves attempting to deal sufficient brain damage to your opponent to lead to concussion – something that would not be acceptable in almost any other circumstance short of self-defence.

⁸This is a competition held yearly at ITU Copenhagen. The theme for 2008 was ‘taboo’.

Part of the rationale for writing *Dark Room Sex Game* was to push players across boundaries, and it does indeed do this. Normally, people would be embarrassed by the sounds alone, never mind the point that they themselves were causing them to be made by swinging their Wiimote. However, the protection of ‘it’s just a game’ allows them to overcome their reservations; in fact, most of the fun derives from this very crossing of boundaries – the gameplay itself isn’t especially compelling.

There are, though, still boundaries. What if it were two straight men playing and both the voices were male? Some people might laugh it off, but others might stop playing: for them, the game would have overstepped the mark of their own personal morality.⁹ What if one of the voices were that of a donkey, rather than a human? OK, well we may lose a few more potential players. What if one of the voices were that of a child? Ah. There would probably be very few people who would want to play under those circumstances, ‘it’s just a game’ or not. There is an interplay between the fiction of the game and the reality in which the game is embedded, a concept Jesper Juul calls *half-real* (Juul 2005); when the reality intrudes too much, the fiction is unsustainable and collapses.

As for when that collapse might occur, it depends on the individual. The point is, though, that there is always *something* that, were it to appear in a game, would be sufficiently emotive that it would yank the player out of the game and back to reality – something that bursts the protective bubble of the magic circle. Just because a game gives you *permission* to cross a boundary, that doesn’t mean you *will* cross it – your own, personal view of what’s right and what’s wrong becomes a factor.

MMO Design

The main job of the lead designer of an MMO involves the following:

- Setting the fictional context of the virtual world.
- Providing a set of possible *actions* that the players can undertake that make sense within this context. Players have to be able to do things, both positive and negative, that they can’t do in real life.
- Offering a range of *goals* for the players. Players need a reason to *want* to do the many things that they *can* do.
- Presenting events in such a way that they allow players to make *decisions* as to which action to undertake or which goal to pursue. (Note: games are very good at this.)

So, the designer sets the fictional framework, tells the plays what they can do within it, offers reasons why they might want to do it and supplies multiple alternatives

⁹Just as a reminder, I’m not making moral judgments myself here. You don’t get to hate me for saying that some people think gay sex is amoral and other people don’t.

so they have decisions to make.¹⁰ If you don't think any of this is going to give you what you want from the game, you don't play.

However, there is a problem: part of what people find entertaining about MMOs is *not knowing* what will happen in them. The designer *can't* tell players exactly what is expected of them, because that would spoil their fun! Yet if you don't know what a game involves, how can you tell whether you'll like it or not?

Well, what happens is that designers create a set of general expectations that show where the boundaries lie. They covenant with players that, even though the players don't know exactly what is coming up, it will fall within these boundaries. There are several such boundaries: this chapter is only concerned with those to do with morality, but others do exist – genre¹¹ and gameplay,¹² for example.

For example, suppose you are told up front that a game is all about knitting. Were you to play it, you couldn't complain if it indeed turned out to feature a lot of knitting. You *could* complain if it didn't feature much knitting at all. You could also complain if it featured a lot of knitting but also had your character stabbing people to death with knitting needles – you would have expected the designer to have mentioned that, er, point, as it isn't something traditionally associated with common knitting practice.

The same applies to games about dancing, soccer management, killing zombies, ... You don't know exactly what you're getting, but you know enough to make a reasonably informed decision as to whether you would want to play or not. Sicart's whole methodology for the morality of computer games is predicated on this very assumption: that players are playing voluntarily (Sicart 2005b).

Games aren't the only medium where this has to happen – it's a widespread issue. For example, J. K. Rowling could write *Harry Potter 8* to include harrowing scenes of drug abuse and wife-beating – she'd be breaking no laws. However, it would be a major act of irresponsibility not to mention this misalignment with reader expectations before putting the book on sale – preferably in very large letters on the front cover.

As with novel-writing, game design is an art form (Chap. 6 by Feige). Designers say things in their designs, just as authors do in books, screenwriters do in screenplays, songwriters do in song, choreographers do in dance, ... This means that game designers get to set the moral stance of their games; they define what, in the context of the game, is good, evil and in between. Furthermore, this is the case *whether they like it or not* – it's intrinsic to the act of design.

¹⁰The actions, goals and decisions correspond to the 'means, motive and opportunity' that detectives consider when solving crimes – which, by a happy accident of the English language, also has the acronym MMO.

¹¹I know it's not a game, but I can't have been the only person to have experienced a WTF moment when *Indiana Jones and the Kingdom of the Crystal Skull* suddenly turned the franchise from supernatural to (bad) science fiction.

¹²A game that promises to be in-depth but isn't (or *vice versa*) is just as likely to cause a player to stop playing as one which promises to be erotic but isn't (or *vice versa*).

Players are made aware of this moral stance before they sign up. If it has guns, then you know someone is going to get shot at; if you don't like that kind of violence, then you don't play.¹³ It's actually possible that there may be several moral boundaries involved. For example, if you take the side of the FBI in a 1920s gangster game, then you won't get to firebomb shops; if you take the side of the mafia, well, you may.

Designers can excuse otherwise boundary-crossing behaviour if it makes sense in context. For example, in the MMO *World of Warcraft: Wrath of the Lich King*, a new character class was introduced called the 'death knight'. It's made clear when you start to play one of these that you are, initially, under the influence of an evil power. You can therefore expect to be told to do evil things, which indeed you are. If you're uncomfortable with this, well you shouldn't really be playing a death knight. If you trust the designer and accept the situation, you find sure enough that it is only short-lived: you are soon freed from your servitude, to spend the rest of your death knight career seeking atonement. The overall moral stance of the game is therefore not unbalanced; boundaries are crossed, but they are crossed for a reason which makes the return all the more powerful.

Note, however, that although boundaries are crossed, there *are* still boundaries. You may *suspect* you'll be asked to kill innocents, but you *know* that you won't be asked to rape children.

This exposition of the moral context for a game usually works just fine, but it can break down. The message may not get across, or may be ambiguous. For example, I knew I could get turned into a vampire in *Elder Scrolls IV: Oblivion* because it was made clear from the onset that this was a possibility. However, I didn't know it was almost certain to happen if I played the game through, nor how frustrating and distasteful an experience vampirism would be. The designers presumably did know this, but failed to communicate it – I imagine because so many players had been asking to play as a vampire that they thought it obvious.

With MMOs, the moral flavour is in part the result of an ongoing dialogue between designers and players. In general, a designer makes an offer of a product made up of a set of features (gameplay, graphics, genre and so on) on the basis of which potential players will choose whether or not to buy it. Those who do buy it will develop a culture (Chap. 11 by Thimm) that designers can respond to through patches and expansions; this in turn will shape the virtual world in ways that the players react and adapt to, and the cycle continues. One of the important features 'discussed' this way is the MMO's moral tone. When it is far from the real-world norm, it should be stated (and indeed usually is, often as a selling point).¹⁴

¹³There is some debate as to whether this is merely the depiction of violence, or whether the interactive nature of computer games and the ways that players read the symbols of the fiction qualify it to be something more. This is a general problem with MMOs: how much of what is presented as real actually maps to real-world analogues (Williams 2010)?

¹⁴This is the case whatever the direction away from the norm. An MMO that is child-friendly and contains no scenes of violence has just as much reason to advertise this fact as one that is adult-only and features gore scenes galore.

However, having set the tone, designers can do whatever they like within its limits; players who complain are effectively asking designers to break the covenant they have with all the other players, which, if they did do this, would be wrong.

Here, suddenly if not subtly, we get to the central issue of this chapter. I used the word ‘wrong’ there – I was making a *moral judgment*. What I’m ultimately discussing is not so much the morality inherent within an MMO as the moral obligations designers have to uphold the pledges they make to players – of which the MMO’s moral stance is but one. If I start to play a game that promises X and I get Y instead, I have a right to feel cheated, and, as every designer knows, players do *not* like feeling cheated.

Breaking the Covenant

What happens when a designer actually wants to break their covenant with the players?

Well, it depends on for how long they want it to be broken, by how much they want to break it, and why they want to break it.

If it’s a permanent affair, then basically they have to step out of the magic circle to announce it, as they’re effectively ending one game and starting another. There may well be some fictional cover for reasons of continuity (e.g. to explain why all of a sudden there are aliens in the Wild West), but you have to tell people beforehand that the game they are playing is about to change into a new game. If you don’t, and simply break the covenant without plenty of warning, why would anyone ever believe that you wouldn’t do the same thing again? It’s a matter of trust.

Although it might seem to a player that breaking the covenant is *never* excusable, there are actually several legitimate reasons for doing so, especially in MMOs (which have long lifetimes compared to regular computer games). For example, *Star Wars: Galaxies* was originally an MMO with a high emphasis on crafting as well as combat, but after a few years of success, it began to shed players. The developers were faced with the choice of seeing it fail completely, or changing its direction in the hope of stopping the rot. They decided to try to stabilise it around that part of the player base interested primarily in combat¹⁵ and announced some time in advance that ‘new game enhancements’ were in the pipeline. Those players who preferred crafting to combat were understandably upset, but they were given ample warning and were able to say their goodbyes before they left for, well, probably *World of Warcraft* actually. Whatever, the ploy worked: although *SW:G* is not as popular as it once was, it is nevertheless holding steady in its niche sufficiently well

¹⁵When it came down to it, crafting, though a very popular part of *SW:G*, was justified solely on the grounds that it provided items needed for combat; therefore, if combat were removed, there would be no point to the crafting. Furthermore, by removing crafting, combat could be streamlined and made more intense, so the combat-oriented players would be inclined to stay. Thus, bye bye crafting.

for its long-term future to be reasonably assured. If the design team had stuck with the original covenant, the MMO would undoubtedly have been closed down completely by now and no one at all would be able to play it; at least this way, combat fans can.

Designers can also legitimately step over a moral boundary in order to establish it. This trespass can't last too long, and it must make sense in context, but it's a handy weapon in the designer's arsenal so long as it is only used sparingly. The example with the death knights in *WoW* is a case in point: the players get to play on the evil side for a while in order to show just how bad the enemy (the Lich King) truly is. When they break free of his influence, they now know where the boundaries lie: evil people do these things, but you're good – you *don't* do them.

There's a later quest in *WoW* available to all characters, 'Army of the Damned', in which you get to role-play the Lich King himself in order to understand the magnitude of his power. Again, although this involves killing a 100 good guys and raising an undead army from their corpses, it fits in with the fiction and establishes where the boundaries lie: the enemy takes glee in the indiscriminate killing of good people, but you don't.¹⁶ The text of the quest makes it *very* clear that you are crossing a boundary temporarily; this design technique is called *flagging* – marking a situation (in this case, a quest) as being different from regular situations, so the players know to treat it differently (i.e. that it has its own frame-within-a-frame).

There are other examples of similar boundary-setting quests in *WoW*. One, 'Zenn's Bidding', which occurs relatively early in the game, has a shady satyr asking you to kill things for him that you know you're not really supposed to kill. If you do it anyway, the authorities find out and make you undertake another quest to redeem yourself. Thus, you are implicitly informed that there's a moral boundary in place that you're not expected to cross (or at least that if you do cross it, expect consequences). Here, the flagging comes after the quest, with the follow-up: you're tempted over the line, but the next quest makes it plain (i.e. flags) that this is not something you can expect to happen routinely. Flagged quests are making a point.

'The Art of Persuasion'

I've mentioned *World of Warcraft's* quests several times here because they show that the designers of *WoW* do know how to do things right.

Here is an example of where they do things wrong.

There is a quest in *World of Warcraft*, 'The Art of Persuasion', which is part of an eight-link chain. Earlier quests in the chain have established that mages are being kidnapped at random, and that one of the Archmages of the Kirin Tor – Lady

¹⁶Unfortunately, judging by the comments regarding this quest on Wowhead, the designer was not entirely successful in conveying this conclusion ... (<http://www.wowhead.com/?quest=13395>, accessed 21 April 2010).

Evanor – is among them. The Kirin Tor is a ‘good’ faction of non-player characters who are opposed to the Lich King; their city was almost destroyed earlier in the fiction when one of their Archmages defected, so quite reasonably they don’t want Lady Evanor to be broken and change sides too. Using a Kirin Tor device called an ‘arcane binder’, you have been able to capture one of Lady Evanor’s kidnappers (a Beryl Sorcerer), and now the whereabouts of Lady Evanor herself can be determined – *if* the sorcerer talks.

Here’s how the Kirin Tor representative lays out what he wants you to do¹⁷:

It is fortunate you’re here, <race>.

You see, the Kirin Tor code of conduct frowns upon our taking certain ‘extreme’ measures – even in desperate times such as these.

You, however, as an outsider, are not bound by such restrictions and could take any steps necessary in the retrieval of information.

Do what you must. We need to know where Lady Evanor is being held at once!

I’ll just busy myself organizing these shelves here. Oh, and here, perhaps you’ll find this old thing useful....

At this point, a device called a ‘Neural Needler’ appears in your inventory. The quest summary states:

Librarian Normantis on Amber Ledge wants you to use the Neural Needler on the Imprisoned Beryl Sorcerer until he reveals the location of Lady Evanor.

So, the Beryl Sorcerer knows where Lady Evanor is, but isn’t saying. Members of the Kirin Tor are forbidden by their own moral code to torture him; however, they see no contradiction in giving you a pain stick to do the torturing for them.

Most players did this quest without a second thought – ‘it’s just a game’. A significant minority, however, were completely *dismayed* by it. Up until this point, on the Alliance¹⁸ side at least, everything that players have been asked to do has fallen within boundaries that approximate those of the Geneva Convention.¹⁹ Suddenly, they’re being asked to torture someone. This isn’t something that good people *do*. It’s something only *evil* people do. Isn’t it?

So why isn’t it flagged?

The quest *could* be flagged in any number of ways: there could be a means to refuse to do the torture, which might enhance your reputation with the Kirin Tor (‘You have passed our test’); there could be a way to reason with the sorcerer so you don’t have to needle his neurons; there could be bad consequences, for example, his giving you the location of a trap rather than Lady Evanor; there could be an

¹⁷<http://www.wowhead.com/?quest=11648> (accessed 28 February 2011)

¹⁸*WoW* has two opposing sides, Horde and Alliance. Although they are united against the Lich King, they are nevertheless deeply suspicious of one another so do not act in concert. The Horde is more ends-justifies-the-means than Alliance, so may feature some more morally dubious (in some views) quests. I’ve only ever played Alliance, though, so have no direct experience of these myself.

¹⁹Strictly speaking, Geneva *Conventions* – there are four of them, dealing primarily with the treatment of non-combatants and prisoners of war.

about-turn in which *you* are captured and tortured to provide information – perhaps information you don't know. There are any number of ways that the quest could be flagged to say 'this is not a normal quest!', but none are present. The quest is *not* flagged.

There are several possible explanations for what is going on here.²⁰

1. It could be an *artistic* statement. The Lich King is actually a dual entity, formed from the merger of the original Lich King with Arthas Menethil, a human prince who became so consumed by his efforts to defeat evil that he himself became evil. By a series of incremental steps, he pushed his moral boundaries further and further back, each action seemingly justifiable to him but increasingly unjustifiable to others (e.g. setting fire to his troops' ships so they couldn't obey the king's order to come home, which would have left Arthas with no army). By asking players to do a small wrong (torture) in order to do a greater right (save a life), the designer may be hoping to give some insight into Arthas' descent to evil; the quest lets the players see how he came to be what he became.

This would be a legitimate thing to do, but if it were indeed the designer's intention, then it should have been flagged. If you want to point out that someone has crossed a moral line, you have to do just that – *point it out*. If you don't, people either won't notice it or they'll think you don't believe you crossed a line (i.e. that you're a jerk).

2. It could be a *political* statement. The US government is forbidden by the US constitution to torture prisoners, but, having prisoners it wished to torture, is alleged (Grey 2006) to have outsourced it using a process known as 'extraordinary rendition'. The quest could be drawing parallels to this in an effort to comment on the USA's anti-terrorism strategy.

Again, this is fair enough, but it has to be flagged in order to work. If the prisoner gave false information, or if other factions turned against you because of what you did, then you would have pause for thought. However, it's not flagged. People will either fail to notice, believe the designer sees nothing wrong with torture or (for those who are very into politics) suspect that the designer put the quest in without comment in order to show tacit support for extraordinary rendition.

3. *World of Warcraft* was launched in 2004. Perhaps the designer wanted to reflect its growing maturity by incorporating edgier material?

Again, this is legitimate *if* you let the players know what is happening. People who play under the old covenant need to be informed *external* to the game that the covenant is changing (because the covenant is itself external to the game). This is so they can decide not to play if they want. I certainly didn't know when I bought the *Wrath of the Lich King* expansion that my character would be asked to torture non-player characters. I knew I'd have to kill them in a 'justifiable homicide' kind of way, but I didn't know I'd be poking them with a Neural Needler while they were tied up in a chair.

²⁰My attempts to contact the designer of the quest to find out which is the correct interpretation have come to nothing. If it's you, get in touch, please..!

4. The default reading is the one that applies to all unflagged quests: it wasn't flagged because the designer didn't believe that it fell outside the normal moral boundaries of the game. It transgressed no expectations because it was, the designer believed, within them.

Well, the designer was wrong. Sufficient numbers of players *were* alarmed by the quest that it was definitely an issue.²¹ So either the designer didn't know where players drew their moral lines, or the designer didn't believe that torture crossed those lines, or (in my opinion the most likely explanation) the designer didn't actually think about it beyond the level of gameplay mechanics ('what shall I make this quest involve, hmm, what modules haven't I used for a while...'). None of these situations is satisfactory.

In cases where the players don't notice the crossing of a line, whether through its not being a line for them or because they weren't paying attention, this quest presents no problem. Concern only arises when the designer's moral boundaries are not in harmony with those of the player and the player spots it; when this happens, the player has to decide whether to continue playing or not. In this particular example, some chose the latter.

However, even though there were lots of people who did find 'The Art of Persuasion' disturbing, they were vastly outnumbered by those who apparently didn't; most players went right ahead and did the quest as normal. Why was this?

Well, the most obvious answer is that these unworried people don't actually see anything wrong with torture so were happy to do it in the game. Torture seems to be effective in TV shows such as *24*, it's only used in exceptional circumstances, and much worse things go on in *WoW* than torture anyway (rogues routinely garrote people, blind them, stab them in the back and so on). If people believe that torture is no worse than some of the other things they consented to accept as legitimate when they started to play, then they won't even register that a line has been crossed; this is because for them, none *has* been crossed.

Although I don't doubt that there are plenty of people who fall into this category, it's not actually the full story. When challenged about it, many of those who did the quest responded along the lines of 'it's just a game', which suggests that they do find the quest a little odd now they think about it, but hey, no real sorcerer was harmed so it's OK.²² The 'game' frame, while not legitimising torture, at least allows it to be disregarded. Nevertheless, if they didn't think torture was bad, then they would have felt no need to use the 'it's just a game' excuse at all, and although there

²¹I speak as the butt of hundreds of forum postings and emails on the subject ... I should perhaps mention that I blogged about this quest when I first encountered it, and my opinion was rapidly picked up and commented upon until something of a firestorm arose. Having read every mention of it I could find (close to a thousand of them), I'm therefore in a reasonably good position to summarise what different sections of players thought about the quest (which I indeed do in the next few pages).

²²I'm reporting my impression from having read what they wrote in their forum postings; I didn't categorise every posting I read as I read them, though, so am unable to provide absolute numbers here.

were some people who put up a spirited defence of torture as a general concept, they were heavily in the minority.

Another possibility is that people did feel unease at the quest, but decided to do it anyway because they wanted to explore a related aspect of their personality. The whole point of MMOs is being able to do things in the game world that you can't do in real life, in order to be and become yourself. If you cross a moral boundary, you find things out about yourself (at least subconsciously) that you might not have learned otherwise. This is actually a sound reason for doing the quest even though it might have felt a little disturbing at the time. That said, it doesn't alter the fact that you should still have been made aware *before* you started to play that you might find yourself facing this kind of decision.

My personal opinion is that the reason so many people did the torture quest without really noticing it is because they were so caught up in their headlong rush to reach level 80 that they lost all sense of narrative. They decoupled the relationship between inducements to act and the actions themselves. This is the mirror of how (I would surmise) the quest got in there in the first place: only the syntax was considered, not the semantics. When the semantics is pointed out, well, 'it's only a game'.²³

In Defence of *WoW*

WoW has a number of other quests that are problematical for some people. For example, 'Tormenting the Softknuckles' involves zapping baby gorillas with some kind of cow poke in order to enrage their mother enough that she comes out from her hiding place so you can kill her. 'Surrender ... not!' is a comedy quest where you dress up in a wacky Murloc²⁴ suit and under the cover of a white flag get close to an enemy leader so you can kill him. It might therefore be surmised that the game is full of morally ambiguous and/or offensive quests.

It's not.

Given that *WoW* has several thousand quests overall,²⁵ it's a testament to the designers' skills that there are so few that cross its established moral boundaries. *WoW* is only mentioned here because the particular example that prompted the writing of this chapter came from *WoW*, and because this quest in turn was itself only worth mentioning due to its contradicting *WoW*'s otherwise very high standards.²⁶

²³ Aside: what does this mean for games-as-education? If players can breeze through a torture quest without picking up any signals, could they breeze through a medieval history edutainment game and come out having obtained no educational benefit at all?

²⁴ These are a kind of fish people.

²⁵ 7,650 as of the *Wrath of the Lich King* expansion.

²⁶ I can assure you that it was not my hope to bring down the wrath of 11,500,000 players on my head when I first blogged on the topic.

WoW also has a tighter moral boundary than many other MMOs. Here, for example, is a summary of the ‘Saving Silverlake’ quest²⁷ from *Vanguard: Saga of Heroes*:

- A Zar cult has taken over some farmers near a town called Silverlake by possessing them with Zar souls.
- A group called the United Races of Thestra (the URT) wants to ingratiate itself with the inhabitants of Silverlake, so decides to free the farmers.
- A group of bandits has stolen the URT’s ‘soul render’ device, which can suck the Zar souls out of the farmers. You have to go get it from them.
- Once you have killed sufficient bandits to obtain the soul render, you use it to suck the Zar souls out of ten farmers. The souls attack you, but the farmers don’t because they’re left in a daze.
- The URT learns that the soul render sucked the farmers’ own souls out, too! They’re not in a daze, they’re effectively zombies. If this is noticed, the locals won’t like it.
- Zombie farmers are attracted by the dust of gargoyle-like creatures called Netherbeasts. You need to kill a bunch of them to collect 25 piles of dust.
- You use the dust to lure three farmers, one at a time, to the nearby mill. There you kill each one and put their bodies into the meat grinder to dispose of the evidence.
- Put the pieces of ground-up farmer meat into a food barrel and you’re done. The reward is a nice piece of leg armour.

Vanguard flags the quest as being played for laughs from the beginning because the URT are that kind of well-meaning but incompetent outfit. Nevertheless, say what you like about *WoW*, you’re unlikely to be asked to make burgers out of farmers in it.

‘It’s Just a Game’

Some players have little depth to their thinking and will cheerfully use the ‘it’s just a game’ argument to assert that there is nothing they wouldn’t do for experience points. Everything they are doing in the game world is fictional, none of the apparent symbols mean anything beyond their use as game tokens, and no real harm is done.

So, they’d do ‘their most abhorrent idea of sexual assault’ to a representation of ‘the deity they worship’? If it looked like their mother and spoke with her voice?

Everyone has *something* that would introduce enough reality into their game world to shock them out of it. It doesn’t even have to be offensive: real-world toothpaste advertisements in a fantasy world would probably do the trick. What these players mean when they say they would do ‘anything’ is that they would do anything within their concept of what constitutes the magic circle.

²⁷<http://www.vgwalkthroughs.com/page/parts/87> (accessed 16 March 2011).

The designer tries to keep things within the bounds of player expectation because that's their job: people want to play a game, and if you burst the magic circle by collapsing to reality, there is no game. Players have different-sized magic circles of varying robustness, but they all satisfy a set of minimum criteria. This is where designers must strive to contain play. If they don't do that, then the game is being played under a false prospectus which, in my belief, is immoral on the part of those who offered that prospectus – the designers.

Conclusion

The players of games in general and MMOs in particular operate within a moral framework primarily established by the designer through the MMO's design. People who do not find this framework acceptable do not even play the game; therefore, the design selects for those who do.

Most moral dilemmas that players encounter will fit within those boundaries that the designer has set. A small few, however, could fall outside these boundaries. When this happens, the designer has to indicate that the dilemma is *deliberately* the wrong side of the boundary, so players (a) notice it and (b) understand that the boundary-crossing was for an artistic or political purpose. If this doesn't happen, it suggests that the designer didn't think it was amoral in the context of the game: it therefore makes a statement about the morality of the game as a whole. This can have unwanted consequences ('Blizzard doesn't think torture is a big deal'²⁸).

When a game crosses a moral boundary, it causes those players whose own moral boundaries were congruent with this boundary to suffer an emotional surprise. An individual shocked out of a context will no longer frame things within that context; in game terms, this means they are no longer playing – they are released from their self-imposed obligation to follow the rules because they are now outside the context in which the rules are meaningful. They then have to decide whether to accept the change in boundary or stop playing.

No matter how dedicated the player, there is always something which, if it were to appear in the game, would cause reality to interrupt so much that 'it's just a game' no longer applies. Sometimes, this is as a result of an external incident and cannot be helped.²⁹ However, if it's internal to the game, then it *can* be helped. By adhering to the moral expectations set up before the game starts, the designer must ensure that such shocks do not arise.

What about the morality of *setting* those expectations, though?

²⁸I'm paraphrasing some of the things I read regarding the *WoW* torture quest. Blizzard (formally Activision Blizzard) is the developer of *WoW*.

²⁹As Wednesday Addams put it so well: 'It's all fun and games until someone loses an eye. Then, it's just fun'.

Bill Shankly, manager of Liverpool FC from 1959 to 1974, famously once said³⁰:

Some people believe football is a matter of life and death. I'm very disappointed with that attitude. I can assure you it is much, much more important than that.

There is a difference between 'it's a game' and 'it's just a game'. What that difference is, however, not immediately apparent. It's clear that there is a distinction between the morality embedded within an MMO (which can be fluid over time and the result of negotiation) and the moral obligations of the designer (which can't). For example, the morality of a designer's decision deliberately to add features to an MMO knowing them to be clinically addictive is independent of the moral compass of the MMO's fiction. Designers are creating real rules that will implement fictional games, but they are doing so using unwritten, adaptive, internal creative processes that are moderated by their own sense of what is right and what is wrong. The morality of design does not need to conform to the morality of that which is designed; the two are related, but separate.

Just as play, in Juul's characterisation, is a combination of real rules applied to a fictional world, so the *design* of play is a combination of fictional rules applied to the real world. Game design can therefore also be seen as a half-real activity, only with the halves reversed.

The question is, where do the limits of the fictional rules governing the design process lie?

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Chapter 13

Inside and Outside the Game

Dominik Härig

Introduction

This chapter aims to detail the context of immersion in the player-game relation. Juul (2005) characterized the game as “half-real” by declaring that the rules of a game are real whereas the content is fictional. Therefore, we look at the threshold between reality and game and between gamer and game. A close look at “border” based on Luhmann (1993) reveals its two forms of manifestation: separating and connecting. First of all, communication is established as a more powerful superset of interaction. Therein, the active role of the gamer as a conscious being is clarified. Games are identified as social spheres. Additionally, in general, the social aspect can be taken as a form of immersion. However, it is not the main intention to specify different versions of immersion as did Ermi and Mäyrä (2005). Instead, it is detailed that the relation between reality and game is neither a clear-cut separation nor a complete fusion. This builds on Ferreira and Falcão (2009), who characterized the magic circle as a mediator between game space and reality.

Is Immersion Unidirectional?

We know that playing an attractive game can achieve different levels of immersion (Brown and Cairns as cited in Nacke and Lindley 2008). What about the directionality of immersion in the context of computer games? A computer game is more than just the content of the box that is shipped by the vendor (Shaffer 2006, 192): this content can be considered as a simulation tool that is able to create a game world and can be

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utilized by sticking to the game rules (see Chap. 2 by Günzel). Only complementing it with the user of a game, the player, will transform this computer program from a simulation into a game. In combination with the nature of the game plot, the fascination and attraction of the game is supported and maintained by immersive processes between player and game (see Chap. 18 by Pietschmann et al.). The predominant perception about the direction of immersion is that the player is drawn into the game world (Neitzel and Nohr 2006). An opposing position is represented by Günzel (2008), who presents the concept of a spatial image, which can be interpreted to claim impact beyond the game world from playing the game. Similarly, Ermi and Mäyrä (2005) concede an active role to the gamer as a reflecting and interpreting subject in a phenomenological sense. Both concepts make a reference to mandatory exchange between human being and simulation. However, dealing with each of the concepts exclusively, one – or the other – is too restrictive. In order to completely describe immersion, I propose to acknowledge both aspects as two sides of the same process: immersion is bidirectional! Thus, the following line of thought aims to overcome the previous either-or perception.

Gaming Is Communication

The primary starting point is a closer look at interactivity as the link that connects the media presentation with the experience of usage, thus constituting it as the minimal requirement for bidirectionality of immersion (Breuer 2009, 183). Following Christoph Klimmt (2006), interactivity can be described as a sequence of input and output loops. I want to build upon this position and even extend it by claiming that the input/output loops are a form of communication between game and player by means of the apparatus employed. It is of pivotal importance to ascertain an explanatory model for the action of a gamer which transcends the usual stimulus-reaction schemes. On the one hand, this implies a renunciation of the behavioristic point of view and on the other hand builds on the assumption of a conscious gamer: he decides not only whether to play but also how long he wants to play. Additionally, Ermi and Mäyrä mention that:

players do not just engage in ready-made gameplay but also actively take part in the construction of these experiences: they bring their desires, anticipations and previous experiences with them, and interpret and reflect the experience in that light. (2005, n.p.)

Thus, the player as an actively acting individual of the real world owns those expectations and emotions. Additionally, the expectations and emotions can be seen as part of the game experience and are inherent to the process of gaming. However, the gamer acts within a communicative context as soon as he enters the gaming situation. Therefore, an important point of this extended position is embedded in the implication that you cannot *not* communicate (Watzlawick 1971, 53). In this context, it means that by starting the game, the communication begins, and even an omitted input can be taken as a message. Some computer games however show a lot

of patience if you stop to “talk” to them; other games progress on their own and very soon will send the message “game over.” Additionally, in the special cases of gaming in multiplayer mode, the teammates will not be amused if one player is away from keyboard and does not participate in the game anymore.

The input provided by the player not only serves as direct instructions to the game, but it also carries information about the sender. Therefore, a game might analyze whether a player might need extra help or additional challenge if nowadays such self-learning is incorporated into the game programming design. These mechanisms are implemented in order to neither over- nor underchallenge the player. Here, a close connection between the terms flow and immersion appears. However, the player is willing to make improvements in the game. This becomes clear as soon as difficult parts have to be played and are played repeatedly. Thus, the effect of immersion is interpreted as continuing interest in maintaining communication.

Another effect in the course of the gameplay is the enhancement of the player’s a priori knowledge about special situations of the game, thus improving his ability to judge critically. In addition to that, each message has a limiting effect on the progress of communication; the choices of progress building upon other possible messages are blocked out. At the same time, new circumstances occur, and new choices might open up: communication is an autopoietic system (Luhmann 2002, 198). In the context of a game, this may be regarded as a restriction, which however can be circumvented by saving and retrieving play status at will. This reload seemingly puts the player back into the same position in which he had saved the status. In fact, the situation is different since the player now has an improved a priori knowledge and is able to react accordingly, probably differently from the last attempt. Applying the concept of communication is clearly extending the scope compared to the concept of interaction. However, a problem remains since it has been set up so far for the exchange between psychological “systems.” This problem is dissolved by referring to the “willing suspension of disbelief”: the player may imply so to speak that the game has an intention, in order not to break the “magic circle” (Huizinga 2006, 20). In a car race, for example, this means that the player assumes that his virtual opponents pursue the same target: to win the race. Therefore, the original social moment which is the intention of the concept of a parlor game is sustained in the transfer to digital games. Therewith, an illegitimate anthropomorphism is avoided. The game is not able to deal creatively with the gamer’s messages. At the same time, the gamer is aware of the fact that the game as a whole is just “half-real” (Juul 2005) and only a construction. However, this does not preclude him from ascribing human-like characteristics to the antagonists. Virtual opponents, or even the game itself, are perceived as acting consciously, consequential, and target-oriented but are also supposed to have emotions (now it is upset!). All these associations are projections taking place in the gamer’s mind.

This implication for the virtual opponents is obviously beneficial for many games that are based on an atmosphere of competition. For other types of games challenging his skills, the player might somehow personalize the game itself: he implies that it tries to keep him from winning or even defeat him by enhancing the level of complexity or speed. These programmed actions – also reflecting the game designer’s

intentions – are becoming the character of messages by implying an intention to the game. Now, similar to the science of literature, it may be questioned whether the intention is with the author (here game designer) and not with the game. In this case, a position that focuses on player and game is represented. On the one hand, it is obvious that we deal with an asymmetric communication according to Watzlawick (1971) in favor of the player; on the other hand, any mention of the game also implicitly refers to its creator, even if the creator is not necessarily present in the perception of the player. However, neither of these aspects interferes with applying the concept of communication as presented here. In addition to its role as a play opponent, the game communicates by means of the game context and the game framing. It acts like a referee or even like a mentor who is rebuking. Furthermore, it empowers by appreciating every success. In particular, this aspect has possibly strong impacts even beyond the game so that a reflection of one’s own skills in the game is enabled. To sum up, the gamer’s interaction with the game set can be perceived as a form of communication, and conclusions from understanding communication can be beneficially employed to the gaming context and the processes that bring about immersion.

Games as Social Places

Within the framework of communication, we naturally encounter another important aspect: the social factor. Human beings are characterized by their affinity to social ties that enable them to enfold the complexity in communication. This affinity also implies the search for appreciation of achievements. Especially the fulfillment of this basic social desire for appreciation and reward is a strong point of computer games (Fritz and Misek-Schneider 1995, 64; Chap. 34 by Giang et al.). However, they operate along the slim line between challenge and frustration (Csikszentmihalyi 1977). This indicates that the attraction of game and player is built on the basis of the gamer’s social needs. Additionally, multiplayer games function as communicative channels which enable the participants to exchange messages via text or “voice over IP.” Those channels themselves serve as reference where meaning is generated. Thus, the player identifies himself partially with his avatar. This lack of semantics within the interaction among the players could be traced back to a pragmatic background on the one hand. However, this can just be assumed since there is no empirical evidence so far. Nevertheless, in those multiplayer games, a social sphere still remains which constitutes the basis of the interaction between the players and their avatars as well as the usage of the different options of communication that are provided by the game. On the other hand, the communication adheres to both fusion and the separation of the game world and reality. It is evoked by immersive processes and is limited by the border. To sum up, communication in games not only refers to messages that are exchanged between player and game or player and player in the game. Additionally, they are an expression of the social aspect of games.

The Term “Border” in the Game-Gamer Relation

The very description of immersion as well as its different states and varieties does not suffice to comprehend the complexity of the bidirectional immersion. Previous discussions were limited to ascribing or not ascribing immersion in its various occurrences. Now, with gaming as a concept of communication and the acknowledgement of social aspects that have been emphasizing the unifying aspects of the game-gamer relation, we shall now have a look at the limitations to this unity. The term “border” is supposed to help to comprise the player as an intentional instance within the communicative game situation. The basis for this is Luhmann’s (1993) definition of “border.” In his understanding, a greater importance is attached to the term. It is defined as more than the rare encompassment in the sense of total immersion or complete separation. Therefore, complexity, or rather its reduction, is a central moment within the system-environment correlation. If this is applied to the game-gamer relation, it becomes clear that the reciprocal development of the psychic system “gamer” and his environment in the game, which in itself is a system, does not enable a firm positioning of a border. Luhmann (1993) describes border as something containing both sides, without being part of either one of these sides, thus separating them. At first glance, this description seems to be similar to an interface. However, it turns out that the concept of border has the advantage over the interface that it does not denote or refer to something that needs to be ontologically present (Neitzel and Nohr 2006, 16).

Since the exchange of messages originates from the player as well as from the game, the two subaspects of immersion not only become compatible but even supplement each other when based on the definition of communication. For this bidirectionality, of course, the distinctness of the communicating parties is a prerequisite: in the case of a coincidence of sender and receiver, you no longer deal with interaction nor with communication.

On this formal foundation, the framework for communication and immersion is ensured by employing the concept of borders. The concept of border covers two forms of manifestation:

1. Border keeping things strictly apart (like a rigid wall)
2. Border partly letting things pass through (like a permeable membrane)

The first form of border stands for the aspect of total separation. It is possible to think of it as a wall of a building that clearly differentiates between the inside and the outside. This strict difference between inside and outside the computer game becomes apparent with every death of an avatar. Nevertheless, it is the player’s representator in the virtual world of the game, and in the genre of survival shooters, you can be frightened by the harbingers of death. Only the avatar will die, while the player stays alive and will not be affected by physical damages (see Carr 2003). In this respect, the border can be acknowledged as the limitation to the real implications of immersion.

The second form of border originates from its nature as connecting things at the same time. This property can be thought of as a permeable membrane. Applied to the gaming context, this form allows the exchange of messages, for example, when audiovisual or even haptic feedback from the game signals the outcome of the player's actions. As a result, these processes become an integral part of the players' experience and among other things increase the identification with the developing avatar. In addition, the results of these processes also become part of the game, in a simple case by saving an interim result after reaching a higher level of the game.

It is important to note that typically only certain forms of information can pass through the membrane border. Therefore, some of the attempts at communication may be bound to fail. In addition, players tend to accompany their actions with verbal outcries or motoric countermovements which have no direct impact on the gameplay. This applies for most of today's games. However, some of the latest games show a trend that more of these accompanying actions will be integrated into future generation games. Irrespective of this trend, from all the information disclosed by a player's behavior during gameplay, there will always remain a significant share that will not be passed to the game. Communication of the game will rely on channels typically available in the game set: communication will suffer when these channels are blocked or disconnected.

The scope of what may pass the game border will certainly widen over time: many of today's complex games represent a more advanced level. Their design includes – of course only to a certain degree – self-learning and adaptive features. This means that not only the (static) information about the saved game level and character properties of the player's avatar determines the response of the game but also the specific way that the player performs in playing the game. Coming back to a car race game as an example, in single player mode, the virtual competitors will improve their performance if the player drives well, and will get slower if he has fallen back (Prensky 2006, 60).

A double bind exists in the bidirectionality of immersion which has been illustrated with the help of the dual usage of the term border. Both gamer and game are connected in an exclusive inclusion. However, there are also limitations to this inclusion. The term border in its duality is shown to reflect both the permeable nature needed for communication and inversion as well as the rigid exclusion aspects separating game from real life.

The Mistaken Thought in Total Immersion

Looking the other way round, at the possible transposition of experience from a game back into the real world, we again face limitations. For instance, the improvement in high jump of the avatar does not imply that the player himself improves his athletic skills as a real person. In the same way, the gamers' improvements in steering his avatar in "Beat'em Up" genre games by means of the control stick does not qualify him as a martial arts fighter. These are manifestations of the

physical distinctness of player and avatar that cannot be resolved by immersion. This might be unveiled best in the instance of a movie. *Strange Days* (1995) will function as an example. In this movie, it is possible to live another person's experiences from this person's point of view. Thereby, "clips" are transferred with the help of a technical device. By using electromagnetic signals, the clips are transmitted into the brain. However, the complete immersion into this artificial reality is only pretended. The perpetuation of the border is constituted in a death experience, which is realized through the clips. Hence, the person who actually made the experience dies in real life but not the person who receives the experience. Therefore, it is not possible to speak of total immersion because the bodies are still separated. Imagine that this distinctness could be overcome: we are left with the appearance of a game, but for the player, the qualifying characteristics of a game are no longer matched. In essence, a possible dissolving of the gameplay border would not lead to the utopia of a totally immersed player but on the contrary to the dissolving of the game itself: it would no longer pretend to virtually represent a reality but actually would be "real" if the virtual interactions imply real consequences for the "player." Thereby, it might occur that there is no essential difference to a general game on a narrative level. However, the system of rules changes decisively, for example, as soon as the game is linked to the real life or the survival of the gamer. Even in the context of conventional games, Huizinga (2006) states that for a professional "player," the inherent character of a game is lost.

Based on the understanding of immersive operations as a subset of communication and on consideration of the bilateral concept of border, the description of immersion evolves as the extension of the player's personality to the virtual world of the gameplay. The game itself is taking effect beyond its virtual borders by influencing the player in the course of time, at least consequential to consideration of the hermeneutic spiral (Bolten 1985). Both border and communication safeguard the integrity of game and player, coexisting according to their own set of rules without completely merging together. The fact that a user of games as a person can only be thought of as an integral unit supports this view. Falling for the misconception to stick with players giving up integrity despite their physical distinctness leads to the same confrontation of conclusions that already Descartes faced. Thus, we can turn down any conceptions of disembodiment of a game user since he is just controlling an avatar without being it himself, as could be shown within the concept of border as a wall on the one hand and border as a permeable membrane on the other hand.

Conclusion

The game-gamer relation has been introduced as bidirectional. On the one hand, this is due to the conscious gamer whose attention is not only bound passively. The basis for this is included in the term "border" which helps to develop the double bind between game and gamer. Then, within the including exclusion immersion serves as the including factor. On the other hand, the erroneous belief of total immersion has

been cleared up because it is not possible as long as the character of a game is supposed to be maintained. Furthermore, the transition from the stimulus-reaction scheme to communication has been consummated. Thereby, communication serves as basis of the game-gamer action which cannot be reduced to mere behavior. Thus, the effect of immersion is interpreted as the continuing interest in maintaining communication. This also highlights the proximity of flow and immersion. Hence, immersion is not only a snapshot, but has to be understood as temporal. Only by considering this, the process of immersion is unveiled in its whole range. This relates the game to its prevalence as an entertainment media and reflects the player's intention to strive for personal development based on the interactions with the game. Not least, the usage of the principle of communication is legitimized in the consideration of gamer-to-game relation. It could lead to a model of gaming based on the described theory and terminology of communication. Enhancement is seen mainly in two aspects: (1) in the substitute communication and (2) through the level of doubled reference. Therein lies the possibility of a broader empirical approach. The same is true for the assumption that computer games serve as social spheres. The importance of inherent social factors could be evaluated empirically for the success of a game, for example, "Which game characteristics favor the gamer's perception as communication and social partner?" Furthermore, it could serve as a connection between game studies and game design.

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Chapter 14

Egoshooting in Chernobyl: Identity and Subject(s) in the *S.T.A.L.K.E.R.* Games

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With no memory of who you are supposed to be and having barely survived the crash thanks to another *S.T.A.L.K.E.R.* that had come down to rob the dead, [...] you will have to find your own way in the world of Chernobyl, the only lead that you have in discovering what happened to you and what might lie at the heart of the Zone itself. (Weblog entry on *S.T.A.L.K.E.R.: Shadow of Chernobyl*, World 1–1 2007)

Introduction: Identity and Identification in Video Games

As the player logs out of the video game and exits the nightmarish radioactive zone in *S.T.A.L.K.E.R.: Shadow of Chernobyl* (2007), one key question comes to mind: is the player still the Stalker,¹ or has he or she become a different ‘self’ in the non-game world? As players ‘walk into’ first-person shooters, do they retain their real-life identities or is the ‘I’ (or ‘eye’) that sees not so simple after all? Or is there a separate direct identification with the *avatar*? Game critics have argued both for and against this apparent seamlessness in the identity formation in video games. However, while the case against seamlessness builds up with respect to other gaming genres, first-person shooters (FPS) are often singled out as best representing this first-person identification that some critics claim to be unique to video games. Using a critical analysis of the *S.T.A.L.K.E.R.* game-texts, this essay builds on earlier research to reveal further problems in assuming a seamless merging of identity even in FPS games; it argues that the very conception of subjectivity has always been

¹I choose to refer to the protagonist in the *S.T.A.L.K.E.R.* video games and other human non-player characters (NPCs) belonging to the different factions (except the army and the bandit faction) as ‘stalkers’ so that the link with the protagonists in the game’s pre-texts is better illustrated.

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problematized in the FPS game and that the genre itself self-consciously keeps pointing this out as is evident through the close analysis of titles like *Shadow of Chernobyl* and *S.T.A.L.K.E.R.: Clear Sky*. As the opening extract illustrates, the plot of *Shadow of Chernobyl* prompts players to question their in-game identity(ies) because the playing subject, instead of being a fixed entity, is hard-wired into the process of exploration that constitutes gameplay. Complementing the issues raised in *Shadow of Chernobyl*, its recently released prequel, *Clear Sky*, problematizes the question of identity even further.

The FPS genre is especially problematic in terms of construing identity during gameplay. Generally defined as ‘3D action games seen from a first person perspective’ (Juul 2005, n.p.), FPS games are characterized with a so-called HUD or ‘heads-up display’ where the player is supposed to view the world with his or her own eyes. In most cases, the player is also directly addressed as ‘you’ by non-player characters and the game’s context. Players can also see themselves holding weapons and performing various other functions with their in-game ‘hands’ while their real hands are using the joypad or the mouse. While the degree of involvement in the game might easily blur the two, there is no denying that the player experiences an in-game identity as well as an identity in real life during the gameplay. However, as this chapter will go on to argue, even these perceptions are further problematized. For the present, the key elements that emerge are that while the player may be, say an American Ranger in *Call of Duty: Modern Warfare 2* (2009), he or she might have a totally different identity outside of the game. Further, the fact that the player can assume such an extremely convincing and yet perhaps very disparate identity is actually the result of an ongoing process of identification.

The above applies to most types of video games, although in the FPS, for the reasons outlined above, the issue is more obvious than in other games. The *S.T.A.L.K.E.R.* games mentioned above are particularly useful for such analyses, especially because they are self-aware of the nature of the FPS genre, and as revealed in a ‘close reading’ of their plots, they highlight the problem of identification in very palpable ways. Other games like *Fallout 3* (2008) or *Sherlock Holmes: The Awakened* (2006), where it is possible to change from first person to third person and back, also raise similar questions, albeit related to the perspectival change more than the analysis of the narrative, which is the approach adopted for this chapter as being one that engages with perceptions of subjectivity in a more direct and conscious way. Before exploring this further, it is necessary to establish the understanding of video games in game studies research so far, especially in comparison with similar discussions in other disciplines.

Game Studies Perspectives on Identity

As implied above, the first-person perspective often leads to the theory of direct identification that, in the extreme, sees the players participating in the game as a ‘visit’ in their respective unchanged selfhoods (for a different approach, see

Stephenson, Chap. 15). Janet Murray's now much-contested equation of the gaming experience with the Holodecks on the spaceships in *Star Trek* is a characteristic example of such an interpretation. Murray describes her gameplay experience with statements like 'I encounter a confusing world and figure it out' (Murray 1997, 142) and 'I encounter a world in pieces and assemble it into a coherent whole' (ibid.); the assumptions behind such a human-centred notion of identity have, however, already been challenged by critics such as Gonzalo Frasca, Katie Salen and Eric Zimmerman. Salen and Zimmerman's concept of 'double consciousness' (Salen and Zimmerman 2003, 451) certainly presents a more complex analysis of identity, but it suggests a duality that is prone to being read as working on two discrete levels – as one's general self and one's agency in the game. Such a reading, however, is based on the assumption that a stable and unified transcendent 'self' exists outside the game. In a related reading based on such binarism, James Newman describes the player as being either 'online' or 'offline' during gameplay; for him, while playing, or 'online', the player is all action, and during the non-play moments, such as cut-scenes, the player is 'offline', and character building goes on (Newman 2002). Such binarisms prove inadequate when identification in games cannot merely be seen as switching between an in-game 'I' to a 'real I' or between an 'offline' character to an 'online' player – the borders are simply not as clearly demarcated. As I have argued elsewhere, perhaps 'multiple consciousness' is a better term to describe the complexity of identity formation (Mukherjee 2008). Here, the issue will be examined from a slightly different perspective.

Identity formation becomes further complicated when we consider the phenomena that exist on the 'meta' level of actual gameplay. In his latest book, Newman discusses the phenomenon of 'cosplay', which is an import from other areas of fandom and as such needs an introduction:

A contraction of 'costume' and 'roleplay', cosplay describes the act of dressing up as characters from popular animation, film and videogames. Moreover, though it is not an essential part of the process, and not every cosplayer possesses the requisite skill or inclination, the manufacture of original costumes is an integral part of the culture. Cosplay, then, is partly concerned with exhibition and display and partly with the craft and invention of couture. (Newman 2008, 83)

For the purposes of analyzing identity, this poses the question asked earlier: is there a direct identification with the avatar? Newman observes that 'we might instinctively think that cosplay offers the most undiluted means of embodying game characters, literally stepping into their shoes and taking control of them' (Newman 2008, 84), but points out that the identification is not as straightforward. Lien Fan Shen describes cosplayers as making 'their body into pure signifiers of playfulness [and] refuting a unified identity' (Shen 2007, 33). According to him, they are embodiments of the 'postmodern subject' (ibid.). Nor is cosplay the only illustration of the complex subjectivity in video game-related media: the recently popular online game diaries, such as the 'The Silent Amateur', also complicate issues of identity. The blogger in his persona of the 'Silent Amateur' writes about his or her experiences in playing *Hitman: Blood Money* (2006), and he does so in the persona of Agent 47, the assassin protagonist of the game. The identification here is both

serious and flippant; simultaneously, it is both in the third person as well as the first. Here is how the Amateur's adventures start:

A guard confronts The Amateur at the door and we exchange serious yet good-sounding dialogue. The Amateur tells him he's not my friend and smash [sic] his head on a gate. The Amateur considers whether that could be his calling card, but figures carrying the gate around would not be worth the hassle. Up ahead there are more guards. (Jiim 2008, n.p.)

The writer, quite curiously, shifts between the third person (The Amateur) and the first ('my friend'). Of course, on a closer look, this dichotomy does not seem strange: the identity crisis is especially pronounced in a game like *Blood Money* where the third-person perspective has the player ('I') playing a bald demure-looking assassin known only by a cipher ('him'). On a further level of complexity, the readers of the blog engage on a different level with the identities mentioned above – after all, many of them have also played the game and identified variously with the hitman *avatar*.

While the above examples make it very clear as to how identity is complicated, within gameplay itself, the identity of the player is much contested. It is simplistic to observe that the person playing the game is an undivided self that interacts with the game environment (see Härig, Chap. 13). Using a metaphor from ancient Greek mythology, Murray compares gameplay with exploring the labyrinth and describes it as the exploration of a plastic and passive locale. Strangely enough, she forgets the Minotaur that lurks within the labyrinth. The player's experience does not allow such an oversight: their interactivity is constantly under limitations. As Laurie Taylor observes, the apparently seamless experience of the FPS, described by Murray, falls apart very easily when the player encounters a mirror within the game (Taylor 2003). Suddenly, the game is an 'outside' world, and the experience is affected. Any gamer will be aware of the frustration that occurs in the jarring moments of difference with real-life scenarios: when it is not possible to scale a wall that is too easy for a 5-year-old, to go AWOL or to blow the brains out of an irritating 'friendly' character who keeps obstructing the *avatar*. The player's identity can only be shaped under the constraining influence of the game's program. In other words, the subject in the video game also involves the machine. Therefore, it is not a simple case of player (subject) versus machine (object). The demarcating boundaries are shown as being non-boundaries in what can be considered a cyborgian 'plugging in' between the human and machine.

As identity emerges as having so many multiple facets, one might wonder as to how these relate to each other. From the above analysis, the key point that can be made about subjectivity and identity formation in video games is that it is emergent; it is a process rather than a unique and homogenous selfhood. The machine, the (human) player and the emergent contexts, therefore, do not relate in a hierarchic fashion, and defining them by any single structure will leave the analysis incomplete. Traditional theories of seamless immersion and binary identification struggle to describe the process of identity formation in video games mainly because they variously assume the existence of a single and definable subject.

Subjectivity and Identity in Philosophy

The question of subjectivity has been of primal concern since the very earliest of philosophical discourses, and there has been a transition from the perception of the subject as a discrete, autonomous and fixed selfhood to that of the ‘death of the subject’ – a phenomenon that seems to be repeating itself in game studies. After the importance given to the reasoning self during the Enlightenment, the dramatic individualization by Jean Jacques Rousseau served to establish the self as unique and complete. Once established as the starting point of all analysis, the primacy of the self was further established in Kantian philosophy through its link to consciousness. However, the fixity of such selfhood was challenged variously by Friedrich Nietzsche and then by later philosophical thought. Lacanian psychoanalysis posits subjectivity as arising ‘in the exchange between two orders whose material and impetus are from the shared, autonomous field of language’ (Mansfield 2000, 44). Louis Althusser essentially nullifies the existence of the independent subject through his claim that all subjectivities are constructed by ideological state apparatuses. Within this milieu of challenges to the notion of the unified subject, Michel Foucault argues against the Lacanian concept on the grounds that ‘the individual is not to be conceived as a sort of elementary nucleus’ (Foucault 1980, 98) and against Althusser’s contrast between ideology and ‘true scientific truth’ (as embodied in Marxism) because ‘the so-called truth it uses to justify and extend itself are always in all of their forms to be met with scepticism and resistance’ (Mansfield 2000, 53). Foucault considers that ‘the individual is an effect of power, and at the same time, or precisely to the extent to which it is that effect, it is the element of its articulation’ (Foucault 1980, 98).

Following Foucault’s argument, the obvious conclusion would be that the subject is a construct. As McHoul and Grace rightly point out ‘he was much more interested at that time in how particular kinds of subject [...] were *produced* as effects of discursive and power relations’ (McHoul and Grace 2002, 91; emphasis in original). The notion of production implies that subjectivity is the result of a process whereby the subject is actualized under a given power/knowledge structure. Speaking in video game terms, the playing subject is constantly being reconfigured through the relation between his or her power/ability in the game with that of the game program’s affordances. Following Foucault, subjectivity has been understood variously in terms of discourses on sexuality, gender, ethnicity and even, perhaps more relevant here, in terms of technology. The latter, as Jon Dovey and Helen Kennedy explain in *Game Cultures* (2006), is described by the term ‘technicity’ which denotes how conceptions of identity are affected by technology. Positions in gender studies, such as that of Julia Kristeva (1982), also conceive of the subject as a process and the result of flows.

The account of subjectivity that perhaps links best to Foucault as well as later critical positions is that of Gilles Deleuze. Deleuze and Foucault openly praised each other’s work and, despite some arguments to the contrary, similarities exist between their approaches. Foucault famously commented that ‘one day, perhaps,

this century will be called Deleuzian' (Foucault 1970, 282) although Deleuze himself later said that he did not know the meaning of this comment as he had never asked Foucault. Written after Foucault's demise, Deleuze's *Foucault* (1980) focuses on subjectivity as one of its key themes.

Foucault, contrary to some readings, did not do away with the subject altogether, and it can be argued that Deleuze does not do so either. Attempting to differentiate Deleuzian and Foucauldian notions of subjectivity, Peter Hallward claims that 'whereas Deleuze would like to get rid of the relational subject altogether, to clear some space for a creative coherence beyond the creatural altogether, Foucault wants to purge the subject, to eliminate everything that specifies or objectifies the subject' (Hallward 2000, 101). Hallward is most probably referring to Deleuze's conception of the 'plane of immanence'; if so, then this is not something 'beyond the creatural altogether'. Instead, Deleuze speaks of the plane of immanence as a multiplicity or a 'manifold' which according to Manuel DeLanda is the 'space of possible states that a physical system can have' (DeLanda 2002, 13). This is very much linked to the creation of the subject as in Deleuzian thought the subject can be seen to be actualized from within such a space of possibilities. The 'space of possibility' is also an important concept in video game design as Salen and Zimmerman (2003) indicate. In such a space of possibilities, however, the actualizations can be many, and instead of doing away with the relational subject as Hallward claims, Deleuze is pointing towards the multiplicity of the subject.

The Multiple and 'Folded' Subject

The following section will illustrate Deleuze's linking of the relational subject and multiplicity through the discussion of his concept of 'assemblages'. A further Deleuzian response to Foucauldian notions of subjectivity is through the concept of the 'fold'. As will be seen, this concept can also be relevant for understanding later experiences on subjectivity including that in video games and technicity.

Where traditional theories of seamless immersion or binary identification struggle to describe the process of identity formation in video games, an important entry point to understanding such a multiple process is through the framework suggested by the (non)philosophy of Deleuze. As DeLanda comments, the concept of multiplicity is one 'that stands out for its longevity' (DeLanda 2002, 12) in Deleuzian thought; to represent structures characterized by such multiplicity, Deleuze views them as 'assemblages'. As DeLanda clarifies, the concept of the assemblage is the main theoretical alternative to organic totalities. Assemblages are 'wholes characterised by *relations of exteriority*' (DeLanda 2006, 10), and a component part of an assemblage may be detached from it and plugged into a different assemblage in which its interactions are different. In the Deleuzian sense, 'plugging in' means a multidirectional process wherein any entity may form flexible and variable attachments with others. The relation of exteriority, however, also necessitates that the interaction between parts results in a true synthesis though the properties of the

individual parts can never explain how the whole is constructed because it also depends on the reference to other interacting entities. Identity in video games resembles the complexity described above. Take the case of the subject in the video game. He or she plays the game as a complex of human and machine in constant interaction as a fictional character (the *avatar*) and also remembered instances of earlier gameplays (both in the same game and others). As in the Deleuzian assemblage, the properties of these factors are not enough to explain the subjectivity: there are always other gameplay experiences and even interactions between players (whether human or machine) that play an equally important role in shaping the playing subject.

The issue of identity is further complicated because the plugging in to assemblages outside the video game must be considered. As already observed in cosplay and other game-related practices, the video game identity spills over into real life, and it does so in complex ways. The following extract from *Cybergypsies* (Sinha 1999), a novel about the early MUD communities, provides a telling example:

The 'real' people in the room were never invited to the party. They're here on sufferance, mere emissaries of the real guests: it's the personas who are meeting here. 'Hi, I'm Louella the half-Elven', a forty-five year old man with an alcohol and tobacco-ravaged face announces and, turning to his shy girlfriend adds, 'and this is Psychopath the Singing Blade'. No wonder so many people are loath to reveal 'real' names. (Sinha 1999, 103)

The above example describes a party organized by players of the fictitious online role-playing game called *Shades*. The peculiarity of this party is that the guests still retain their identities from the game world even though they are meeting each other in real life. In a sense then, the party is also full of guests who have never been invited since both the real and the in-game selves of the players are present here. The situation is complicated because of the multiple identities involved. Sinha's novel shows yet another situation in which identities emerge as a result of plugging in – in this case, from the video game to the social assemblage, as seen in characters like the shy girlfriend who is also 'Psychopath the Singing Blade'.

So far, the multiplicity and the complexity of the playing subject have been unpicked from within more traditionalist discourses that considered the player as a homogenous whole, either existing as the sole subject in the game or jointly sharing subjectivity in performing the ludic action. For the reasons mentioned above, such conclusions miss an important point that the framework of multiplicity and assemblage uncovers: identity is a process. Again, Deleuzian ideas prove extremely apposite in analyzing the process. Elsewhere (Mukherjee 2008), I have read action in video games in terms of the Deleuzian discourse on cinema – there, certain key issues regarding identity formation were left implicit. The present analysis will engage in more depth with these and other issues. Against such a Deleuzian reading, some critics have argued that Deleuze's views on subjectivity vary considerably in different 'periods' of his writing, fluctuating between the pulverization and the recognition of subjectivity. As Constantin Boundas rightly argues, however, 'the trouble with this periodization [...] is that it is too facile. It overlooks, once again, the "rhizome" named Deleuze and the complex relationships that exist between Deleuzian texts' (Deleuze 1991, 12). It is possible to identify later Deleuzian ideas

on subjectivity even in an early work like *Empiricism and Subjectivity* (Deleuze 1991). Here, Deleuze defines the subject as being ‘defined by movement’ (ibid., 85); according to him, ‘the subject transcends itself, but it is also reflected upon’ (ibid.). The subject, here, is both intensive and extensive; its operations are directed both inwards and outwards. In his later works, Deleuze (1993) describes this as the ‘fold’. As Tom Conley comments on the ‘folded subject’, it ‘inflects and is inflected by the mental and geographical milieus it occupies’ (Conley 2005, 178). In *Foucault*, Deleuze describes the fold using the example of the Renaissance madman who is put to sea in a boat as ‘the inside as an operation of the outside: in all his work Foucault seems haunted by this theme of the inside which is merely the fold of the outside, as if the ship were a folding of the sea’ (Deleuze 1988, 81). Describing the ‘fold’ Simon O’Sullivan states that

In an echo of the Foucault book, that these new foldings are simply the name for those new kinds of subjectivity that emerged in the 1960s – in the various experiments in communal living, drug use, and sexuality – as well as in the emergence of new prosthetic technologies. (O’Sullivan 2005, 102)

While the concept of the ‘fold’ has other philosophical aspects that are beyond the scope of this discussion, Parr’s comment indicates its relevance to current ideas on subjectivity. The subject defined by movement is similar to the player (whether human or machine); it is the result of a continual actualization of the possibilities that gameplay posits.² In short, the subject (or player) is in flux and cannot be pinned down as human, *avatar* or machine. If a different possibility were to have been actualized, then that would have affected the subject. The next point about subjectivity in video games is to take into account the intensive and extensive processes through which the player simultaneously connects to multiple assemblages.

‘Kill Strelak?’: Close-Reading the ‘Folded’ Subject in the *S.T.A.L.K.E.R.* Games

Returning to the earlier discussion of the FPS, is it still possible to find the ‘I’ (or the ‘eye’) that one is accustomed to assume behind the heads-up display (HUD)? Deleuze refers to the subject as the ‘cracked I’³; it will be instructive to see whether this applies also to the subject behind the HUD. Particularly suited to such an analysis are the plots of *S.T.A.L.K.E.R.* games, especially in the way they play with definition of the identity of the protagonists. These games have their antecedents in a popular

²Here, it is necessary to distinguish Deleuzian ideas from any actual virtual duality that might relate it to Aristotelian views on ontology. As DeLanda clarifies in *Intensive Science and Virtual Philosophy* (DeLanda 2006, 41), Deleuzian analysis avoids the typological problems that Aristotelian analysis involve, and eschewing thinking in terms of essences, he understands individuation as the result of an intensive process.

³Boundas mentions this in his introduction to *Empiricism and Subjectivity* (Deleuze 1991, 4).

science fiction novel by the Strugatsky brothers (1977), *Roadside Picnic*, and a major art house film by Stalker (1979). All of the texts, video game or otherwise, describe a mysterious and reactive wasteland called the Zone, to which they ascribe different origins (in the novel, it is the result of an alien ‘visitation’; in the film, its origin is ambiguous; and in the games, it is created after a second explosion at the Chernobyl nuclear power plant). It is marked by random events, such as radioactive anomalies that destroy life in myriad different ways, mutated animals, zombies and areas of legendary significance such as a Wish Granter and a Brain Scorcher. The Zone is as much a character as any other in all the texts and in the video games; it is also a combination of the machine code and the player’s actions (to which it reacts). In the novel and the film, it is a desolate expanse which undergoes small yet life-altering changes. In the film, the protagonist says that the Zone must be respected or it will punish; it is a complicated system of deadly traps, and the moment someone enters it, everything comes into motion and things keep changing all the time, almost capriciously. The Zone redefines the identity(ies) of the stalker and the two people whom he guides into it. In *Roadside Picnic* (Strugatsky and Strugatsky 1977), the Zone ultimately leaves the protagonist, Redrick Schuhart, a changed man. At the very end of the narrative, Schuhart’s own subjectivity is under scrutiny; his crisis is now one about who he is:

He had stopped trying to think. He just repeated his litany over and over: ‘I am an animal, you see that. I don’t have the words, they didn’t teach me the words. I don’t know how to think, the bastards didn’t let me learn how to think. But if you really are ... all-powerful ... all-knowing ... then you figure it out! Look into my heart. I know that everything you need is in there. It has to be. I never sold my soul to anyone! It’s mine, it’s human!’ (Strugatsky and Strugatsky 1977, 173)

In the film, the protagonist keeps referring to a stalker named Porcupine, who committed suicide after giving in to avarice. The stalker’s name, Porcupine, is of importance in that it reflects the ambiguity between humanity and animality in the Zone that Schuhart’s comment points to. Following on from their earlier pre-texts, the *S.T.A.L.K.E.R.* video games explore the Zone in ways that ask questions about identity in an even more direct way. The Zone is not as desolate as in the pre-texts but is peopled with other stalkers, random radioactive pockets and dangerous mutants. As the game manual warns: ‘the radioactive reaches of the Zone present dangers unknown to the outside world. Where mutation has become mundane, who can judge what is normal?’ (*S.T.A.L.K.E.R.: Shadow of Chernobyl* 2007).

It is in this locale of uncertainty and constant danger that the plot of the game plays out. The protagonist’s fate, whether it lies in the seven possible ‘official’ endings or the numerous deaths that are all part of the gameplay, is intertwined with how he reacts to the Zone. In a way, like the stalker in the film, the game’s protagonist also constantly shapes and reshapes his identity through his interaction with the Zone. Indeed, the game leaves his identity in question, even from the very outset. As the opening extract indicates, the protagonist wakes up into the game after having been left for dead and his memory wiped clean. A local trader calls him the ‘Marked One’ because of a mark on his face and the name sticks. This will have further consequences in the course of the game. Together with the ambiguous identity of the

protagonist, the names of the other stalkers also raise questions about identity. Many of them are named after animals, for example, Wolf, Mole and Fox; whether this is a response to Schuhart's identity crisis that puts him between animality and humanity, one cannot be sure. The issue of an ambiguous sense of identity, however, remains. Finally, as already indicated, the 'official' endings reinforce the idea of the subject being defined 'in movement', in an almost practical illustration of the Deleuzian position on subjectivity. In one example, if the player ends with 50,000 roubles, the 'I want to be rich' ending is reached. In this, an endless shower of coins falls on the protagonist and ultimately smothers him. The various other endings are dependent on the player's reputation and behaviour within the game. The missions in the *S.T.A.L.K.E.R.* games are not easy: the A-Life AI engine comes up with a few surprises although the unpatched version of the first game can be rather buggy. However, it may be that the game certainly does not let one leave with the feeling of being a unified and homogenous subject. Subjectivity is intrinsically tied up with one's existence in the Zone and with being part of the machinic.

The above analysis could perhaps be applied to most video games, especially those with a larger space of possibilities, fairly easily. Even other first-person games as varied as *Crysis* (2008) or *Call of Duty: Modern Warfare 2* could to an extent reflect this complexity in understanding subjectivity. *S.T.A.L.K.E.R.*, however, is perhaps one of the few major FPS to address the issue of identity directly – the Zone and its links to the discourse on identity in its pre-texts certainly provide an opportunity for a deeper understanding of the subject. Besides the above elements, the *S.T.A.L.K.E.R.* games can also be seen as illustrating the 'fold' of identity: as in the Deleuzian discourse, above, the subject exists as both within and outside the player protagonist. This rather abstract notion is better explained when we examine a 'fold' within the structure of the plot of the two *S.T.A.L.K.E.R.* games. When the Marked One wakes up for the first time in the *Shadow of Chernobyl*, the trader with whom he has ended up finds a PDA on him. There is a message on the PDA that simply says, 'Kill the Strelok'. These three words are quite momentous because the protagonist takes them to be the key to his identity: written in the imperative mood, these words also define the game's overarching mission. Does the Marked One finally kill Strelok? Does he even find him?

These questions have generated a lot of discussion amongst fans, and on looking online, one gets many conflicting views. This confusion arises because the answers to both questions are deeply worrying: in a sense, the Marked One both finds and kills Strelok, but in another sense, he does not. In two of the endings of *Shadow of Chernobyl*, he ends up confronting a machinic intelligence called the C-Consciousness, which is actually the powerful collective consciousness of seven people who were part of a scientific experiment. In these 'true' endings, he learns that he himself is Strelok – the C-Consciousness admits to making a mistake and tells him: 'You were sent to kill yourself'.

The problem, however, does not end there. In the recently released sequel, *S.T.A.L.K.E.R.: Clear Sky* (2009), the objective of the game is again to kill Strelok. Only this time, the protagonist is a stalker called Scar. At the very end of the game, the final mission is to kill Strelok; your quarry, however, is a tiny figure whom you

can only see through a sniper scope. Strelok, here, can be anybody – he is faceless and seems the least imbued with character of all your adversaries. In fact, whether he is an adversary is a moot question: he does not shoot back. In a strange way, come to think of it, when the player shoots Strelok in *Clear Sky*, it is difficult to forget that he or she ‘had been’ Strelok in the earlier game. There, too, the protagonist had been asked to kill Strelok and ended up discovering that his mission was actually suicide. In *Clear Sky*, even after the successful ‘killing’ of Strelok, there remains much ambiguity as to the actual outcome. There is an explosion, and the game ends by showing many dead bodies. Perhaps one of these is Strelok waiting to wake up in *Shadow of Chernobyl*; perhaps one of them is the player or, perhaps, there is no difference between the two.

On close-reading the *S.T.A.L.K.E.R.* games, the problems with the seamless identity and the subjectivity of the player in FPS games emerge more clearly. The games themselves seem to reflexively comment on this aspect of the FPS genre. On comparing the Strelok plot to the earlier introduction to Deleuzian ideas on subjectivity, the ‘I’ in the *S.T.A.L.K.E.R.* games seems more like the ‘cracked I’ that Deleuze describes. Another advantage of such a reading is that it enables the detailed study of the significance of some of the not-so-obvious narrative elements, the names of the characters being a case in point. The protagonists in both the game bear similar names: Scar and the Marked One can be seen as having similar connotations. The more important name in this context is, however, that of Strelok. In Russian, ‘Strelok’ means ‘Shooter’. To kill Strelok is therefore to kill the Shooter – whether the shooter is the protagonist/subject or the adversary is a moot question. Using these elements, the designers seem to have included a latent critique that points to the complexity of the FPS.

‘Egoshooting’: Rethinking Subjectivity and Identity in Video Games

Given that the FPS questions subjectivity in so many subtle ways in video games like the *S.T.A.L.K.E.R.* games, the current term that privileges the first person might need some rethinking. In comparison, it can be said that the German term *egoshooter*⁴ perhaps expresses the experience of identity in the FPS more effectively. The term is a unique German coinage and is, in itself, a multiplicity: in German, it is a *scheinanglizismus*, meaning a pseudo-anglicism. The root consists of *ego* which is ‘I’ in Latin and Greek (*Εγώ*) and ‘shooter’ in English, while the actual usage of the compound word is German. In the true nature of the multiple, the word plugs into various language systems and meaning systems. Playing with the word might result in a combination like ‘I, shooter’ (where I is the subject) or in another different one such as ‘I-shooter’ (where the full expression is the subject

⁴I am grateful to Dr. Mark Butler (2007) for bringing this to my attention.

and the meaning is changed). The first meaning contains the conventional sense of the FPS as a shooter where the player identifies with the player character as the subject. On the other hand, as the 'I-shooter', the player identifies with the 'I' that is being shot. The two identities occur together as one and yet as differently actualized instances within the virtual. The shift of identities within the multiple space of possibilities is indeed complex.

The split that some critics point out is simultaneously also a non-split within the space of the possible. In this 'in-between zone' is the locale for a continuum of identities: in a situation similar to the Deleuzian 'fold', the 'I' that is shooting and the 'I' that is being shot at are all developed in the 'in-between zone' of possibilities. Again, the *S.T.A.L.K.E.R.* games provide an appropriate metaphor for this situation. The above analysis highlights the need to rethink concepts of in-game identification in terms of current philosophical discussions; conversely, it illustrates how video games can help in clarifying the complexities of perceiving the 'I'. As the player negotiates the issues of subjectivity and identity in the in-between zone of the *ego-shooter*, it is difficult to tell where the gun points or whether the sniperscope through which one looks at Strelok actually becomes a mirror.

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Chapter 15

Personality Development Through Immersion into Intermediate Areas of Digital Role-Playing Games

Katharina Stephenson-Mittlböck

Introduction

The disciplinary background of this chapter is formed by psychoanalysis on the one hand and game studies on the other. It is based on the assumption that an interdisciplinary view would lead to a potential common understanding, allowing a broader comprehension of some discipline-specific aspects hitherto selected.

The main goal is to focus on competencies of a sane psychic structure from a psychoanalytic point of view as a base for deeper insight into aspects of personality development by means of playing digital role-playing games.

For that purpose, the phenomenon *intermediate area* will be explained and adapted to contemporary understanding. Ensuing different potential spaces for intermediate areas will be argued for. Based on these theoretical conditions, potential challenges of playing digital online role-playing games will be developed. Arising from these challenges, a bundle of four competencies of a sane psychic structure will be defined. Finally, the interdependence between them and playing digital role-playing games will be shown. The chapter will finish with a conclusion and an outlook on parts of a current research project within my dissertation, yet outstanding.

Intermediate Areas

The idea of intermediate areas is part of a classical psychoanalytic concept by Donald W. Winnicott. ‘The third part of the life of human being, a part we cannot ignore, is an intermediate area of *experiencing*, to which inner reality and external life both contribute’ (2005, 3; emphasis in original).

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Therefore, human beings have three repositories of resources – inner reality, external life and intermediate areas. Intermediate areas can be imagined as a kind of parallel worlds or also as virtual space. I also used to compare it with Huizinga’s magic circle (Stephenson 2007), but my current deliberations are not tending towards a dichotomic view of real and virtual as it is also argued for by Ferreira and Falcao (2009) or Calleja (2007). Immersion – or incorporation¹ as Calleja (2007) calls it – is an internal psychic act of construction – regardless of how the trigger was perceived. The resources for this act can be imagined to be drawn from the three repositories with their several *inhabitants* which human beings need for their mental and psychic development. They need constantly available, self-resilient interaction partners on the outside. On the inside, they need stable representatives for the interacting objects from the outside. This inside structure is not inherent but has to be developed step by step in the early years of life and – as I maintain – the whole life long. The third intermediate area is the virtual space where this development takes place. The results of the processes occurring in an intermediate area are fed into the inner reality of the individual.

An intermediate area is only activated under special circumstances and in certain settings of interplay of the other two spaces. It is not a persistent world. It has to be constituted, or rather co-constructed again and again. Finally, the above-mentioned inhabitants of intermediate areas are *symbols* called ‘transitional objects’ and ‘transitional phenomena’ (Winnicott 2005). As they emerge at the beginning of an individual’s personality development in early childhood and are formed by an immature psychic structure, I call them ‘primary symbols’ (Stephenson 2007).

Transitional objects are things *standing for* the beloved *object* of comfort, shelter and correspondence. Transitional phenomena are actions performed by the child, *standing for* the *cooperation* within the first relationship. Employing transitional objects or phenomena represents an act of *symbol formation* as well as a first *playful interaction*.

Winnicott shows us a necessary aspect of dealing with symbols in the context of gaming, which will be thematized later on: we are witnessing the starting point of a developmental process which will determine the future capability of playing.

Primary symbol formation is taking place in infancy, and, therefore, its prevalent task is to create meaningful symbols.² The later *secondary symbol formation* means creating new symbols and connecting them to the existing symbol system and advancing the already ‘residential’ symbols. Playing is a precondition for this *secondary symbol formation*. This means that *early* symbols co-created in the intermediate area between mother or father and child will be *shaped, modified* and *multiplied* all through life (Stephenson 2007).

¹ Calleja’s term does not refer to the psychoanalytic term of incorporation.

² The difference between *primary and secondary symbol formation* is the point in time when it is taking place within the human development and the maturation of the psychic structure of the symbol forming individual (Stephenson 2007, 58).

One of the infant's essential developmental objectives of its first year is to establish a *steady* internal object, which can be conceived as a kind of image of the interacting objects from the outside. 'The baby, having incorporated his parents, feels them to be live people inside his body in the concrete way in which deep unconscious fantasies are experienced – they are, in his mind, "internal" or "inner" objects' (Klein 1975, 345). I mentioned that above in connection with the three repositories of experiencing. The parents are part of the external world, and their images should inhabit the infant's internal world step by step. The third repository, the intermediate area, is the sheltered 'training place' where this developmental process takes place.

In the intermediate step of development, the symbolizing articles and acts can be helpful in stabilizing the not yet steady internal object by reminding the child of it. If the beloved person is absent, the impending disintegration of the infant's mental image can be counteracted by the employment of transitional objects and phenomena.

Recapitulating, I argue that the symbols called transitional objects and phenomena, which are the inhabitants of the early intermediate area, are an essential resource to establish a sane and steady internal object. Forming and using these symbols is an act of collaborative playing and learning at the same time. Being able to interact with symbols constructively, diversely and playfully in further life is the precondition of lifelong personality development and deep learning, which contributes to what we call *Bildung*.

Further Attributes of Intermediate Areas

So far, we have examined the intermediate area with its essential inhabitants – these special symbols and their particular tasks as Winnicott defined them. But I maintain that this virtual parallel world in our mind has some further attributes, which should be stressed in this context: one is the psychosocial moratorium; the other one is immersion.

Psychosocial Moratorium

The term psychosocial moratorium was introduced by Erik H. Erikson. He originally limited it to the developmental phase of adolescence (Erikson 1980). He argues that the environment is providing a psychosocial moratorium to the growing up 'during which the individual through free role experimentation may find a niche in some section of his society, a niche which is firmly defined and yet seems to be uniquely made for him' (Erikson 1980, 119–120).

That means that we are talking about a time-out where actions do not have sustainable or real-life-endangering consequences. Therefore, a psychosocial

moratorium can be imagined situated in a parallel world, where real-life rules are somewhat invalid. My hypothesis referring to this is that an intermediate area is a playful as-if world with the effects of a psychosocial moratorium as a necessary criterion. Concerning playing DRPGs, this could be related to the concept of ‘excitatory homeostasis’ (Calleja 2007, 86) or to Csikszentmihalyi’s classical flow concept (1987). Excitement or flow needs challenge but no excessive demand or even threat.

As contemporary life requires *lifelong development*, intermediate areas providing a psychosocial moratorium are helpful *companions through life*. That implies that *finding* or *creating* settings which facilitate the constitution of intermediate areas is a *key competence* for lifelong development.

Immersion

The basis for my understanding of the term immersion is, for example, the investigations done by Brown and Cairns (2004). They distinguish between three stages of *involvement*. What they define as *engrossment* and *total immersion* corresponds in several aspects to the term immersion as it is used in this chapter. For example, Calleja’s (2007) view on it as an act of incorporation and an experience of involvement marked by several so-called frames³ also provides good connectivity options for this discourse (Calleja 2007, 84). His idea of not entering an existing space but of mutual diffusion bridges to my view of immersion into an intermediate area as a process of internal creation described above. A different approach to immersion is given by Pietschmann et al. (Chap. 18) who focus on the relevance of the control mechanism of a game.

To accomplish the term immersion as it is understood in this chapter, I will at first remove it from its media context and transfer it into the psychoanalytic theory aspects mentioned above. The individual’s immersive state evokes the construction – or as it is argued above – the *co*-construction of an intermediate area which is at one go the target of the immersion. The game’s world is the trigger for that process. Factors such as the quality of social interaction within the game or telepresence as described by Lombard and Ditton (1997) facilitate the immersive process of constructing an intermediate area. Following a constructivist approach, immersion does not mean to plunge into a game space. It is a state of being emotionally involved that enables the mind to open up an intermediate area fed by the psyche’s internal structure and current state from the one side. On the other side, this conceived intermediate area is filigreed by personally relevant and meaningful aspects from the game. The linking between the two happens by an act of *struktureller Kopplung* (Fritz and Fehr 1997).

³ The affective, the shared and the narrative frame have been particularly stimulating for this research project.

What significance or intensity does immersion have, when an infant – in co-construction with its ‘psychological parents’ – constitutes an intermediate area? Greenspan and Shanker formulated the thesis that images have to be attached to relevant emotional experiences to become individual symbols (2004, 25). If we regard the employment of transitional objects and phenomena as an act of symbol handling and formation, it is obvious that we are facing an act of *deep emotional involvement*. But immersion into an intermediate area is also always associated with a first act of *distancing oneself* by employing an acquired *strategy*. The infant’s growing ability to evoke the internal object in order to make use of it as a kind of virtual interaction resource to hold the psychic balance can be seen as a preliminary stage of reflection. Why? It delineates a back and forth motion between very deep involvement in – for instance – fear and the step back by activating the internalized image.

Colwyn Trevarthen’s (1979) concept of primary and secondary intersubjectivity is giving us some hints for this reasoning. The developmental step from primary to secondary intersubjectivity seems to be a step from a stage of solely relying on the one outside object to a stage of being able to involve additional human and material objects. This wider scope of possibilities to interact suggests the assumption that the infant is able to employ this action ensuring its well-being. That would be a kind of targeted strategy being at least prereflective. Stein Braten, who is building on this concept, defines intersubjective communion as a ‘mutual engagement between subjects who consensually attend and attune to one another’s emotive states, expressions and gestures in a prereflective and nonverbal mode of felt immediacy’ (Braten n.d., n.p.). In this view, distancing oneself without the fear of losing the *co* enables the infant to come to a twofold position: to immerse into the interaction with the ‘additional’ object and to reflect on it from the ‘other’ position.

Therefore, intermediate areas can only be constituted by deep involvement, which can be called immersion. And one of the infant’s first developmental challenges – the step-by-step internalization of the beloved object by means of symbols – represents a process of beginning reflection.

Seeing it like that has the consequence that – at least at this stage – immersion and reflection are inseparable.

Potential Settings for Intermediate Areas After Early Infancy

So far, intermediate areas and their necessary characteristics and attributes like transitional objects and phenomena, the psychosocial moratorium as well as the immersion have been investigated referring to a setting which takes place in early infancy. But that is not the only possibility for intermediate areas. Two other potential spaces for the constitution of an intermediate area will be mentioned here: one is analytic psychotherapy, and the other is our central topic, the game space of digital role-playing games (Stephenson 2009).

Analytic Psychotherapy

The client in analytic psychotherapy is usually not an infant. He or she can be a child, an adolescent or an adult – comparable to the users of digital games. And there is another simple parallel – therapy is optional. Not everybody passes through one unlike the first intermediate area, which each human being experiences. Winnicott gave us a very contemporary definition of analytic therapy. Therapy

takes place in the overlap of two areas of playing, that of the patient and that of the therapist. Psychotherapy has to do with two people playing together. The corollary of this is that where playing is not possible then the work done by the therapist is directed towards bringing the patient from a state of not being able to play into a state of being able to play. (Winnicott 2005, 51)

This definition shows an aspect of the common ground of infantile interactions and relationships and the ones between therapist and patient. The method of psychoanalytic therapy induces the co-construction of an intermediate area which serves as a ‘training location’ for personality development (Stephenson 2009). This special kind of playful interaction between therapist and patient provides a psychosocial moratorium, where, for example, negative emotions against the therapist do not have consequences for the life ‘outside’. Rudolf Ekstein characterizes psychoanalytic psychotherapy as a process which is a game between identification and counteridentification, between transference and countertransference, between adaptation and regression, reflected in the destiny of the transitional objects while in the psychotherapeutic process (Ekstein 1988, 163). He further argues that the therapist himself functions as a transitional object to which former emotions can be transferred. This act facilitates a transition into a sane emotional development for the patient (see *ibid.*). The therapist symbolizes the objects of relationship from infancy as well as their internalized representations. The revived meaningful scenes from long ago now performed between patient and therapist stand for the first relationships. The therapeutic interactional process which is targeted at deep learning and personality development requires immersion. To revive meaningful emotions and scenes from early childhood cannot be done in passing. By immersing into old and deep layers of the personality, one always comes upon the unconscious, where memories are hosted which used to be too terrifying to hold them in consciousness. Meeting them again by immersing into an intermediate area is a very touching experience. The scaffolding personality and the methods of the therapist promoting a psychosocial moratorium are a necessary condition to get involved in this adventure.

The difference between the two is that an *early intermediate area* like the one between mother and child is meant for *learning* while the *later ones*, like psychoanalytic therapy – and game space of digital role-playing games – are spaces which facilitate *relearning* (see Mitgutsch 2008; Stephenson 2007) – an aspect which will be mentioned later on in particular.

Game Space of Digital Role-Playing Games

To show that game space has the makings of being a facility for an intermediate area, we initially follow Winnicott again.

The place where cultural experience is located is in the potential space between the individual and the environment (originally the object). The same can be said of playing. Cultural experience begins with creative living first manifested in play. For every individual the use of this space is determined by life experiences that take place at the early stages of the individual's existence. (Winnicott 2005, 135)

This chapter focuses on the genre of digital role-playing games. They are the kind of games which are 'powerful means of affecting player's moods and emotional states' (Calleja 2007, 86; also see Bryant and Davis 2006; Grodal 2000). The game space of such a game is populated by entities which are at most a concentrated bundle of symbols. They are standing for force, gallantry, cruelty or healing power, just to mention a few possibilities. Their equipment symbolize a variety of symbolic aspects. A character armed with a metal shield symbolizes that she or he is resilient even against hard attacks. A body armour decorated with lightnings or burning shoulders stands for special force and power. Mounts with legs *and* wings stand for the possibility to explore new places and to overcome barriers. To assume a certain part and – if scheduled by the game – to embody it allows one to act out a covert part of the personality or to try out a new way of dealing with life's challenges. Virginia Axline records that 'play is the child's natural medium of self-expression. It is an opportunity which is given to the child to "play out" his feelings and problems' (Axline 1989, 8). Likewise in later life, that can be seen as an act of re-externalization necessary for a modification of the once internalized symbols (Eissler 1958; Bloss 1967). The motor for this process is 'that the individual has within himself, not only the ability to solve his own problems satisfactorily, but also this growth impulse that makes mature behaviour more satisfying than immature behaviour' (Axline 1989, 14).

To start on one's way through a challenging surrounding within a game space of a digital role-playing game and to take on archetypic beings might recall the struggle within oneself. To impact on these symbolic beings and actions, to shape and to pattern them means to form and to modify them and make them meaningful symbols for the individual. Friess investigates the relation of the gaming experience and procedural aspects of meaning construction in digital gameplay and gives some empirical results on that (see Friess, Chap. 16).

Considering a game with multiplayer mode the beings and the actions a player is concerned with are partly driven by other players. Therefore, the interaction with and even the formation of the symbols is a collaborative process of co-construction. To award a certain symbolic meaning to a phenomenon within a game is an act of trial and error and negotiation with the game's general framework as well as with the other players one is confronted with. Shared involvement becomes more intense the more players are collaborating (Calleja 2007, 87). Ackermann describes the high social quality of collaboration within a game. She did her research on LAN

Party communication and found multiple player-player interactions, especially verbal and nonverbal communication (see Ackermann, Chap. 29). The game itself and potential other players are not the only possibility for co-construction of meaning. Humans, having passed their infancy, always have their internal *cos* with them. These internalized representatives of their former objects of relationship are an integral part of each symbol formation and modification process. Therefore, the dealing with symbols within a digital role-playing game is always an act of collaboration regardless of the existence of other players.

An interaction within a very challenging, rather frightening and partly not even remotely comprehensible world can deal with very deep layers of one's personality. But as they are taking place within a game, they are under a certain protection. As a consequence, a digital role-playing game provides a psychosocial moratorium. The players 'can take risks in a space where real-world consequences are lowered' (Gee 2003, 67).

Playing a role and identification with the chosen character within an interesting and challenging story requires and induces fun, as Christoph Klimmt argues. I would go even further and say it is more than fun, it is deep immersion. (If it were just fun, relearning would not be possible.) Klimmt mentions two other releasers for the high attraction of digital role-playing games. One he is calling *effectance*, and the other is the *oscillation between suspense and release* (Klimmt 2008, 7–17).

In conclusion, my hypothesis is that game space in a digital role-playing game is a *convenient setting to constitute an intermediate area* because

- It is populated by symbols, which can be formed and modified individually
- This symbol formation is a collaborative process of co-construction
- It provides a psychosocial moratorium (see Gee 2003)
- It promotes immersion

Developmental Challenges of Immersion into Intermediate Areas

After having explained these classical psychoanalytic theories and having built the bridge to the field of gaming, an insight into developmental challenges of immersion into an intermediate area by means of digital role-playing games against the background of these theoretical aspects will be given. The developmental challenges that will be mentioned in the following are:

- Relearning
- Co-construction and collaboration
- Immersion versus reflection
- Coping with chaos

Relearning

Relearning is ‘a circular process of gaining experience through negative instances which confront the learners with their incomplete prejudgements and pre-experiences’ (Mitgutsch 2008, 27). Mitgutsch refers to Gadamer by pointing out the central aspects of the negativity of experiences:

one experiences something new about an object (1), about the limitation of his or her prior anticipation (expectation) (2), about the limitation of one’s own consciousness (3), and finally one reaches a new horizon of consciousness as an experiencing subject (4). (Mitgutsch 2008, 25)⁴

But what does negativity of experiences have to do with playing digital games? Klimmt (2008) argues – as mentioned above – that the peculiarity of games determines the particularly high *fun* factor. How can Mitgutsch assert that *passion* is a central factor while playing digital games? First of all, he says that this passion is the precondition for learning and personality development. It is doubtlessly possible to play just for fun without being too much involved – and without deep learning. But at least when the first challenge which has to be mastered is arising, a player will have to make a decision – acceptance of the dare, involvement and passion or retreat, to place a compensatory action or change to another game. That means that they have to ask themselves: Do I take over the identification with my roll? Do I experience *effectance*? Am I willing and able to bear the changeover between *suspense and release*? (see Klimmt 2008, 8–9). This is what we call immersion, and it is closely linked with passion. Mitgutsch referring to Caillois argues that focusing on the unstructured action of *playing* instead of the structure-giving *game* relearning can become apparent. He stresses the fact that games which are minimally structured facilitate this kind of *playing*, which has the makings for relearning.

Learning based on a playing environment, which enables *learning anew* and *relearning*, does not directly determine the player’s learning path via goals and rules. It opens up a wide range of opportunities, and gives the learner the freedom to choose, and the possibility to reflect upon experienced negative instances. (Mitgutsch 2008, 30)

Therefore, relearning can take place when immersion into an intermediate area occurs. If the constitution of this intermediate area is induced by entering a game space of a digital role-playing game or, to follow Mitgutsch, by the act of playing, it means that we are facing an act of operating with symbols. Playing a role is always playing with symbols. Finally, the psychosocial moratorium which is a necessary aspect of intermediate areas and of playing is also a necessary precondition for relearning. The ‘learners are forced to be players that experiment without functional pressures of negative consequences or social sanctions’ (Mitgutsch 2008, 31–32).

⁴This approach is also discussed in Mitgutsch (Chap. 36).

Against the backdrop of the topic discussed, we can point out that relearning is facilitated

- By operating with symbols
- In an intermediate area
- Where a psychosocial moratorium prevails
- Where the back and forth motion of immersion and reflection is mastered

Co-construction and Collaboration

Constituting an intermediate area is always a process of co-construction. The *cos* are both real objects and internal objects (Stephenson 2009, 8–9). Braten – as cited above – maintains that with his view of the *virtual other in mind*:

when looking at the infant and the adult in interplay the reader is invited to see them as one self-organizing system, not two. When looking at the infant left to itself, the reader is invited to see not one, but two participants making up a self-organizing dyad. The same form of self-organizing processes that unfolds in the infant’s proto-dialogue with an actual other is seen to unfold itself in the infant when by himself, in dialogue with what I term the virtual other. (Braten 1991, n.p.)

This *virtual other* is in fact the stable inner object the sustainable meaningful image of the ‘partner’ in primary intersubjectivity. Or as Calleja is focusing on multiplayer games or virtual worlds: ‘the player thus becomes part of the game world that is incorporated by others connected to it’ (2007, 88).

Concerning this process as an act of symbol formation, co-construction of meaning related to *primary symbol formation* can be seen as the ontogenetic prototype of collaborative learning (see Stephenson 2007, 67). Co-construction of meaning related to *secondary symbol formation* therefore means an increase and diversification of collaborative learning skills.

The chapter ‘Playing Together: Rules and Repertoire’ describes how cooperation between players is negotiated (see Dahlskog, Chap. 21).

Immersion Versus Reflection

Immersion might obstruct reflection. Marian Heitger argues that the more one knows about a feeling, the weaker it will be; a feeling is strong if it is not the subject of reflection (see Heitger 1994, 27).

Johannes Fromme on the other side alleges that immersion and reflection are a dichotomy. For reflection, immersion needs to be interrupted. Doing that is – in relation to immersion into the game space – the task of the game structure (Fromme 2006, 199–201).

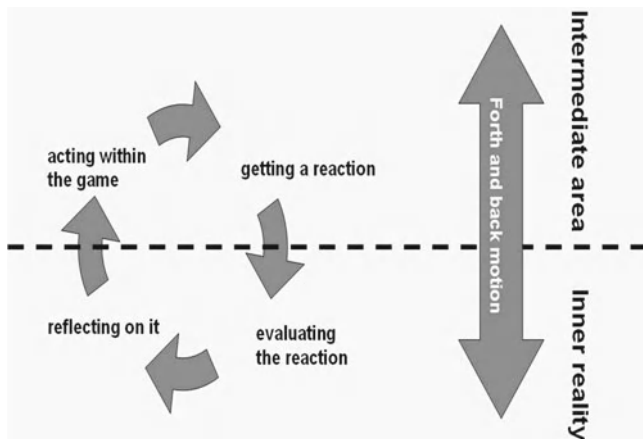


Fig. 15.1 Anatomy of playing and back and forth motion (Source: Author's drawing)

My point of view concerning this immersion-reflection interplay is illustrated in the above graph (Fig. 15.1).

The left-hand side illustrates a simplified anatomy of the act of playing, which can be seen as a circular movement. The player is acting within the game, is getting a reaction, is evaluating this reaction and is reflecting on it. The circle ends up with setting a new act within the game.

On the right-hand side, the already simplified illustration is reduced once more. The circular movement becomes a back and forth motion between the intermediate area and the inner reality of the player. I argue that acting within a game and getting a reaction are 'situated' in an intermediate area constituted or more precisely co-constructed by the individual in interaction with potential other players. Evaluating the reaction and reflecting on it take place in the individual's inner reality where his or her internal *cos* are on duty. This back and forth motion is an oscillation between immersion into the intermediate area and the possibility of reflection in the inner reality.

That implies that concerning the question if immersion obstructs reflection, Heitger is right: Immersion or deep emotion and reflection are never emerging concurrently. And Fromme is certainly right as well, a scaffolding game design supports a balance between immersion and reflection.

I argue that one central aspect of the dynamic of the interplay between immersion and reflection is still missing. My hypothesis is that the ability to hold the balance and move *back and forth* between immersion and reflection is first of all a *competence of the psyche*. Therefore, it is an act committed by the individual which has to be developed and learned from earliest childhood on. It can be trained and optimized all through life. For that, one needs framework conditions with good-enough *training locations* (see Stephenson 2009, 12).

Coping with Chaos

Immersion into an intermediate area always demands *surrender* to chaos. Surrender is a *precondition* for immersion as well as the fact that *immersion is a precondition for primary and secondary symbol formation* (see Stephenson 2007, 75). The most fascinating depiction of a journey through game space, which was constantly assaulted by getting lost in chaos, was given by Mitgutsch (2009) talking about the game *Shadow of the Colossus*:

The motive of the player to fight the unbeatable Colossi arises from the passion to revive his lost girl. Therefore the protagonist starts the game with a loss and his task appears unreachable – the mission appears desperate. The player does not choose his challenge, the challenge chooses him! How desperate the situation actually is becomes evident on the long and lonesome journey to the Colossi. The long paths to the enemy appear more than a means to an end, it appears to be the meaning of the game itself. The player is confronted with an experience uncommon in computer games: no action, no enemy, no music, no hints – just you and your horse Agro and a strange feeling in a beautiful scenery. (Mitgutsch 2009, 17)

The challenge of coping with chaos is bigger if the game is minimally structured (see Mitgutsch 2008) or does not force the interruption of immersion (see Fromme 2006). The other potential reason for getting lost in the chaos of game space is that the player's psyche has no sufficient *chaos-ordering forces* available.

Greenspan and Shanker argue that already the infant has to learn 'to transform catastrophic emotions into interactive signals' (2004, 28). We can interpret that as a process of *taming*, and it is therefore leading to a kind of domestication of overwhelming chaos. Entering the fantastic world of a computer game with its dangerous beings and situations constitutes an act of training and enforcement of *taming skills*. The risk of having to cope with dangerous situations is minimized by the above-mentioned fact that game space includes a psychosocial moratorium. *The lack of existential danger – the psychosocial moratorium – allows deep immersion, but the immersion itself can represent a hazard.*

Saint-Exupéry's *Little Prince* met the fox and suggested playing together. The fox said that would not be possible because he was wild and not yet tamed. He explained that taming meant that one had to make somebody or something familiar with oneself and, as a consequence, the one became unique and important for the other (Saint-Exupéry 2002). This metaphor illustrates the nature of this developmental process. Catastrophic emotions are something very wild and savage, and if they are not tamed, they are extremely threatening and dangerous. The taming itself is an adventure and a source of energy at the same time. Having succeeded, the tamed entity does still exist, but it is domesticated and therefore becoming a valuable friend. The individual who has succeeded, accompanied by the social environment, in taming these overwhelming powers, has probably won *a very strong and motivation-generating motor* for her or his life and – as I maintain – for cognition. Taming emotions is based on co-creation of meaning in interaction from the child and its 'taming assistant' (see Stephenson 2007, 67–68). In case of an infant, this assistant is the external object. Later in life, the internal *co* is supposed to do this job.

A New Perspective on Game Literacy

For Buckingham, ‘the term “literacy” implies a broader form of education about media not restricted to mechanical skills or narrow forms of functional competence. It suggests a more rounded, humanistic conception that is close to the German notion of *Bildung*’ (2006, 80). The point where my concept is linked to this discourse is where it focuses on the players – or as Buckingham calls it – the audience of games. He stresses that ‘the experience and pleasure of play’, ‘the social and interpersonal nature of play’ and the ‘public debates about “effects” of games, for example, in relation to violence’ are subjects of a contemporary game literacy (Buckingham 2006, 87).

Well-performing game literacy is seen as a benefit for lifelong learning and therefore for lifelong personality development which requires the ability and the motivation for ongoing deep learning or *relearning*. The purpose of this article and the underlying dissertation project is to come to a broader understanding of selected aspects of game literacy as a precondition for lifelong personality development. The new focal point is directed towards psychic qualities which are competencies of a sane psychic structure. The hypothesis is that they can be advanced by the act of playing digital role-playing games. These four necessary *psychodynamic aspects of game literacy*, which can be understood by psychoanalytic theories, are:

- Secondary symbol formation
- Co-construction of intermediate areas for collaborative playing
- Back and forth motion of immersion and reflection
- Strategies to ‘tame’ chaos (see Stephenson 2009)

Conclusion and Outlook

The added value of this approach is to harness psychoanalytic theories to explain a more differentiated view on psychic processes induced by playing digital role-playing games. Furthermore, a complex understanding of these special internal processes as part of personality development is offered.

This chapter is intended to give an insight into a current research and dissertation project. In order to continue and develop this work further, it will be necessary to acquire and to develop the fundamentals of the following issues.

First of all, the question of how far these psychic competencies are useful or necessary for *learning* will be followed in more detail. Second, it will be necessary to investigate game criteria which are facilitating the constitution of intermediate areas and the question what a scaffolding *game design* could look like. Furthermore, the derived theses will be considered against the backdrop of *recent psychoanalytic research*, whereby the developmental phase of *adolescence* will be its main focus. *Psychoanalytic pedagogic interventions* building on these findings will be an impact of this research project. And, finally, the question has to be posed if and

how these hypotheses can be supported by *empirical studies*. Criteria for the design of such studies need to be developed. In this context, we can profit from the described parallelism of game space and analytic psychotherapy concerning the constitution of intermediate areas. Methods which are employed to investigate the effects of psychotherapy will be analyzed and if possible adapted for the investigation of gaming effects.

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Chapter 16

Symbolic Interaction in Digital Games: Theoretical Reflections on Dimensions of Meaning Construction in Digital Gameplay

Regina Friess

Introduction: Meaning Construction in Digital Gameplay

Digital games are understood as a form of media culture that merges together mediated communication, audiovisual media, and the culture of play. The underlying assumption is that digital games evoke specific processes of meaning construction, which are based on the relationship between the perception of complex and rich audiovisual presentations and the users' actions within symbolic environments.¹ It is assumed that the two processes have to be analyzed as interdependent processes. This means that the users' activities themselves already influence the specific characteristics of the interpretative processes and that it would be misleading to imply certain imaginative activities (like the experience of a trip through the jungle), without asking for them in the first place. Therefore, it is considered crucial to analyze the modes of perception in relation to the user's activities.²

There are two prior assumptions partly based on previous research on playful and narrative perception of interactive movies (Friess 2008). The first is that the gaming activity and an action-oriented perception mode build a polar relation to a narrative and/or an aesthetic comprehension and perception according to the

¹For an attempt to investigate the process of meaning production on the level of the interface, see Wiemer (Chap. 5).

²Consequently, it might be critical whether the research design is based on assumed interpretations of the users according to representational content structures (plot, characters, realism) as proposed, for example, in the research on possible gratifications of realistic game design by Klimmt (2006).

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characteristics of emotional and cognitive processes of meaning construction.³ The second is that certain design characteristics of digital games (e.g., the differences between a mainly qualitative or quantitative feedback) have a significant impact on the quality of narrative or interpretative perception of the visual presentations in the games. It is assumed that, for example, the quality of the empathetic perception of a character might change in relation to the design of the score structures of the game.

Therefore, the aim of this framework is to discuss the relation between perceptual and intentional poles of meaning construction within digital gameplay as a first step and analyze possible relations to game design qualities on a second level. In order to reach an empirical research approach, the theoretical polarizations have to be related to empirical qualities of describable game experiences. The theoretical approach tries to link reflections of media, play, and game theories, discussing qualities of perception and meaning making.

The empirical background consists of two projects carried out at the games lab of the University of Applied Sciences of Technology and Economy (Hochschule für Technik und Wirtschaft, HTW) in Berlin from 2007–2009,⁴ with one project discussing the possible characteristics of older gamers and the other project aiming at the development of a game-based learning application for the car industry. The broader context is a cultural perspective on digital gaming that tries to link empirical research on gaming and gamers with reflections about and proposals for specific game design tasks. The more specific objective of the following reflections is the analysis of the relationship between the active gameplay and a narrative and/or aesthetic perception of the audiovisual presentations in the game. The aim of the theoretical discussion is to elaborate a rough basis of possible dimensions or polarities of related gaming experiences which are to be refined and reflected on the basis of further research, for example, in the empirical study on older gamers. Narrative perception is understood in a broad sense as a form of situational meaning construction that focuses on the course and the interconnectedness of actions, considerations, and experiences of humanlike agents in world-like environments (see Tan 1996, 45–49). Aesthetic perception is understood as meaningfulness that is based on the valuing of perceived structures (see Morris 1992) of the audiovisual presentations, which could be aesthetic structures of the audiovisual presentation, of narrative structures, or of even more abstract concepts. The theoretical perspective refers to concepts of symbolic interactionism and derived media theories. Mediated communication is reflected as a procedural activity of building and redefining meanings in relation to individual considerations and their social embedding (see Krotz 1996a; Wimmer, Chap. 33).

³See the theoretical comparison of playful and narrative patterns of media perception developed in a previous study (see Friess 2008). For an ecological approach to media perception, see Meldgaard (Chap. 17).

⁴The original project titles were: “RealSymbIn: Realitätsnähe und symbolische Interaktion bei Games und Online-Games”; “Gatscar: Game-Based Training and Teaching for Service in the Car Industry.”

The first step is to discuss a model that reflects the procedural aspects of meaning construction in differentiating polarities of meaning construction in the assumed interplay of playful activity, media perception, and gaming as sociocultural activity. Aiming at the research on the possible impact of game characteristics on these processes the polarities should be subsequently related to adequate categories of game design. The task would be to find an approach that corresponds to the focus on narrative perception of audiovisual presentations and which enables an empirical and, if possible, experimental research design. Because of the limited time of the two research projects, this second step had to be narrowed down to a rough differentiation of relevant categories of gaming experiences and interview guidelines in order to be able to conduct the qualitative inquiries with the older gamers as well as the evaluation of the game experiences in the game-based learning project. Within the qualitative research on older gamers, the model was used to characterize different types of game experiences or game perception, which will be discussed at the end of the chapter.

Apparently, research on processes of meaning making in gaming is a rather complex and highly interdisciplinary task, and, therefore, empirical and developing projects conducted in this field have to go along with limitations, each of which might become a critical pitfall in the design of the research. As our focus was on the perception of audiovisual design elements in the gaming process, categories concerning the context of the gaming situation, like the motivation to start a game session or social contexts were only regarded in the second line. Nevertheless, for certain gamers and with certain games, these contextual aspects might in fact define the gaming experience to a much greater degree as the characteristics of the audiovisual presentations. The aim is not to describe the gaming experience in its entirety, or to develop a model on narrative principles in game structures and game design, but to get a better knowledge of possible modes of perception of audiovisual presentation and narrative design elements in gaming processes.

Digital Games as Meaningful Interaction

Digital gameplay can be analyzed as a form of symbolic interaction, understood as social action of meaning construction (Joas 1988) with regard to the cultural aspects of media aesthetics (Schmidt 1998, 28–29). The following reflections on the one hand discuss relevant categories and dimensions of processes of meaning making in the perception of audiovisual media based on theories of symbolic interactionism and constructivism. On the other hand, they relate them to a cultural reflection on play and the above reflections on game experience. The aim hereby is to enhance already defined dimensions of predominantly passive media perception (Friess 2008, 110) by reflecting on the specific qualities of playful action and action-based meaning constructions.

Dimensions of Meaning Construction in Media Perception

In the theoretical framework of symbolic interactionism and constructivism, meaning construction is defined as procedural activity of the individual consciousness referring to the actual pragmatic and social contexts as well as different cognitive concepts and schemata of reality (see Krotz 1996a; Schmidt 1998; Großmann 1999). Whereas media theories based on concepts of the symbolic interactionism reflect media perception in relation to identity and social interaction, constructivist approaches focus on the cultural aspects of media environments in its specific materiality as bases for cognitive and emotional perception (Schmidt 1998).

Meaning construction in symbolic interactionism is based on a sociological theory of verbal and mediated communication, aiming at a procedural analysis that goes beyond concepts of motivation and gratification (Krotz 1996a). Processes of meaning construction are analyzed as activities related to social concepts of the self-being and others, the pragmatic situations framing the constructive processes, and the procedural aspects of meaning (see *ibid.*). George Herbert Mead pointed out the inherent social quality of identity based on constructive processes of meaning making in verbal communication (Mead 1980, 203). Blumer focused on the situational and procedural characteristics of meaning construction as an interpretative process relating to the pragmatic situation and social interactions as well as everyday experiences (Blumer 1973, 81).

Compared to personal dialogical communication meaning construction in (mass) media perception is characterized by a greater range of freedom (as well as uncertainty). This allows the individuals to build up more self-related interpretations and meaningfulness, which in the case of popular media can be seen as an integrative part of the users' pleasure (Mikos 2003). On the other hand, interpretation and meaningfulness have to rely increasingly on internal – either intratextual or intertextual – relations and reference structures (Esposito 1995).

According to pragmatic approaches of symbolic interactionism, the perception of agents or characters and the possible role models they represent is one of the central concepts for a situational meaning construction (Tan 1996, 45–46) and the users' involvement in audiovisual media (Krotz 1996b). This already includes the experience of the physical presence of bodies, space, and movements (salience) as a kind of primary level of meaningfulness (see Grodal 2000, 197–213). The aspect of salience points to the general relevance of phenomenological representation and its specific quality (e.g., in terms of realism) in audiovisual presentations.

On the opposite range of predominantly external references, the potential internal value of symbolic signs and presentations in its own concrete materiality or gestalt has to be reflected. In the first place, there is the aesthetic value of the symbolic signs themselves (Morris 1992). Second, the internal structures of symbolic systems can build up self-related meaningfulness, which does more or less refer to external phenomena (Foerster 1992). Constructivist media theories point to the increase of self-referential structures based on the material complexity of modern

audiovisual- and computer-based media (see Esposito 1995). From the constructivist point of view, the capacity of interactivity is seen as the distinctive characteristic of computer based media. Interactivity in this case is understood as the capacity to generate information on the bases of complex data operation (ibid.).

Dimensions of Meaning Construction in Play

Playing and gaming can be analyzed likewise as cultural praxis of meaning making. The central aspect of play with regard to this question lies in the linking of communication and action (see Murray 2006). Action in this case is to be understood as the concrete act of manipulation in a given physical or material environment⁵ (in contrast to the social concept of action that defines the pragmatic framework of meaning making in symbolic interactionism).

The process of meaning construction in play therefore should be analyzed with regard to the mental processes of cognition and imagination as well as the experience of interaction with a given social and/or physical environment.

As has been described by Bateson, playful actions build up a special relation of real activity and reflection of the sociocultural systems that frame these activities. Play always includes two levels of meaningfulness, a primary level of direct interaction and a second level reframing the reference system of the first one (Bateson 1993, 116–119).

Meaning in play is qualified therefore in its specific relation to certain parts of social, cultural, or phenomenological reality and the specific form of abstraction, modeling, or internal structure (see Klaus 1968, 9–11). The act of building abstract models, or the action on an abstracted level, which can also lead to transgressing forms or actions, is itself a part of the pleasure in playful experiences (see Sutton-Smith 1978, 48).

The flexibility of a structural system provides the possibility to build up variations in terms of meaning making as well as in the concrete formations, activities, and processes (Ohler and Nieding 2001). Meaning making in play is connected to a procedural experience of an experimental or dynamic activity⁶ (which can also be a mental activity) and to the act of referencing meanings into these activities. As stated afore for popular media, the given flexibility enables self-centered or self-reflecting interpretations and meaningfulness. In Piaget's terminology, play is qualified as a kind of assimilative process or activity, based on self-referenced constructive processes (see Piaget 1993, 117).

⁵Rolf Oerter (2001) points to the relevance of the experience of manipulation in playful activities.

⁶Scheuerl (1991) points in this context to the aesthetic value of the procedural experience of dynamic structures in play.

Reference Poles of Meaning Construction in Digital Gameplay

Relevant Approaches in Game Research

With the focus given herein, game theories that discuss narrative perception have to be reflected on. Within a broader perspective more general theories on meaning construction in games will become relevant. In Laura Ermi's and Frans Mäyrä's SCI-Model for gameplay experience worlds, characters, and story elements are part of the imaginative immersion, whereas the perception and interaction with audiovisual presentations are defined as sensory immersion (Ermi and Mäyrä 2005, 7–8). As Ermi and Mäyrä were aiming at a heuristic description of relevant components of the gaming experiences, the question whether and how presented characters are perceived as personalized characters or only as functional part of an audiovisual interface is not the question. Their point of analysis lies already behind the questioned construction of narrative or interpretative content here. Likewise Christoph Klimmt's model of digital games and his experimental study on the experience of interactive entertainment is based on the assumption of an already given imaginative or narrative experience of an alternative reality (Klimmt 2003, 2006, 70–113).

Marie-Laure Ryan discussed the polarity of story perception and digital interactivity in terms of different modes of interactivity that correspond with certain narrative themes (Ryan 2001). This is an early approach that relates to specific characteristics in game design with respect to differences in narrative perceptions. In the final discussion, Ryan nevertheless confirmed the assumption of a conflicting relation between the gaming activity and a narrative experience (Ryan 2001, 13). The narrative potential of gaming experiences, so Ryan's conclusion, thus is in its essence a virtual or potential form of narrativity that could be realized by the players in a retrospective view but is not an inherent part of the gaming experience (*ibid.*, 19).

Grodal questioned this point of view in his analysis of the intertwining of story perception and gaming, as it sticks to a reduced understanding of agency linking it to the act of manipulation (Grodal 2003, 136). His analysis is based on a psychological and anthropological concept of basic patterns of narrative meaning construction as well as playful activities. He supposed a broad concept of story as a continuous linking of perception, emotions, cognitions, and actions (*ibid.*, 131) related to humanlike beings in a kind of natural environment (*ibid.*, 153). Playful activities were on an even more general level characterized as pleasurable (free of necessity) explorations of pattern- or rule-bound possibilities within repetitive procedures. The perception of narrative patterns might therefore be part of this exploration (*ibid.*, 140). He elaborated a general discussion on narrative perception and story construction in digital games with the focus on a cross media comparison. Therefore, he discussed story perception in games on the basis of a rather general concept of digital games, which is not focusing on the impact of game design characteristics to different qualities of narrative or interpretative perception. In his analysis, Grodal evolved an in-depth discussion on the perception of story and video games, of which only two aspects will be considered here.

His approach was based on the assumption that the forms of media (and not a conceptual idea of narration and play, *ibid.*, 136) have a substantial impact on the users' emotional and cognitive patterns of perception and that interactivity in opposite to linear media presentations is a crucial characteristic for the experience of narrative design in games. Grodal argued that the output-driven perception of gaming activities evokes emotions supported by the sympathetic nervous system whereas the input-driven perception of linear representations allows the evocation of strong passive emotions (like crying) supported by the paratelic nervous system (*ibid.*, 151–152). Grodal additionally pointed to an art-like perception mode focusing on the structural possibilities that lie behind a given form of expression or design.⁷ In most cases, this is a more experienced perception mode, which can be part of the passive as well as the interactive forms of media perception (*ibid.*, 152–153).

Proposal for a Model of Polar Dimensions of Meaning Construction in Digital Gameplay

The following model is based on the discussed categories of media perception with a focus on audiovisual media and perception in playful activities in relation to the above reflections on gaming experiences. As the objective was to get a better understanding of possible differences in meaningfulness in the gaming experiences, the proposed polarities are to be understood as a primary concept that has to be evaluated on the basis of empirical research.

It is assumed that the discussion of reference systems with different levels or values of meaningfulness is a critical concept for a more distinguished analysis of the user's experiences in digital gameplay.

In the first place, the potential qualities of the user's interpretation and the related experiences should be analyzed. This means, for example, that a distinction should be made whether a certain character is perceived, for example, as a human agent or as a kind of technical game function, as a person-like character or a stereotyped role model, etc., before assumptions can be made on the possible meanings of the user's interactions with this character.

Second, the possible dependencies of the dimensions of meaningfulness and qualities of the game design should be reflected. Previous research (Friess 2008) on differences in linear and interactive film perception pointed out that already subtle changes in the design of the interactive films lead to rather strong differences in the user's perception of and involvement in the presented story.⁸

⁷Grodal argues that narrativity is linked to linearity, whereas the basic affordance of gameplay initiates a kind of "meta-narrative" perspective of the different possibilities, which in their actualization lead to linear paths (Grodal 2003, 152–153).

⁸The categorization of relevant qualities still has to be developed. This is part of an ongoing research for serious games, in order to evaluate the users' experiences and interpretations in relation to game design elements.

Derived from the theoretical reflections above, the evaluation of meaning construction is based on the following main categories:

Perceptual Versus Teleological Meaning Construction

It is assumed that different media contexts and media forms evoke either predominant perceptual qualities or more teleological alignments of interpretation. According to Grodal's discussion of the basic difference between an output- and an input-driven activation of perception (Grodal 2003, 151–152) and previous reflections on active versus passive media perception (Friess 2011), this polarity is regarded as having a major impact on the quality of the perception processes and meaning construction. The same narrative scene of two men arguing might be totally differently perceived, if the spectator has the task of navigating his agent through hallways without getting shot or if he tries to discover which of the two men might be the wanted criminal.

Referential Versus Relational Meaning Construction

The polarity referential versus relational meaning construction opposes meaningfulness derived from internal relations and valences to a representational meaning construction referring to external phenomena. This dimension refers dominantly to constructivist media theories reflecting interactivity as a quality that enhances self-referential meaning (see Esposito 1995; Foerster 1992). Kücklich establishes the opposition of referential and relational meaning to characterize two different text modes, a world and a game mode (Kücklich 2002, 155–156).

Bringing the above reflections on narrative and aesthetic meaningfulness together with the stated polarities a further distinction occurs. Concerning the relational, internal forms of meaning constructions, a difference between a functional or operative value (based on data manipulation) and an aesthetic value referring to perceptions of gestalt or design qualities is to be made. Likewise, the merging of the two concepts results in the opposition of a representational experience and a simulative activity on the part of referential meaning construction.

This leads to four main forms of meaning construction: the operative, the aesthetic, the representational, and the simulative perception of symbolic signs, which are to be understood as nonexclusive qualities.

An operative perception would occur if the user interprets his activity dominantly as a form of data manipulation. This would be the case, for example, if a gamer only perceives the numbers of manipulated objects and the derived scores of manipulation, regardless of whether, what, and how these objects might represent in the narrative context of the game world.

An aesthetic perception values the gestalt of certain aspects of the materiality of the mediated presentations and always implies a kind of meta-perception (or experienced mode in terms of Grodal). The structures are appreciated for their design not for their functions. This can be sound structures or even good game design structures.

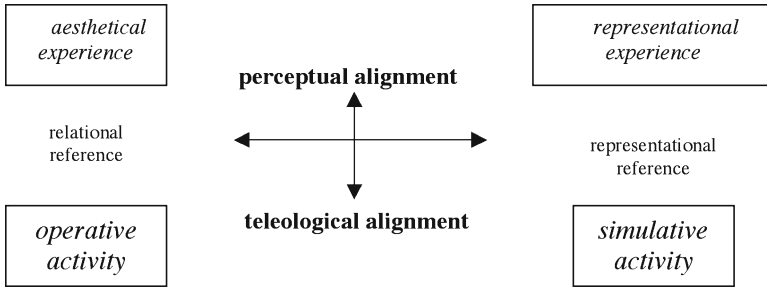


Fig. 16.1 Dimensions of meaning construction in digital gameplay (Source: Author's illustration)

In representational perception, the imagination refers to objects, situations, and experiences the user knows from external contexts. This might be in most cases real live contexts, like the experience of gravity or solid material but could also be mediated knowledge, like references to military situations, which most of the users might not have experienced directly. The emotional involvement in the perception of narrative situations in fictional films is based (to a lower or higher degree) on the reference to external reality.

A simulative perception or experience in most cases is linked with the representative perception but enhances it with the possibility of an active manipulation of represented objects, whereby the activity itself refers (more or less) in its procedural aspects to external procedures.

Based on these concepts, the player's experience can be polarized as shown in the following scheme (Fig. 16.1):

Design for a Qualitative Empirical Research

As mentioned above, a study was conducted at HTW Berlin on economical, technical, and social aspects of games and gamers. Part of the study was an empirical inquiry aiming at the qualification of game usage of mid-aged and older gamers. Based on the developed model of meaning construction in games, the research focused on qualification of game usage with regard to the perception of game design elements.

Derived Categories for Qualitative Research of Meaning Construction in Digital Gameplay

Bringing the exposed aspects of media perception and play together, the following categories were defined for qualitative research on the gamer's experience and related meaning constructions in digital gameplay. The categories refer to

game experiences that might be discussed with the gamers in a retrospective interview:

- Relevance of visual and auditory representations and representational content structures (e.g., narrative relations) for game experiences
- Aesthetical experiences in gameplay
- Abstract or structural descriptions of gameplay, functional experiences of gameplay
- Role models and role reflections
- References to reality systems (cultural references, everyday life, phenomenological perception, physical activities) and possible transgressions
- Self-reference in meaning construction and self-centered activities
- Relation of action-related and passive, perceptual meaningfulness

Design of the Study and Operational Definitions

The study was based on personal guide approach interviews with gamers (about 15 interviews per age group) with additional guide approach group interviews and workshops on certain topics.

As the emphasis of the qualitative analysis was on personal interviews with the gamers, the relevant categories and dimensions had to be integrated in describable game experiences. In general, the verbal description of processes of meaning making is certainly a difficult topic and even more in the case of gaming experiences. They seem to be more difficult to describe in retrospective discussions than, for example, cognitive and emotional experiences made during watching a movie.

Therefore, one of the main tasks was to engage the interviewees in a conversation about the more subtle processes of their gameplay. In order to reach this objective, it proved to be most efficient to have a mixed team of interviewers – one gamer and one non-gamer. The non-gamer used different wordings and different categories of description than gamers did, which led the interviewee to a more explicit and descriptive explanation of its experiences. On the other hand, the gamer often had more insight into the relevant aspects or processes and therefore could direct the interview to relevant topics. In addition, to have an interviewer with gaming experience in the team helped to build up confidence. When possible, the interviews took place in stages, where the interviewees could show their games during the talk, which in most cases was at their accommodation at home.

The guide categories and their subcategories for the interviews were composed by merging the analytical categories of meaning making and relevant categories of a verbal description of game experiences. Additionally, contextual categories concerning the integration of gaming in everyday life and biographical developments were included (Table 16.1).

Table 16.1 Guide categories for interviews

Main categories	Subcategories I	Subcategories II
Fascination/interest	Referring to action	Reference to different reality schemes
Interpretation/description Evaluation/judgments	Referring to content, depiction	Dynamics, structural perception, internal relations Aesthetic perception, design qualities Interaction with teammates
Gaming behavior/process	Referring to achievements, output, predefined goals Referring to creation, open processes, self-defined goals Referring to role models, role characteristics Interaction with teammates	
Context/situation	Integration in, reference to everyday life Integration in, reference to social contexts (family, friends, work) Personal character (preferences, particularities) Media use, preferences, characteristics	

Within the main categories, the overall focus of the interviews was:

- To explore the relevance of the audiovisual representations and narrative content for the gaming experience and its ranking within a given hierarchy of the gamer's evaluation of the game design
- To analyze the verbal description and the narrative and representative content within the reflection of gaming experiences
- To examine the relation between action oriented experiences and a passive or perceptual mode of interpretation

Within the interviews the categories proved to provide a framework for a motivated and productive dialogue. However, it was definitely necessary to have the opportunity to explore the discussed games during the interviews. The most critical point in the guideline was the question of aesthetic and/or functional perception of game structures. It appeared to be too abstract a concept for direct questioning and can only be explored indirectly from the descriptions of the gaming experiences and the game evaluations of the users.

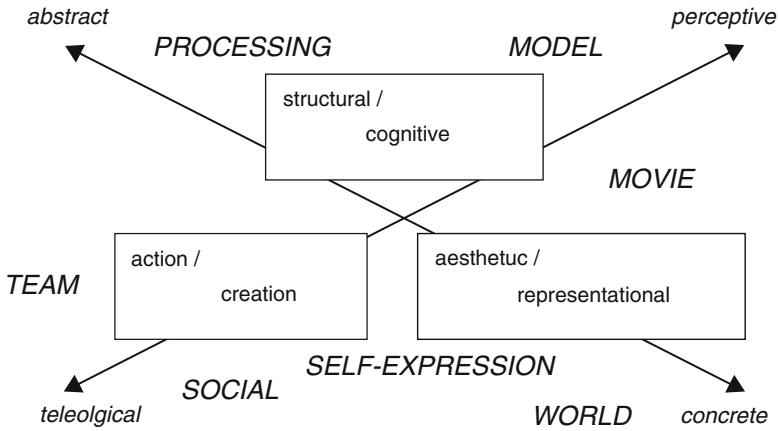


Fig. 16.2 Typology of gaming experiences (Source: Author’s illustration)

First Results of the Study: Typology of Gaming Experiences

As mentioned above, the aim of the guide approach interviews was to explore differences in meaning constructions and related gaming experiences in relation to the proposed categories. Additionally, we wanted to evaluate the analytical value of the proposed polarities. Therefore, the first step was to analyze the interviews with a focus on different types of gaming experiences and match it to the proposed model. We clustered characteristics concerning the description and evaluation of gaming experiences with a focus on game design elements into different gaming types. This process was exercised separately by the four interviewees. After that, we discussed the results and compared the characterizations found with the theoretical categories of the perception modes. We evaluated whether the analytical categories serve to describe the found types and characteristics. On the basis of the evaluation the following typology of meaning construction and gaming experiences was derived from the gathered interviews (Fig. 16.2).

The clustered characteristics are not conceived as clearly bounded ranges, but as probable patterns, which may intersect or vary:

World: Representational references, high valence of physical or phenomenological portrayal and audiovisual aesthetics, constructive gameplay, self-defined aims, event-based dynamics, and team play not as primary focus but interested in multi-player dynamic (“I can also just sit there and enjoy looking at the waterfall” – *Lord of the Rings*).

Team: Action-oriented gameplay, primarily teammate and contest-oriented dynamics, high valence of physical representation, medium importance of audiovisual aesthetic, and also interested in event-oriented or world-like game experiences

([accordingly:] “It’s just about playing together with your team and seeing if your tactic strikes” – *Call of Duty*).

Processing: Primary abstract or functional references, dynamics through complexity of (rational) processes of data progressing, teleological gameplay in terms of effective fulfilling of defined tasks, low valence of physical representations and audiovisual aesthetics, primary cognitive activity of problem-solving processes ([accordingly:] “The graphic is of no importance, civ has a rather bad graphical design... I found it interesting to gather such a large amount of units at one place that the game graphics could no longer even show the right number” – *Civilization*).

Model: Combination of structural and representational references, game structures as reference to real-life structures, ambivalent experience of referential and abstracted/internal references, and often high value of audiovisual aesthetic ([accordingly:] “It’s nice to see all these villages, workers and it makes fun to build nice landscapes” – *Civilization*).

Film: Representational reference, high valence of content relations, high valence of physical representations, event-oriented dynamics (“It’s like being in a movie. The design of the rooms, the lightening and the characters are very important for me. I did not like to see the avatar in a mirroring surface, because I did not like its design” – *Portal*).

Social: Game structures and game design of subordinate valence, primary personal interest of meeting people or interest in social events, either low-engaging rule play or constructive self-expressive gameplay, valences of audiovisual aesthetics, physical representation, etc., vary according to preferred game types.

Self-expression: The game is a medium to create environments or act in environments in a way that either express the gamers’ feelings or reflect certain aspects of his personality in an experimental form (“It’s just the fantasy that satisfies me. [...] I created a corner for lyrics and I wrote long ballads on the quests that our clan fulfilled, which expressed the fun and esprit we experienced [...]” – *World of Warcraft*).

Concluding Remarks

The categorizations for the guided interviews and the analysis of the data proved to yield interesting and characterizing results on the specifics of game usage of the age groups studied. Especially in the group of middle-aged gamers, where digital games are used and experienced as fictional environments, the qualities of game design were closely reflected upon and evaluated (see Friess 2009). The conducted inquiry could not and was not aiming at the further analysis and specification of the relation between characteristics of game experiences and game design elements. This is seen as part of an ongoing research project aiming to build up a framework for the analysis of game usage for the evaluation of serious games.

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Gameography⁹

- Call of Duty series. (Since 2003). Infinity Ward & Treyarch (Dev.); Activision (Pub.).
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- Lord of the Rings Online. (2007). Turbine (Dev.); Turbine & Midway Games (Pub.).
- Portal. (2007). Valve Corporation (Dev./Pub.).
- World of Warcraft. (2004). Blizzard Entertainment (Dev.); Vivendi (Pub.).

⁹The games were referred to in personal interviews. When games are part of a series and it cannot be said which installment is referred to, then the whole series is listed in the gameography.

Chapter 17

Playing by the Visual Rules: An Ecological Approach to Perception and Video Games

Betty Li Meldgaard

Introduction

Within the growing field of video game research, a variety of theoretical approaches are branching out in order to understand the widely accepted activity of video gaming. The domestication of video games may have been the original spark that lit up this whole new field of research. When the arcade game machines shrank and moved into the living room as home game consoles, a new situation arose of endless and coin-independent playtime, consequently turning video gaming into an activity that researchers could not ignore. Video games are now being played on a daily basis, and a range of consoles has been absorbed into the everyday life environment as a natural artifact alongside the home computer and the television set. Video games are at all times accessible, ready at hand, and playable on command.

Even though technology has allowed for advances in relation to both video game graphics and means of interaction, the specific relation that emerges between the player and the graphical layout has been under researched on the premises and framework of visual perception and perceptual theories. There seems to be a shared view, at least among the more formalistic and structural approaches to video game research, that the first ten official years¹ of video game research set the trend for thinking that what should be studied is the hidden or underlying meaning that exists beyond the graphical layout and most notably reveals itself through narrative and ludic rules. To apply perceptual theories to video game research is no easy task, and it is understandable that the attempts that have been made have leaned more upon theories concerning other pictorial media, especially motion pictures, than upon

¹Espen Arseth, see <http://www.gamestudies.org/0101/>. Accessed 22 February 2011.

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actual psychological theories of perception. The first question to be raised is whether video games are in fact to be considered as pictorial media.² Further research should be interested in the similarities or diversities in comparison to other pictorial media and the various theoretical approaches to reception associated with these. To address questions in relation to visual perception, it is proposed in this chapter that video games should be understood in their own terms as manipulative graphical layouts that in a very specific way engage their players on a perceptual level that is vital for playing video games. This statement is not to presume that, on a representational level, video games bear no resemblance to other pictorial media, as it is believed that the techniques for creating game worlds build on a broader tradition of both realistic and abstract depiction. The statement here merely suggests that to catch a player's interest and engagement, the game world layout must itself invite action. The action that unfolds, both the progression through a game world and the eventual uncovering of an underlying significance, takes place very directly on the visual surface of the presented game world environment, thus appealing to our visual perceptual accommodations. The joystick-pulling and button-pushing operations serve to create visual changes to the graphical layout, consequently creating a sense of motion and locomotion. The visual control of a game world will be explored in this chapter, and an outline for a visual approach, based on an ecological approach to perception, will be proposed.

Video Games: Media Spaces and Points of View

In order to make some of the implications understandable in applying perceptual theories to the domain of video game research, it is worth looking at some video game textbook examples of how such concepts as space and point of view, which are also essential when investigating perception, are treated.

In relation to the introductory statement that approaches to video game studies are branching out, this statement should at this point be taken literally in the sense that not only are there a variety of approaches, but no common definition of what a video game is has been reached, let alone agreed upon. This raises some essential questions as to the subject matter at hand, in that it is difficult to outline what it means exactly to study video games: furthermore, the field of research is open-ended and is not based on a definition of its subject, but rather on items of interest. Here the term *video game* is used deliberately due to the origin of the word *video*, which means *I see*,³ and video games are therefore here understood as *games of seeing* or *seeing games*.

²The specific mediality of video games is also discussed, for example, by Günzel (Chap. 2) and Veugen (Chap. 3).

³<http://www.etymonline.com/index.php?search=video&searchmode=none>. Accessed 22 February 2011.

In retrospect, it is interesting to note that the very first video game, *Tennis for Two*, created by Higinbotham in 1958,⁴ was a demonstration of the capabilities of the laboratory in which he worked. Essentially, his game proved that it was possible to design a system that permitted a user to control visual elements on a screen purely for the sake of entertainment. The ludic rules of tennis established an outline of familiarity and served as a framework for the activity of object manipulation on a screen. From a visual perception viewpoint, onscreen object manipulation can be said, on a rudimentary level, to be what video games are all about and eventually the crucial factor that separates video games from other visual media.

Spaces

The graphical layouts of video games have customarily been treated within the overall field of video games research. How it is treated seems to stem from the individual researcher's specific interest in video games, their previous field of studies, if any, the paradigm under which they approach video games per se, and to some extent on ideas and theories of pictorial representation.

Manovich states that "new media spaces are always spaces of navigation" (2002, 252). He claims that this type of space navigation is a category in its own right and holds that this specific category has received little attention. There are two things to be noted about this: Manovich refers to the spatiality of new media, and he suggests that they are spaces of navigation, which implies that they are traversable.

Another example of how to approach video game worlds can be seen in "Understanding Video Games" (Nielsen et al. 2008), which gives an overall introduction to theories about games and devotes a chapter to Video Game Aesthetics. Reading that chapter initially created excitement for this chapter's author, since there was a statement that made the following claim about perception:

As we follow the historical evolution of video game design, we should increasingly not cling to a strict division between first- and third-person perspective; rather, we should discuss a game's *point of perception*, the point from which the player perceives the gamespace. (ibid., 110)

The authors argue that the point of perception should be of interest, but unfortunately, no theories of perception are then introduced. What is introduced is a level of description that has to do with the construction of space using techniques derived from mathematics and geometry and to some extent terms derived from cinematography. This may serve as an example of the difficulties involved in consistently studying video games from a perceptual viewpoint and addressing the relevant matters on both the theoretical as well as the level of terminology.

The construction and simulation of space on flat surfaces has been known since the discovery or invention, as one might say, of the central perspective. The construction

⁴http://en.wikipedia.org/wiki/Tennis_for_Two. Accessed 22 February 2011.

of space where space does not exist has been investigated in the visual arts, at least since the fifteenth century. With the computer as a visual medium for space construction the use of the Cartesian coordinate system using x , y , and z axes has been employed as a technique for space construction, and we now readily refer to such constructions as 3D images in opposition to 2D images. The utilization of a terminology that derives from pictorial construction techniques is not in any evident way equal to the *experience of spatial structure*. There is confusion as to how images are constructed and how images are experienced. We cannot explain the experience of game space by describing how (game) space is constructed. That it is attempted in textbooks is really not that surprising since the body of perceptual theories is vast and quite diverse, and the application of perceptual theory requires an in-depth investigation of perceptual theories per se. In a dystopian manner, Ian Gordon, in "Theories of Visual Perception," states that "it can be asserted that there is as yet no satisfactory general theory of visual perception" (Gordon 2004, 217).

The leap that the authors in "Understanding Video Games" make is to jump from the statement we should discuss a game's point of perception to a description of perspective and yet further to the notion of dimensions. They state that there are different perspectives in games and that computer graphics are always either two- or three-dimensional. The claim of this chapter is that perspective is not a mode of perception but a technique to depict spatial structures in the manner mentioned earlier, just as dimensions are geometrical tools used to calculate and simulate features concerning depth.

If we wish to address *the point of perception*, we should incorporate theories of perception and not theories of images. This may seem odd since video games can be seen as a pictorial medium, but theories of dynamic interactive images have not yet been fully formulated. So what we have at the outset, it seems, are pictorial theories that are not developed within the field of video game studies, but theories derived from other pictorial media where the modes of perception differ quite a lot from that of interactive imagery and game world encounters. Of course, there is a dichotomy in the above statement since video game graphic designers are trained within the pictorial tradition and are taught how to represent space using pictorial techniques. But again, it must be pointed out that even though game space is constructed, it may not be experienced as such and to some extent is not manipulated as such. This is because we come to the gaming situation equipped with our perceptual system and knowledge based on perceptual learning derived from our everyday experience of encountering the world around us. What the above-mentioned authors are attempting to articulate is that the point of perception is dependent on the construction of the game's space, in other words, what there is to be perceived. However well intended and however smartly construed, the statement that video games should be studied from the point of perception, their chapter fails to address questions concerning perception and may be characterized as an attempt to describe game world layouts.

As space perception is a phenomenon crucial to perceptual theories and in extension of the statement put forth by Manovich, a further investigation into game spaces will be made in order to outline how game worlds are often perceived as navigational spaces.

An example of how game spaces can be understood can be found in M. J. P. Wolf's distinction of spaces in games. In "The Medium of the Video Game" (Wolf 2001), he differentiates between 11 types of space: this is, on the one hand, more a historical account of possibilities for constructing and representing space depending on the advances of technology and aesthetic influences and, on the other hand, a description of how different spaces can be encountered. This is a structuralist's approach to variations of space representation, and it is largely built on a pictorial approach and again on construction techniques.⁵ Two paragraphs have been selected from the listing of the 11 notions of space, which will be of further use later on, when modes of perception are introduced. Paragraphs 4 and 5 relate to the act of scrolling in games; 4 on the scrolling on 1 axis and 5 on the scrolling on 2. Wolf's underlying agenda is to relate to off-screen spaces, that is, spaces that are not immediately visible to the player but can be brought into sight by scrolling: he states that

By moving the game's "set pieces" across the screen, often synchronized with the player's movements, the game designer can create a "scrolling" space in which objects come on and off screen. (Wolf 2001, 57)

Typically, one way scrolling was one of the visual constraints in early games, when scrolling was either horizontal or vertical; this changed later on when games became scrollable in both directions. That we scroll in games to get information about the game world relates to specific modes of perception which will be addressed later. Here, the example shows the use of techniques from other pictorial areas, which is seen in Wolf's comparison to the techniques of panning and tilting in films. As with non-scrollable games, he points out, the player must pay attention to the edges of the screen in order to notice incoming characters.

Point of View

Another important aspect is that of the point of view. Point of view is hardly separable from how space is constructed, since it is the mode from which the game space is "seen." The point of view typically relates to the perspective represented in games. From what point is the world visible? The most common terms are first- and third-person perspective, which means that we either get a direct, though constrained view into the world, or we control an avatar and have a kind of secondhand view of the world, with the avatar present in the layout. There can also be cases of a bird's view, the world seen from above, and others. In games the perspective or the view point positions the player in relation to the game space. In "Trigger Happy," Steven Poole relates to the view point by describing the construction of perspective in games, taking as an example the isometric perspective (Poole 2000, 121–123),

⁵For different approaches to "game space" see, for example, Nitsche (Chap. 10) or Hemminger and Schott (Chap. 25).

which is a synthetic way to create the illusion of space by using diagonal lines that never converge as would be the case with lines in creating the central perspective. These techniques in video game design seem rudimentary at this point and have become choices rather than limited constraints based on the technology and the power of creativity. Poole's agenda, again, is to give a historical account of the construction of game space and introduces techniques as they have been explored throughout pictorial history.

From the above statements, a preliminary conclusion can be made. Approaches to video game graphics – be it from the point of view or through the employment of spatial and geometrical concepts – seem to hold an intrinsic assumption: the means for description deriving from these areas is equivalent to that which is there to be perceived. This is where matters get complicated. Though video games are undeniably to be considered as pictorial or visual media, the question that emerges in the search for perceptual insight is whether they should also be treated as such. As will become obvious in the further argument, video games are a specific visual or pictorial simulation of the natural perceptual system, rather than an elaborated way of projecting and perceiving images. Before this statement can be fully unfolded, it is worth looking at a suggestion made by Peter Weibel on the significance of interactive visual media.

Opsisopic Space

Peter Weibel defines interactive images as the latest offspring in pictorial representational history. If traditional still images are the representation of *vision* and films are the representation of *vision of motion*, which he claims, then interactive images can be seen as *vision of vision*, which is the simulation of vision. In the article “The Intelligent image: Neurocinema or Quantum Cinema?” (Weibel 2003), he puts forth the idea of machine vision as the *thing* cinematography was originally about; the simulation of “motion for the eye” (ibid., 594). Cinematography is therefore not a motion technique in a kinetic sense but a simulation of motion as experienced by an observer. This leads him to suggest that interactive imagery simulates seeing of seeing, opsiscopy, and the media characteristic as a writing of seeing, opsigraphy: “In cyberspace, for example, when you see yourself and your actions as an image, you are already in opsisopic space” (ibid., 594).

The interactive images have become image systems that react to the observer's movements, which is a new condition altogether and brings us closer to the imitation of life, he suggests. In relation to his notion on the place of images in the above-proposed genealogy, the observer is now a part of the images in a way that other pictorial media are not, and this changes the way we can address the role of perception. Opsisopic space becomes a simulation of space where image and observer converge. Interactive images behave as if an observer is present and internalized, unlike in other pictorial media, where the observer is externalized. The notion of the simulation of the presence of a moving observer is the key concept

that makes theories of perception relevant, as the perception of a moving observer becomes more interesting than perception by a passive observer.

The notion of opsiscopic space then makes it possible, at least within a media-theoretical framework, to integrate theories of perception, where the levels of explanation do not get as mixed up as they do when trying to describe space from a constructional and technical viewpoint. The question whether or not the terms opsiscopy and opsigraphy are viable terms will not be the subject of judgment here. The interesting part about Weibel's proposal is that it opens up a framework for examining the relation between the video game world and the player, which cannot be explored solely on the basis of theories of images, but needs to account for an actively perceiving observer.

Following the notion of the convergence of a moving image and a moving observer, a relation of interdependence between the manipulative possibilities has to be assumed, that is, the possible simulation of a moving observer present in the layout, and the possibilities of manipulation and motion simulation in the graphical layout. The challenge that arises is how to address the moving images simultaneously with the simulation of a moving observer, since usually they are addressed separately and in very diverse fashion. Weibel's concept makes ready at hand the application of the ecological approach to visual perception since it has as its core assumption that the perceiver (player) and the environment (game world) cannot be studied separately but must be understood in tandem, as a whole action-perception-dependent system. As the ecological theory assumes that vision is functional in relation to navigation in the environment, it can be assumed that for the simulation system of moving images and moving observer to unfold an inbuilt functional relation does exist. Though Weibel's notion about moving images will stand for now, an additional modification may be needed.

Ecological Approach to Perception

In the following, a description will be given of the most essential concepts within the ecological approach. This is by no means an easy task since the ecological approach on the one hand has sparked some controversies within the more traditional and accepted approaches. It also has been the foundation for a widely spread misconception of the term *affordances*, which is the theoretical glue that holds together a theory that has as its core mission to reformulate all prior foundations for perceptual theories and to present questions in a new way.

James J. Gibson fathered the new branch within theories of perception that is known as the ecological approach (Gibson 1986; Gibson and Pick 2003). It has a functional and biological starting point and has as its main hypothesis that vision is functional in order to cope in a changing environment. The ecological approach is perceived as a controversial theory that has as its opposite the constructionist theory of perception, which stresses cognitive involvement in the act of perception. The constructionist or information-processing paradigm holds that vision is an act of

interpreting data received through the sense receptors. In this presentation of the act of perception, data are considered to be arbitrary and thus have to undergo a cognitive act of processing in order to be meaningful (Gibson and Pick 2003). This approach or paradigm holds that perception is indirect; it can also be characterized as an overall paradigm of enrichment, which means that perception requires an act of enrichment since the perceived does not contain enough meaning. The paradigm under which Gibson can be said to belong is the differentiation paradigm, which suggests that there is more than enough obtainable information, and perception becomes an act of differentiating the already rich content. Moreover, under this paradigm the ecological approach is a marginalized theory and is branded as a theory of specificity (Gibson and Pick 2003). The ecological approach specifies properties in the environment in great detail and accounts for the various functional relations, also known in the ecological context as affordances that emerge through contextual actions. The controversies about the more traditional perceptual paradigm as the constructionist and the ecological approach will not be described here. But it is pivotal to mention that controversies exist. Here, the ecological approach is accepted and regarded as the one main approach that suits the gaming situation due to the interdependence between player and game world layout, that is, the simulation of moving images together with a moving observer.

Ecological Concepts in Detail

Gibson published a groundbreaking work, “Visually Controlled Locomotion” (Warren 1998), in which he stated that all locomotion must be visually guided. When an animal moves through a cluttered terrain, it makes use of the available information it picks up from the surroundings. Eventually, the notion of information pickup became a central part of Gibson’s theory. Whether by vision or any of the other perceptual systems, the information pickup process is an active acquisition of useful information for locomotion, shelter, food finding, and so on (Gibson 1986). Gibson believed that the act of picking up information is an activity that enables the perceiver, man or animal, to perceive the world directly. In Gibson’s conception, anything else would seem strange as he assumed that the senses – or perceptual systems, as he calls them – must have an evolutionary function.

Basically, the ecological approach takes into account the information available to an animal/human, the perceptual systems by which the information can be picked up, and the circumstances in which the information is obtained. Information obtained from the environment during walking will differ from the information picked up when driving a car. This situates the perceiver contextually in specific activities requiring specific information-based actions to carry out specific tasks. In order to make the approach more understandable, key terms will be outlined and described for further use in relation to video games. Though Gibson very strictly denotes that a separation of animal/human and environment is impossible, a temporary separation must be executed in order to disclose what makes up the larger perception-action systems.

The environment is regarded as an ambient optic array (Gibson 1986). It is from the array that information is picked up. The array can be organized in a number of ways both naturally created and man-made. Vistas may be open and uncluttered as well as cluttered, and the variety of layout of the array is informative relative to action. In cluttered environments, locomotion may be difficult due to rocks, bushes, and trees. In open vistas, there are no obstacles, and locomotion is therefore not hindered. Keeping video games in mind, a cluttered game world may be part of the overall gameplay where locomotion is required. In platform games, obstacles are a vital part of navigation through the game. To get from one end or part of a game world to another can be said to be an obstacle-driven type of gameplay from the ecological viewpoint. An in-depth description of game worlds from the ecological approach will be given later.

The ambient optic array is where optical changes take place due to motion or during locomotion. The notion of optical changes is specific to the ecological approach. Motion can be a fuzzy term in relation to a description of changes taking place in the ambient array. Motion can be trees swaying in the wind. It can be animals/humans moving around, and it can be animals/humans moving things around or a combination thereof. In relation to optical changes, it is crucial for the perceiver to know what is caused by what. It is therefore vital to be able to distinguish between motion caused by others and other things and motion caused by the perceiver. Locomotion causes changes to the array specific to the means of transportation, be it walking or car driving. And the motion of other things, again, causes changes specific to an object's motion, for example, the trajectory of a flying ball. Optical changes are not to be understood, necessarily, as real changes happening in the environment. The environments may be stable or fixed but still undergo optical changes. The changes are caused by locomotion: for example, driving a car will result in very different changes from the changes caused by walking, which is a statement that requires further explication. Everyone has experienced a car ride alongside trees. The velocity of the car distorts the perception of the trees and makes them indistinguishable from each other, but also as trees per se. The optical changes resemble a more blurry layout of colors and light passing by. When walking, it is impossible to obtain a velocity that would cause the same optical changes as car driving. Optical changes are thus to be understood as visual but not necessarily physical changes to the surroundings (Gibson 1986).

In extension hereof, the process of information pickup is relative to changes caused by object motion in the layout and optical changes due to locomotion. The various states coexist and a method to ascribe which is which is to distinguish between exterospecific information and propriospecific information. Exterospecific information is relative to environmental properties, whereas propriospecific information is relative to the perceiver.

As we encounter the world, we are equipped to do so by means of our perceptual systems (Gibson 1966). The notion of perceptual systems suggests that the act of perception cannot be located to any one receiver of sense data. The perceptual systems cooperate by forming subsystemic relations, whereof the cooperative visual and audible systems form a subsystemic relation specifically of interest for perceptual

video game research. An extended subsystemic relation in respect to games would be that of the visual, audible, and haptic systems since the manipulation of the joystick requires a dexterous and skillful feel for the artifact. In the following, the emphasis will be on the visual perceptual system and the relation between the gamer as a perceiver and the visual information of the game world, and how the interdependence from an ecological approach is believed to be the core appeal of video gaming.

Ecological Concepts: Overview

In order to make the ecological terminology surveyable and in order to choose a few concepts to work with, the most crucial terms will be listed with an explanation and made more comprehensive in the application to video games.

One of the distinctions Gibson makes about modes for perceiving the environment is a distinction between *ambient* and *ambulatory vision*.

- *Ambient vision* is the activity of getting information from the environment (ambient optic array) by turning one's head.
- *Ambulatory vision* is getting information from the environment (ambient optic array) by moving around and turning one's head.

These two basic modes of perception are related to the concepts of *going out of sight* and *coming into sight*. Things can go out of sight and come into sight due to ambient and ambulatory vision.

- *Information pickup* is the activity of obtaining information from the environment (ambient optic array) and is most often a context-related activity. In the case of hearing a loud sound, the perceiver will turn his/her head (ambient vision) in order to pick up information about the source. If something has been misplaced, both ambient and ambulatory visions are utilized in order to bring into view what has been lost.

Optical changes are visual changes occurring in the environment (ambient optic array) but not necessarily physical changes, though it may be so. When other people move in one's field of view they create one type of optical change that is physically bound, whereas self-movement or locomotion creates another type of optical change. Optical changes in the array caused by other people, for example, are referred to as *exterospecific information*, that is, changes caused by external factors; whereas changes caused by self-movement/locomotion are referred to as *propriospecific information*, that is, information specific to the actions of the perceiver.

The last concepts to be listed here are the concepts of *visual kinesthesia* and *visual control*. If locomotion is visually guided, there must be properties addressable in the array that guide the locomotion. Gibson refers to these properties as laws. *Visual kinesthesia* is related to environmental properties whereas *visual control* is relative to the possible actions of the perceiver. In the example of car driving,

the surrounding array will create an outflow when moving forward, whereas moving backward will create an inflow in the visual field from a particular point. Visual kinesthesia and control are paired relative to the action. The law for visual control when moving forward will be as follows: Move so as to create an outflow in the ambient optic array. And to go backward will correspondingly be to create an inflow. The optical changes are thus informative in relation to a specific mode of action (Gibson 1986).

The above concepts will serve as examples with regard to the application of both a new terminology that encompasses descriptions relative to the role of perception when playing video games, and a new way of addressing specific modes of activity or action in games. When it was earlier stated that the ecological approach to video games is genre-independent, this is what was implied. From an ecological perceptual standpoint, it does not matter which genre a game belongs to: what matters is the required style or mode of action that a game world layout is informative about. That is, how the properties of the game world are informative relative to the manipulative possibilities.

Application of Gibson's Ecological Approach to Video Games

Often in video games, a visual perceptual activity will be one of removing dangerous figures from the game world, be it Germans, Aliens, or other creatures. In first-person shooters, "enemies" are increasingly populating the field of view, which creates an up-tempo activity of getting them "killed" and removed from the layout. This paced activity requires experience with joystick control on the dexterous level in coordination with the visual output. This specific activity of getting information from the layout and acting on the information is a core part of gaming and one that serves the purpose of keeping the gamer in play. The representation of the gamer in the game world, either by a manipulative viewpoint or by a hand in the layout in correlation with the behavior of the programmed figures, is an example of the constitution of the moving image and the moving observer.

In ecological terms, the moving images, as Weibel puts it, are to be conceived of as informative arrays. The optical changes occurring are specific to both programmed, yet for the player uncontrollable, elements, as well as to the optical changes that the player can in fact create. In this respect, the players simulate locomotors, and the game world simulates the presence of locomotors and other types of motion. The information in the layout is therefore to some extent exterospecific but can become both exterospecific and propriospecific as the player takes action.

If we look back at the examples of the employment of terms derived from pictorial construction techniques and the applied concepts of space (Wolf) and if we substitute *scroll* with *ambient vision*, then games that make use of this type of manipulation simulate ambient vision. Scrolling is a simulated head turn, which in games can be a constraint due to limitations of control of direction, if it is possible only to move the view point in one direction. In the early *Mario* games, it was only

possible to move in one direction, and in the later *Super Mario Bros.* (1985), it is possible to move the viewpoint in two directions. The *Mario* games are canonical within platform games, which are a type of games that can be characterized as games that make use of constraint simulated ambient vision. In more recent games such as *Bioshock* (2007), both ambient and ambulatory visions are simulated. To label a game as a 3D game would be the typical way to denote that both ambient and ambulatory vision are made possible on the simulative level.

Now that a perceptual framework has been created for a new terminology, we can take another look at the other concepts presented. By turning our heads on an everyday basis, we bring objects into and out of view. But objects also enter our field of view, and, most naturally, everyday vision is a mixture and combination of these. To obtain information from *Bioshock's* game world is to manipulate the simulated ambient and ambulatory vision in order to bring things into view, but what creates part of the tension is that objects or simulated locomotors also become visible. The dangerous ones are "killed," that is, removed from the layout. In this respect, simulated locomotors are exterospecific information and the removal from the layout is at the same time extero- and propriospecific information. This is an important point since it is vital for the player to be aware of the distinction between the manipulative feedforward and the array's feedback. On one level, the practice of manipulation can be seen as a process of obtaining a growing awareness about the laws of optical changes, though this is not necessarily realized by the player. This points to the last of the concepts mentioned, now more readily applicable, namely, the concepts of visual kinesthesia and visual control. The simplest example would be that of a racing car game with a first-person point of view. To keep "the car on the road" the player must create an outflow in the layout that simulates forward locomotion. In order to stop the car, the player must stop the flow; and to reverse the player must create an inflow in the games array. In this respect, the joystick becomes a subservient device through which optical changes are created: thus, control of the simulation of both the moving images (or game world array) and the moving observer (or perceiving player) are made possible.

Concluding Remarks

If we accept the premises of the ecological approach to perception and utilize the concept in a media-theoretical framework, we can return to the title of this article and claim that video games are visual media formats that are being played by (according to) the visual laws or rules. On this basis, it appears promising to apply perceptual theories, where the preferred theory here is that of ecological perceptual psychology. In order to create a synthesis of media theories and psychological theories, it is important to be specific about the subject matter under scrutiny. Video games encompass so many layers that can be studied separately and which come under their own headings, and theoretical paradigms such that navigation within video game research can itself be similar to playing a game with multiple outcomes.

It has been the purpose of this chapter to point out that theories of pictures and moving images may not be the appropriate starting point for research into the role of perception in playing video games. It has also been the intention to point out that the relationship that emerges between player and game must be studied in tandem. The interchanging of extero- and propriospecific information and the optical changes that guide action on an everyday basis are what video games are able to simulate in both elaborate and constrained forms.

By utilizing perceptual theories, it is believed that new insights into the visual dynamism of the medium can be obtained in a manner that will be beneficial for both design processes and further analysis of games. The synthesis of the ecological approach and media theory addresses both the game as a visual object and the player as a perceptual subject. We are perceptually tuned to encounter the world around us, and this attunement is on an essential level what we bring to the encounter with the games' visual layout. That the game world is understood as an informative layout in a functional way points to a level of operability that coexists with more aesthetic features such as the artistic and visual means of construction: these are typically under scrutiny when analyzing the game world layout. It is believed that when we look beyond the surface and disregard, at least momentarily, what is represented in the game world, we gain knowledge about the operational mechanisms and the perceptual involvement in tasks to be overcome, such as doing the same things over and over again in order to change the optical structures in an advantageous way. Thereby, we can make progress. The approach presented is an alternative to more pictorial, aesthetic, and semiotic approaches to video game layout research and does not ask why things look the way they do but how they function.

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Part III
Users, Uses and Social Contexts of
Computer Games

Chapter 18

The Effect of Authentic Input Devices on Computer Game Immersion

Daniel Pietschmann, Georg Valtin, and Peter Ohler

Introduction: Computer Game Immersion and User Experiences

Computer games¹ are nowadays considered as one of the most important forms of entertainment. What has been despised as a nerdy waste of time some years ago has meanwhile been developed into a major phenomenon with a strong economy and a noticeable cultural impact. The increasing role of computer games raised the interest of many researchers who use a wide array of approaches and methods to scientifically explain the phenomenon. Although the number of players constantly grows, little is known about the actual computer game use (systematic, empirical data regarding time investments, platforms used, playing modes, etc.) to use as a foundation for theoretical and empirical research. This issue is discussed by Blake and Klimmt (Chap. 23). A key question in the field of computer game studies is the user experience during the gameplay, thus the experience resulting from the interaction between the player and the computer game. This has proven to be a difficult subject because the rapid development of gaming hardware and software constantly alters the user experience. One of the latest major developments is the increased usage of new input devices. With the launch of the Wii console in 2006, Nintendo introduced an innovative concept of controlling computer games. The so called Wii-Remote and Nunchuk have a built-in motion sensing capability that allows the player to

¹Computer games and video games are used synonymously in this chapter since the differences between the two terms are merely technical in nature. However, the term “computer games” better emphasizes the use of computer based hardware, whereas “video games” refers to the visual presentation on a video monitor.

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manipulate and to interact with computer game elements seen on the screen by moving and pointing the controllers.² Most games for the Nintendo Wii have been designed in a way to fully support the new control mechanism. For example, playing a bowling game requires moving the arm and hand similar to rolling a real bowling ball while holding the controller. Likewise, a tennis game requires holding the controller like a racquet and performing forehand and backhand swings.³ Without much doubt, this new way of controlling computer games has a deep impact on the player experience. To be more specific, in our opinion, the entertainment value (*Spielspaß*) of computer games is generally increased by the usage of controllers that provide a more realistic (or to be precise: a more authentic) experience. In this chapter, we substantiate that assumption in consideration of the relevant theories and discuss the results of an empirical study that was conducted to confirm it.

Researchers suggested several concepts and determinants to comprehend and to explain the user experience during the act of playing computer games, for example, interactivity, effectance,⁴ self-efficacy, control, presence, and immersion (see Ryan 2001; Zimmerman 2004; Klimmt 2006; Tamborini and Skalski 2006; Murray 1997; McMahan 2003; Härig, Chap. 13). Thereof, immersion is one of the most discussed terms and topics in the field of computer game studies with many different approaches, for example, from literature studies (e.g., Murray 1997) or presence research (e.g., Slater and Wilbur 1997). As a result of the heterogeneous approaches, there is a lack of a generally accepted definition of the term “immersion” (see Pietschmann 2009, 76). In our understanding, immersion has to be considered as a psychological state of the user, similar to concepts like flow (Csikszentmihalyi 2005), presence (Tamborini and Skalski 2006), and cognitive absorption (Agarwal and Karahanna 2000). Several definitions of immersion relate to focusing one’s attention “on something other than the immediate surrounding reality” and mean that the user is “captured by and experience[s] a story and its world, shutting out the ‘real’ world around [her]” (Gander 1999, 1).⁵

Independent of the approaches to conceptualize immersion, researchers agree on the existence of different forms of immersion that contribute to the construct of immersion as a whole. Examples include visual immersion (e.g., Held and Durlach 1992), social immersion, temporal immersion, emotional immersion, or somotoric immersion (e.g., Ermi and Mäyrä 2005). The last mentioned is the most relevant form of immersion for our study. Björk and Holopainen define somotoric immersion as “the result of feedback loops between repetitious movements players make to perform actions in the game and the sensory output of the game”

²Basically, the Wii-Controllers use a built-in accelerometer and optical sensor technology; for details, see Witzmann (2007).

³There are lots of expansions and accessories that can be attached to the default controller to give the gaming experience an even more realistic touch. Available expansions and accessories include golf clubs, tennis racquets, guns, and swords.

⁴Effectance means the perceived influence on the game world.

⁵For a comprehensive discussion of the term immersion and its various types, see Pietschmann (2009).

(Björk and Holopainen 2004, 206). Accordingly, somotoric immersion is the part of immersion that occurs as the consequence of the player interacting with the (game) system interface. Considering this as one of the most fundamental parts of computer games, sensoric immersion seems to be a core experience during gameplay episodes. It is closely linked to *explicit interactivity* (Zimmerman 2004, 158) and the resulting experience of self-efficacy (Klimmt 2006, 76). Ermi and Mäyrä (2005) suggest “sensory immersion” (synonymous to visual immersion and in their terms part of somotoric immersion) as one of three key dimensions of the gameplay experience. According to their understanding, sensory immersion is a quality characteristic of the media:

Large screens close to player’s face and powerful sounds easily overpower the sensory information coming from the real world, and the player becomes entirely focused in the game world and its stimuli. (Ermi and Mäyrä 2005, 7)

Somotoric immersion puts the focus on the sensory perception as well as the player’s body movement during the gaming experience.

The well-established virtual reality research understands sensorimotor functions (*Sensomotorik*) as the interactions of the multiple human sensory systems (see, e.g., Steuer 1992; Heers 2005). One of the main goals of virtual reality technology is to achieve a high level of authenticity by an adequate stimulation the human sensory systems (see Held and Durlach 1992), including visual, auditory, tactile, olfactory, and vestibular sensory stimuli.⁶ It is generally assumed that a better interplay of the multiple stimuli leads to a higher degree of authenticity, and this, in turn, causes the state of somotoric immersion. We agree with this argumentation. Therefore, somotoric immersion relates to the interaction of perception and bodily reactions to the perceived stimuli.

Given the fact that both concepts are referring to a psychological state during (digital) media usage, immersion and presence are often used in similar contexts or even synonymously. Whereas the term presence is usually associated with “serious” virtual reality environments, “immersion” was applied accordingly from literature to digital entertainment. Both concepts have been accounted for in our study.

Several methods exist to measure immersion and presence empirically. Especially in the presence research, many instruments have been developed to prove the concept in scientific studies. Currently available methods can be categorized as subjective (questionnaires, online ratings, or qualitative explanatory discussions/interviews) and objective (behavioral, physiopsychological, or neurological) measurements. For a comprehensive overview over 69 different methods, see van Baren and Ijsselstein (2004). Studies for evaluating immersion also range from qualitative approaches (e.g., Brown and Cairns 2004), which identified important barriers and prerequisites of computer game immersion, to quantitative research, combining subjective and physiopsychological (e.g., eye tracking) measures (e.g., Jennett et al. 2008).

⁶Not all of these sensoric stimuli must be present to cause somotoric immersion.

Study: Sensomotoric Immersion

As computer games can be understood as a particular form of virtual reality, it is reasonable to apply the discussed theoretical principles: more realistic/authentic game interfaces (or symbolic media systems in general) with ways of interacting drawn from life conciliate more authentic and more “believable” stimuli and thus sensomotoric immersion. Other types of immersion (e.g., emotional, social, or narrative immersion) moderate the effect of sensomotoric immersion, as they can intensify or weaken the immersive experience as a whole. The more authentic the perceived interaction between the player and game system, the higher is the sensomotoric immersion of the player. A higher degree of sensomotoric immersion increases the fun and entertainment value of computer games. Let us clarify this by the example of playing a car racing game. If the player controls his/her vehicle with the keyboard, the sensomotoric immersion should be very low because he/she uses a rather abstract input device for an activity that is performed completely differently in the real world. The procedure of driving a car is reduced to simple keystrokes for accelerating, breaking, and steering, while only the visual and auditory sensory systems are being stimulated in a realistic way – given the fact that actual racing games provide simulation-like graphics and sounds. If the player uses a steering wheel and pedals instead of the keyboard, the gaming experience changes significantly. In this given case, the tactile sensory system is also stimulated in a realistic way, since using the steering wheel and pedals to control a car appears natural and authentic. Although this is of course not a perfect simulation of driving a racing car (e.g., there are no acceleration forces), the more authentic control is resulting in a higher degree of sensomotoric immersion.⁷

A quantitative study was conducted in order to understand the user experience of sensomotoric immersion during a play session using the Nintendo Wii console. The aim of the study was to clarify how the input device (authentic/realistic input versus arbitrary/abstract input) is related to immersion, presence, and perceived entertainment value. Several existing questionnaires were used to measure immersion and presence after the game session. We used different questionnaires because an important question regarding the relationship between presence and immersion is not answered yet: Are the experiences of presence and immersion in computer games two individual psychological states of mind, or different interpretations of the same concept? By measuring both concepts, we were able to compare them directly. Although various game relevant factors contribute to both concepts as a whole (e.g., visual perspective, narrative, game tasks, audiovisual quality, and single- or multiplayer), our focus was on the input devices: The experimental group was given an (authentic) Wii-Remote controller with a tennis racquet add-on to play a

⁷Of course only under the condition that steering the car matches the expectations of the user. If the car would understeer permanently or if pushing the throttle pedal would decelerate the vehicle, there would be no authenticity and therefore low sensoric immersion.

tennis computer game, whereas the control group had to play the same game with a classic gamepad controller. No other changes were made; thus, the only difference in both groups' game session was the input device and the potential degree of sensomotoric immersion, respectively. In this chapter, we address the three major hypotheses and their implications.

H1: Users perceive a higher degree of immersion and presence when using an authentic game controller than when using an abstract gamepad controller.

According to their practical gaming experience, we divided our subjects into the groups "nongamer," "casual gamer," and "regular gamer." Based on schema theory (see, e.g., Smith and Queller 2001), we suspected that experienced players grew so accustomed to playing computer games with a gamepad controller that they do not need to think much about controls (construct/create new schemes) while playing. For them, playing with a gamepad is the "natural" way to interact with a console game. They focus their attention not on controlling the game but on the game (and the content) itself. Inexperienced players, however, need to learn how to interact with the game before playing. Their attention is more likely to be focused on the controls instead of the game's content, as their cognitive system has no (or not enough) preexisting schemes to operate the interaction properly. If inexperienced players could draw on a way of interacting with the game that they know from the real world, they would not need (completely) new schemes but use existing schemes instead. When playing a computer game with an authentic input device based on prior real-world experiences, they should be more able to focus on the game content and thus potentially experience a higher degree of immersion or presence. Inexperienced players should therefore benefit greatly from the use of an authentic input device because they do not need to learn an arbitrary way of interacting with the game and instead use a way they are already familiar with.

H2: Experienced users do not benefit as much from authentic input devices in terms of immersion and presence as casual players do.

The amount of real-world experience with the given task varies individually. In this study, the subjects had to play a tennis computer game, so the degree of experience with real-world tennis was also taken into consideration (dichotomously: low/high experience). Players who never played real-world tennis before are considered to have other expectations toward the interaction with the game than regular tennis players have. For the latter, the game has to meet a high demand in realism and simulation accuracy; otherwise, the players would feel their interaction to be restricted. If they cannot use familiar movements from their practical real-world experience in the game, their sense of immersion or presence could be hindered. Inexperienced real-world tennis players, however, only base their expectations on the observation of tennis players in the real world or the media. This usually leads to a lower demand on simulation accuracy. In general, the perceived immersion should be higher for real-world tennis players, if the game simulates tennis playing accurately.

H3: Users with experience in real-world tennis score higher on immersion and presence when using an authentic input device than users without real-world tennis experience.

Methodology

Participants ($N=136$; male $N=64$; female $N=72$) were recruited through an opportunity sample via online advertisement. Their ages ranged from 12 to 74 years (average: 24.15 years; $SD=7.91$). Twenty-two percent of the participants were non-gamers, 41% casual gamers, and 37% regular gamers. The study was conducted in a game lab at Chemnitz University of Technology, using a darkened room with much space to move. The game console was connected to a video projector using a big (several meters) projection screen and surround sound system to minimize distractions and to provide optimal conditions for the formation of sensory immersion. All subjects were asked to play a tennis game on the Nintendo Wii console, either with a gamepad or a tennis racquet controller (see Fig. 18.1). We choose the game *Sega Superstar Tennis* (2008) for the study, a game that was unknown to all participants (see Fig. 18.2). Hence, possible effects due to prior game experience could be ruled out. A tennis game was chosen because – unlike narrative computer games (e.g., *The Legend of Zelda: Ocarina of Time* (1998), which offers complex narrative immersion types) or MMOGs (e.g., *World of WarCraft* (2004), complex social immersion types) – sports games usually do not mix several complex types of immersion and focus on sensomotoric immersion in general or audiovisual in particular. Using a tennis game allowed us to easily separate sensomotoric immersion from other types of immersion. Furthermore, tennis being a popular sport, there were many games for the Wii console to choose from. Billiard, golf, and bowling were also considered but had to be dismissed as most of these games varied too much in quality and complexity and furthermore did not sufficiently support multiple input devices. Although *Wii Sports* (2005) Billiard uses very authentic input, it is not playable with a gamepad. Other tennis games considered were the tennis game of *Wii Sports*, *Top Spin 3* (2008), or *Rockstar Games Presents Table Tennis* (2008). They were deemed either too complicated, required too much practice time, or did not support different controller devices. *Sega Superstar Tennis* (2008) scored reviews with an average (meta) score of 71%. It is suitable for beginners and relies on relatively simple game mechanics, thus making it enjoyable not only for the hardcore but also for casual gamers.

The study is based on a between-subjects design: The participants were assigned randomly to play with the classic gamepad or Wii-Remote tennis controller as independent variable. Before the game session, each subject had to fill out a questionnaire to collect demographic information and assess real-world tennis experience as well as general gaming experience. The latter contained questions regarding, for example, the playing time per week and the platforms used for gaming. In addition,

Fig. 18.1 Input devices used for the study (Source: Authors' photography)

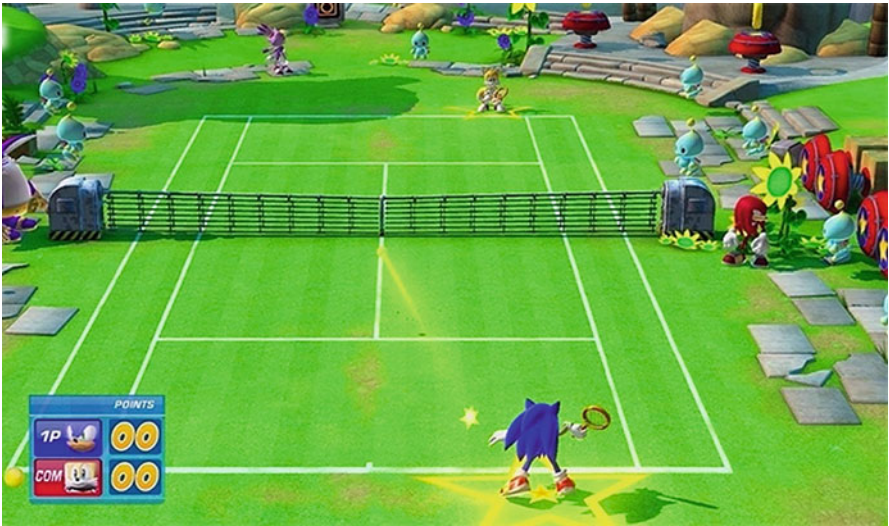


Fig. 18.2 *Sega Superstar Tennis* (Source: Screenshot from the game *Sega Superstar Tennis* (2008))

Table 18.1 Sample items and factors of the translated Presence Questionnaire (PQ)

Factor	Sample items
Involvement	“Wie vertieft waren Sie in die Erfahrung der virtuellen Umgebung?”
Interface quality	“Wie stark haben Sie die Eingabegeräte beim Ausführen der Aufgaben im Spiel behindert?”
Adaption/immersion	“Waren Sie in der Lage vorherzusagen, wie die Umgebung auf Ihre Handlungen reagieren wird?”
Visual fidelity	“Wie gut konnten Sie Objekte untersuchen?”

Table 18.2 Sample items and factors of the translated Immersion Questionnaire (IQ)

Factor	Sample items
Motivation and fun	“Inwieweit haben Sie es genossen, das Spiel zu spielen?” “Wie groß war Ihr Interesse zu erfahren, wie das Spiel weitergeht?”
Real-world dissociation	“Inwieweit haben Sie mitbekommen, was während des Spielens um Sie herum passiert ist?”
Achievement	“Wieviel Mühe haben Sie sich beim Spielen gegeben?”
Cognitive involvement	“In welchem Maß hielt das Spiel Ihre Aufmerksamkeit?”
Challenge	“Empfanden Sie das Spiel als einfach?”

participants had to complete the Immersive Tendencies Questionnaire (Witmer and Singer 1998), which has not been evaluated further for this chapter.

Each game session lasted about 20 min, including a training session with an instructor to get used to the game and the controls. After the game session, each participant had to complete a questionnaire that comprised translated versions⁸ of two questionnaires used in other studies (Immersion Questionnaire [IQ] from Jennett et al. 2008, Presence Questionnaire [PQ] from Witmer and Singer 1998).⁹ The items consisted of questions or statements that had to be rated on a 5-point Likert scale. Tables 18.1 and 18.2 show sample items used for each category of both PQ und IQ. Also, further demographic information was gathered, such as participants' game experience, real-world tennis experience, occupation, or level of education. The factorial structures of the immersion and presence questionnaires were validated using a factor analysis (principal axis factoring) which confirmed the factors reported in the original studies: The items of the PQ constitute the factors “involvement,” “interface quality,” “adaption/immersion,” and “visual fidelity,” whereas the IQ items accumulate to “motivation/fun,” “real-world dissociation,” “achievement,” “cognitive involvement,” and “challenge.” The data of the study were analyzed, using statistical procedures in SPSS.

⁸The original questionnaires are in English language and have been translated into German by Pietschmann (2009, 127) for this study.

⁹See, for example, Insko (2003) for a detailed discussion on the use of questionnaires in presence and immersion research.

Results

The overall measures of immersion and presence show a relatively high correlation coefficient of $r=0.552$ ($p<0.0001$, two-tailed). That is not surprising, since the two concepts are closely related and overlapping, as mentioned above.

The results of the study confirm H1: The use of the authentic game controller led to a significant increase of perceived immersion (two-sample t -test, $t=3.39$, 134 d.f., $p<0.001$) and presence (two-sample t -test, $t=2.84$, 134 d.f., $p<0.005$). The average amount of immersion and presence measured was higher in players using the authentic game controller. As the only difference between the experimental ($N=63$) and the control group ($N=64$) was the usage of differing input devices – and thus, the potential amount of sensomotoric immersion – the differences measured in immersion and presence can only be results of perceived sensomotoric immersion. This could be traced back to several factors, such as “visual fidelity” (Mann-Whitney U -test, $U=1546.0$, $p<0.001$), “involvement” (Mann-Whitney U -test, $U=1393.0$, $p<0.0001$), and “cognitive involvement” (Mann-Whitney U -test, $U=1660.0$, $p<0.005$). No differences were found between groups regarding the factors “achievement” and “dissociation of the real world.” Perceived “challenge” was only marginally significantly higher, when using authentic input devices instead of the classic controller (Mann-Whitney U -test, $U=1,909$, $p=0.056$). The factor “motivation/fun,” however, increased significantly when using the authentic tennis controller (Mann-Whitney U -test, $U=1680.5$, $p<0.01$).

The results did not support H2: Just like casual gamers, the experienced regular gamers also scored higher on immersion (two-sample t -test, $t=2.15$, 48 d.f., $p<0.05$) when using the tennis controller instead of the gamepad, but not in presence. Regular gamers using the authentic input device also scored significantly higher on the factors “involvement” (Mann-Whitney U -test, $U=173.5$, $p<0.01$) and “cognitive involvement” (Mann-Whitney U -test, $U=98.5$, $p<0.01$) in comparison to nongamers and casual gamers. Surprisingly, unlike the group of regular gamers, there were no statistically significant differences in the immersion and presence scores when using different input devices in the nongamers and casual gamers group in detail. Although just missing a statistical significance in the group of casual gamers (immersion score: $p=0.07$; presence score: $p=0.06$), the only statistically relevant differences were the scores of “visual fidelity” (Mann-Whitney U -test, $U=56.5$, $p<0.03$) and “challenge” (Mann-Whitney U -test, $U=56.6$, $p<0.02$) for nongamers and “involvement” (Mann-Whitney U -test, $U=232.4$, $p<0.01$) in terms of input devices.

The results supported H3: When using the tennis racquet controller, players with real-world experience in tennis showed higher scores of immersion (two-sample t -test, $t=3.0$, $p<0.01$) and presence (two-sample t -test, $t=3.0$, $p<0.005$) than players without experience.

Discussion

Our study has shown that the usage of an authentic input controller considerably changes the gaming experience or, to be more precise, enhances the gaming experience. While the overall scores of immersion and presence fully support H1, it is worthwhile discussing some factors in detail. According to theoretical considerations regarding the schema theory, the usage of the authentic input devices should cause the player to fall back on existing schemes having more cognitive resources available for the actual gameplay. This has been confirmed by the factors “visual fidelity,” “involvement,” and “cognitive involvement” that scored significantly higher in the experimental group. The usage of the authentic controller is more natural, so that the game content gets the full attention of the player: The player absorbs the audiovisual stimuli to a higher degree, and, therefore, she is more involved in the gameplay.

The significantly higher rating of the factor “motivation/fun” when using the authentic controller leads to the conclusion that it enables users to experience more fun while playing the game, whereas the interdependence between immersion and fun has yet to be determined. Since so far computer game studies have been unable to agree on a theoretical model that can fully explain the entertainment value of computer games, we can only assume the underlying causality. From a media psychology point of view, a possible explanation can be found in the model suggested by Klimmt. This model explains the entertainment value of computer games as the result of three mechanisms that constitute the gaming experience: self-efficacy, complex challenges in combination with narrative information, and simulated life-like experience (see Klimmt 2006). A higher degree of (sensomotoric) immersion would increase the self-efficacy as well as the lifelike experience (which in our case can be described as the player’s feeling of actually playing tennis). In further studies, we want to confirm the results of this study with various other game types. Those studies can also contribute to the empirical validation of Klimmt’s model because the use of different controller types is a valid method of manipulating the self-efficacy. Also, the long-term effects of playing with the authentic controller need to be researched since one could argue that the user experience of a higher entertainment value could also be moderated by the fascination of using an innovative control method, and the usage of the new device itself was more fun.

Another interesting finding is that the factor “challenge” generally shows only a marginal significance. If we compare only the subjects from the group of casual gamers, the factor challenge was significantly higher when using the authentic input device. This finding can be explained with the different skills that are required to handle the controllers. The abstract input device (gamepad) demands a considerable amount of eye-hand coordination, whereas the authentic controller (motion control) requires more complex actions with more parts of the body being involved (like swinging the arm while performing a sidestep) – the requirements regarding the players’ performance are higher in the latter. Related to the tennis game we used in the study, it means that the players using the gamepad – on the

most elementary level of understanding – only had to hit the right buttons at the right time in order to outmaneuver the opponent. When using the authentic tennis racquet, the player needed to perform appropriate arm swings to hit the ball at the right time, with the right strength and in the right direction. For inexperienced players, these rather complex actions appear more challenging.

To profit from the new control mechanism, game designers have to ensure that the interaction matches the user expectations. The usage of authentic input devices does not automatically increase the entertainment value of a computer game for every player, since they usually have subjectively different expectations regarding the interaction with the game system. A notable difference between the game experience and the real-world experience of the users can reduce or even destroy the sensomotoric immersion. That explains our findings on subjects with great expertise in real-world tennis who did not benefit (in terms of immersion and presence) from authentic input controllers as much as subjects with moderate experience. Later interviews with some of the advanced tennis player participants suggested that this can be explained by the fact that the demands of those players were not met by the gaming system: *Sega Superstar Tennis* is not a high-fidelity simulation but a game for the target group of casual gamers with no to little gaming expertise – the group that the majority of the subjects belong to. Advanced tennis players did expect a more accurate/authentic tennis simulation which the game we used failed to deliver. There are indeed tennis simulations that offer a high degree of authenticity and realism. The complexity of those simulations overburdens the abilities of beginners and nonplayers in a way that would totally prevent the experience of immersion or being entertained (at least in the given time frame of 20 min). For further research, it will nevertheless be necessary to use more realistic games to evaluate the findings of this study. To avoid the problems with the heterogeneous gaming experience, only regular gamers should be chosen as subjects. In terms of game enjoyment from the use of authentic input controllers, game designers need to clearly define the target group of their game, as it seems difficult to maximize the effect of the authentic controller for both experienced and inexperienced players simultaneously.

In the ongoing discussion concerning the degree of relationship between the concepts of immersion and presence, the results of our study substantiate the position that they are closely connected. The correlation between immersion and presence shows considerable overlap between the two concepts. However, the questionnaire used in the study (PQ) was not specifically designed for the measurement of presence in computer games; therefore, our results cannot be generalized without further research.

Furthermore, we suggest differentiating the various uses of the term immersion in the field of game studies. Immersion can concurrently be seen as one form of *involvement*, which is defined as “a psychological state experienced as a consequence of focusing one’s energy and attention on a coherent set of stimuli or meaningfully related activities and events” (Witmer and Singer 1998, 227). This is very similar to the definition of immersion shown above but more related to activities in general. Based on the assumptions of the schema theory (see, e.g., Smith and Queller 2001), Douglas and Hargadon (2000) distinguish between immersion and

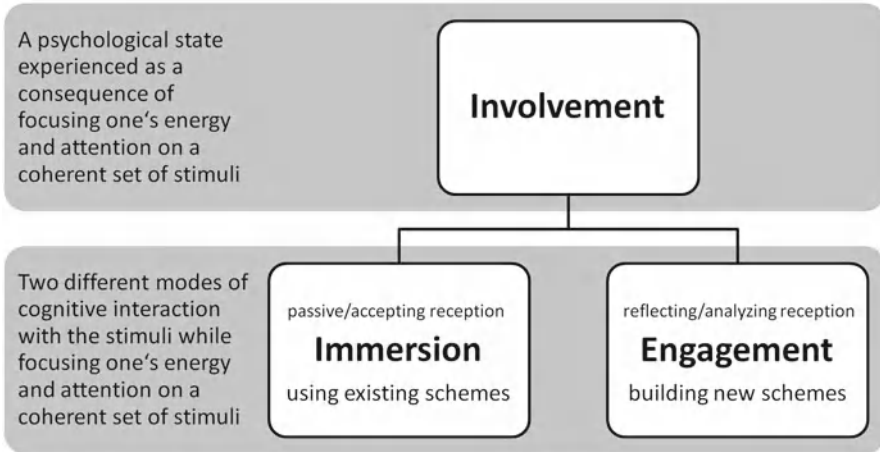


Fig. 18.3 Involvement as generic term and immersion/engagement as modes of cognitive interaction with a coherent set of stimuli (Source: Authors' illustration)

engagement as modes of cognitive interaction with a medium. The difference between both can be explained by the way the user engages with the medium: If she absorbs the media (more or less) passively without actively reflecting the content (e.g., accepting the stimuli without thinking about or questioning them), she is in a cognitive state of immersion. If the user does actively deal with the content (e.g., reflecting, analyzing, or contemplating it), she is in a cognitive state of engagement (see Pietschmann 2009, 73).

The pleasures of immersion stem from our being completely absorbed within the ebb and flow of a familiar narrative schema. The pleasures of engagement tend to come from our ability to recognize a work's overturning or conjoining conflicting schemes from a perspective outside the text. (Douglas and Hargadon 2000, 155)

Using these terms, immersion can be considered a more or less passive and receiving cognitive state, where existing schemes are being processed. This is contrary to other (broader) conceptions of immersion (e.g., Murray 1997; Gander 1999; Björk and Holopainen 2004), which mean basically the same as involvement in terms of Witmer and Singer (1998). The broader concept of focusing one's energy and attention on specific activities and blocking out distractions or the immediate surroundings should therefore not be called immersion but rather involvement. This definition includes both modes (using existing schemes and building new/combining existing schemes) of cognitive interaction with the given set of stimuli.¹⁰

As a result, immersion and engagement can be understood as two oppositional cognitive states within the broader concept of involvement (see Fig. 18.3).

¹⁰For example, Neitzel (2008) also prefers involvement instead of immersion in this context.

When playing a good computer game, the user is involved with the game and switches between the subjacent states of immersion and engagement – based on the use of cognitive schemes.

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Chapter 19

Digital Games in the Context of Adolescent Media Behavior

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Thematic Framework and Introduction

Digital games are assuming an increasingly central role in the entertainment media markets (see Kerr 2006; Jöckel 2009). The successful development of the computer and video game industry with a constant growth in turnover of between 5% and 15% for many years (see Müller-Lietzkow 2008, 2009)¹ has meant that digital games have become a normal element of the recipients' everyday life. When taking into account that children and teenagers were the main users of these media until the end of the 1990s, it has become evident that digital games have assumed a firmly established role in the media biography of young people today. With innovative game concepts and further developments in visualization and acoustics (three-dimensionality, physics, artificial intelligence), online games (especially MMOGs – Massively Multiplayer Online Games), casual games (party, music, and singing games), mobile gaming (especially boosted by the iPhone and iPod boom), and also social gaming, especially on social networks (Facebook in particular), the industry

¹An exception is 2009, which, for the first time, evidenced a global drop in growth due to the financial crisis.

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is currently penetrating new target groups, for example, by focusing on women and young females and also the so-called silver gamers (term coined for gamers over the age of 50, see Müller-Lietzkow 2008; Dogruel 2009).

Although the industry is becoming much more diverse with regard to target groups, access, and content, and new research questions are being discussed internationally, the question of the depiction of violence and its effect with regard to transfer to and dulling of the gamers still dominates the scientific and political/public discussion in Germany. The harshest critics and politicians mainly cite the possible aggression-promoting effects which can even culminate in juvenile delinquency (Byron Review 2008; Von Salisch et al. 2007; Enquete NRW 2010) or the dependence and addiction behavior of young computer gamers (Griffith 2005).

However, at the same time, the learning and transfer aspects of digital games (Gibson et al. 2007; Gee 2008) as well as the formation of social contacts and the social interaction which occur within the context of computer games (Castranova 2007; Taylor 2006; Dahlskog, Chap. 21; Carr, Chap. 26; Ackermann, Chap. 29) are attracting more attention in public and scientific discussions. The increasing trend to research in the field of so-called serious games (i.e., the use of game mechanisms, game motivation and also game technologies for other purposes) is also an important contributing factor (see Ritterfeld et al. 2009; Müller-Lietzkow and Meister 2010; Jenson et al., Chap. 37; Klopfer and Purushotma, Chap. 38).

As previously indicated, however, the national research landscape is (still) focusing on the question as to whether the depiction of violence in digital games has a detrimental effect on young people and whether playing so-called killer games increases the likelihood of adolescents becoming violent themselves. In Germany, correlations between media-related violence and acts of real violence are examined by various branches of social and behavioral science (with the main emphasis on media psychology and media pedagogy). In the meantime, several long-term studies (Hopf et al. 2008; Möller 2006) have now been published in response to widespread criticism on cross-sectional studies with little informative value. However, the research results concerning the possible transfer potential and resulting possible damaging influences from the viewpoint of youth media protection were extremely ambivalent. The researchers' own subjective view of digital games often plays a considerable role. In order to estimate the possible dangerous effects of computer games more accurately, various studies point out that it is important to take into account the motivation of the young gamers for using the medium.

Fritz (2008) as well as Kunczik and Zipfel (2006) identify a series of other aspects of use which indicate that the attraction of virtual gaming worlds is not purely consumer-driven, and that the respective life situation is decisive for the fascination of or attachment to digital games. For example, the need for company (especially during multiplayer games) or the need to overcome boredom was in the foreground. However, aspects such as identity formation, escapism, or the flow experience (see Klimmt 2006) can be the motivation to play computer games. In this correlation, Meister et al. (2008) also determined a "relaxation and lust-oriented usage context" among adolescents, especially for medial violence (see *ibid.*, 173) by means of qualitative individual interviews.

Although studies now take the perspectives of users into account, and differentiated gamer typologies (Quandt et al. 2008) as well as special gaming form descriptions enhance the image of computer gamers, from a media-pedagogic viewpoint, it also seems necessary to identify in which ways computer and video games have become an integral part of everyday youth culture activities and to which extent there are differences in comparison to nongamers and infrequent gamers. To our knowledge, there are only few long-term studies that systematically gauge the habits of computer gamers, and then only normally within the context of violence research described above.

Objectives of Research and Conceptual Framework

We would now like to examine the importance of digital games in the overall context of the media use of young people and consider what role is played in this context by social aspects, functions of media use, and media competencies. Setting up this large framework, we also examine more closely the extent to which intensive gamers differ from adolescents who use digital games less intensively and for a shorter time. We will finally investigate the intensive gamers to examine whether general potential dangers can be recognized within the context of computer game use and how intensive gamers differ with regard to their imaginative and everyday worlds.

To be able to answer these questions, we have referred to data obtained during the study *Medienhandeln Jugendlicher* (Media Activities of Young People) (Treumann et al. 2007) which had not been analyzed separately for this purpose. This chapter therefore constitutes a special statistical evaluation of the data which were not previously analyzed by focusing on a specific topic and therefore supplements the main study.

In addition to socialization theories, the Bielefeld media competence model (see Baacke 1996) and the uses-and-gratification approach (see Katz et al. 1973) served as a theoretical framework. This was used for the operationalization of the variables in the quantitative investigation and dictated both the interpretation of the multivariate statistical methods and was also of importance for the qualitative evaluation of the interview material.

Baacke's media competence model appears to be helpful in that it gives us dimensions which are ultimately based on skills and abilities as a tool. Baacke regards media competence as "the ability to *include all sorts of media into one's repertoire of communication and action while actively appropriating the world*" (Baacke 1996, 119; translated by the authors). Baacke's concept encompasses four dimensions which are represented by the fields of media use, media knowledge, media critique, and media creativity. Baacke's concept of media competence was operationalized for the survey and empirically reconstructed on the level of his various subdimensions. The term "media competence" is mainly used in a German-language context; on an international level and in the Anglo-American world, "media literacy" and

“media education” have become established terms. The three terms are often used synonymously, but there are terminological and methodological differences behind the individual concepts (see Buckingham 2003, 7; Aufderheide 1993).

The research perspective of the uses-and-gratification approach challenges the image of “passive” recipients who are, to some extent, externally controlled. The approach is not only based on the effect of the media, but primarily questions which individual benefits the recipients gain from dealing with the media in each instance (see Katz et al. 1973). The focal point of this perspective is the active recipient, who satisfies his or her needs in the sense of selective choice, use, and processing of media content. The active role of the adolescents in dealing with digital games is examined in this investigation by asking questions about the function of the media in their everyday life and by interpretation of the interviews.

Conception of the Survey

The empirical basis of this chapter is a large-scale study which examined the representative data of 3,271 adolescents between the ages of 12 and 20 from three non-randomly selected German federal states (North-Rhine Westphalia, Saxony Anhalt, Mecklenburg-West Pomerania) who were questioned on their media activities as well as 10 qualitative group interviews and more than 40 questionnaire-based individual interviews (Treumann et al. 2007). The aim of the research project was to document the complex structure of the media activities of adolescents by means of their media competence, media use preferences, and framework conditions of media activities. In order to do justice to the various interests, proclivities, and competencies of the adolescents with regard to their media activities, a multivariate analysis was used to reveal the principal component analytical internal structures which enable the determination of differences in media activities on the basis of existing media competencies. This principal component analysis served as the basis for conducting cluster analyses, with which we arrived at an empirically backed typology of the media activities of adolescents. In total, seven different clusters were determined, the members of which practice typical forms of media use with different degrees of media competence: the Education-oriented – clever and committed adolescents (20.4% share of all interviewees), the Disoriented – uncritical and naive adolescents (20.3%), the Communication-oriented – ingenuous integrated adolescents (19.1%), the Consumerists – pragmatic hedonists (17.4%); the All-rounders – practiced avant-gardists (12%), the Inconspicuous – low-profile loners (7.8%), and the Creatives – creative “doers” (3.1%).

In a combination of quantitative and qualitative methods following the triangulation principle (Treumann et al. 2005), the survey attempts to achieve “the most comprehensive description of media activities which is as close as possible to the everyday life of the interviewees” (Treumann et al. 2007, 481). For this reason, up to six adolescents were requestioned in interviews per cluster, with their selection based on their proximity to the cluster centroid. The questions of

the guideline-based interview were focused on the acquisition and use of media and their incorporation in lifeworlds in order to investigate the interests, proclivities, and competencies of the adolescents. The interview material was evaluated with the aid of qualitative content analysis methods (see Mayring 2003), whereby the central evaluation categories were derived from the text material in a deductive and inductive manner. The qualitative material therefore extended the cluster analyses considerably and illustrates the intended actions and relevance structures of the adolescents in their own respective lifeworlds (Treumann et al. 2007, 481–482).

Using the quantitative and qualitative data material from the *Media Activities of Adolescents* study, we examine below the role of digital games in the lifeworlds of adolescents. We use the term “computer games” in this chapter, however, as concrete questions were elaborated on this topic, but not about the subject of “video games” (i.e., console games). The submitted survey therefore does not investigate a question which is isolated from other media activities but links to the content of the conducted survey on media use behavior and the media competence of adolescents. First, we will examine the question of whether the group of intensive gamers differs significantly from the other adolescents with regard to their age, level of education, and gender and also in view of their social context, media activities, and media competence or with regard to their set of ethical-moral values.

In an additional step, the role of computer games is described in the overall ensemble of media use (at the time of the interviews). To determine this significance, the developed cluster typology of “Media Activities of Adolescents” study is used and the results of the qualitative interviews taken to illustrate the influence of computer games in the daily life of various clusters.

Basic Results

When considering the state of research on digital games in recent years, it must be acknowledged that there is a lack of continuous, empirical studies on the use of video and computer games by adolescent gamers (see Blake and Klimmt, Chap. 23). Although the JIM studies (e.g., from 2009) of the *Medienpädagogischer Forschungsverbund Südwest* provide some clues (e.g., access, duration of use, gender distribution, forms of use, displacement effect), these do not target the motives for use or explanation patterns for theory construction. Therefore, the “long-time series” of these studies (by extrapolation) outlined by Wolling (2008) unfortunately only are of descriptive value. In contrast, the majority of reception-oriented studies (see Schlütz 2002) only contain selective analyses and analyses of individual cases (e.g., the effect of ego-shooters) or focus closely on the discussion of the effect described above. Media-pedagogic studies, however, like Witting (2007), for example, frequently remain on a purely qualitative level. One exception in the intended sense is the empirical study of Fromme (2003), which already examined

the incorporation of digital games in juvenile lifeworlds as well as the habits of use in the 1990s. But the models change increasingly with the online boom.

The following sections show the theories and results of our study, categorized according to the main topics.

Frequent and Less Frequent Computer Gaming

When we considered who would belong to the group of intensive gamers – that is, the gamers who stated they played frequently² – we were guided by the assumption (which is often strongly criticized) that primarily male, young, and less educated adolescents would spend more time in front of the computer than others.

As our study focused on media activities distributed over all areas of media, we were able to determine that playing computer games is an integral element of computer activities and also the most popular activity (72.1%), closely followed, however, by “writing texts for school” (70.1%) and “surfing on the Internet” (67.8%).

If the numbers of intensive gamers are looked at first, our results show that almost half the questioned adolescents “frequently” play computer games (45.5%), while 54.3% do not regard themselves as intensive gamers. Although this differentiation between intensive gamers and other adolescents only initially reflects the self-estimation of the adolescents, this self-assessment can be externally validated by supplementary information about the duration of daily computer use. According to their questionnaires, intensive gamers sit in front of their computers on average for 146.8 min per day, while other adolescents are considerably less active with an average of 85.6 min daily. The old cliché that gamers principally use the medium over-proportionately can therefore be dispelled when a comparison is made with the TV viewing time of the 50+ seniors, which is, on average, almost 220 min daily.

The data confirmed our assumptions with regard to the age and gender of habitual gamers. So far, gender is the strongest predictor for frequent gaming. Only 29.4% of girls and 62.1% of boys stated that they frequently play computer games. These data also correspond to the JIM data (also see Wolling 2008), according to which approximately 62% of the boys, but only 20% of the girls play computer games more or less regularly (the JIM studies also exclusively focus on the use of computer games). The age effect is slightly less, as is also shown by the binary logistic regression: 65.2% of the 12- to 13-year-olds and 53.2% of the 14- to 15-year-olds state that they frequently play games on the computer. The corresponding share of the 18- to 20-year-olds is only 25.8%.

The effect of education is slighter across all age groups than the gender and age effect. An education effect can only be evidenced for the 16- to 18-year-old pupils, as pupils in grades 11–13 at a German *Gymnasium* (academic high school) play

²Intensive gamers can be distinguished from “core” gamers who not only spend much time on playing but are also willing to spend freely available money and who attach importance to being integrated in a gamer community (e.g., eSport) (see Müller-Lietzkow 2010).

significantly less than pupils from *Gesamtschulen* (comprehensive schools) or *Berufsschulen* (vocational schools) in grades 10–13. Thus, the share of intensive gamers among pupils from vocational and comprehensive schools is 34% and 31%, which is significantly higher than the share of the academic high school pupils in grades 11–13 (25%). However, it is certain that it is not the case that all the “ignorant” pupils (as gauged by the type of school) play while the “well-educated” pupils do not. In addition, it must also be taken into account that young people have considerably less time for their respective hobbies when they start working (e.g., when they start a traineeship).

Social Integration of Intensive Gamers

In the public view, intensive gamers are frequently regarded as socially isolated or are seen as withdrawing purposely into virtual worlds. On the basis of the available data, we examined the social integration of intensive gamers in comparison to the other adolescents questioned. The question asked was: Are there differences regarding the feeling of security in the family and with friends or with regard to recreational activities and youth culture orientation?

Our data show, in general, that there are only few differences with regard to the social integration of habitual gamers in comparison with other adolescents. Most intensive gamers (51.7%) feel equally secure – to varying degrees – in their families or circle of friends as other interviewees (51.5%). Intensive gamers sympathize much more strongly with youth culture scenes such as soccer fan clubs, computer geeks (for both, $p=0.001$), the rock/heavy metal scene ($p=0.01$), the fans of music groups ($p<0.05$), or skinheads ($p<0.10$). These are frequently scenes and social groups which are also very active on the Internet and are also well-represented online. In addition, habitual gamers are much more often members of a sports club than other interviewees and are therefore equally socially integrated (refer to Fig. 19.1).³

The ratio of intensive gamers to adolescents of the same age group seems to be somewhat more divergent than among other interviewees. It is noticeable that intensive gamers do not feel quite as secure in their circle of friends and also participate less in recreational activities with their clique or other peers (response “never,” 6.2% vs. 3.8%; and response “frequently,” 49% vs. 52.9%). They spend their free time alone correspondingly “often” (10.4% vs. 6.3%). However, whether these data already indicate that intensive gamers more frequently become lost in virtual worlds and the possibility of potential dangers can be entailed as a result is purely speculative at this point in time. It may be possible to find a potential risk group among the 2.7% of the questioned intensive gamers who do not feel happy in their circle of friends

³All illustrations in Figs. 19.1, 19.2, 19.3, 19.4, 19.5, 19.6, 19.7, 19.8, 19.9, 19.10, 19.11, and 19.12 come from the authors.

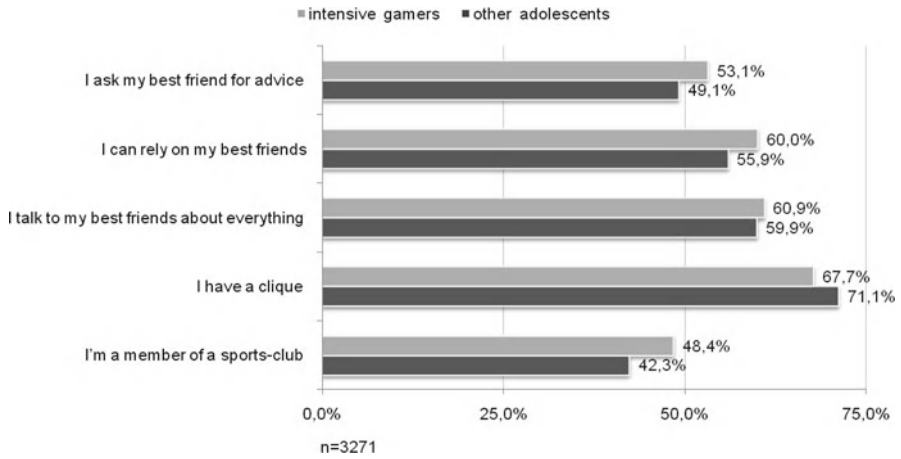


Fig. 19.1 Social integration of computer gamers and other interviewees

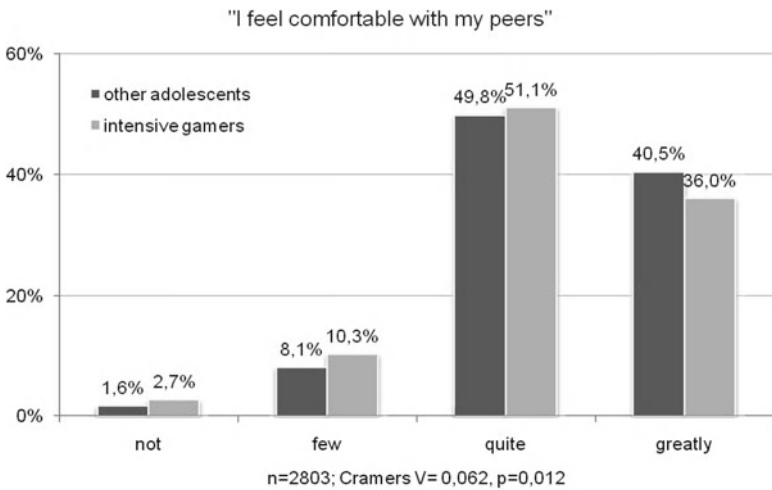


Fig. 19.2 Perceived sense of security in circle of friends among intensive gamers and other adolescents

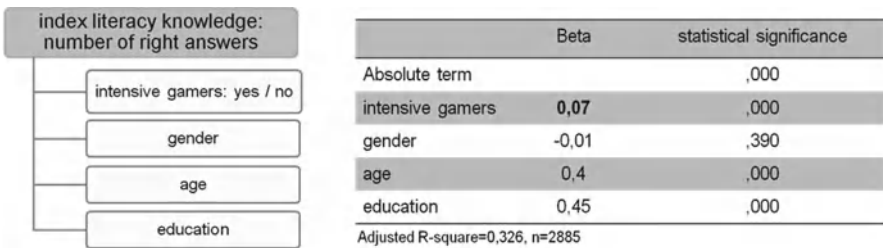
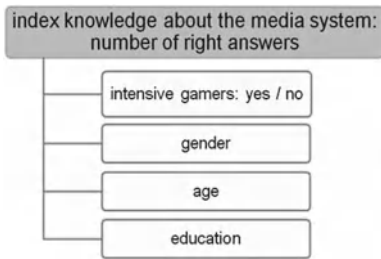


Fig. 19.3 Linear regression of literary general knowledge in relation to inclusion in the intensive gamer group and the control variables gender, age, and education



	Beta	statistical significance
Absolute term		,000
intensive gamers	0,04	,016
gender	0,21	,000
age	0,45	,000
education	0,41	,000

Adjusted R-square=0,359, n=2885

Fig. 19.4 Linear regression of knowledge of the media system in relation to the assignment to the intensive gamer group and the control variables gender, age, and education

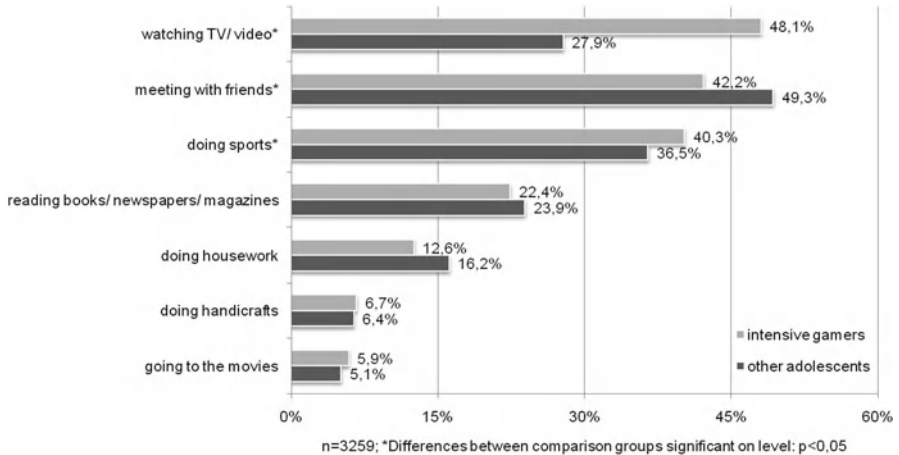


Fig. 19.5 General recreational activities of intensive gamers and other adolescents

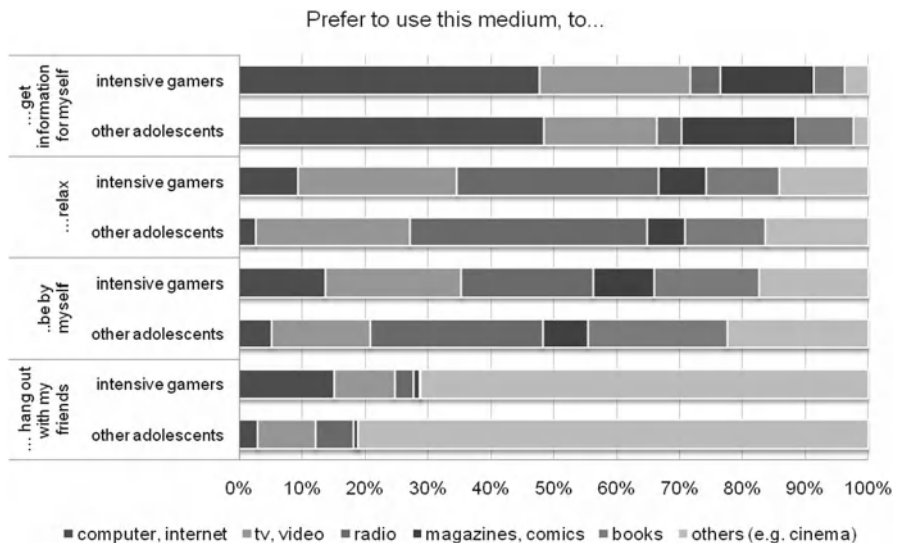


Fig. 19.6 Preferred aims of computer use by intensive gamers and other adolescents

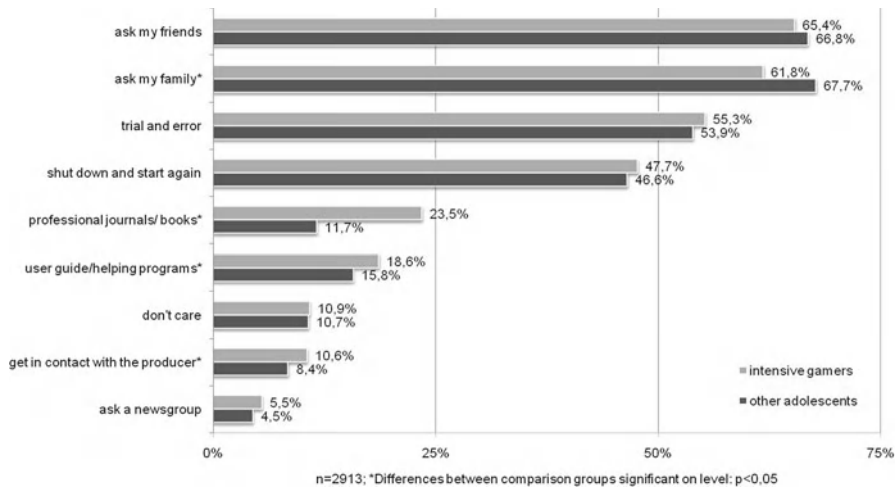


Fig. 19.7 Solution strategies in handling computer problems of intensive gamers and other adolescents

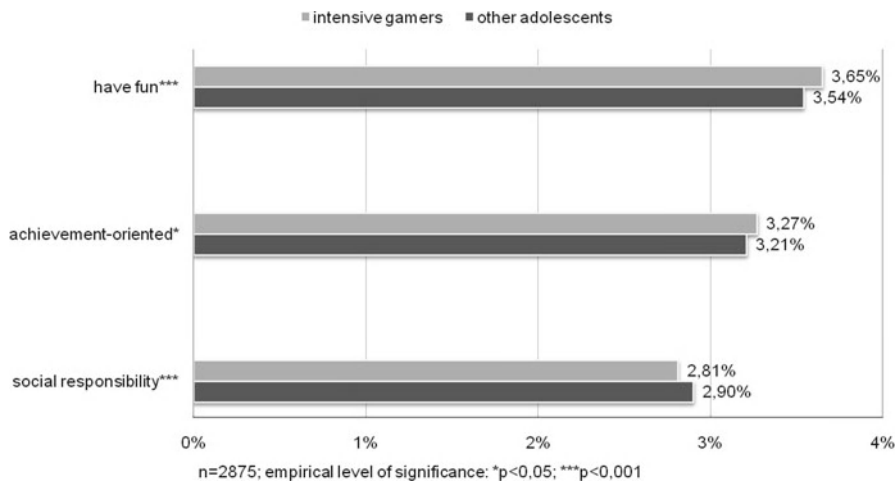


Fig. 19.8 Value orientation of intensive gamers and other adolescents

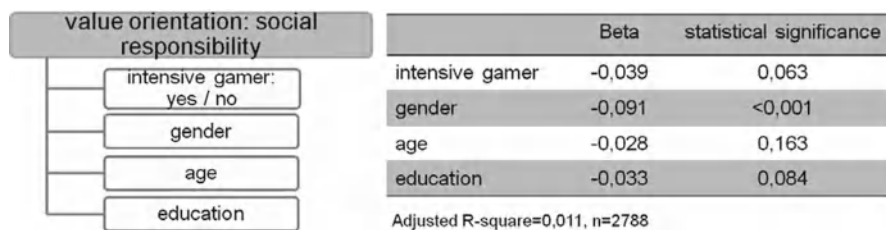


Fig. 19.9 Linear regression of the “social responsibility” value orientation of adolescents in relation to the assignment to the intensive gamer group and the control variables gender, age, and education

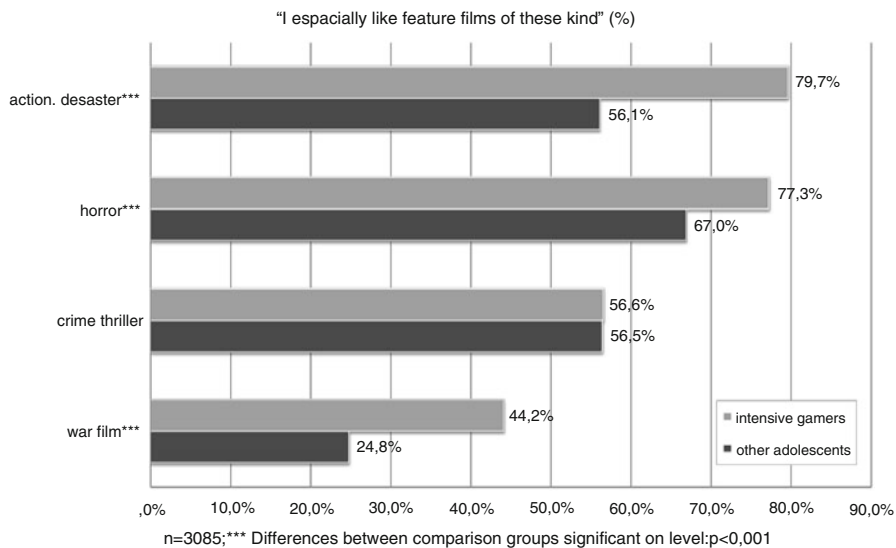


Fig. 19.10 Preferences for violent film genres among intensive gamers and other adolescents

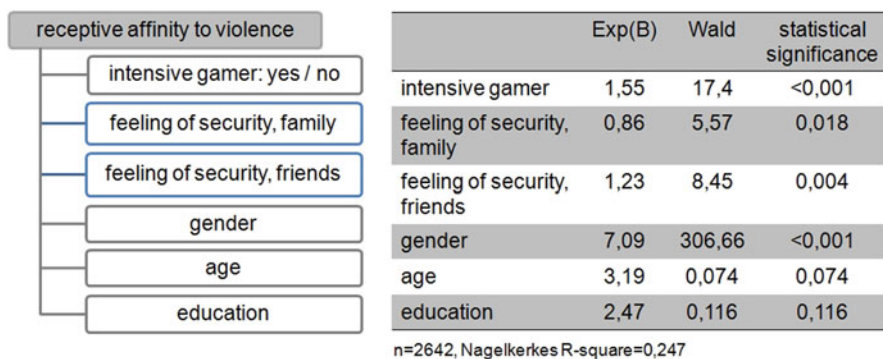


Fig. 19.11 Binary logistic regression of the preference for violent film genres among adolescents to grouping as intensive gamers, the subjective feeling of security in the family and circle of friends, and also the control variables gender, age, and education

(see Fig. 19.2). Some individuals could be regarded as “lonely fighters” whose social integration in real life is inadequate and provokes flight into a game world.

Media Competencies

The media competencies of adolescents are very varied, partly gender-related, and cannot be assessed on an overall scale. During our survey, we developed various components of media-related activity patterns using principal component analysis.

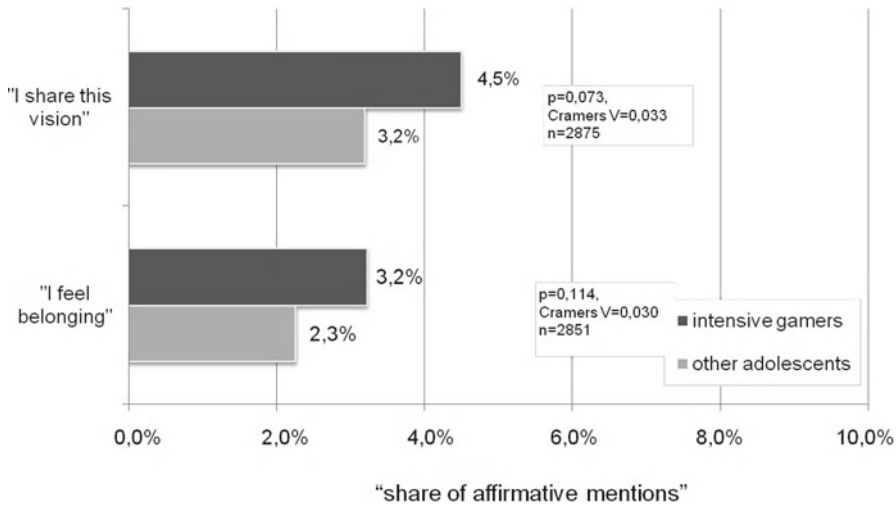


Fig. 19.12 Sympathy and subjective affiliation to the skinhead youth culture among habitual gamers and other adolescents

These components refer to different aspects of competence-oriented media activity, which form the basis for different clusters of media activity. The media competence-based principal components include receptive and interactive media use, informative and instrumental-qualificatory media knowledge, dimensions of media design, as well as analytical, reflective, and ethical dimensions of media analysis. With regard to informative media knowledge, the analyses revealed a two-component model, differentiating between literary educational knowledge and the knowledge of the media system (see Treumann et al. 2005, 160).

As intensive gamers deal with computers and audiovisual media more intensively and longer in general, we examined if habitual gamers have less literary knowledge but more knowledge about the media system as a whole. The background of this theory is the discussion that computer games are superseding the use of print media in everyday life to an increasing degree. The general level of knowledge of books and their reception was recorded as part of this study by means of various indicators for informative media knowledge, such as knowledge-related questions on media-specific content (e.g., “Do you know the name of the author of the Lord of the Rings?”).

In contrast to our expectations, the “intensive gamer” determinant played a rather more insignificant role for the literary educational knowledge of habitual gamers from a multivariate viewpoint (see Fig. 19.3). The general educational influence and age are the main factors. This result is backed by Bonfadelli’s theory (1993) that persons with a higher level of education use more text-based print media than those with a lower level of education, as reading requires high cognitive abilities on the part of the recipients. Berg and Ridder (2002) accordingly show that persons from a segment with a lower status level prefer more simple types of media such as television.

In light of the fact that digital games in particular often have a nonlinear story line and therefore make higher demands on the user than linear TV story lines, our results surprise us less when Bonfadelli's theory is taken into account.

Knowledge of the media system is also influenced to a much greater degree by education, age, and gender-specific differences than the assignment to the intensive gamer group (refer to Fig. 19.4). The results indicate that computer gaming alone does not result in a higher level of comprehension by means of computer use competence, as in this case only specific applications are used without any reference to the overall context of the media (in simple terms, inserting a DVD with a game does not automatically imply the ability to program a computer). The skills of the habitual gamers may in fact be related to game playing itself.

Recreational Activities

Surprisingly, almost half of the intensive gamers honestly admitted watching television in their free time, less often meeting their friends (with the exception of those who played games on the Internet), and less often carrying out household duties or other home-related work than the other adolescents. However, it can be said that the recreational activities of the intensive gamers on the whole do not vary significantly from those of other adolescents, as is often assumed (see Fig. 19.5).

Situative Computer Preferences

Computer gamers are often presumed not only to spend too much time at the computer but to be socially isolated (also due to their intentional escapism into virtual worlds), which is said to be recognizable by the way the media are used. The data of our study show that on the one hand intensive gamers often use the computer and the Internet alone but, on the other hand, integrate these media more intensively in their peer group than adolescents who do not play games as often (Fig. 19.6). The enjoyment of these media is therefore not limited to spending solitary time without being disturbed. On the contrary, it became apparent that video and computer games have a connective function and that the meaningful, communal experience is also important to intensive gamers. There are already initial indications that from the gamer's viewpoint, there is no need to differentiate between real and virtual worlds. The emphasis is less on escape from the real world but more on an expansion or extension of the gamer's own scope of potential. At the same time, the data can be interpreted in line with the uses-and-gratification approach that the use of the computer has different functions and satisfies different needs for different user groups. Therefore, the need for social proximity can actually be satisfied by participating in online games without any negative interpretation being necessary, as otherwise online chatting or instant messaging would also have to be regarded as critical.

In this context, the question arises as to the degree of independence and media competence actually involved in use of the computer by intensive gamers. The solution strategies of young intensive gamers (Fig. 19.7) show that they mainly use their social network for dealing with computer problems or opt for systematic solution methods such as referring to the manual or contacting the manufacturer.

Value Orientation

On the value orientation level (Fig. 19.8), within the framework of the analysis, intensive gamers appear to be more entertainment- and performance-driven and less willing to take on responsibility than other adolescents. However, they cannot be deemed to be generally hedonistic on the basis of the data. For this purpose, a cross analysis with other adolescents who focus intensively on other hobbies would be necessary. It can be expected that the values would also deviate from the norm in these cases.

As the results initially appear to confirm several opinions of habitual gamers that are backed by popular science, we used a multiple regression analysis to reveal the actual differences.

Statistical analysis reveals that existing differences on the level of entertainment orientation and willingness to assume responsibility are less influenced by the characteristic of being an intensive gamer than by gender-related differences (Fig. 19.9). We had already expected this, based on the assumption that off-line computer games satisfy communication needs much less effectively and are therefore not the first preference of girls in their choice of media.

Violence Affinity

Finally, it has to be verified whether computer gamers show a greater affinity to violence and whether this should be cause for concern. As we did not explicitly investigate the question of the use of specific violent games (e.g., *Counter Strike* or *GTA*) or genres and subgenres (first- or third-person shooter) during the survey, we examined the potential dangers of violent film genres – as a classification property for violence – as intensive gamers stated more frequently than other interviewees that they watched a great deal of television (refer to Fig. 19.5). Furthermore, youth cultures with a violence affinity and the self-concept of the adolescents were used to answer this question.

When comparing the preferred film genre, intensive gamers show a significantly higher preference for watching violent films such as action, horror, or war films than the other interviewees (Fig. 19.10). A binary logistic regression of the preference for violent film genres (Fig. 19.11) – the combined partiality of adolescents to horror and war films is taken as an indicator for such an overall preference – to the group

of habitual gamers, to attributes for social integration, and to the social-demographic control variables shows a statistically significant influence of the categorization as an intensive gamer. The significance of this influence is even greater for the receptive violence affinity than the effect of the perceived feeling of security of adolescents in their families and circle of friends as well as the effect of age- and education-related genre preferences. Nevertheless, the statistical significance of belonging to the intensive gamer group is much smaller than the significance of the influence of gender-related differences for the preference of adolescents for violent films. Kline et al. (2003) pointed out that this phenomenon could also be explained by “militarized masculinity” (ibid., 246). We were able to follow this assertion on the basis of the available data.

Another possible indication of the higher violence affinity of adolescent intensive gamers at a first glance was also the increased presence of frequent gamers among sympathizers with youth cultures with a violence affinity such as the skin-head youth culture (Fig. 19.12).

However, a binary logistic regression analysis also revealed that categorization in the group of characteristics of the intensive gamers, especially taking the social-demographic elements of education and gender into account, is not significant for the scene-related violence affinity of adolescents.

Qualitative Analysis

As previously mentioned, the media activities of adolescents were subjected to a cluster analysis in the study summarized in this chapter in order to do justice to their specific interests, proclivities, and competencies. Principal components formed the basis of the cluster analysis which were mainly based on the previously described media competence model of Baacke. In the quantitatively determined seven clusters, it was also possible to identify the media preferences in addition to the specific media competence. With regard to the computer gaming activities, three clusters showed below-average interest – the Education-oriented (20.4%), the Communication-oriented (19.1%), and the Creatives (3.1%) – and they are therefore not included in the following deliberations.

The other four groups of adolescents, the clusters of the Disoriented (20.3%), Consumerists (17.4%), All-rounders (12%), and Inconspicuous (7.8%), have above-average computer gaming activities and can be briefly outlined as follows.

Disoriented: The adolescents in this cluster are clueless when it comes to media use and are out of their depth. The members of this cluster are unable to gain a foothold in the media world. They seek orientation and need assistance but are not really well connected to advanced media users. The media use of the Disoriented is highly isolated and characterized by entertainment and situative needs such as compensation or distraction. Their computer use is quite unsystematic and not integrated into everyday life.

Consumerists: The Consumerists use media mostly for music downloads or Internet purchases. They use media regularly, effectively, and precisely to exchange information and for communication with friends, often about media-related topics. The media activities of the young people in this cluster are therefore embedded into the everyday life and interests of their peer groups.

All-rounders: The All-rounders use all forms of media and have very good media skills. They love to play computer games but also spend a lot of time using chats and experimenting with new forms of self-expression. They have a comparatively better connection to friends and are able to write software programs for game sections. These adolescents add new media skills to their repertoire, such as how to create a video or a game, or customize their community page more through trial and error. In summary, the All-rounders use media more intensively and more self-confidently for their own interests than other adolescents.

Inconspicuous: The media activities of the Inconspicuous are relatively unspecialized and characterized by uncritical media use. Their knowledge of the media system as well as their interest in technical or political topics is below average. They play computer games mostly for fun, but it is not their primary choice of leisure activity. The adolescents in this cluster are mostly boys who are not intensively engaged in computer gaming and therefore use the computer games more “according to whim.”

All-rounders: Within the computer gamers in the cluster of the All-rounders, it becomes evident that computer games are a part of everyday life. They prefer sophisticated games such as strategy games, adventure games, or simulations. The fascination of these games and the motivation to play them is to become a part of the fantasy world. Most of the boys enjoy the challenge, irrespective of the fact that it requires a variety of skills. One of the interviewees, the 13-year-old Marco, underlines this with the words: “You need to think about it and so on.” Facing a challenge is the focus of the media activities of the All-rounders, and for this reason, they are looking for excitement. Monotony and the reduction to mechanical functions are avoided. For this cluster, the genres are less important than the implicit activities. Another respondent, Andy, says, “the graphics, the story [...] the excitement of doing something or reaching the next level.” The ambition of this cluster to seek excitement and stimulation also leads to playing games for mood management. Depending on the situation or on what the young people need, they play also other game genres such as action games or ego-shooters. These games were concentrated on by the adolescents even when they usually prefer complex game stories. On this topic, Andy says, “Well, usually I prefer these strategy games, but when I’m really in the mood, I love to play action games as well.” When asked which games he prefers to play in these situations, he answered: “*Counter Strike*, *Day of Defeat* or *Medal of Honor* and *Soldier of Fortune 2*.” This self-confidence of being able to use the whole spectrum of genres and games is not only embedded into a variety of media activities but is also especially based on the confidence in their own computer skills.

The multifarious and stimulating gaming in this cluster is embedded into a family context, which is not regulating, but control-oriented. On the one hand, Andy's family pays attention to his homework and school work, and on the other hand, Marco plays games with his father and his sister.

In addition, for the gamers in this group, the computer games are an inherent element of peer activities. Not only gaming with friends and organizing LAN parties but also the communicative aspects, which are essential for cultivating friendships, are important in this context. They help one another if someone is looking for cheats or passwords, as this automatically leads to communication about the games, the experiences, the possibilities, and obstacles enabling them to progress in the game.

Disoriented: Within the cluster of the Disoriented, the horizon of gaming is totally different in comparison to that of the All-rounders. For example, the games played by one of the interviewees of this cluster, the 13-year-old Mike, are classified basically under the category of ego-shooters, action games, role-playing games, or sport games. It appears to be so that during gaming, the battle and dealing with violence as well as power struggles are the subjective horizon. For Mike, challenges within the framework of the game do not provide him with a subjective benefit as with the All-rounders. Levels which Mike cannot reach constitute a risk to him, as he could become overwhelmed and frustrated. However, taking into account that these games are characterized by hurdles and levels, the adolescents of this cluster protect themselves against their fear of losing by fleeing into emotional moods. With this argumentation, they are unable to achieve their aims if they are not in the right mood. It is only possible for Mike to gloss over his lack of ability with this construct: "I think you have to be in a good mood to play Nintendo [...], everybody says that [...] if you're not, you can't break records [...], that's a pity."

This restriction, which is self-imposed by the gamers' anxiety and failures, keeps them from playing complex games. One of the reasons why the fear of failure is so pronounced is the lack of media literacy, which is central for this cluster. Not only the limited, less reflective media usage could lead to violence-oriented game playing but also the computer itself is perceived as frightening. As they have no feelings of success, the adolescents of this cluster look for simple solutions such as the interviewee Mike says when he has problems with the computer: "I punched [the computer], I hit and pushed the keyboard [...] the computer started to get on my nerves."

Results and Outlook

If the results of the quantitative analyses are weighted with the social characteristics of intensive gamers, it can be stated that this characteristic group is, as expected, mainly male and young, while intensive gamers are represented in all education groups of young age. Adolescents from the lower and middle education segments

are only significantly overrepresented among older intensive gamers. With regard to the level of social integration, intensive gamers only vary slightly from other adolescents, except that they have more individualistically characterized patterns of recreational activities. Of interest is the fact that our data show that intensive gamers do not have a higher media competence in comparison to other adolescents. Nevertheless, they appear to be more confident in using Internet portals or trade magazines in order to solve computer problems. With regard to their other recreational activities, the intensive gamers in our study showed a greater tendency to watch television. In this context, a preference of the habitual gamers for violent film genres such as horror and war films can also be empirically traced. Statistically, however, assignment to the habitual gamer group seems to be negligible with regard to violent genre preferences in comparison to the statistical significance of the gender effect.

However, the results are very revealing. If the intensive gamers are examined in light of their general media activities (cluster typology) from a qualitative viewpoint, a differentiated picture can then be painted which shows considerable differences among the computer gamers themselves. On the one hand, we are dealing with a group such as the All-rounders who have a high level of media competence and therefore play games selectively in their full scope from strategy/role playing, adventures/simulations/sport simulations, and casual/fun through to action/shooters. This also includes regarding games as individual challenges and using them for mood management. This complex use overwhelms other groups. For example, the Disoriented stay on the level of simple action/shooter games and use only less complex versions of strategy/role-playing games. This group scarcely uses the games for intellectual challenges or to extend their personal horizons, and their use is more restricted to an affective level.

Playing and using the computer for some gamers (All-rounders) means an extension and intensification of their social networks due to their high level of media competence, as they are able to help others and do so willingly. On the other hand, there are adolescent groups (the Disoriented) who are sufficiently equipped with hardware and software but cannot use these correctly due to their lack of media competence or they are not sufficiently supported and assisted by their social environment, and this group can hardly realize their own potential.

Although both groups are intensive gamers and also play violent games, the social framework in which this takes place is so varied that the effects can even be regarded as opposite to what might be expected. Violent games are therefore met by very different sounding boards depending on the social environment, motivation, and media competence of the users. Our study is also indicative of the life environment of the gamers, which influences the motivation and function of the use of computer games. This brings us back to our theoretical prior assumptions that ultimately the preferences for use are more easily explained and, with regard to the use and gratification approach, interactivity and therefore, in turn, the individuality of the experience during use are explained, and indication is provided about the importance of digital games in the media socialization of intensive gamers without automatically assuming that this entails any risk or danger. Few of the conventional,

frequently negative connoted stereotypes can be confirmed on an empirical basis or only to a slight degree. In simpler terms, in everyday dealings with media, digital games do not put children and adolescents at risk as long as no significant deviations become apparent with regard to isolation or school problems. This should serve to de-escalate the heated discussions on the subject to a certain degree. From a scientific perspective, however, there is definitely an opportunity to conclude this long-winded discussion and to put forward other topics of interest for research in the context of the use of digital games by children and adolescents.

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Chapter 20

Online Games: Modern Media Worlds of Young People

Jan Keilhauer

Research Background and Empirical Approach

As a central development in the last few years, young people use the Internet more and more as an everyday area of experience – they increasingly spend their life with and on the net, combining communication, information and entertainment. Nowadays, video platforms and social network services are most popular amongst young people (see Schorb et al. 2008). Gaming in and via the Internet is an everyday activity for most youth: 71% of Internet users aged from 12 to 19 in the Federal Republic of Germany do so. Next to off-line games (84% of the same population play off-line on a computer), it is the most important form of electronic gaming (see *ibid.*). Online games range from simple casual games up to the complex worlds of massively multiplayer online role-playing-games (MMORPGs) (for systematic overviews, see also Schmidt et al. 2008; for exemplary studies, see Hemminger and Schott, Chap. 25; Carr, Chap. 26; Giang et al., Chap. 34).

The Media Convergence Monitoring is a media pedagogical research project at the University of Leipzig. It observes developments in the media appropriation processes of adolescents in the context of media convergence. Convergence means the merging of different media, in terms of technical aspects such as the development of multifunctional media and in terms of content such as the distribution of certain content across various media. The fundamental question of part of the study about online gamers was what relevance new media offerings have for the constitution of everyday life, for the socialization and identity construction of adolescents.

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Adolescents appropriate online games, as well as other media offerings, as actively acting subjects and depending on their particular characteristics, namely, age, sex, social background, current development tasks and everyday experiences (Schorb and Theunert 2000). The process of appropriation (from the access to the perception, evaluation and interpretation of a media offering) and its results can differ considerably from individual to individual. However, there are common forms of dealing with online games. There are public discussions about the impact of online games, for example, if online gamers are socially isolated and in danger of 'game dependency'. Empirical data can be found particularly for the area of the very popular massively multiplayer online role-playing games. Yee (2006) examined the motivations and experiences of users of these online games. There are several studies about their social functions, for cases of power gamers (Taylor 2006) and experiences in gamer groups (Ducheneaut et al. 2006; Zaremba, Chap. 28). Other studies describe the individual configuration of avatars and interaction within game roles regarding the coherence of online and off-line worlds (Ducheneaut et al. 2009; Yee et al. 2009). Furthermore, options for learning via online games are explored (Steinkuehler 2005; Wolf, Chap. 35). A comparison of adult and adolescent online gamers focused on the amounts of playing time or on favourite aspects (Griffiths et al. 2004). However, up to now for adolescents, there is not much data about the motives and specific practices of online gaming and the integration of online games into everyday life. The study of the Media Convergence Monitoring took the view from the perspective of young online gamers. An explorative approach was intended to consider how they use online games and what possible subjective processes of appropriation are. Therefore, quantitative and qualitative methods were combined.

An online survey was carried out at the Games Convention, the biggest trade fair for games in Europe, which took place in August 2008 in Leipzig. In this study, we investigated the use of online games of a group of young people, those engaged in gaming in some way, such that they visited a highly popular fair trade. Although the sample cannot be assumed to be representative for the whole population of online gamers, it reflects the broad levels of a group of online gamers with various interests and individual contexts rather than a very specific group of insiders. Three hundred and forty nine online gamers aged 10–22 participated in the online survey. The sample covers more male interviewees (78%) than female interviewees (22%). The main part of the sample (55%) were between 15 and 18 years old; 29% of the interviewees were more than 18 years old; 16% were younger than 15. We interviewed many more online gamers with a higher educational background (69%) than a lower educational background (31%). The data was systematically analysed in regard to sex, age and educational background. The online survey is a continuation of surveys carried out since 2005 so that we could notice changes from a long-term perspective. Crucial differences in terms of time will be mentioned below. To examine subjective forms and contexts of appropriation, qualitative interviews with 43 online gamers were conducted at the same location. Data from both quantitative and qualitative instruments has been analysed relative to each other.

In the following, the main outcomes¹ based on statistical data as well as descriptions of single cases were presented to answer these questions:

- How much time do young people spend playing online games, and how do they integrate the games into their everyday life?
- What kind of online game genres and what games do they prefer?
- How do young people maintain and set up social relationships, especially in the context of playing in gamer groups?
- What are adolescents' problematic experiences as a result of playing online games?

Duration of Playing Online Games and Integration into Everyday Life

Many of the interviewed adolescents spend a substantial part of their leisure time playing online games. Of them, 71% play every day or nearly every day on the Internet. Figure 20.1 shows for this group how many hours per day they play.² There is a general difference between gaming on school- or workdays and holiday time or weekends and between boys and girls. On average, boys play about 3 h per day on school days and about 5 h per day when there is no school or work. Girls do not play so long, but even so, they do play two and a half hours per day on schooldays.

Thus, for many online gamers, gaming is an everyday activity. Nevertheless, solely the duration of playing is of comparatively little significance for the relevance of the online games for young people. It depends on the particular genres, how much time young people spend playing, for example, whether it is an ongoing story within a role-playing game with thousands of members or a turn-based game, which can be continued without problems several days later. Furthermore, the duration of playing varies over the months and years of gaming, depending on other activities and circumstances. In the face-to-face interviews, many online gamers related that they had been playing for a long time and that there were phases of longer and shorter duration of playing. For example, Paul (aged 14) reports:

Actually, I'm playing Freeware [a browser based Role-Playing-Game; J.K.] for at least three years. But always with intermission. Then I went on the game for five minutes, killed some monsters, not more. And then there were phases, I played like two or three hours at a stretch.³

¹Results of the Media Convergence Monitoring at the University of Leipzig are also published on the website <http://www.medienkonvergenz-monitoring.de>

²All illustrations in Figs. 20.1, 20.2, 20.3, 20.4, 20.5, 20.6, and 20.7 are based on the Media Convergence Monitoring and come from the author.

³All quotations from interviews have been translated into English by the author.

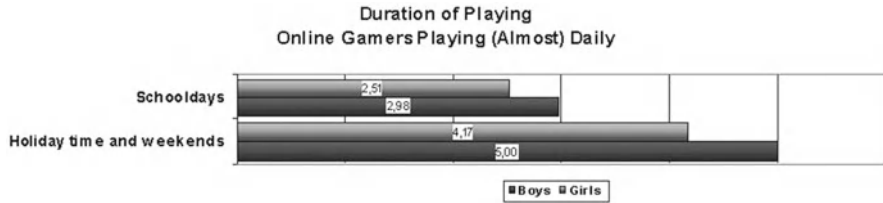


Fig. 20.1 Duration of playing; in hours per day (N=243)

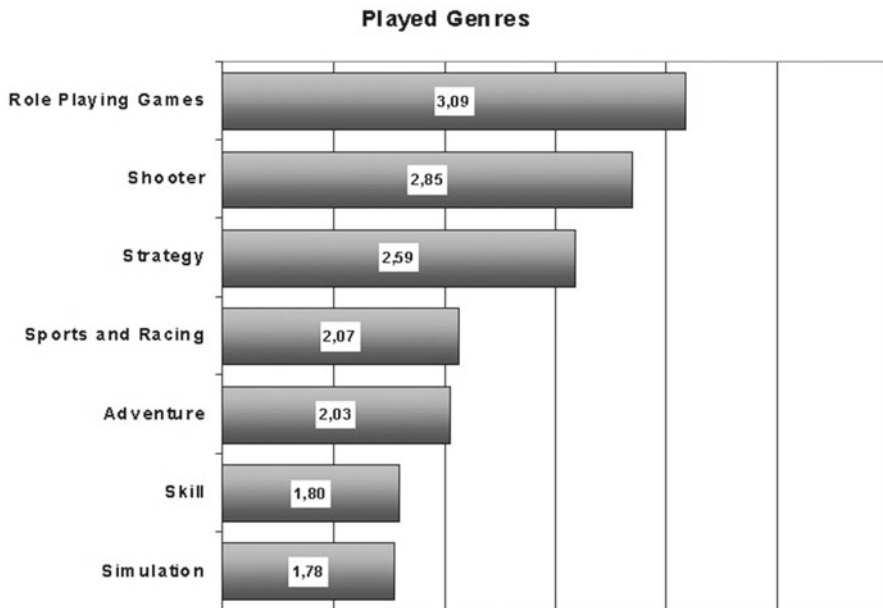


Fig. 20.2 Frequency of playing different genres; mean values; scale: 4 – often, 3 – sometimes, 2 – rarely, 1 – never (N=349)

Online Game Preferences

The relevance of online gaming is very different from individual to individual. The preferences for different game genres can give a hint as to what kind of content and manner of gaming are relevant for online gamers.

Figure 20.2 shows mean values for the frequency of playing the seven main genres. Role-playing games were played most frequently, followed by shooter and strategy games. Less frequent are sports and adventure games, and rarely played are skill and simulation. There are no significant differences in terms of age or educational background of the interviewees; however, we found considerable differences between girls and boys (see Fig. 20.3). Boys play shooter games much

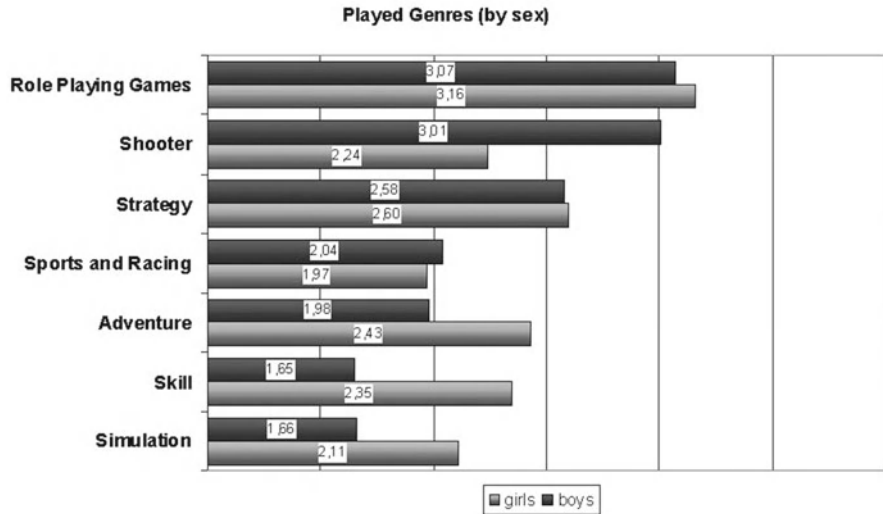


Fig. 20.3 Played genres; mean values; scale: 4 – often, 3 – sometimes, 2 – rarely, 1 – never (N=349)

more often than girls; whereas girls play more skill, adventure and simulation. There is no significant difference for the dominant role-playing games. Male gamers have a higher preference for action- and weapon-oriented competition than female gamers, whereas role-playing games, enabling competition as well as communicative and strategic gaming, are highly attractive for both girls and boys. Female gamers are more interested in adventure, skill and simulation games, which are mainly less complex browser games.

These preferences for online game genres correspond with the ranking of favourite online games. The answers to the open question ‘What is your favourite online game?’ show that the massively online role-playing game *World of Warcraft* is the most frequently mentioned favourite game of online gamers, and this has been constant in the surveys since the year 2005 for both boys and girls. Twenty-seven percent of all the interviewees declare it to be a favourite game in 2008. The shooter game *Counter-Strike* came at second place (19%). For the boys, other shooters and strategy games followed (*Call of Duty*, *Warcraft*, *Battlefield*). The girls’ further favourites are the MMORPGs *Fly for Fun* and *Travian*.

Based on the favourite games, we can estimate what manner of gaming seems to be significant for the majority of online gamers. MMORPGs such as *World of Warcraft* enable gamers to play in a certain role and to select and design their own avatar. It is all about becoming stronger and having success doing certain quests. A central part of the game is the social exchange with many other gamers. The game offers many different options (see Fehr and Heinz 2008; Seifert and Jöckel 2009), from competition and struggle to social communication and the pursuit of individual interests. Joining gamer groups called *guilds* or *clans* is a nearly inevitable part of the game because many quests only can be encompassed helping each other.

Shooters such as *Counter-Strike* consist primarily of struggling scenarios from an ego perspective, competition with others and improving skills. Two teams, a terrorist group and a counterterrorist group, fight to eliminate each other. We can find here a strong social dimension of gaming as well because the chances of success increase with personal communication, a smart distribution of roles within gamer groups called *clans* and more engagement in training (Wiemken 2003).

Online gaming offers a broad repertoire of activities. The social communication within the game seems to be of great importance (see Wolf, Chap. 35). It is realized by using in-game chats or TeamSpeak and, beyond the game itself, via further communication on clanpages or fanforums. There is also strategic communication needed to be successful in the competition and an option for role playing, which includes the possibility to represent and bring in one's own characteristics and abilities.

The Social Relevance of Multiplayer Online Games

Functions of Multiplayer Online Games

We have seen that young people prefer to play together with other real people in multiplayer games. Only 2% of the interviewees play online games only against the computer. From the question what aspects they like most about multiplayer online games (see Fig. 20.4), we can compare the importance of the different functions or motivations of online gaming.

'Play together with others' is the most important aspect. For 86% of the young online gamers, it is a very positive option. To 'compete with others' also is very relevant, as much as the options to 'talk with others', to 'get to know new people' and to 'play against real people'. Thus, many of the very important aspects go beyond the game playing itself and indicate further social motives. These social motives are more relevant than the possibility to 'assume another role' or 'discover something new'. Collective activities around the game are – apart from differences in regard to the socio-economic factors – the most important motives for playing multiplayer.

In the face-to-face interviews, young online gamers describe what their reasons for playing online with others are. For some of them, playing together means to be more successful. Leon, a 13-year-old member of *World of Warcraft*, says: 'From the other gamers you can learn some new things and, yes, that's just good. You can improve'.

But more than that, a number of online gamers find social exchange and feel socially integrated. Social experiences are more important than just better playing. Michael (17) gives an example speaking about his favourite game *Call of Duty*: 'You can talk with someone and play and compete and can get certain awards. Well, now, it has to do not only with the game but just do it together ... like just teamplay'.

Furthermore, young people can use online gaming to enlarge their social relations with other young people by entering a big community where they can find

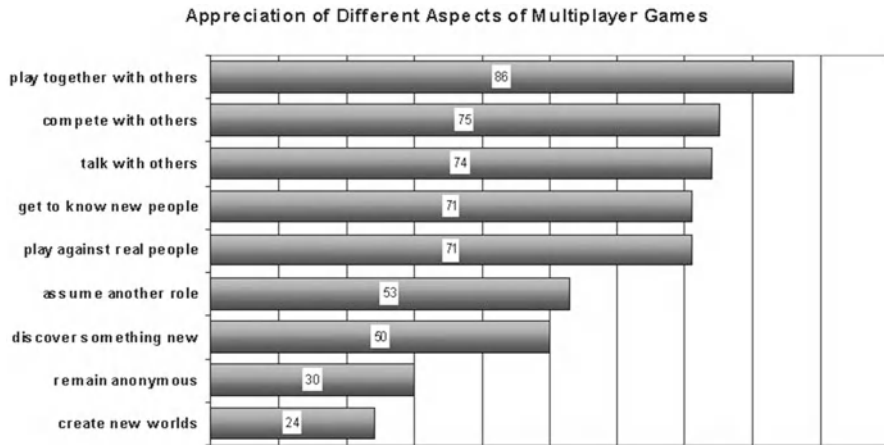


Fig. 20.4 Appreciation of aspects of multiplayer games; in percent (N=299)

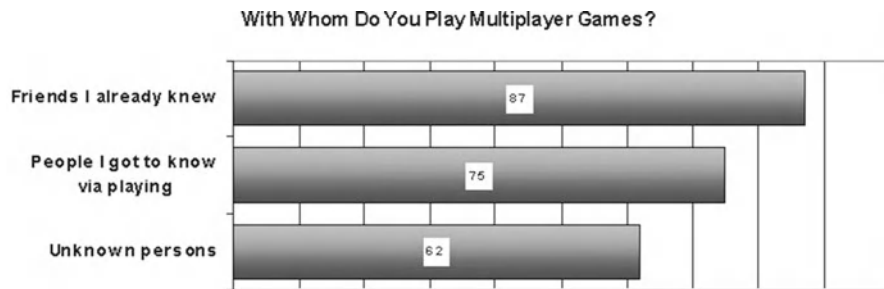


Fig. 20.5 Playmates in multiplayer online games; in percent (N=299)

like-minded people. Aline (17) emphasizes this: ‘There are lots of people in World of Warcraft and you’ll find very soon somebody to talk with. After all, it’s just a huge community’. In the following, these social aspects will be explored in more depth.

Managing Social Relationships via Multiplayer Online Games

For many young online gamers, it is especially important to have experiences together with their friends and to get to know new people by online gaming. Figure 20.5 shows with whom they play.

Most of the online gamers, 87%, play together with friends they already knew from real life. Seventy-five percent play with gamers whom they first got to know via playing online. In contrast, playing with unknown persons is the less frequent form of playing. Hence, gamers like to know with whom they play. The online gamers

we interviewed in detail told us how they maintain and set up social relationships by playing online games.

Online gaming, similar to other media activities, is often stimulated by friends. And many gamers themselves again ask other friends to play with them. And so they continue in the games world their social relationships from school or other activities outside the net. For Kurt (18), the main reason to play online is his friends because ‘you just know who’s playing with you and what to talk about’.

Many of the online gamers build up new personal relationships by online gaming. They get to know others by doing quests together and supporting each other. There are many similarities with real-life relationships. For example, Paul (14) said:

That’s almost like in real life, but you can’t see each other. You just ask, if anyone comes along in the group so as to help destroy any monster. And then, you’ll get talking to them, and some day you put them on the list of friends, meet once again in the game, go on talking, maybe get ICQ numbers – and so it evolves.

About half of the online gamers, mainly the interviewees older than 14 years, stated in the survey that they already got to know new friends through online gaming. In the face-to-face interviews, some online gamers made clear that they distinguish between friends and any community members. For them, other gamers are friends if they can talk with them about more than the games: private matters and youth cultural issues. Florian (16) describes possible communication contents: ‘You meet in TS [Teamspeak; J.K.] and talk about things like family, friends, school, styles of music and so on ... and about what happens in the world. And I suppose that’s close friendship’. Some online gamers mentioned the experience that it is just online friendship that allows them to speak openly about their problems. A few online gamers even report that after playing together for a longer time, they met their online friends in real life.

Playing in Clans and Guilds

Social relationship building often takes place in gamer groups such as clans, guilds or alliances. In these groups, online gamers organize their collective gaming; they plan strategies and build social structures.

Playing in groups is the most frequent form of online gaming (see Fig. 20.6); 58% say they do this often, and altogether 89% of the online gamers are members of clans or guilds. This confirms a trend over the last several years. ‘Alone against others’ is also a common form of playing, but is played not so frequently and mainly by the younger online gamers.

The main reason for playing in groups is the opportunity to be socially integrated. But participation in gamer groups as well can mean bindingness and obligation. Hereby, gaming can become an important everyday business, as Leon (13) describes it:

Once you play together with other gamers, I would imagine that it’s important that you are there all along, to do the things together. That’s sort of rhythm, when you have to look every day, if you’ve sold something or if you’ve managed something.

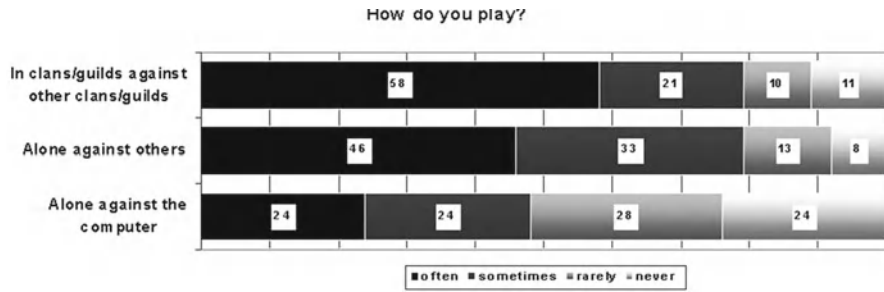


Fig. 20.6 Playforms of online gaming; in percent (N=349)

Furthermore, in gamer groups, there are social hierarchies and division of labour. There are leaders, trainers and normal teammates. Within the game strategy, everyone can assume a role, which fits for him or her, for example, as an attacking soldier or a healer. Online gamers use chances of advancement and professionalizing within a gamer group or by joining elite guilds or clans, which only selected gamers can enter. Successful gamers can acquire prestige and reputation. Therefore, some young people practise a lot. That means regular training and sometimes fixed working hours. Consequently, online gaming can lead to new forms of communities, revolving around interests in common and relatively independent of where members live. Clans and guilds can further become important areas of life and fields of work, comparable with real-life forms of engagement, for example, in sports clubs.

Especially in the context of playing in groups, online gamers use further media offerings and options, and they learn – apparently by the way – to use the media for their own purposes and to develop media literacy to a certain degree. They communicate via clanpages, forums or weblogs and instant communication channels. Thus, they organize activities, support others and maintain their social relationships. Some of the online gamers produce their own videos, which they publish in video platforms, or they create websites for presenting their own clan and their own interests. We can observe here how the online world with its different tools and social spaces becomes a living environment for young people, in which they combine various activities – a finding that is supported by Hemminger and Schott (Chap. 25), for instance.

Problematic Experiences with Online Games

Online games obviously offer an extended field of social experience for young people. Closely linked with these social aspects, they also give rise to problematic experiences. Altogether 79% of the participants of the online survey confirmed having had bad experiences. We asked in them what kind of experiences they had had.

As Fig. 20.7 shows, for many of these young online gamers, ‘cheating’ and ‘bad behaviour of other gamers’ are problematic. They also see problematic aspects in ‘technical problems’, ‘financial expense’ as well as in a lack of fun. Only for 25% of them is the time-consuming aspect of online gaming problematic.

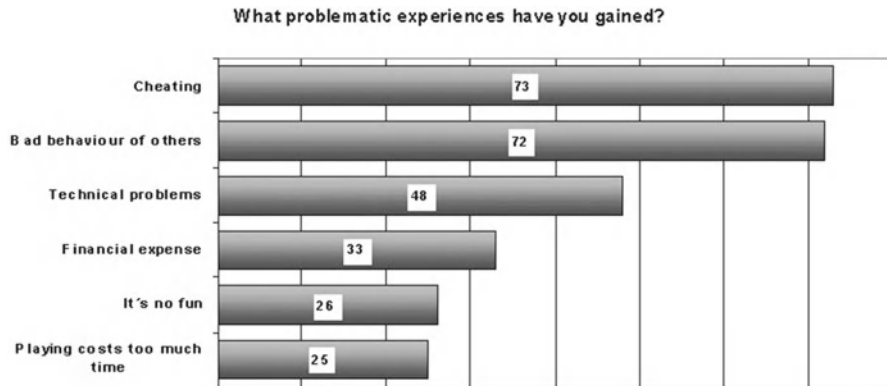


Fig. 20.7 Problematic experiences; in percent ($N=276$; only online gamers, who have problematic experiences)

The most relevant problems are connected with the behaviour of other gamers. In the online worlds, young people are confronted with problems similar to those in real life: bullying, cheating and stealing. And Frances (18), for instance, points out another aspect: ‘It sucks, when somebody writes: “I’m looking for a partner or kind of sex and stuff”’. These experiences are not unusual, but this does not discourage most of the young people from playing online. Online gamers do not think they are defenceless. In the communities, they can use rules and sanctions such as banning or warning.

Although appearing as a smaller problematical area in the survey, the time-consuming effect and in this context the potential for ‘addiction’ (as they call it themselves) are very often mentioned by young people approached in the qualitative interviews. We noticed that many of them had been thinking about that. The question of game dependency seems to be much discussed, especially in gamer communities and groups. For example, Aline (17) said:

In the guild we often talk about it, if there are people who are addicted. And many say, they know such people, but themselves they are not concerned. Well, it’s much discussed. And you notice: someone, who’s still online at two o’clock in the morning and plays every day, that’s not good.

As factors leading to excessive playing and dependency, online gamers interviewed identified, first, the persistence and endlessness of online games, especially in MMORPGs. That means, if they want to participate, they have to stay continuously in the game and cannot miss the actions of the others. Second, the aim is to increase success of their own character and to gain social appreciation. Therefore, they must ‘work hard’, and if they once get appreciation, they will continue to work in that area. This is connected with the third point they describe: the obligation to participate in gamer groups. Some of the young people are aware of these risks (for investigations into the risks of online gaming, see, e.g. Fritz and Misek-Schneider 2006; Wimmer et al. 2008; Höschen 2006).

Some young online gamers describe extensive playing as problematic, for example, if other social contacts get lost and tasks are neglected. Some of them also reflect

on the fact that it depends on the individual player's personal background whether gaming has a negative impact or not. They talk about the possibilities for dealing with the risks, for example, the creation of rules of time restriction in gamer groups.

Conclusion

Online gaming is an everyday activity for many young people. It is an example of the growing importance of the Internet as an everyday living environment for young people. The data shows how young people can work through playing online games on a main purpose of adolescence in and outside the Internet: the development of social relationships. This seems to be the most important function of online games for young people. For them, it is not a virtual world separated from 'real life'. Virtual and real levels are merging. They meet their 'real' friends here and set up relationships to (for the moment) 'virtual' friends. More important than the virtual-real distinction is the quality of exchange and personal support. Online relationships are perceived as real and can indeed become a relevant factor in socialization. Young people can enlarge social relationships on the Internet, and that can become important, especially in such cases when they cannot easily find like-minded people in their local environment.

One ensuing question is how young people connect social action in and outside the Internet. Up to now, we do not know much about the way they have recourse to the social experiences gained in online games in other areas of everyday life and how conversely social behaviour learned in 'real life' influences actions within the games. Different online games and online game genres offer special fields of game options in each case. It is essential to deepen research into single cases of game offerings.

As we have learned especially with regard to gamer groups, young people can gain social appreciation and communality. Engagement in gamer groups is comparable to forms of real-life engagement, including its obligation, peer pressure and social structures. When researching these processes, other forms of media communication connected to and exceeding gaming activities themselves – such as the use of online communities and self-created websites to present clan activities – should be focused on as well. So the influence of online gaming on the processes of socialization and identity building should be considered in the context of all the relevant media and social surroundings of young people.

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Chapter 21

Playing Together: The Player's Repertoire, an Obstacle to Learning

Steve Dahlskog

Background

Digital game research from a sociological perspective (e.g., on interaction between players through a game) commonly describes games with a large player-based culture, typically games like massively multiplayer online games (MMOGs). Other research studies show that children sometimes play computer games like *The Sims* or *SimCity* that make it possible to explore the pedagogical value of using video games as a learning tool. Not all games are online nor are they all played for pedagogic reasons. In this study, we will use a different but common arena – that of situated play. We will explore the console-based, colocated off-line game where only two persons are engaged in play.

If we compare online MMOGs and off-line console play, we find both similarities and differences. Taylor (2006, 36) notes that MMOGs have “an emergent culture in the game that has, over time, formulated norms around social behavior, how favors are given out, how killing is handled, and how help is requested” as part of the play culture. These emergent cultures are based on the social norms and behavior of players, a feature definitely not designed as part of the game, but rather developed and upheld by players. For a game to evolve into a game with a large player-based culture, the players need time to do so. One common way is to use a persistent game world. For multiple-user online games with nonpersistent game worlds, like games with instances of the game world which are reset at given intervals, the players usually use a game forum or something similar to build a kind of metaworld for the game with the traits of a persistent game world. For off-line console play, the evolution of rules and norms for playing the game is different. There is no persistent world or community to learn from since you usually play the game over a series of

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independent sessions. Only the save file is persistent, and the players can only bring their own skills into each session. For off-line play, where no large persistent world, metaworld, or striving game culture exists, the time spent playing together is more focused on how to play according to the rules of the game and on how the players play together, rather than on playing according to a norm established by a surrounding community. One rationale to do so – that is to follow the game’s rules – could be linked to the more explicit ending of an off-line game (an MMOG usually does not have an end at all, the players of an MMOG continue to play the game for other reasons) or as Juul puts it: “a game has multiple outcomes, the player must expend effort trying to reach as positive an outcome as possible” (2005, 56). A more explicit outcome of a game will demand that more effort is focused on completing the game, rather than perfecting a move or fine tuning an action in the game.

Learning to Play

To be able to play a game, the player must learn it, or at least have a rudimentary notion on how it functions. The skill of using games is what Gee calls “game literacy.” The recognition that it is a different and sometimes difficult skill to master is a useful standpoint when engaging in case studies (Gee 2003, 13). (Gaming) literacy can be viewed with Kellner as “gaining competencies in effectively using socially constructed forms of communication and representation” by “gaining the skills and knowledge to read and interpret the text of the world” (2002, 91). For a player to become game literate involves reading and interpreting a game world as well as performing the game in a way that is more advantageous or effective than that of an illiterate player.¹ The knowledge of literate players can be viewed as empowerment and gives a player the freedom to perform in a game, or many games, since games share common traits, for example, the ability to navigate a 3D space and connected spatial abilities are useful in all 3D games. Some research has been done in this area, but the study of Sjöblom (2008) has a different scope; the players are colocated and have at least some knowledge of the MMOG used in the study. Unlike Bennerstedt’s study (2007) into how novice players engage their first (or almost first) digital game and start to become literate players, our study goes into how already knowledgeable players explore a game which was previously not part of their repertoire of game skills.

Even though playing digital games can be viewed as a simple and fun activity, not all aspects of playing games are easy and straightforward. All games demand some skill to be played efficiently (Wolf, Chap. 35). Several researchers, including Juul, recognize that learning in games is important, “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” (2005, 5). The learning outcome might

¹For a conceptualization of computer game literacy, also see Kringiel (Chap. 40).

not be of any use or meaning outside of the game, but it is at least useful within that game and for the players themselves. During a session of play, this skill usually increases. However, players usually play more than one game during their career, and, thus, the knowledge of playing one game is typically used when the player learns to play another game. If two games resemble each other, more knowledge is drawn from previous game experience – even though *Doom* and *Quake* are more alike than *Lumines*, a *Quake* player could still benefit from the learning experiences of both *Doom* and *Lumines* when playing *Quake*.

The Player's Repertoire

We will revisit Juul's concept of the player's repertoire in order to discuss skill and knowledge in games. Juul's concept of the player's repertoire is described as two sets of knowledge, where one is the subset of the other. Let us begin by looking at the smaller, least inclusive of the two sets. Here the player's repertoire is viewed as the knowledge learnt and needed to play a single game:

Games are learning experiences, where the player improves his or her skills at playing the game. At any given point, the player will have a specific repertoire of skills and methods for overcoming the challenges of the game. Part of the attraction of a good game is that it continually challenges and makes new demands on the player's repertoire. (Juul 2005, 56)

Here Juul presents the repertoire as a notion of specific skills for a single game. However, the repertoire usually consists of more than a single game, at least for the literate player. The second, larger set is described by Juul as follows:

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. (ibid., 5)

The former should be viewed as a subset of the latter: when the player extends the knowledge of a game, the repertoire for this game grows, and, thus, the superset repertoire, the total game-oriented knowledge, grows.

The Research Question and Its Context

Based on previous studies that cover either social interaction in MMOGs, digital games' pedagogic value, or how previously nonexperienced players become more experienced with games, we feel that there is a knowledge gap to be filled. What we are studying is how an experienced player learns to play a game, in order to establish an understanding of how the repertoire concept works in relation to reality. By focusing on the experienced player, we hope to minimize factors that exist outside the game space and player, problems like interaction with the game software and hardware with a controller, understanding of 3D space, etc. We approach the

research question from the perspective of usability. Usability is concerned with the production of usable and safe systems. Usability is positioned on the boundary line between the human and artifacts: the field borrows from other research areas like interaction design, social interaction, and cognitive science in order to understand both the human and the machine. The research question is motivated by the will to understand how the players interact in order to understand the game as well as how the players play together. For this purpose, we will analyze the interaction between player and game as well as between player and player.

The Case Study and Its Method

The method used for the case study is interaction analysis as described by Jordan and Henderson (1995). Interaction analysis is an interdisciplinary method that involves ethnography, conversation analysis, proxemics, and kinesics. The method has been used to study games and players several times, for example, by Linderöth (2004), Bennerstedt (2007), and Sjöblom (2008). Interaction analysis is relevant to our study because of its ability to recognize that the expert knowledge in a social situation is not only located in the heads of individuals but also “situated in the interactions between members of a particular community engaged with the material world” (Jordan and Henderson 1995, 2). Furthermore, Jordan and Henderson state that “knowledge and action are fundamentally social in origin, organization, and use, and are situated in particular social and material ecologies” (ibid.). To be able to draw any conclusion about a particular individual player’s action, we have to observe the player’s interaction with the other players, with the gamepad and more importantly with the immaterial artifact, that is, the digital game. Interaction analysis is our preferred choice over other methods like direct observation, video recording, and verbal protocol (Ericsson and Simon 1985) because it incorporates many of the advantages the individual techniques have.

This study of players learning game rules together is part of a larger project that focuses on players in a colocated off-line environment with a dedicated game system, like a digital game console. Such a playing environment consists of two players, playing the same game at the same time, on the same game console in front of the same screen, ideally using the same type of controller in order to be able to exchange information on what actions the different buttons initiate.

The video material collected for the larger project is approximately 15 h long, of which 7 h² are especially suited for the observation of patterns in learning, communication, and negotiation of the intention of the rules, because in these sessions the players have not previously encountered the game system other than by reading about the game in magazines.³

²This material is based on players playing *LEGO Star Wars II*; the rest of the material is based on *LEGO Batman*.

³“I was thinking of buying it, since it they say it is a good game” – quote of left player in pair #11.

The players in the large project are both male and female and are of the ages between 19 and 35 years. The players in the research were 28 students expressing an interest in digital games and were divided into groups of two players. All pairs were created so that all players were playing with someone they had met prior to the play session. By grouping the players with an acquaintance or friend, we aimed to limit the problems of players not knowing their playing partner. The 28 players stated that they had prior digital game experience ranging between 5 and 24 years, and they played digital games 1–70 h per week (the average value for the group was 15 years of experience and 17 h of play per week). By using players that are literate, we set a different scope for this study than previous studies that explored how novice players engage their first digital game and become literate players; in this way, we were also able to avoid simple problems that can occur in play sessions like how the gamepads work, etc.

The video material was recorded by one camera. In order to properly do the interaction analysis, we needed to observe both the players and the screen at the same time. To do this, we placed a mirror on top of the screen and placed the camera so that it was filming the screen in the lower part of the picture and the mirror in the upper part of the picture. This *modus operandi* allows the analyst to observe fewer data sources, making it possible to save time and limit the occurrence of timing problems when synchronizing several audio and video data sources.

The analysis of video data was performed in three steps. The first step was to observe the players during recording of the video data in order to make initial observations. The second step was to run through the recorded material in order to compare and choose observations that could either recur during play sessions or appear in different play sessions. The third step was to write down thorough transcriptions and analysis of the principal, that is, important situations. Principal situations are mainly situations where players perform actions that are following a recurring pattern with respect to either communications about rules, coordination of play, or where players play differently to what one would expect. For this paper, we have chosen to follow a particular play session and a pair of players that we feel played in a way representative of the other pairs. Another advantage by following a single pair and not several pairs is that the events come in a logical or continuous order, and this limits possible mistakes when presenting the findings: in this way, we avoid mixing up learning situations from other pairs.

Throughout the interaction analysis part of this study, much effort is given to the aspect of the special case of players and digital games. Interaction analysis is not always a simple method to apply since it is sometimes hard to know whether the interaction is performed between two players, between a single player and the physical interface, the graphical user interface, the avatar, the game world or different combinations of them. A player can interact with the other player by using the physical world or by using the nonphysical world or a combination of both. Traditional interaction analysis usually focuses on how the humans interact with an artifact or each other by oral communication and body language. When applying interaction analysis in the context of digital games and players, we must realize that body language is seldom represented as an object for analysis since the players are

more or less static in their posture and they focus mainly on what is taking place on the screen. Instead, they use the avatar in the game world for interaction with the other player, or they use the avatar as a marker for pointing at something in the game world when it would be possible to use an index finger, etc.

The Game

The digital game used in this particular play session was *LEGO Star Wars II*. The game is an action and platform game, where the avatars can engage in actions like shooting, wielding a light saber, building LEGO objects, and jumping. The game uses objects that are made from LEGO bricks in the Star Wars setting. Apart from the setting, the narrative from the *Star Wars* movies has been adopted, but not completely. The developers have approached the *Star Wars* universe from a humorous point of view which is visible both during gameplay (e.g., Obi-Wan Kenobi uses the force on Stormtroopers to turn their helmets around) and cut-scenes (e.g., during the “I am your father” scene, Darth Vader does not say anything, but instead shows a picture of Anakin Skywalker and Amidala).

The game has drop-in and drop-out cooperative functions so that the game can be played by one or two players. The game can be played either in story mode, where only the preset characters are available, or in free play mode, where the players can choose different characters and even switch between them. The play sessions in this case study used only the story mode with two players playing cooperatively.

Preparing the Study

In order to be able to use the interaction analysis as a tool to understand what the players are doing, the analyst needs to prepare himself by learning about the game. To do so, there is a clear need for knowledge about the game and its rules. Following Aarseth’s discussion on the expertise of the researcher as the playing analyst, the game researcher can categorize himself as either newbie, casual, or hardcore (Aarseth 2003, 6; also see Carr, Chap. 26). For this case study, to be able to carry out the interaction analysis as fast as possible and not to have to return to the game too often, the author of the chapter played the game through with different characters in all modes (single- and two-player, both in story and in free play), spending more than 60 h unlocking all characters, all extras, and almost all canisters and completing the game to over 90% (according to the game). For the purpose of analysis, we used walkthroughs as well as drawing maps over the different levels the players were to play in order to identify where rules were used for the first time and where player actions would be needed for the first time. Another source of information about the game and its rules was the instruction booklet inside the digital game packaging. Several pieces of valuable information on how to perform moves with

the player avatar were provided in the instruction booklet, but during the recording of the case study, only one out of the 28 players used the accompanying game documentation, even though it was left clearly visible on top of or to the left of the Xbox 360 console: the players did not seem to view it as a practical source of information when playing the digital game.

The Play Session

The excerpts in this chapter are taken from a session with two male players (pair #4 in the large project). One of the players is 32 years old (player right, PR) and the other one is 35 years old (player left, PL). Both players have a vast experience of playing digital games, 23 and 24 years, respectively. When asked, the players stated that they play about 10 h per week on average. Both players stated that they enjoyed the game because of the social aspect of being colocated as well as the feeling of cooperation.

The reason for following these two players during their first encounter with *LEGO Star Wars II* and not to alternate between different pairs is because this pair's performance represents an average play session in the larger case study. The other players basically encounter similar situations, not always in the same order or position in the game space, but close enough to portray the majority of play sessions recorded for this case study. What is common in all play sessions is the way the players communicate and how they deal with different situations, be it using newly introduced rules and mechanics or how they attempt to solve problems.

One of the first things the players do, often individually, is to explore what actions their avatar can perform. A common strategy is to use the interface – in our case the Xbox 360 gamepad, to extract this simple knowledge. By pressing different buttons individually and observing their avatar, they deduce the different possible actions. The only problem with this strategy is when using contextualized controls and interaction as in *LEGO Star Wars II* where the same button is used both to engage in hand-to-hand combat and to fire your avatar's blaster. For this particular session, both players stated that they had played other games on the Xbox 360 before and should therefore be comfortable with the standardized gamepad.

Excerpt 1:

Player Left: [player moves avatar around trying different buttons]

PL: You can't jump.

PL: [presses the X-button]

PL: Yes – you can!

Player Right: A?

PL: X!⁴

⁴ All excerpts from the interviews have been translated (from Swedish) by the author.

As the players try to establish how to play, they usually tell the other player as they realize which actions trigger which results. Sometimes the findings are described as what to do and how to do it, and sometimes the other player (as in our excerpt) has to ask for more explicit information. This type of knowledge is a procedural skill which incorporates controlling an avatar as well as localizing your own and your partner's avatar (Bennerstedt 2007, 55). Such procedural skills are typically enhanced when faced with greater challenges and repeated activity.

In demanding situations, the players need to know and learn particular pieces of knowledge fast (e.g., how to jump, shoot, or open a door). When such situations arise, a player may pose a question for either player to answer, and, thus, the player initiates a dialogue (even though it may be in a stressed and loud tone of voice).

Excerpt 2:

[Stormtroopers appear from an opening at the far end of the room just entered and begin to fire their weapons, aiming at the players' avatars]

PL: Let's fire! How do you do that? [Starts jumping – hoping to find a button.]

PR: You can fight with X. [PR is has now moved so close that his avatar is engaged in hand to hand combat with the Stormtroopers]

PL: [The left player's avatar Princess Leia falls to pieces after a number of hits]

PL: Ah, yes. I was that one! [The left player realizes that the avatar he observed was the other player's]

PR: Ha ha – did you think that you were my guy?

Several players in the larger study repeatedly make the same mistake and mix up their avatar with their playing partner's avatar. This is an unexpected behavior since the avatars usually have a distinct difference in their appearance, either the clothing or color differs, and even though the avatars are made to resemble LEGO figures, one can easily see if the avatar is intended to resemble Luke Skywalker or Han Solo, for instance. The behavior is even more unexpected if we consider that our players in this study have an extended experience with games – according to them more than 20 years – and they are playing a game with a label stating that it is in the intended user span from 3 years and above, at least according to PEGI (Pan European Game Information). For the *LEGO Star Wars II* game with a shared screen, it is not always easy to establish which avatar a particular player controls (see Excerpts 2 and 4).

Excerpt 3:

PR: How do you put your weapon away? [The player is under the impression that you have to put your weapon away in order to be able to pull a lever.]

PL: [The responding player does not know but supplies with known information about the subject at hand – weapons.] It comes out with X.

For the players to be able to formulate a hypothesis on “how to put the weapon away,” the other player helps with information on how not to do it. Sometimes the players actively take turns in the formulation and testing of the hypothesis.

Excerpt 4:

- PR: Stand over here! We're supposed to press these buttons, right? [When trying to perform an action that needs both avatars performing the same action, almost simultaneously, it might be rude not to ask for confirmation since the players are not used to playing with each other.]
- PL: Yes, yes – I was just mixing up me with you [PL tries to apologize for the strange behavior and was going to help out but didn't realize that he was following the action of the other player's avatar.]
- PR: You think you are me!
- PL: Yes.
- PR: B? [PL is seeking confirmation on the knowledge needed in order to perform the right action with the "right" avatar.]
- [The players manage to open a protecting "door" for a window and a lot of "studs" fall out.]
- PL: Damn, that's nice!
- PR: Let's take the other side! [Walking on indicators in the floor]
- PR: Something happened there now. Did you see it? Something flashed there!
- PL: This? [PL stands on one of the indicators.]
- PR: It was something green. [When PR is recalling something in the game world which is not understood.]

It seems that the players feel safer communicating their thoughts when they play together. When PR is trying to test his hypothesis, he needs PL to cooperate and starts to direct PL's moves. In this excerpt, both players are engaged with the controllers and the gameplay, but interestingly enough, they do not point to what happens on the screen; instead, they use their characters to indicate what they are talking about. The interaction is taking place in both the physical world and the game world at the same time. The players actively take turn in the formulation and testing of the hypothesis actively as in Excerpt 4; and sometimes one player is the driving force behind the knowledge creation as in the last third of Excerpt 5.

Excerpt 5:

- [The digital game gives an instruction on screen: "You can push objects that have black and yellow stripes"]
- PL: [Reads instructions.] These ones right? [Uses his avatar to push crate-like objects.]
- PR: Ok. The right one. This one should go here – what button to move... [Moves the other crate.]
- PL: I think that you only walk into them? [PL does so.] Yeah!
- PL: Now, why don't I do this? Aha! [PL keeps pushing the crate until it drops into a hole in the floor.]
- PL: Really nice that this takes... Oh shit [Door opens – the Stormtroopers on the other side of the door start to shoot at the players' avatars.]
- PL: [Shoots back.] Arrgh.
- PR: Sweet! [Complementing on well performed shooting.]
- PR: We shouldn't kill him [PR recognizes C3PO as a friendly character standing behind the Stormtroopers.]
- PR: You can take control of him. Some kind of code here? [Looking at a panel beside a door that has the face of C3PO.]
- PL: "Walk up to friendly character and press Y to take control" [Quotes the instructions given in the digital game.] – Henchmen!

PR: Now I got him. I got him, now. Now I AM him. [PR tries to do what PL reads out loud.]

PL: But you are. You are? [Misses PR taking control of C3PO.]

PR: “Droids can operate LEGO panels. Press B to activate them.” [PR stands close to the panel again and quotes the instructions given in the digital game.]

PR: Ah – it’s that one. [PR is realizing that C3PO can do something with the door or panel.]

[Cut-scene in the digital game. The cut-scene shows Princess Leia handing over the Death Star blueprints to R2D2.]

PR: Mhum.

PL: Hmn, what happened there?

PR: Now, she disappeared! [Princess Leia has disappeared, which is problematic since up until now one player has been playing this avatar and the digital game switches avatars for the players.] Now I became him [C3PO]. You became my guy, I guess.

PR: Ai, I didn’t manage to read [Instructions from the digital game disappeared from screen.]

PL: You became boosted? [The animation that shows when the players change avatars could be interpreted as an energy boost, but this is not the case.]

PR: So was he. [Continues switching avatars, this time from C3PO to R2D2, and accepts the other player’s interpretation as something possible.]

PR: Let us go forward. To here and check it out! [PR starts to move to the far end of the room with R2D2-avatar which uses wheels.]

PL: Wait. I wonder what to...

PR: You should also become a droid? Maybe, I don’t know?

PL: Damn you can’t choose!

PR: Come here now! [PR enters the next room, dragging PL with him.]

In this excerpt, the players seem to be attached to “their” avatar, and when the Princess Leia avatar disappears, this confuses the player that controlled that avatar. In different play sessions, other players seem to have grown even more attached to Princess Leia and start to look for her. The confused player becomes more passive than the partner.

Excerpt 6:

PR: I can shoot with something? [PR tries the X-button with the R2D2-avatar. R2D2 is only armed with a stun gun, which has a totally different look and function than the ordinary blaster that other avatars carry.]

PR: That’s not so good. I can’t destroy boxes with this guy. [PR tries to understand the function of the stun gun and does so by trying to blow up boxes with the stun gun.]

PL: What use are you then? [PL only recognizes the usefulness of common avatars armed with blasters for combat.]

PR: I don’t know? [Even though the droid avatars proved their value valuable in opening doors, PR cannot disagree on the usefulness of common avatars.]

PR: Now I’m him again. [PR switches to the C3PO-avatar.]

PL: I probably have to choose him. [Since they seemingly cannot progress with the current avatar Captain Antilles, PL hypothesizes that he should change avatar to make some progress.]

PR: Is it that one we should pull down. The elevator over there? It looks like a thing we should use.

In Excerpt 6, the players do not engage themselves in reflecting learning activities. Possibly because of what is happening at the far end of the room (rebels and Stormtroopers are engaged in combat with each other) or because of the prior confusion on the switching of avatars. The players are safe but feel stressed because of the shooting, and they focus on the preferred abilities of their first avatars which

could shoot with blasters – an ability needed if they encounter Stormtroopers. It could also mean that the players feel more attached to a specific avatar rather than the abilities of an avatar.

Excerpt 7:

PR: What happens if you do that thing? No. It didn't work. That thing. There is a button over there. Should one pull down that one?

PL: Right.

PR: Should we run back? All the way to that room... Is it supposed to be that...?

PL: That we have gone too far?

PR: Too far? I don't know.

Continuing within the same room as before (see Excerpt 6), the players have used "a vehicle"⁵ (a crane) to solve a puzzle and to progress further in the game. The players do not solve this puzzle as fast as previous puzzles. In fact, they spend more than 4 min to produce an idea, but rather than focusing on a solution within the room, which all progress-based puzzles in *LEGO Star Wars II* have, they start to question their knowledge of the game, and they begin to formulate a strategy that comes from other games. The players are either not incorporating the knowledge of this game to their total skill repertoire or not internalizing it. The players' repertoire does not seem to be entirely context based, but rather universal for all games, so much so that knowledge from other games takes precedence when problems arise in the current game.

Excerpt 8:

PR: [Swings a light saber with the avatar Obi-Wan Kenobi.] Ooops. We are a team. I can hurt you. Damn.

PL: You can? Oopf. [PL is a bit startled and when his avatar takes damage from the wielding of the light saber promptly verbalizes that his avatar is taking damage.]

PL: [Tries to shoot with no enemy present and hits PR's avatar.]

PR: You can hurt me too! [A bit choked that PL fires his blaster at his avatar.]

PL: Wait. Come back here. We need to have a good field of vision.

PR: [Moves back.] I don't know. How should we do if... If you fire... We'll have to try to keep out of each other's way when this happens.

Here the players realize something that other players realized earlier on. Almost 27 min into their play session, they realize that they can harm each other's avatars. The interesting part is that they try to formulate a policy to follow a norm from real life: "Do not harm the ones you cooperate with." The norm they try to uphold is not really needed in or a part of *LEGO Star Wars II* since the avatars respawn instantly and the penalty for losing an instance of your avatar is minimal; it only affects the number of studs you have collected.

Excerpt 9:

PL: [Grapples with Luke Skywalker-avatar.]

PR: What button was that?

PL: Jump-button.

PR: I can't use that one. Only you can do that.

⁵ According to the game, the crane is a vehicle even if it is stationary.

[The players continue to play for another 5 minutes with intensified use of different abilities of the avatars of different types until]

PL: So cool, that we have different...

PR: ...different things. Yeah. [Talking about different abilities but focusing on the materialization of the actions of the avatars – Obi-Wan has a light saber and Luke a blaster.]

Here we can see that the players use a reflective process in their learning of the gameplay. The reflective process in digital game learning is a notable one (Gee 2003), but it is not always an active or present one as this excerpt shows. Bennerstedt states that for some games, the reflective process is initiated by force which is one of the advantages of the use of digital games as a medium for learning processes (2007, 64).

Conclusions

The players show participation in five types of learning situations:

1. Trying-observation (Excerpt 1)
2. Observation-sharing (Excerpt 1)
3. Turn-taking formulate-try-observe (Excerpt 4)
4. Observation-reflective (Excerpt 8)
5. Reflective (Excerpt 9)

These situations do not vary much from previous findings (Bennerstedt 2007) except for the amount of time the stand-alone reflection takes. The experienced player behaves in principally the same way as the inexperienced player except in one aspect. Previous findings show that a game and its theme can send different messages and thus obstruct the player's possibility to perform or progress a particular action:

These observations show that a central learning process during play is to go from the starting point where the game works in analogy with its theme (doors are possible to open, it is possible to fall off ledges) to learn the rules of the game in question (only certain doors, with a specific look, are possible to open, avatars cannot fall off ledges). (Linderoth 2004, 249)

The game *LEGO Star Wars II* is a game where the players are spared from the problematic mismatch of theme and rules. However, watching the players performing, we can clearly see that something else is not working smoothly. The players' own repertoire sometimes hinders them in their learning and their progress through the game (see Excerpt 7). When the players are challenged with a puzzle and cannot solve it and continue their progress through the game within a comfortable time-frame, they start to adopt a strategy of going back to previous areas which is a common solution in other games, but has not been used in this game at all. Instead of just trying all the objects in a room, the players think they have forgotten something in a prior room. The players are either not incorporating the knowledge of this game to their total skill repertoire or they have not internalized it. The players' repertoire seems to be rather universal for all games, and the players tend to stick to their repertoire even when it becomes dysfunctional. The learning process of video gaming is viewed by Gee (2003, 90) as a situated activity which includes a reflective

process. The reflective process contains creation, testing, and retesting of hypotheses as we have seen in the excerpts. However, sometimes the testing and retesting of hypotheses seems less important, and the players fall back on their prior repertoire. This becomes a problem when the previous knowledge or repertoire conflicts with what has to be learned to play a new game. The old repertoire works as a mental block or obstacle for the players to incorporate the specific game knowledge in the specific context. We conclude that this (re)learning obstacle is related to cognitive schemata (on the topic of relearning also see Mitgutsch, Chap. 36). A (cognitive) schema is a concept that supports us in order to structure and interpret information. By using schemata, it is possible for a human to take shortcuts in the interpretation of information. However, these mental solution patterns also cause humans to exclude new relevant information and instead keep old information that confirms their preexisting beliefs and ideas and thus hinders the extension of the players' repertoire.

Therefore, the problem of reaching a higher level in the play behavior that allows for a reflective process is perhaps one of the largest obstacles when using games for learning. New players that cannot learn in such a situation will perhaps quit playing instead of learning something more in order to progress further into the game. Developers of commercial or serious games cannot base central game knowledge or concepts entirely on an in-game reflective learning situation, because it takes more than repetition and simple instructions to invoke them. In our case, it takes the players more than 30 min to formulate a hypothesis on the use of different avatars which the game designers tried to teach them after 10 min (see Excerpt 5). All actors in digital game development should question the learning potential for their game, especially when the industry is hoping to reach a larger market with less literate players than the current market does.

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Chapter 22

The Right Game: Video Game Choice of Children and Adolescents

Sven Jöckel and Leyla Dogruel

The Availability of Video Games

Over the last few years, the availability of video games has become considerably more differentiated. Video games can now be played on the PC, on a gaming console (both mobile and at home) or on the cell phone. The available titles range from easy to play casual games in a web browser, to complex virtual worlds or action-packed shooter games (Blake and Klimmt, Chap. 23). Several thousand titles can be played on the various contemporary platforms. For the Nintendo DS, for example, more than 1,400 titles are publicly available (see USK/ESRB databases). Adults and children as consumers can therefore choose from a broad range of titles. The question however remains: How do gamers select the specific games they like to play from the available range of titles? With respect to the video game use of children and adolescents, this question gains importance. As many gamers are still minors, legal schemes are installed to protect them from harmful content.

The aim of this chapter is to scrutinize existing approaches in media choice theory as applied to video games. Based on these theoretical approaches, an integrative, phase-based media choice model for video games is deduced. This model accounts for the various phases in the media choice and selection process. Further, the emphasis is put on the media choice of children and adolescents with respect to three influencing factors: parental mediation, developmental status

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and legal regulations. A critical evaluation of the integrated model for explaining children's media choice and possible practical implications are discussed in the concluding section of this chapter.

Approaches in Media Choice

Along with the enormous range of video games on offer, academic research on video games has increased tremendously over the last few years (Klimmt 2009). Research no longer focuses exclusively on the – in particular negative – effects of video games (Lee and Peng 2006). The question 'Why do people play video games?' has gained some prominence in academic research as well (Bryant and Davies 2006, 182; Fritz 2003, 10). The answer to this question lies in a range of different approaches (Vorderer 2006), each with a specific theoretical (and disciplinary) focus. Four generally acclaimed approaches are at the centre of attention in this chapter: the 'uses-and-gratification approach' (UGA), the 'transfer model' by Jürgen Fritz, integrated action-theory-based approaches and economic decision models.

The Uses-and-Gratification Perspective

The uses-and-gratification approach (UGA) is one of the most prominent theoretical approaches in explaining video game (and media in general) choices (Scherer and Naab 2009). The UGA is not a monolithic concept but rather a range of theoretical and methodological approaches. The basic assumption of the UGA is the perception of media users as active recipients. These media users have certain needs that they aspire to satisfy through various media. Thus, the media become possible sources for gratification (Ruggiero 2000). One starting point of UGA-based research is the identification of typologies of needs that explain why certain media are selected and made use of. As of today, several typologies of needs for video game use have been identified. In particular, the need for challenge and competition, but also – with respect to multi-player games – the need for community and social exchange seems to play a decisive role in explaining gamers' video game choices (Jansz and Martens 2005; Lucas and Sherry 2004; Seifert and Jöckel 2009; Sherry et al. 2006; Yee 2005).

From a theoretical perspective, the distinction between 'gratifications sought' and 'gratifications obtained' is a central component of more elaborated concepts in the UGA tradition. The now almost classical 'expectancy-value model' by Palmgreen (1984), for example, argues that gratifications sought are the product of expectations towards a media product and their evaluations. Media use is then based on these 'gratifications sought'. When the medium – a video game – is used, the gratifications obtained from this use may then be compared with the original gratifications sought which result in a feedback process for further media choice processes (Palmgreen 1984; Schlütz 2002, 46). Schlütz (2002) expanded this model in order to explain media choice with video games. In her perspective, the starting

point for choosing a video game is a deficit motivation, a lack that – when it becomes conscious – needs to be overcome. This results in certain gratifications sought, leading to the use of video games. In Schlütz' perspective, video-game use can then be distinguished in two distinct phases. The gaming experience phase is mainly based on flow-like (Sherry 2004) experiences, while the preceding phase is characterized by the development and evaluation of obtained gratifications. In line with the expectancy-value model, these gratifications obtained impact on the expectations of a media product in following media choice processes (Schlütz 2002, 72–78).

Still, no general model for the use of video games could be deduced as both gratifications obtained and gratifications sought may differ not only with respect to media in general but also with respect to certain video game genres and types. Besides the open methodological issues, in particular with respect to the scales used in UGA research, a general critique on UGA-based research for video games is the perception of the user as a conscious decision maker. Asking a gamer after a video game session why he has played a game may yield answers that do not account for the actual decision-making process (Vorderer 2006, 55–56). Additionally, the question remains open why the choice was made for a specific game (Jöckel 2009, 99–100). Still, UGA research may generate a good starting point for media choice theory, as long as it moves beyond the identification of more or less concrete typologies of needs.

The Transfer Model by Jürgen Fritz

In contrast to UGA-based approaches which originated in media research in general, Jürgen Fritz developed a genuine model for explaining video game use. Arguing from a media pedagogy/media education perspective, he sees the aspects power, sovereignty and control as explanatory variables for the fascination of video games. His approach departs both from the stimulus-response-based effects tradition and the UGA tradition with its focus on intention-driven decision-making processes. The fundamental assumption of Fritz' model is the perception of the world from a constructivist perspective. Reality is shaped by the cognitive capacities of individuals. The world we are living in therefore consists of several worlds that are generated by our cognitive system. Cognitive schemata allow us to navigate between these worlds. The 'virtual world' of video games is one of these worlds – such as the 'real world' (of concrete tangible objects around us) or the 'dream world'. Between these different 'worlds', so-called transfer processes occur (Fritz 2006).

Fritz' model then assumes that gamers choose the games they play with foresight for possible transfer processes (see Fritz and Fehr 1997, 67). What gamers aspire to are power, sovereignty and control (Fritz 2003, 10). Achieving mastery in the game through cognitive or sensomotoric skills is seen as a crucial aspect of gaming. The resulting process can be described as 'structural coupling' (*strukturelle Kopplung*): Gamers' preferences are shaped by their need for control (*ibid.*). These preferences are then matched with the concrete offer of video games. Structural coupling means simultaneity, but not necessarily a causal relationship

between certain structures and action patterns or experiences between the individual, cognitively generated worlds of men (Fritz and Fehr 1997, 67; Fritz 2006, 121). The concrete aspect of game playing is then modelled, in parallel with Schlütz' approach (2002), as 'flow'-like activity which results in an amalgamation of action and consciousness (Fritz 2006, 132–134).

Fritz concludes that a functional scheme can be deduced. The starting point for this scheme is a primary motivational source such as boredom or a need for excitation. When these motivational sources are confronted with a concrete offer of video games (as a kind of requesting stimulus), not only a satisfaction of these primary motivations can be achieved, but they may also result in self-concentrated gaming experiences (labelled as secondary gaming actions). In the end, these gaming experiences may lead to mood management and flow experiences, if players achieve power and control in the game. However, boredom and failure in the game may lead to withdrawal from it (ibid., 138–140).

Fritz' transfer model with its roots in constructivist action theory is an elaborated attempt to explain video game use. In contrast to approaches in the UGA tradition, its empirical examination is still limited. The few qualitative studies that were carried out are very much oriented on concrete cases (Witting 2007). No general model of transfer processes could be deduced. The fact that gamers form a connection between their real world leisure activities such as playing football and virtual world gaming preferences (playing football games) is rather plausible but cannot explain why gamers prefer one (similar) alternative over the other. Accounting for the different livelihoods of gamers and the relationships between the different circumstances (or 'worlds') seems to be an important element for an elaborated but also applicable media choice model for video games.

Integrated Action-Theory-Based Models

Approaches in media psychology and entertainment research that expand the UGA perspective have led to new insights for answering the question 'Why do media users play video games?' (Klimmt 2009, 65–66; Vorderer 2006). One focus of these elaborated approaches (Klimmt 2006) lies in the analysis of the reception process of video game playing (Meldgaard, Chap. 17). Not so much the selection and choice in the pre-communicative phase but the processes that occur during the communicative phase are in the centre of research. Still, one theoretical branch in entertainment research provides some additional insights for media choice. Video games, like other media, may be used for mood management. Grodal (2000) as well as Bryant and Davies (2006) see the essential function of video games in the affective regulation of moods. The application of mood management or selective exposure theory (Knobloch-Westerwick 2006) to video games is not without problems. Mood management theory, for example, is not able to explain repeated exposure to video games (Bryant and Davies 2006, 190). Overall, empirical studies using mood management as a theoretical background are still limited (Reinecke and Trepte 2008).

Aspects of mood management or selective exposure theory may be integrated with elements of the UGA tradition, particularly the expectancy-value model in order to explain media choice processes. Hartmann (2006), for example, aims to find a causal explanation of selection intensities of different media offers (Hartmann 2006, 174). Based on the expectancy-value model, he argues that media users evaluate an alternative based on developed preferences. What he includes in the decision-making process are various forms of costs. Not all possible alternatives have the same costs. Costs may thus be components of what turns out to be the expectancy of a certain alternative (ibid., 148). Furthermore, motives or needs that are central in the UGA tradition are only one component of expectancies, but the video-game-specific knowledge system and expectancies of (required) competencies also impact on the media choice process. The effect of video game exposure may thus result in varying degrees of cognitive or affective response (ibid., 125). If users do not assume to have the required level of competence to play a certain game, this game is not chosen as an alternative, if gamers' aim is cognitive relaxation as the potential relaxation benefit is overshadowed by the expected hours of training.

Overall, Hartmann's model is a very complex and theoretically saturated model for explaining the (psychological) processes of media choice processes. Nevertheless, as with all other models described, the characteristics of the media offer are not fully accounted for.

Consumer-Research-Based Decision Models

Media choice models based on the expectancy-value model implicitly involve the assumption of men as – at least partially – rational beings. In economic theory, this assumption can be summed up under the concept of the Homo Oeconomicus. The basic concept sees individuals as aiming to reduce their costs and maximize their profits. Their preferences are fixed, and the individual has all the necessary information (Schweiger 2007, 168–169). For media choice processes, it is more accurate to assume that individuals only possess limited information as it does not seem to be rational to gather information on several thousand titles before making a decision. Therefore, the decision-making process can be described as one under uncertainty.

Media products such as video games are characterized as experience goods (ibid., 186–193). The value of an experience good only becomes apparent *ex post*, after the product has been used or experienced. Still, experience goods may signal their potential value *ex ante*. In order to reduce the risk of consumption decisions, consumer may, for example, rely on certain product characteristics such as genre information, age ratings or external reviews (Jöckel 2009, 82–83; Neelamegham and Jain 1999). In effect, this may lead to what Gerhard Schulze labels 'Experience Rationality' (*Erlebnisrationalität*), where actions that aim to achieve certain experiences are used to organize one's self. With more and more complex environments and options, routinized strategies might result in different user typologies (Schulze 2005, 41–42).

When children, adolescents or adults choose a certain video game, not only do their personal traits and preferences decide which game to choose, but the games themselves signal their qualities upon which users can base their decisions upon (Jöckel 2009, 107–110). The more accurate a game signals its qualities and the more these qualities match the preferences of the individual user, the more likely this game will be chosen by consumers. The theory of subjective quality assessment accounts for these external qualities, arguing that in addition to the evaluation as in the expectancy-value model, users judge the different alternatives on the basis of the perceivable qualities of the media product (Wolling 2009). Not accounting for the experience of the good properties of media products, this theory has not yet been applied to video games but may nevertheless provide some useful insights for a complex and dynamic video game choice model.

In addition to Hartmann's account of different cost situations, one also needs to account for the fact that most video games are not free. Monetary costs are still a neglected area of research in media choice theory (Scherer and Naab 2009). Costs may play an essential role at least for the acquisition of video games. This suggests that the video game choice process consists of a use as well as a concrete acquisition decision.

An Integrated Phase-Based Media Choice Model for Video Games

A Phase-Based Approach on Media Choice

An integrated and dynamic media choice model for video games needs to account not only for the individual characteristics of the potential users but also for the qualities of the products. Different products with their individual characteristics can be seen as alternatives within the decision-making process. Additionally, it has become apparent that the media choice process is not monolithic but consists of different phases. All of these phases are located in what can be labelled the pre-communicative phase (Schweiger 2007). It ranges from the intention to use a certain media product to the concrete use, the actual game playing. The aim of this model is to analyse the interplay of these processes.

Three distinct phases can be deduced that take place at separated stages of time but are not independent of each other (Dogruel and Jöckel 2011). For each of these phases, specific theoretical approaches as outlined above are of relevance. The three phases are

- The phase of video game acquisition
- The phase of intermedia choice
- The phase of intramedia choice

The phase of video game acquisition is an often neglected aspect of video game choice. Only if users have bought or acquired a video game through some other

means (shared, downloaded or received) can this game be played. This phase also consists of – in a broader sense – the acquisition of the relevant gaming hardware as a previous investment decision (Scherer and Naab 2009).

The phase of intermedia choice has often been in the focus of academic research (Hartmann 2006; Schlütz 2002) and sees video game choices, following the UGA tradition, as only one alternative out of a broad range of rival leisure activities.

The intramedia choice is the phase that follows the decision to use video games as leisure activity. Here, users decide which of the games they have access to they will use. It becomes apparent that intramedia choices can only be made within the scope of the available options for which the decision during the acquisition phase has set the restrictions. As already implied in the expectancy-value model, the decision at the intramedia choice phase has then effects on decisions in proceeding acquisition or intermedia choice phases.

An Integrated Media Choice Model

The classical expectancy-value model occupies the central stage of the proposed media choice model. In particular for the inter- and intramedia phases, approaches in the mood management or selective exposure tradition demonstrate the necessity to include more situation-based factors. Here, the assumption of the rational media user needs to be re-evaluated. Emotional factors may interfere with rational decision making. Based on certain moods, users will come to different decisions (Bryant and Davies 2006; Hartmann 2006). Moods may directly impinge on the concrete evaluation of an alternative.

The transfer model by Fritz states that not only situation- or mood-based implications influence the decision-making process, but video game use is embedded in the broader livelihood of users. Gamers are not blank sheets but are human beings with distinct preferences but also identities and social environments. These environmental factors shape what users expect from a certain game.

The expectations are – a lesson learnt from Hartmann (2006) – more complex than elementary psychological needs that need to be fulfilled. Expected costs (time, money) but also expected competencies and the game-based knowledge system play a role for the constitution of these expectancies (Weber and Shaw 2009) which then lead to a concrete decision model that can be characterized as a black-box that is filled by the different individual processes.

As of now, the characteristics of video games themselves are still neglected. As consumer decision models for experience goods (Neelamegham and Jain 1999) and the theory of subjective quality assessment (Wolling 2009) both assume, users will compare their own expectancies with the signalled characteristics of the product. It becomes apparent that this comparison is of crucial importance particularly for the acquisition phase. Here, users have to rely on external information – reviews in magazines, web portals or indications on the game box itself – in order to adequately judge if a video game will suit their needs or not. Prior experience has

not been made directly but yet experiences with the genre or the brand or franchise may guide the decision-making process. Here, the influence of peers as advisories may play a crucial role as well.

Thus, for the acquisition phase, these signalled characteristics of the product are confronted with the individual expectancies of the user but also with his or her competencies.

This perspective assumes that in line with findings on consumer decision making (Kroeber-Riel and Weinberg 2003, 369–374), video game acquisition choices are decisions made under a condition of considerable cognitive control. Users actively seek out information to justify their decision making (extensive or at least limited decision making). This assumption however is no longer valid for the intermedia and intramedia choice phases.

In these later phases, uncertainties have already been reduced – the video game has already been acquired. Thus, more situation-based factors, such as moods or needs, may impact on the decision-making process. No longer complex evaluations of product characteristics and individual expectancies occur. Instead, ritualized and habitualized decision making with less cognitive control may take place. With respect to the intramedia choice phase, users only have to decide which of the games among their repertoire they will use. They have already had prior experiences with this game, so that – with the exception of the first time use of a particular game – users make decisions at least partially knowing what to expect and which needs this particular game will fulfil.

The actual uses of the video game then lead to the dynamic component of the illustrated phase-based media choice model. By playing a video game, expectancies are re-evaluated. Experiences are gathered. Competencies are improved; self-efficacy may increase (or decrease in case of an unpleasant gaming experience). Users may even act as external information sources for other users by writing about a game at an online portal or by direct word-of-mouth among friends. Users implicitly evaluate their gaming experience. This evaluation impacts on ongoing decision-making processes by oneself and others.

Media Choice of Children and Adolescents

Three crucial aspects need to be integrated in the proposed phase-based media choice model for children and adolescents: (1) developmental aspects, (2) parental mediation and (3) legal regulation. These three aspects need to be integrated into the proposed media choice model.

Developmental Aspects

Few studies have accounted for the gaming preferences of children and adolescents (Valkenburg and Cantor 2000). There are several descriptive studies on what

games children and adolescents actually use or prefer (Meister et al., Chap. 19; Jöckel and Dogruel 2009; MPFS 2008b; Kutner and Olson 2008; von Salisch et al. 2006), but few of these studies actually try to explain why children chose a particular game. Based on the UGA, von Salisch, Oppl and Kristen assume that children are – as proposed in the phase-based model – not only rational users. Instead, three aspects determine media choice processes by children and adolescents. Children choose games that (a) address their developmental task, (b) offer possibilities for escapism and mood management or (c) match their level of development (von Salisch et al. 2006, 148).

Not all games, however, are fun for children of all ages. As the feeling of mastery and control is of central importance for a positive gaming experience, gamers need to be able to complete the tasks offered by a game (Fritz 2006; Sherry 2004). If children depending on their developmental status are not able to cope with certain challenges because their cognitive or sensomotoric skills are not developed enough, playing these games would not result in a fun experience. On the other hand, if they become more experienced gamers, simple and easy games – such as some jump-and-run games – are no longer attractive as the gamers feel ‘under-challenged’. Developmental tasks (Havighurst 1953) and gaming thus go hand in hand. Learning to read on the one hand might be a developmental task that can be learned in a typical children’s game (von Salisch et al. 2006). For adolescents, on the other hand, researchers have argued that shooter games may fulfil a crucial role for their development and identity formation, as adolescent males may learn to cope with feelings such as anxiety, anger and stress in action-related, violent video games (Jansz 2005). Developmental task and status may thus influence the expectancies children and adolescents have towards certain games (Stephenson, Chap. 15).

Legal Regulations

Developmental aspects however play a crucial role for the second influence factor on children’s and adolescents’ media choice: legal regulations. Minors are not allowed to play all games. Worldwide, age-based regulatory systems have been installed (Smith 2006) to protect children from the harmful influence of violent or sexually offensive media content. The basic assumption of these schemes is that the developmental status of a child refers to a certain age (Süss 2004, 33). De jure, legal regulation denies children the access to certain games based on the children’s age. This is an obvious influence factor of media choice, as certain games are not available for them. Legal regulations, however, only impinge on the first phase of media choice, the acquisition phase. De facto, this influence is even more restricted, as studies indicate that unsuitable video games, meaning games for which the children are legally too young, are a rather widespread phenomenon particularly among boys (Jöckel and Dogruel 2009). Research indicates even a contrarian effect. Games that are forbidden become more attractive (forbidden fruit effect) (Bivanjk et al. 2009; Nikken and Jansz 2007).

Parental Mediation

The reason for this seeming failure of legal regulations lies in the third crucial influence factor on children's media choice: parental mediation. Parents mediate their children's media use. Rooted in television research, parental mediation has been analysed for the Internet (Livingstone and Helsper 2008) or video games (Nikken et al. 2007). Overall, four distinct mediation strategies could be identified in the various studies: the restrictive strategy, the evaluative or active strategy, the co-use strategy or the lack of any strategy (Livingstone and Helsper 2008; Nikken et al. 2007; Valkenburg et al. 1999).

Restrictive mediation relies heavily on the use of bans and time restrictions. Children are not allowed to watch certain programmes, to play certain games or are only allowed to access the Internet for a given, limited period of time. It becomes apparent that preferring such a restrictive mediation strategy impinges on the media choice of children and adolescents. Restrictive mediation seems to directly influence the acquisition phase, when a particular game is outright forbidden by the parents. The effect of this restrictive mediation, however, is rather limited (Livingstone and Helsper 2008). Children at an early age develop strategies to either evade their parents' orders or to persuade them to buy a game for which they are still too young (Kutner and Olson 2008). Furthermore, the already mentioned forbidden fruit effect makes forbidden games – at least for older boys – even more attractive (Bijvank et al. 2009). Still, the preference for a restrictive mediation strategy may influence children's media choice processes in several ways. In the acquisition phase, it may result in forbidding the purchase of a certain game. In the concrete use situation as a consequence of intramedia choice, it may limit the available time for a game and therefore also the outlook on potential gratifications.

As with restrictive mediation, evaluative or active mediation may influence both the acquisition and intramedia choice phase. During the acquisition phase – it may be assumed – parents with an active mediation style try to explain why their children can or cannot use a particular game. However, research on parental mediation and game acquisition is limited (Nikken et al. 2007). It could be hypothesized that restrictive strategies rely more on age-based ratings, whereas active mediation focuses more on content-based descriptions. However, empirical research could not fully prove this assumption (*ibid.*). For the intramedia phase, active mediation could mean that a particular game will no longer be chosen, as parents outline the potential negative content effects. Still, there is even less research on this phase of the media choice process.

A similarly limited amount of research is available for the role of co-use strategies. What makes the situation even more complicated is that by contrast to other media, co-use of video game playing occurs even less than co-use for television or the Internet (MPFS 2008b, 13). As for the acquisition phase, it could be expected that parents with a strong emphasis on co-use mediation would influence their children in choosing games that allow for co-use options such as sports games or family-related titles. This hypothesis however has not yet been empirically addressed.

The lack of any mediation strategy, however, is expected to lead to a proliferation of unsuitable video games for the children. Even if this assumption sounds plausible, it still lacks empirical foundation.

Integrating Developmental Status, Legal Regulations and Parental Mediation into the Media Choice Model

Overall, parental video game mediation can be seen as a third factor influencing children's media choice processes. Still, it is not independent of the above-mentioned aspects of legal regulations and developmental status. Despite the mixed findings on the importance of age ratings for video games and their role for parents (Bushman and Cantor 2003; Gentile and Walsh 2002; MPFS 2008a; Nikken et al. 2007), it can be stated that there is a connection between parental mediation and legal regulation schemes. Without the mediating role of the parents, legal regulations cannot work properly. Furthermore, the preference for a certain mediation strategy not only is influenced by socio-demographic factors, psychological predispositions and experiences on the part of parents but is also dependent on the respective child's developmental status.

With respect to the proposed phase-based media choice model, it becomes apparent that each of the three aspects – parental mediation, legal regulation and developmental status – plays a different role for the three phases. Legal regulations for example may only impact on the acquisition phase. Here, age ratings can act as a guideline for acquisition decisions. They can be seen as one of the instruments signalling a product's inherent qualities. Additionally, parental mediation that uses age ratings as guidelines is particularly focused on the acquisition phase. Here, parents can decide if a game is bought or not. Findings from the MPFS KIM study (2008b) illustrate that parents are indeed the prime source for video game acquisition. Still, if a video game is acquired through other means, this form of regulation no longer applies. Restrictive parental mediation may then not only impact on the acquisition phase but may, for example, reduce the alternatives in the intermedia choice phase. Evaluative mediation is presumably stronger in influencing the concrete gaming experience and therefore the post-consumption evaluation. Developmental status not only determines the preferences for video games but also impacts on the gaming experience and the post-consumption evaluation of a video game as well.

Discussion

Academic research in media pedagogy, communication studies, media psychology or consumer research has come up with complex approaches in explaining the choice of video games. This chapter argued for the need for an integrated, dynamic media choice model. Therefore, the video game choice process needs to

be separated into three distinct but also interdependent phases: the acquisition, the intermedia and the intramedia choice phase. The often neglected acquisition phase sets the constraints for the following phases that have already been at the focus of academic research. Following approaches from a UGA perspective but also integrating findings from the transfer model by Fritz, integrated action-theory-based choice models by Hartmann (2006) and economic decision making (Neelamegham and Jain 1999), the relationships between the individual media choice phases have been evaluated. Expanding the notion of Fritz' transfer model (Fritz 2006), the integration of concrete video game characteristics can be seen as a crucial element for the identified acquisition phase. Here, elements from economic consumer research can help to foster our understanding of media choice processes for video games. The proposed model only presents a rather broad framework for the individual processes at the different phases. For future research, these processes need to be further scrutinized. The already existing, illustrated approaches on media choice for video games provide useful starting points for this endeavour. With respect to the video game choice of children and adolescents, three crucial influencing aspects could be identified: legal regulation, parental mediation and developmental aspects. Again, this chapter provides a rather broad framework for the potential impacts of these distinct aspects. As an important finding, it could, for example, be outlined that the proliferation of unsuitable video games is not a sign of a failure in the legal system but is the result of a complex process within the interplay of developmental tasks, parental mediation and video game choice. It stresses the importance of further analysing the interdependence between acquisition decisions and parental mediation. As the acquisition phase could be identified as the phase where the highest level of cognitive control is assumed, this phase seems to be of crucial importance for an active mediation of video game use between parents and their children.

Overall, the outlined implications illustrate that when analysing the video game choice of children and adolescents, not only psychological dispositions need to be thoroughly accounted for but also the interplay with social and mediating factors in particular on the part of the parents and peers.

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Chapter 23

The Challenge of Measuring the Use of Computer Games

Christopher Blake and Christoph Klimmt

Introduction

The academic interest in computer games and the people who play them has grown with exceptional dynamics over the past decade. New series of conferences, new organizations dedicated to games research (such as the Digital Games Research Association, DIGRA), new academic journals, and a wave of thematic book publications indicate the increasing scholarly activity devoted to “Game Studies.” Researchers in numerous disciplines – in computer science, the humanities, as well as the social sciences – are exploring new fields of inquiry and also communicate their results to an increasingly interested public. Both the significant development of academic research on computer games and the growing public interest in games and game studies are rooted in the simple fact that “people are doing it.” Computer games have evolved as a mass medium, a key element of today’s landscape of media entertainment (Vorderer and Bryant 2006). The argument that “so many people are playing” is central to the justification of scientific and social *relevance* of game studies, and relevance is the engine that drives the expansion of academic fields. Because so many people play, computer games have become an integral part of contemporary media and youth culture (see Meister et al., Chap. 19) and “deserve” academic examination in terms of content, technology, production, usage, effects, cultural and economic dimensions, and so on.

The statements that “people are doing it” and that “gaming is growing” appear in virtually all academic and journalistic publications addressing games research. It has become a commonplace, a fundamental assumption that is not reflected

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upon anymore, as most scholars (and journalists) are departing from this basic information to more specific issues, such as the consequences of “so many people are playing violent games” for aggression in modern societies or the implications of “so many people are playing video games” for knowledge acquisition and (informal) education (e.g., Mitgutsch, Chap. 36). Interestingly, the empirical evidence for the actual “size” of the gaming phenomenon is much less solid than one would expect it to be when so many scholars seem to agree that “it is huge.” There are, of course, survey studies in numerous countries that clearly indicate a strong demand for video games and frequent use of games particularly among male adolescents and early adults (e.g., in Germany: MPFS 2009; in the USA: Roberts et al. 2005). Games sales data provided by industry associations (e.g., BIU in Germany, ESA in the USA) also bolster the general notion of games as an important entertainment medium. The statement that “gaming is huge” is clearly not an artifact.

However, the empirical information available to describe “people’s game use” is by far not sufficient to provide a solid base for the developing subfields in game studies. Most surveys ask people about the amount of time they spend with playing per day or per week (MPFS 2009). They tend to neglect the facts that contemporary game use occurs in highly diverse social settings and locations, with very different platforms, and, most importantly, that “gaming” can refer to extremely different genres or titles. We therefore do not know much more from contemporary survey research beyond the fact that “gaming is huge.” For an academic field that is devoted to study the social, cultural, and economic consequences of a complex and multifaceted phenomenon, the state of the art in measuring the use of computer games is therefore remarkably weak. For instance, to estimate the “true” impact of violent video games on adolescents (Möller and Krahe 2009), it would be desirable to have reliable data on how many players of what age play which (genre of) violent games in which social settings (e.g., online vs. offline), and it would be great to know how use of different genres that contain violence develops over time. Similar requirements for precise information could be defined for virtually all subfields of game studies, such as the time spent with and social organization of creative game use (“modding”; see Sotamaa 2008).¹

The present chapter is dedicated to the gap of fundamental knowledge about the actual occurrence of the phenomena so many scholars of interdisciplinary game studies are interested in. We first analyze the reasons why high-resolution information on game use is virtually unavailable and then outline organizational and methodological challenges that should be resolved in the future. We conclude with a vision of how a continuous survey project could support the Game Studies community and help to build closer references between much ongoing research and the actual social reality of gaming.

¹For a qualitative approach to remix cultures like modding, see Unger (Chap. 32).

Game Use: Why We Do Not Know

There are two different origins of information about media use: academic research and commercial research. Academic research generally dedicates itself to specific questions that can be investigated by the analysis of particular subparts of a population (e.g., the media use of adolescents). Representative studies that allow us to get an overview about a population's media use are not a classic domain of the research efforts. This is mainly because the required financial resources to conduct the appropriate large-scale empirical investigations are beyond the means of most academic institutions. Besides that, there is a large body of representative commercial studies on media use, so there is no significant research gap to be closed – at least concerning most of the relevant media.

Taking a closer look at commercial research reveals that the state of knowledge concerning traditional media use (e.g., broadcast media such as television and radio or print media like newspapers and magazines) is superior to available knowledge about computer game use by far. For the measurement of TV use, telemetric systems have been installed in representatively selected household panels in most of the developed countries (for an overview, see [IP 2008](#)). They deliver continuous and comprehensive information about the type of content used. Combined with an exact measurement of usage time, detailed information about which program was used on which channel for how long by what audience is available to describe TV use elaborately. Some telemetric systems additionally feature the capability to register video game usage automatically whenever a console connected to the measurement device is switched on (e.g., the GfK-Meter in Germany; [GfK Fernsehforshungs GmbH 2005](#)). Unfortunately, only usage time but not the type of content used can be recorded by the system. Furthermore, playing games on devices which are not connected to a TV set or the GfK-Meter (e.g., computers, handheld consoles, cell phones) is neglected by this approach. Therefore, the data gathered are not a suitable source of “holistic” information on game use.

Concerning radio, newspaper, and magazine use, there is a remarkable amount of studies providing detailed information about audience sizes and audience characteristics. The German “MA-Pressemedien” survey, for example, covers almost every daily newspaper title (about 700) as well as the most widespread magazine titles ([AGMA 2004](#)).

By comparison to conventional mass media, knowledge about computer game use is sparse. Besides sales data, most of the available information only applies to the medium as a whole. As mentioned before, we know approximately how long people are engaged in games per day or per week, but we cannot break this knowledge down to a specific game, genre, or playing mode.

The amount of information available on the use and users of different types of media is mainly a function of the degree to which a specific media type's business model depends on advertising sales. If a business model is primarily based on generating sales volume by selling ads, as is the case with commercial television and radio broadcasters ([Kops 2007](#)), detailed information about media use as well as the

audience composition concerning specific programs have to be provided for media agencies and companies' media departments. This information is essential for the development of a target-group-oriented media strategy that allocates a given media budget efficiently (Unger et al. 2007). Because the collection of data on television use is a necessary condition to successfully operate on the TV advertising market (which has, in the case of the German market, an annual volume of about 9 billion €; AGF 2009), the high costs of conducting large-scale research as a long-term project are a reasonable investment for the television broadcasters. The same argument holds true for newspaper and magazine publishers and their research activities even though in an alleviated manner. By contrast, business models in other media branches are less dependent on advertising sales, because their main or only revenues are generated by product sales. This is traditionally the case with publishers of computer games, books, and sound media (see Wirtz et al. 2003). So computer game companies do not face the strong economic necessity to conduct expensive market research in order to continuously gather information about their audience composition or the intensity of product use. Consequently, academic game studies cannot benefit from the existing commercial data treasures that are available for conventional mass media.

Following this observation, we may reasonably hope that the situation will improve once advertising grows in importance as a secondary revenue source for the games industry. For this, the game industry's business model would have to count advertising-relevant information as being more important, and, thus, game companies would have to invest more into collecting usage data, similar to the practice in the conventional mass media business. A much more solid information base for academic games research would be the positive side effect of such a development. Unfortunately, it is quite unlikely that this scenario will become reality.

Even today, there are specific types of games that are financed completely or mainly by advertising and product placement sales, such as browser-based casual games (e.g., Klimmt et al. 2009). These games can be played online without having to install game software on local computers. The measurement of relevant information concerning the use of specific games can be achieved in a precise and effective manner by means of log file analyses (Worzyk and Löhdefink 2004). Combined with basic sociodemographic data collected during the registration process or measured within an on-page survey, the providers have sufficient data concerning their audience and the usage time of their games.

More generally speaking, much online advertising is billed according to click rates (i.e., advertising media are paid only if a user clicks on an online ad and is thus linked to the advertising company's website; see Silk et al. 2001). So in order to determine the effectiveness and outreach of an ad (and how much money has to be paid for the underlying advertising deal), no survey-based research into audience sizes is needed any more: Server protocols indicate precisely how many "clicks" have been generated, and that is all the advertising media need to know. This holds also true for computer games that serve as advertising platforms, and not only for those technically rather simple browser games mentioned earlier but also for high-end games based on client software on the player's computer. So-called

dynamic in-game advertising permits the collection of user information via online connections (e.g., if the player participates in an online match; see Keilhauer, Chap. 20) and the insertion of advertising messages, even whole product placements in the game world, based on individual user profiles.

The midterm vision of the advertising business is thus to combine the presentation qualities of conventional mass media (e.g., visually appealing images as in TV) with the addressing and targeting possibilities of online advertising, which overall implies an independence from continuous, survey-based audience research. Therefore, future academic game studies will not enjoy the option of industry agents sharing large survey data sets on people's game use.

Interestingly, the online connections and server logs involved in increasingly more types of computer gaming imply that game companies *do* know a lot about their customers, the time and ways their products are used. However, this information is neither available publicly, nor does it cover a broad (let alone representative) range of the available on- and offline games. For game providers, there is no need to cooperate in order to render a reliable measurement of media usage possible, because either they do not need that information urgently (e.g., as they do not incorporate advertisements in their products, as is the case for most of the non-sports titles) or they can register the use themselves without much effort (as is the case for browser games). This does not imply that games companies refuse collaboration with academic games research in general. To the contrary, various research teams enjoy the benefits of cooperating closely with game corporations (Williams et al. 2006). The point is that a broad (title-independent), continuous, methodologically sound description of the audiences of the various types, genres, and kinds of computer games will probably never be available to academic games research from the industry.

Measuring Game Use: Methodological Issues

Besides the above-mentioned structural-organizational issues responsible for the small base of representative studies on game use, there are also methodological issues that have to be considered concerning what we do not know and what we should know about computer game use. There are three basic ways game usage can be measured: (a) by classic survey measures, (b) by diary measures, and (c) by technical observations. Each of the methods has specific strengths and weaknesses concerning the measurement of usage *time* and used *game content*.

Survey Measures. The first and most widespread way to measure these aspects is to conduct survey studies that typically include self-report measures like "In a typical week, how many hours do you spend playing video games?" to assess the amount of time spent using computer games (ISFE 2008). Respondents are then asked to choose between categorized answer options like "less than 1 h, 1–5 h, 6–10 h, 11–15 h, and more than 15 h." Various issues are being discussed concerning this so-called self-report methodology (Schwarz 1999), and most of them apply to the

present topic as well. The first problem associated with this type of assessment is obvious: Compared to telemetric data, the information generated on usage time is a rather rough value. While this is sufficient to provide an integrated overview concerning the distribution of playing intensity in a given population (Wolling 2009), the measure lacks the accuracy required to adequately describe, for example, changes in the population's use in a more differentiated manner. Even if individuals double their playing time from 2 to 4 h or triple it from 1 to 3 (which would suggest a substantial change in their pattern of playing games), the measure would indicate that no change has taken place, because both values fall into the same category. The reason why these broad answer categories are defined is because this is the only way game use can be measured reliably within self-administered survey studies.

Open questions about time spent using games in an average week would simply surpass respondents' capacity to remember. This point, which is also the reason why television use is measured in rather broad categories (in self-administered surveys), applies to the measurement of game usage even more strongly: The highly standardized programs in contemporary television provide a frame of reference for the estimation of one's own amount of television use. Thinking about the name and length of the programs one usually watches helps to make more realistic estimates.² Due to the fact that playing video games (a) is not restricted to a certain programming scheme, (b) is also independent of a specific place or device, and (c) is probably not as habitual as television use, it is even harder for respondents to make accurate estimates about their playing time. A fourth aspect that could possibly create difficulties for players to estimate their usage time is that playing games can induce flow experiences (Sherry 2004), which affect time perceptions and may therefore bias self-reports.

In addition to such unconscious and unintentional reasons for biases, problems with self-report estimates of time spent playing may arise from social desirability (Nederhof 1985). It is possible that frequent players might adjust their actual usage time to a lower level, recognizing that extremely high frequency of playing might socially be interpreted as addictive behavior. Vice versa, frequent players may intentionally overstate their actual time spent playing in order to demonstrate to interviewers their great excitement for games. These and other kinds of socially desirable responding further challenge the validity of self-report measures of game use.

While the above-mentioned arguments are mainly applicable to the accuracy of measuring playing *time* with survey-based methods, various aspects of concern exist with regard to the measurement of the game *content*. Survey studies provide mostly only a little information about the content. In addition to measuring a global value for usage time (as most surveys do, see above), it would be relevant to know which games (title) or which types of games (genre) have been played and for how long, at what time of day, in which game mode (online vs. offline, single-player vs.

² Nevertheless, it is questionable whether respondents engage in this kind of systematic reasoning: It is assumed that people are not willing to engage in high cognitive effort when asked to make estimates about the frequency of behaviors (Sudman et al. 1996, as cited in Greenberg et al. 2005).

multiplayer) by whom and with whom (sociodemographic and psychographic information about the players) to be able to get a detailed impression of game usage. As mentioned above, respondents may have problems making accurate retrospective estimates concerning their media exposure – even if it is only about estimating an overall value for game use. Taking into account the great diversity of available platforms and games, the respondents' limited memory capacities, and their tendency not to engage in high cognitive effort when asked to estimate the frequency of behaviors, it seems to be impossible to measure the content used in a detailed way by means of (self-administered) survey measures (Schwarz and Oyserman 2001).

To sum up, measures gathered with typical survey studies on computer game use are quite short on information, because of their insufficient accuracy and diversity. Nevertheless, a positive aspect concerning the survey method is that the recruitment of respondents is presumably less complicated in comparison to that of most alternative methods and procedures. Furthermore, it is the most inexpensive way to gather representative data on game usage.

Diary Measures. A diary measure is a specific form of self-observation that requires study participants to list (selected) activities in tables that cover the course of the present day (Bolger et al. 2003). From such list entries, researchers can conclude behavioral patterns (e.g., integration of media use into daily routines) as well as consumption of specific media (e.g., overall time spent playing video games). Diary measures are typically seen as a promising alternative to survey measures, as the former are capable of gathering richer information concerning the used content and more precise estimates of usage time. With this methodology, it is possible to collect qualitative criteria defined for each playing session beyond mere usage time (such as platform, game title, genre, and gaming mode). Diary data could in fact generate information bases that enable description of respondents' playing behavior in a way that is considerably more detailed by comparison with survey-based data.

However, the diary measures' assumed advantage concerning its accuracy should be considered critically. Greenberg et al. (2005) give reason to suppose that problems of memory and authorship can be a threat to diary measures' data quality. Problems of memory can occur when the diary is not completed at the appropriate point in time (e.g., because people forget to do so). The term "problems of authorship" means that one cannot be sure that a diary has always been filled out by the target person. Within their comparison of survey and diary measures, Greenberg et al. (2005) show that the survey method leads to systematically higher estimates concerning the usage of various types of media (including computer games). Furthermore, they found that conventional survey and diary measures of game use only show moderate correlations ($r = .207$ as regards offline play and $r = .289$ regarding online play; Greenberg et al. 2005, 6). Because of the issues mentioned concerning diary measures, they concluded that it is not quite clear whether they are delivering more accurate measurements than survey measures. To be able to precisely determine the discrepancy between actual usage and usage measured by the two methods, external cross-validation studies need to be conducted.

In fact, there are studies on the reliability and validity of diary measures, which compared diary entries with reliable external data sources such as video recordings

of the respondents' behavior, as well as studies, in which test-retest reliability analyses have been conducted. These studies suggest that diary measures are quite reliable and valid (for an overview, see Reinsch et al. 1999). In accordance with these results, we propose that diary measures can be seen as quite accurate concerning the measurement of usage time. The above-mentioned problem of forgetting to complete them at the appropriate point in time can, for example, be reduced by instructing participants to mark frequently used objects within their residence with stickers that remind them to fill out the diary regularly (Bolger et al. 2003).

A critical aspect is that being obligated to complete the media diary day by day can be tiring for the participants after a while. This is why researchers have to make time-consuming and expensive efforts themselves to keep the panels' persistence rates high. This includes caring for the subjects and providing an adequate monetary compensation for their participation (Möhring and Schlütz 2003). Apart from these practical problems, the above-mentioned problem of social desirability is not exclusively tied to survey measures but to diary measures as well.

To sum up, diary measures are a major improvement in comparison to survey measures, mainly because they allow us to assess game usage in much more detail (Bolger et al. 2003). Problems that cannot be completely ruled out are biases concerning the measurement of usage time. Beyond that, the method is time-consuming for the respondents and expensive for the researchers.

Technical Observation. The considerations above have shown that both diary measures and especially survey measures are unable to deliver truly exact measurements of usage time. Technical observations of usage time by means of a program installed on gaming platforms could improve this, delivering measurements to the split second. These programs could also measure relevant content characteristics such as the game title, the genre it belongs to, and the playing mode. The data gathered could be automatically submitted via the Internet from the gaming platform to the institution operating the measurement system. A major advantage in comparison to diary measures is that the measurement of detailed information on usage is completely effortless for the players. Furthermore, biased answers due to social desirability, or due to respondents not completing the diary at the appropriate point in time or in the intended manner, will not occur using technical observations.

Despite these strong advantages, there are also several critical issues to be addressed. One major problem is that the technical observation procedure is not applicable to old but still widespread platforms like Sony PlayStation 2 (in 2008, it was still the most frequently used video game console; ISFE 2008), because Internet access cannot easily be facilitated by this platform. This holds true for several types of cell phones as well. In Germany, 95% of all adolescents possess a cell phone, and 15% of all 12- to 19-year-olds use it to play games (MPFS 2009). Cell phones without Internet access would thus be relevant to game use research, yet difficult to cover by technical observation measures.

Another problematic issue is that the initial installation of the observation software entails high effort for players, whenever a high number of different devices have to be set up for the electronic registration of game use. Despite the continuous

Table 23.1 Comparison of positive and negative aspects of different methods to measure game use

Method	Positive aspects	Problematic aspects
Survey measures	Respondents easy to recruit Comparatively inexpensive Comparatively easy to supervise	Inaccurate measurement of usage time Undifferentiated measurement of content Measurement of content affected by social desirability Undifferentiated information about mode of use No continuous measurement
Diary measures	Acceptable measurement of usage time Detailed information on content Detailed information on mode of use	Measurement of content affected by social desirability Fatiguing for respondents Demanding supervision Comparatively expensive
Technical observations	Exact measurement of usage time Detailed information on content Detailed information on mode of use Measurement not demanding for respondents Continuous measurement over long periods of time	Not applicable to widespread platforms without web access Complicated to apply to all platforms Fatiguing setup process Demanding supervision Comparatively expensive

measurement that does not require any effort itself on behalf of the respondents, the setup and maintenance process could turn out to be an important barrier to participation. Another problem to be solved would be the provision for browser-based games. In this case, the measurement software has to be able to register game use, although no proprietary game software is currently executed by the computer.

Taking into account all the above-mentioned advantages and disadvantages, going along with the three ways portrayed for measuring game usage (see Table 23.1 for an overview), diary measures presently seem to be the most suitable way of obtaining high-quality data that could also serve academic purposes. Diary measures combine detailed information about the game content with acceptably valid data concerning the usage time. Furthermore, they warrant applicability to all significant game platforms. In the future, as soon as game platforms that do not feature off-the-shelf Internet access (like PlayStation 2 or Game Boy Advance) cease to form a significant fraction of used gaming platforms, technical measurement will possibly be the most advantageous way to tap in on game usage. It allows precise continuous measurement, over a long period of time, without facing problems like social desirability or false recall.

Knowing About Game Use: A Vision for the Future

Research on computer games, players, and game cultures is in need of better data about game usage. While the relevance of academic games research does not depend on such improvement – as is already clear – many research perspectives in the field need underlying usage data to make progress, for instance, in testing theories of gaming motivation (e.g., theories in developmental psychology; see Kirsh 2003). For those areas in Game Studies that are primarily nonempirical, better usage data would allow the more precise connection of theoretical considerations to social backgrounds, such as improving the understanding of game-based learning in social-cultural or gender contexts (e.g., Mitgutsch, Chap. 36) or reflecting on the aesthetic outreach of video game arts and design into popular culture (e.g., Walz 2003).

The previous sections have discussed organizational and methodological barriers that have prevented the availability of time-based, high-resolution data on contemporary computer game use. The resulting challenges are significant, and there is no scenario of easy remedy to be found among the current trends of the games sector. We conclude this chapter with an outline of a major effort that could fill the gap of missing game usage data in a long-term perspective.

First, the methodological issues can be resolved to the extent that social science methodology allows. Clearly, diary-based measures turn out as the optimal choice, as they achieve a high level of time resolution, deliver qualitative additional information (e.g., co-players, mode of playing, location of game use), and are platform independent (Bolger et al. 2003). In order to gain a reliable picture of the game use out there, representative samples in each country (with a focus on younger generations due to their higher prevalence of game involvement) would be required to complete a game-use diary measure for a 1-week period (so that weekdays and weekends are covered). “Measurement weeks” should be conducted twice a year, that is, once in summer time and once in winter time. Such waves of measurement are also common in radio research (for instance, see Webster et al. 2006) and reflect the fact that “weather” is a key determinant of entertainment media consumption. Limiting the continuity of data collection to two waves per year excludes the option of precision at the level of played game titles (as much exposure to a given title may occur between the measurement weeks and would thus not be registered at all) but allows addressing the other levels of interest (game genres, game platforms, and gaming modes) while keeping the economic effort of assessment to reasonable proportions. An international expert board could be assigned to elaborate implementation guidelines for this study, including the specific design of the gaming diary, thus allowing execution of the study in multiple countries with a standardized, comparable methodology. In sum, the scientific-methodological dimension of learning more about computer game use is an issue that could be resolved through adoption and application of existing methods knowledge in communication science and psychology (Bolger et al. 2003; Greenberg et al. 2005).

The organizational dimension requires more of a vision, however. Without economic rationality demanding thematic studies, commitment of the industry will

likely remain low. Public sponsors are unlikely to commit themselves for such an expensive, long-term effort implied by the outlined research design, particularly at the international level, because the immediate benefit for authorities and political agents would be much lower than for academia (and parts of the games industry). Mobilizing academic resources (e.g., project grants from national science funding institutions) would also probably not result in a sufficiently continuous project, for instance, because funding will not be available synchronously in different countries and will not be secured for a long-term effort. So how can the organizational barriers be overcome in order to provide academic games research with better, up-to-date knowledge on “the gaming out there”?

Clearly, the only solution in perspective for this major endeavor is partnership. In order to establish a reliable source of game usage information that is functional in a long-term perspective and meets with high scientific standards, the institutions mentioned above should combine their resources. An international, independent foundation would be the organizational solution for such a joint venture. Consulted by a multinational, interdisciplinary scientific advisory board (which would be responsible for methodology issues, see above), this foundation would be the core element in laying out continuous measurement activities in different countries. National institutions, research firms or teams would “franchise” and adopt the standards defined by the foundation for execution of the measurement waves at the country level. The foundation, in turn, would synthesize findings from the various countries and provide open access databases for scientific and commercial analysis. The foundation itself would be a “lean” body of research administration and communication; most required resources would flow into nation-level implementation of the diary studies.

We envision a joint venture of nationally relevant game companies and/or associations (e.g., game publishers, game magazine publishing houses), public institutions (e.g., ministries for youth and/or education), and private donors (e.g., foundations with a focus on social issues). These institutions would network primarily at the national level and “get out” of their collaboration relevant data concerning their own country; so the benefits would be of immediate practical relevance. The international or global dimension would reside with the overarching foundation, but not cause much additional cost. With a single major donation (e.g., from a globally successful game company), such a foundation could begin the project and spread its vision across the different continents and countries. Within a few years, then, circumstances for national implementation of the continuous measurement project could be arranged, and once a number of countries would be involved, more would follow. This way, academic games studies and the societies the field is serving would finally receive the high-precision information on game use that is so important to understand games as a key element of contemporary (and future) culture and society. Because the business behind this medium does not produce this knowledge automatically as in earlier times, a joint venture of different public, corporate, and private stakeholders appears to be the only reasonable solution to overcome the information gap concerning computer games, their players, and the culture that is evolving around them.

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Part IV
Game and Player Cultures

Chapter 24

A Critical Interpretation of a New “Creative Industry” in Turkey: Game Studios and the Production of a Value Chain

Mutlu Binark and Günseli Bayraktutan

Introduction: Digital Games as the Products of a Creative Industry

Thanks to the increasing number of digital game players in Turkey, assuming the role of “players” who boost progress in the game culture as well as “consumers” within the game economy, most gaming patterns, particularly those free-to-play MMORPGs (massively multiplayer online role-playing games), are now increasingly localized, and the producers of such games have started to pursue partnerships in order to sustain the online game economy in Turkey.¹ This illustrates the fact that the digital game industry in Turkey must be discussed as an independent industrial sector. Therefore, the study is the first of its kind to discover the independent existence of the said area in Turkey and also gives a critical interpretation of the

¹ Since the late 2000s, Korean online game companies and their local commercial partners (i.e., Game Sultan, Gameturk, Game Master, Üyelik-A1, GamesArena, and Gamersfirst) have invested in the expansion of online games (i.e., *Knight Online*, *Silkroad Online*, *Metin2*) via Internet cafés. For example, some 2.5 million Turkish users are actively playing *Knight Online*, and around 1.2 million playing *Silkroad Online* through game servers. (This information is based on an interview with Murat Yavuz Kaplan, the Game Master of Mynet, on April 04, 2008.)

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problems confronting the development of the sector.² All these factors have urged us to treat the existing digital game industry in Turkey as a new and developing branch of creative industry,³ and based on this viewpoint, the concept of a value chain will also be set out here because this concept includes the role of all actors in the production process. According to Aphra Kerr, the political economy approach to media institutions should employ the concept of a “culture industry” to explain the production processes and production relations within these institutions because this concept recognizes that the production, distribution, and proliferation of “meanings” in media institutions are carried out by means of symbolic forms (2006a, 44).

However, in this study, we have preferred to use the “creative industries” concept instead. Having taken the phenomena in the British context as examples, Nicholas Garnham has been the first to use the creative industry as a concept in an effort to explain the emergence and fast growth of new economic sectors on both global and local scales, as well as to draw attention to the new employment areas emerging from those new economies (Hesmondhalgh 2007, 145, 2008, 559). In particular, those newly emerged creativity-based economic sectors have provided a link between the music and the media sectors, so-labeled as the “culture industry,” and the productions in dance, the visual arts, fashion, and design; and especially the rising role and importance of the software industry in the society as a new economic production area have necessitated relabeling all these production modes as “creative industry” (Hesmondhalgh 2008, 559). According to Garnham, this wider coverage enables software producers and major cultural industry conglomerates to establish cooperation with small-scale businesses, producers, or cultural workers for the purpose of intellectual property protection (as cited in

² This chapter is based on the findings of the research project “Digital Game Culture and the Internet Cafe Usage Patterns of Young People in Turkey” and was supported financially by the Scientific and Technological Research Council of Turkey; it lasted 16 months, from June 2007 until October 2008.

³ By the definition given by Nicholas Garnham, creative industry is made up of the music industry, dance, the visual arts, design, fashion, software, and the digital games sectors (cited by Hesmondhalgh 2008, 559). Yet, none of them has become a substantial area of production in Turkey. The share of R&D expenditures in GDP, which was 0.67% as of 2002, is quite low compared to the advanced countries in the field of science and technology. Even though public resources allocated to science and technology have been significantly increased since 2005, the share of R&D expenditures in GDP is still lower than 1% (NDP 2006, 39). Food, textile, chemistry, and mining are the major areas of production in the country. While the share of the manufacturing industry in GDP in Turkey was 19.2% in 2000, it went up to 20.8% in 2005 (NDP 2006, 42). However, in recent years, we see that some investments have already begun in areas defined under creative industry, and the importance of these sectors in the development of informational capitalism (Castells 2007, 487) has been acknowledged. In the Ninth Development Plan, innovativeness is one of the most important factors of the competitive economic structure, and a major part of the innovations results from R&D activities that produce knowledge and technology (NDP 2006, 39). Thus, Turkey will be positioned as a regional player in the field of software and services in the information technologies sector. In the context of techno parks, a structure for specialization of software activities to support regional and prioritized industries will be established (ibid., 96).

Hesmondhalgh 2008, 559). This new definition will provide legitimate grounds for the ICT industry, which is particularly seen as an important area of creativity and production within the informational capitalist economy growing on a global scale, and for the governmental support policies for creative staff working in this area (Hesmondhalgh 2007, 145).

We think that the digital game industry in Turkey must also be considered as a creative industry by Garnham’s definition, as it creates new employment areas through independent game-developing studios and integrates into the historically global-scale informational capitalist economy in various fashions (i.e., distributor–publisher relations in the global market, attempts to make commercial partnerships between global and local actors). Furthermore, the public authorities tend to regulate the issue and the domain. According to Hesmondhalgh, this concept “fits in the political, cultural and technological landscape of globalization, the new economy and the information society” (2007, 148). Therefore, the digital game industry is an ideal type of commodity – one that maintains growth through integrated marketing, cultural creativity, and technological innovation (Kline et al. 2006, 29) – for promotional capitalism based on transnational marketing.

Consideration of the digital game has six dimensions: technology, industrial structure, organizational hierarchy, occupational careers, market, and legislative regulations (Peterson and Anand 2004, 311). In contrast to the perception of a game as being *simple* and *entertaining*, the digital game is an extremely sophisticated and serious cultural product as is evident in the comprehensive and multidimensional production stages. The existence of these dimensions produces the above-mentioned value chain. Therefore, the absence or malfunctioning of any of these stages adversely affects the value chain. Developers, publishers, distributors, retailers, and all other actors involved in the process add value to the basic commodity at every stage of production and contribute to the final price that the consumer is ready to pay (Kerr 2006a, 44–45).

Here, we applied qualitative research methods (Dyer-Witthford and Sharman 2005; Hollifield and Coffey 2006; Malaby 2006; Jin and Chee 2008). In order to map out the general situation of the Turkish game industry, we carried out semi-structured in-depth interviews with game designers, engine developers, project leaders, publishers, distributors, and digital game magazine editors. Additionally, we organized workshop and panel sessions on March 14, 2008 concerning the game industry in Turkey with the participation of the actors mentioned above. In our field research, we included all the actors working in the industry. We carried out 48 recorded interviews from spring 2007 to summer 2008, and most of the interviews lasted more than 3 h. All the interviews were transcribed. After receiving permission to use the data, the discourse of the participants was analyzed to examine how the value chain in the industry was produced and their explanations were categorized according to the six dimensions of game development. However, here, we have selected only 10 interviews to illustrate the six dimensions of game development as they apply to Turkey.

One of our interviewees, Burak Barmanbek, from Momentum DMT Company, claims that if the global digital game industry is characterized as an infant sector

compared to other more traditional entertainment and media sectors, the digital game sector in Turkey cannot even be seen as newborn (workshop dated March 14, 2008): one can observe insufficient numbers of actors, incomplete production, and a lack of institutionalized structure. Though we have interviewed the representatives of all actors within the industry, our choice to take the production of the value chain creation as the core of the discussion has directly led us to independent game studios. Hence, we have opted to include in the analysis only twelve game studios⁴ because, first of all, some of these game studios produce games which can be considered as milestones in the short history of the Turkish digital game industry. Second, there are some games that are produced by these studios and successfully distributed throughout the global market. Third, there are also some pioneer games on the basis of genre which these independent studios have developed. Having examined the value creation chain in these twelve studios, the existing problems encountered by the digital games industry in Turkey are identified and a first descriptive research on this issue is carried out. The Turkish game developers we have met during this research seem to have a desire, even a mission, to produce games to *world standards*. Able to control only small and limited resources as yet, they urge the need for more investments in games development because they believe the game industry will play a major role in Turkey's future. For example, Başar Muluk, the head designer of Yoğurt Technologies, says: "We haven't had the chance to produce a Mercedes, so we have tried to produce our own Anadol-like⁵ digital games" (interview dated 02 February 2007). If it is desirable to see the industry develop into a creative industry, as all Turkish game developers want, then the major problems must first be defined relating to the existing situation in the value creation chain, so that policy suggestions could be developed.

The Topography of the Turkish Digital Game Industry

Based on Peterson and Anand's study (2004), the findings in this research can be classified under six dimensions – the inseparable components of the value chain. We apply these dimensions to analyze a developing creative industry within the framework of the industrial production process. It is highly possible that this industrial production area will become an important field of entrepreneurship for informational capitalism in countries like Turkey, as already seen in China (Ernkvist and Ström 2008),

⁴ These independent game studios are Yoğurt Technologies, Son Işık Game Studio, Sobee, Ceidot-Ceiron Game Studio, Zoetrope Interactive, Momentum DMT, Eurosoft, Tale Worlds/İki Soft, 7 Kare, Overdose Caffeine, Savaşım, and Emibel. For the games developed by these studios and the short history of game development in Turkey, see Table 24.1.

⁵ Anadol is a famous brand name of automobile, developed in Turkey during the late 1960s and which was churned out. The car was produced up to 1984 and had some deficits compared with the high-quality cars produced in Europe and the USA at that time. Anadol in that sense is the symbol of weak national industrial production.

Table 24.1 The topography of Turkish game studios

Name of the game studio	Games, genres, platforms, and language	Target player	Location	Budget	Revenue model	Publishing and licensing	Distribution
Yöğurt Technologies	<i>Pusu</i> , TPS, Box, Turkish (the name in English is <i>Ambush</i>)	16+ (registered by the Ministry of Culture and Tourism)	Istanbul-İTÜ Technopolis	Around 250,000–300,000 \$	Retailers	Published by Aral İthalat (in May 2005) and licensed by Yöğurt Technologies	Local (10,000 legal copies were sold in Turkey)
Sobe (very recently merged with Turk Telekom, the leading telecommunications company)	<i>Kabus 22</i> (with Son Işık FPS, Box, Turkish (the name in English is <i>Nightmare22</i>)) <i>İstanbul Kıyamet Vakti</i> , MMORPG, Internet, Turkish (the name in English is <i>Doomsday in Istanbul</i>) <i>I Can Football</i> , web-based strategy, Internet, Turkish	Not given 16 + Not given	Istanbul-İTÜ Technopolis	Unknown 400,000 \$ Unknown	Vestel shops, retailers Free to download, but the player is motivated to buy premium cards	Published by Vestel (in fall 2007) and licensed by Sobe-Son Işık Game Studios Published by Mynet Internet Service Provider in spring 2008	Local and Russian market Local MMORPG
Son Işık Game Studio (now 2Gen)	<i>Kabus 22</i> (with Sobe) FPS, Box, Turkish	Not given	Istanbul-İTÜ Technopolis	Unknown	Vestel shops, retailers	Published by Vestel (in fall 2007) and licensed by Sobe-Son Işık Game Studios	Local and Russian market
Ceidot-Ceiron Game Studios	<i>Sovereign Symphony</i> , Box, English (unfinished project)	Not given	Ankara-METU Technopolis	Unknown	Free to download, but the player can buy premium cards	Published by Mynet (in spring 2008) and licensed by Ceidot-Ceiron Game Studios	Local MMORPG

(continued)

Table 24.1 (continued)

Name of the game studio	Games, genres, platforms, and language	Target player	Location	Budget	Revenue model	Publishing and licensing	Distribution
	<i>Sovereign Symphony Online</i> , web-based strategy, Internet, Turkish	Not given		Unknown			
	<i>Umaykut Online</i> , web-based strategy, Internet, Turkish	Not given		Unknown		Distributed through Facebook	
Zoetrope Interactive	<i>Darkness Within</i> , Adventure, Box, English	16 +	İstanbul-Home Office	Unknown	Retailers	Published by Lighthouse Interactive (in fall 2007) and licensed by Zoetrope	Global
Momentum DMT Company	<i>Culpa Innata</i> , Adventure, Box, English, and several other languages	18 +	İstanbul-Gebze TÜBİTAK MAM (a technopolis)	Unknown	Retailers	Published by Strategy First (in 2007) and licensed by Momentum DMT	Global
Eurosoft	<i>Kaptan-ı Derya Barbaros</i> , <i>Savaşan Şahin</i> , <i>Komando</i> , TPS, all Box, Turkish (the English names are <i>Admiral Barbaros</i> , <i>Fighting Falcon</i> , <i>Commando</i>)	4+	İstanbul-Office	Unknown	Retailers	Published and licensed by Eurosoft	Local
Two Tales/İki Soft	<i>Mount & Blade</i> , FRP, Box and Internet, English	16+	Ankara-Bilkent Cyber Plaza (a technopolis)	Unknown	Retailers and online sale	Published by Global Paradox Int. in 2008 and licensed by Two Tales/İki Soft	Both global (sold 200,000 copies)

7 Kare	<i>Nette Hayat</i> , Life Simulation, Internet, Turkish (the name in English is <i>Life in the Internet</i>)	Not given	İstanbul-Office	Unknown	Free to play, but the players are encouraged to use game money-netto	Published and licensed by 7 Kare	Local
Overdose Caffeine	<i>Spellcaster</i> , Strategy and RPG, web-based strategy, English	Not given	İstanbul-Home Office	Unknown	Free to download, but players can buy premium cards	Published and licensed by Overdose Caffeine (in 2007)	Global
Savaş Simülasyon Hizmetleri	<i>Savaşım</i> , web-based strategy, Internet, Turkish (the name in English is <i>MyWar</i>)	Not given	İstanbul-Office	Unknown	Free to download, but players can buy premium cards	Published and licensed by Savaşım (in 2007)	Local
Emibel	<i>System Wonders 6</i> , web-based strategy, Internet, Turkish (the name in English is <i>System Wonders6</i>)	Not given	İzmir-Office	Unknown	Free to download, but players can buy premium cards	Published and licensed by Emibel (in 2008)	Local

South Korea (Jin and Chee 2008), and India (NDP 2006, 19). Therefore, this is the first piece of research in which the existing situation in Turkey is analyzed: a critical interpretation and the conditions on how this “ideal-type commodity” of informational capitalism might evolve into ideal product are defined in order to pave the way for a wider critical political economy analysis that could be done in the future.

Industrial Structure and Development Process

There are three types of development company according to Kerr: the first-party developers who are fully integrated into a publishing company; the second-party developers who are contracted to create games from concepts developed by a publisher; and lastly, the third-party developers or independent development houses who develop their own projects and try to sell them to a publisher (2006a, 43). In the Turkish case, most are third-party developers or operating as independent development houses. One of the peculiarities of the Turkish independent game developers is their amateur spirit. The commoditization of their game is not their main motivation in the first place. For example, Cem Uzunlar, one of the pioneers, says that he produced games in order to learn how to make a game, meanwhile building experience and a career. Uzunlar explains this amateur spirit as follows:

It is more important to know why a team produces a game. Everybody talks about the financial aspects; so we get a false picture where everything seems possible once somebody pays the costs. Our main purpose of doing *Pusu* as a team was only to have a game originally produced by and belonging to this office. I would feel successful if all technical and engine functions, visuals, story and animations are produced solely by ourselves. We are still at the learning stage. Making *Pusu* (Fig. 24.1) taught us how to engineer a three-dimensional engine, how graphic designers and code writers collaborate, how a project is run and how it is scheduled. Once *Pusu* was complete, I had learned how a PC box-game is published. (based on the workshop dated 14 March 2008)

All studios included in this study, except for Eurosoft, had their first games already completed and released. Their purpose after completing their first games was to transform the experience they got through the process into economic and cultural capital and use it in their new projects. For example, based on their completion of *Kabus 22*, and its patch *Kabus 22: Yıkım Günü*, Son Işık Game Studio together with Mevlüt Dinç produced an advergame for “Citroen C4,” which is being promoted widely in the mainstream media and game magazines (Fig. 24.2).

With regard to the geographical location of the game studios, we see that they are mainly in metropolitan cities like İstanbul, Ankara, and İzmir. According to Manuel Castells, in the information age, the metropolitan areas are privileged spaces because of their cultural and enterprise opportunities (2005): the location of the developers is very important in the sense of accessing the resources of the new digital capitalist economy on a global scale. The lead producer of Ceidot-Ceirion Game Studios, Erkan Bayol, also emphasizes the importance of geographical location and says that

Nato Belçika üssünde görevli Üsteğmen Fatih Yıldırım yorucu bir günün ardından odasına dönmüş düş almaktadır. Aynı dakikalarda Aylın İstanbul'daki evinde telefonun başında Fatih'i arar. Fatih belki akan suyun gürültüsünden belki de günün üzerine yığıldığı yorgunluktan, telefonun sesini duymaz. Telefonun ısrarlı çalışanlarından sonra telesağiretreye devreye girer. Aylın telaşlı ve biraz da korkmuş sesiyle mesajını bırakır:

- Fatih ben Aylın. Hemen İstanbul'a gelmen lazım. Burada garip şeyler oluyor. Babana günlerdir ulaşamıyorum. İşyerinde de garip olaylar oluyor. İstanbul'a geldiğinde detaylarını konuşuruz. Kendine dikkat et.

Fatih duştan çıktığında mesajı dinler. Babasına ne olmuş olabilir ki. Aylın'ı bu kadar telaşlandıran şey ne olabilir. Fatih kafasında bu sorularla İstanbul'a doğru yola çıkar.

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- 1 GB sabit disk alanı
- 4x CD-ROM sürücüsü
- Stereo ses kartı
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- Direct9.0c
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Fig. 24.1 The first Turkish PC game: *Pusu* (Source: Yoğurt Technologies' Archive)

their unfinished project could much more easily find a global publisher and investor if the studio were not located in Turkey (2008, 23). Here, we should emphasize that in Turkey, the companies operating in the technocities have certain privileges. The most important privilege is the tax exemption for the game studios because they are expected to conduct R&D. Tax exemption will enable studios to transfer resources to other stages of games development.

The game industry in Turkey is very small in size and operation in comparison to the global market requirements and production process. To take a Turkish example, Ceidot-Ceiron Game Studio mostly focused on marketing strategy at the beginning and ran out of money, so they tried instead to find investors both on a local and



Fig. 24.2 Sobee Game Studio (Source: Mutlu Binark's Archive)

global level (Bayol 2008, 22–23). Another producer, Emibel, used financial resources acquired from different industries like chemistry and plastics that were taking place within the same financial establishment. According to the project leader of Emibel, Fırat Bükey, 80% of the budget has already been spent on staff expenses like salaries during the development process. Mevlüt Dinç says:

Mynet spent over \$ 400,000 for the *İKV*. I am not sure if it is correct to mention figures, but our share in that cost was nearly half of the figure. Actually it is ridiculously low for such a game. (interview dated 19 June 2008)

Independent developers have just accomplished their first game projects and are now using that experience in new projects. Their first products were financed by their own personal savings, supplementary employment, bank loans, any other private sources (Kerr 2006b, 81), or, in rare instances, venture capitalists such as *SystemsWonders 6* who were financed by Emibel or *İKV* who were financed by Mynet. In particular, independent game developers, based in their home offices, explain that they have not

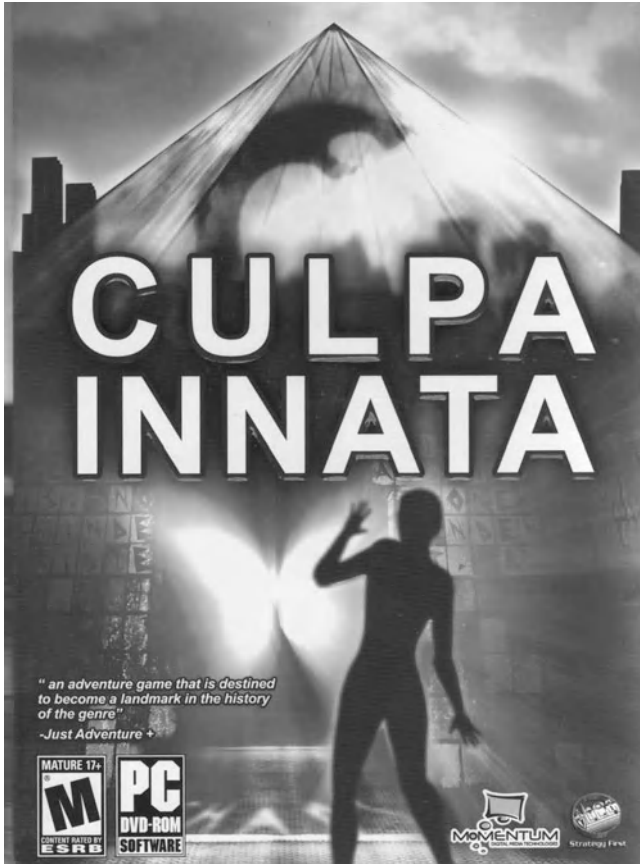


Fig. 24.3 Globally sold Turkish PC game: *Culpa Innata* (Source: Momentum DMT’s Archive)

had any budget and financial resources to use, except for their free time at nights and weekends and supplementary employment during the daytime (Fig. 24.3).

For PC or box game developers, in Turkey, the duration of developing a game often exceeds the deadline. So, two major problems arise: first, the graphics technology of the game gets out of date, and second, the taste of the players may change by that time. As a result, when the development of a game is not finished on schedule, the production costs get higher. Moreover, the developers will have to look for other sponsors and to agree on uneven and limited conditions. Yasin Demirden, from Son Işık Game Studio, speaks affirmatively:

It always happens, we always get behind. So, we have to renew the project. Because it affects the budget, you need to produce it in a cheap way. (interview dated 05 February 2008)

The extended production process, a typical situation for the Turkish game industry, results in devaluation of the value chain and means loss of profits and perhaps bankruptcy. The developer team has to decide whether to build a game engine, or

modify an engine that has already been created, or use another company's completed game engine, or buy a commercial development environment. Out of 12 studios, 6 game developer studios produced their own game engine, but they did not license it. Zoetrope Interactive built an engine for adventure games, named *Complete Panoramic Adventure Game Engine* (CPAGE), and Overdose Caffeine built *Etherengine* for producing advergames. There are several advantages of building a game engine such as providing the exact needs of the production. Also after licensing the game, developers can promote the engine separately and adopt it in their new projects easily and rapidly. Larger games studios mostly reuse the engines of previous games developed by the studio (Kerr 2006b, 91).

Uzunlar, the developer of both *Pusu* and *Nette Hayat*, says:

The engine is the technical infrastructure of a game. We need to know how to establish such an infrastructure. Nobody makes the mistake of writing an engine from scratch for every new project, but anyway we need to create our very own technology. It is unlikely to reach the global level; and surpass our rivals by importing engines from abroad. You need an infrastructure anyway to use the engines. If you lack the knowledge how to write an engine code, you cannot simply buy it and use it. Buying the engine may be an option only for timing and financial purposes, but even that will not fulfill your needs. Because you need to tailor the engine according to your own needs and adapt it to your business. (based on the workshop dated 14 March 2008)

The disadvantage of building a game engine is that it takes time, so the developers spend time on coding and programming the engine from the beginning. "If a company spends too long on the game engine, for example, then the art and game play may be underdeveloped and vice versa; if too much time is spent on the art, then the underlying technology will contain 'bugs' and not be well integrated" (Kerr 2006b, 87). Thus, some developers prefer either to modify a complete engine or buy middleware. "Development companies are increasingly using a type of software called middleware to reduce the amount of time it takes to program a game and same on research and labor costs" (Kerr 2006b, 91).

Publishing and Licensing

In the local market, the primary motivation for a publisher must be to get profits from game sales, but in Turkey, we also see publishers supporting new and original games to earn prestige. For example, Aral İthalat published *Pusu* just because it was the first box game in Turkish. Also, Mynet supports *İstanbul Kıyamet Vakti* financially and technically as a prestige product because it is the first MMORPG project. As we look at the publishers' other commercial activities, we can see that they mostly operate in related commercial areas such as Internet service providing or selling IT products. However, an important obstacle for Turkish game developers is finding either local or global publishers and dealing with the publisher on equal terms. Kerr agrees that "[...] a developer with an established reputation is perceived as less of a risk and they can negotiate a larger advance

and a higher percentage of royalties” (2006b, 81). Uzunlar on the same issue argues that:

It is difficult to find a publisher with only a design layout in hand. You can get an appointment only if you have a history in the business. They always ask if you have ever produced games in your own country and how much it sold. If you don’t have such a record, you will not get a reception better than a “see you later” salutation. Or you may have the chance to work only with small-scale publishers in Russia, or sometimes in Europe. If you go to the publisher too early, you will not get more than 5%. But if you go with a finished game and already created resources, you may have higher shares. It is very difficult to find publishers in Turkey without anything in hand. There are many ways to market your game; for example, if you sell it on the Internet, you will have all the money. (based on the workshop dated 14 March 2008)

Distribution and Marketing

Development budgets must also embrace marketing campaigns and activities. When we look at the Turkish case, we see that in most cases, there is no marketing budget. Cemil Türün from Yoğurt Technologies explains the marketing process of *Pusu* as follows:

We have produced this game over a three years time span, sacrificing many things, like spending from our own individual salaries. There was no other way to accomplish it. So we never had a 100,000 TL budget to spend for marketing for such a sacrifice-fed product. I wish we did, then we might have printed 20 thousand copies, not 10 thousand. We have not done any marketing, nor did we sell huge amounts. 10 thousand is still a good figure for many, as foreign games sell between min. 100-max. 2000 copies in Turkey. For some, selling 10 thousand copies of *Pusu* is a success. (06 February 2007)

Promoted in the market with *the Turkish word for technology* motto, the Vestel company was the publisher of *Kabus 22* but never employed a specific marketing strategy to bolster the value chain for the product. It was on display in Vestel stores next to television sets and refrigerators. Most of the game developers use the Internet environment, that is, forums, to promote their products. Online products are sold on the Internet by subscription, whereas box games are sold via retailers and on the Internet via e-commerce sites. For the lack of marketing strategy in the Turkish game industry, Barmanbek gave the main reasons as follows: “Let’s suppose that you developed a game: there is no serious and professional company that can publish your game in Turkey. I mean a professional company that can run print ads in national mainstream media, not only in game magazines.”

Labor Force

Developing a digital game requires a synthesis of narration, aesthetic, and technological skills to conceive, plot, and program virtual worlds, deploying the combined expertise of digital coders, graphic designers, software testers, scriptwriters, animators,

sound technicians, and musicians. Production is done in studio conditions by teams of 6–50, and each project generally takes 1–2 years to complete (Kline et al. 2006, 199). When we look at the numbers of the staff employed in the game studios in Turkey, we observe that the least number of employees is three and the highest is eighteen. The labor composition of the studios has certain peculiarities in common. People who are in the business are mostly close friends, brothers, or married couples. Some studios do not have permanent monthly revenues so they cannot pay salaries. Management techniques regarding the labor force comprise “[...] youthful technophiles with a compulsive-obsessive work ethic, one-dimensional character formation, and a high rate of burnout” (ibid., 200), and this is also the case in Turkey. The most sought-after qualification for a game developer is self-dedication. The companies force their employees to create more products for the market and, as a result, require more self-dedication from their employees.

We observe that the lack of experience is another important obstacle with regard to the labor force in Turkey. Kerr emphasizes the importance of experience as follows: “Experience is the ‘holy grail’ and experience gained while working on a commercial product, or a successful modding project, is how people get jobs and how development companies get publishing deals” (Kerr 2006b, 89; for a more complex cultural investigation of modding, see Unger, Chap. 32). More than anything else, the lack of experienced staff results in delays or failures of the development process in Turkey. This is because experience helps game designers to make “realistic” plans for budgeting and time schedules. The lead producer of *Mount and Blade*, Armağan Yavuz, says that:

Mustafa came to us, for example. He had worked before on the *Pusu* project; we have learned many things from him because apparently they did many different things in *Pusu*; he brought us quite a lot of know-how... this is the basic problem, the lack of know-how. (interview dated 27 August 2007)

Clearly, the labor force in Turkey does not lack the technical know-how in the development process. But the experience and cooperation are missing among the actors, and these are actually the fundamental skills needed in a digital workforce.

Legal Regulations

Detailed interviews with the industry actors, and our observations in the game industry, show that the lack of the necessary legal regulations is another problem that hampers industrial development in games. In Turkey, digital games must carry tax stickers bought from the Ministry of Culture and Tourism, like all other products in the culture industry. According to an amendment dated October 2008 to the Regulation on the Registration and Copyrighting of Intellectual and Artistic Works,

computer games, like all other productions containing movie works, as they also have a direction and script that involve moving pictures with sound, are subject to registration and copyrighting by the rights-owners in order to prescribe their rights and to facilitate the proof of rights.



Fig. 24.4 *Sovereign Symphony Online* (Source: Ceidot-Ceirion Game Studio’s Archive)

Additionally, a provision enabling “contracts or licensing agreements for transfer of financial rights” for registration and copyrighting transactions was also added to the regulation. Buying tax stamps and these registration-copyrighting transactions are the only legal regulations specifically regarding digital games. Piracy is therefore a major obstacle for the development of the game industry because the piracy market in Turkey has quite large sales. Especially independent studios have been affected terribly by illegal copy production. The Turkish government has recognized piracy as a problem since the early 2000s and tried to crack down on software piracy with the assistance of the police authorities. According to the NDP (2006), the legislation regarding the protection of intellectual property rights will be effectively implemented in the software sector (ibid., 97), and reduction of the informal economy (ibid., 32) is aimed at. But the problem is still there. For example, *Kabus 22* has a 15 € price tag, whereas the pirate copy of the game sells for 2 € on the streets.

Games are also classified by the Department of Copyrights and Movies under the same Ministry into 7+, 13+, and 18+ age-limit groups according to the violence and pornographic content they have. However, this classification is not sufficient as it fails to correlate the type of the game with the content, as is the case in the PEGI and ESRP classification systems. Therefore, a classification system is required specially designed for digital games.

Recently, in 2009, there was a dispute between the Ceidot-Ceirion Games Studio (Fig. 24.4) and the investor GGC about the ownership of intellectual rights, followed by the Studio’s registration of the web-based *Umaykut Online* game with the Turkish Patent Institute and, therefore, claiming that the intellectual rights

belong to the developer of the game. This dispute had been a case of struggling over intellectual property encountered during the process of game development in Turkey, and it was settled in favor of the developer. Following the dispute with the investor, the said developer opened the source codes of the game and made it accessible in Facebook free of charge (www.yenimedya.wordpress.com, accessed 20 Oct 2009). Erkan Bayol, the chief producer of the Studio, tells of the working conditions and how a game studio should be motivated during the development process in Turkey:

You shouldn't be daunted and you should be lucky enough. You will never know when a real opportunity comes up, and if you always keep your strength to seize and benefit from such opportunities, your life will totally change when that very opportunity really comes up. If you feel tired of waiting for that opportunity and tend to give in, you'll start losing power and will not have the strength to reach and seize it when it really comes to you. Therefore, one must be a demon for work, must always be seeking and trying. No bank will ever give you credits for it, but maybe you'll meet an investor who likes you very much; maybe you'll apply to a venture capitalist and by chance he/she is on the lookout for a games project... In short, one cannot mention a standard procedure for this stuff; you must be intrepid, and fight right up until the end. You must not accept defeat. Alternatively, you must hang on and go with a very small team for a good project based on a very creative idea, finish that project with no external financing, then somehow publish it, attract people and then try to make money. It sounds impossible but there are such success stories in the world. *Mount & Blade* of Turkey is a good example of it. (www.yenimedya.wordpress.com, accessed 20 Oct 2009)

Governmental Policies

According to Hesmondhalgh (2007, 106), the public authorities may be involved in the development of creative industries on the national level in three ways: legislation, regulation, and subsidizing. In this context, the public authorities', especially the government's, behavior towards the development of the digital game industry in Turkey is inadequate in all of these respects. Although the government's policies and discourse concerning information technologies over the last two decades have included the notions of spreading the Internet, and developing and supporting e-trade, there has been no mention of supporting and developing the digital game industry anywhere in these policies. On the contrary, the General Directorate of Family and Social Research under the Prime Minister advised that the MMORPGs must be subject to regulation on the grounds that game addiction may spoil the relationships between the teenagers and their families.⁶ In the first meeting held on the issue by the Directorate on 11 June 2008, entitled "Developing A Policy Framework for the Turkish Game Industry," it is said that although traditional games

⁶Similar critical discourses are present in other countries (see, e.g., Kutner and Olson 2008; Meister et al., Chap. 19; Kringiel, Chap. 40). Apart from being significant for the industry, they also raise a number of educational questions. Fromme (Chap. 41), for instance, explains why public skepticism and legal regulations may also restrict modern approaches of activity-oriented media education.

are good for children’s mental development, playing digital games must be restricted and supervised, and that something should be done to counter the cultural imperialism embodied in games of foreign origin. It is also recommended by the meeting that the money accumulated in the universal services fund held by the Telecommunications Communication Presidency must be used to produce nonviolent games.

The General Directorate urges the introduction of legal regulations not only to have control over digital games on the basis of their type and content but also, being aware of the economy created within the game world, to prevent the transfer of money created in the game world to foreign countries (Binark and Bayraktutan-Sütcü 2008a, b). Adopting a conservative and protective discourse, the General Directorate raised concerns in the Fifth Family Council, held by it on November 5–7, 2008, and declared that “the youth waste time in Internet cafés playing computer games.” Under the Ministry of Transportation, the Telecommunications Communication Presidency (TCP) was established within the Telecommunications Authority in August 2005 and became functional in July 2006, and is responsible for implementing the national filtering system and preventing access to some websites, due to their harmful content.⁷ TCP has also become the agency that lists harmful online games, played especially at Internet cafés. To list the harmful online games, information is collected by the Presidency’s hotline. For example, a letter, written by a mother on the harmful effects of game-playing addiction to *Knight Online* by her teenage sons, was used by the Presidency to forbid playing this MMORPG game in Internet cafés throughout Turkey. The Ministry of Internal Affairs declared and disseminated this decision to the local police authorities. Fethi Şimşek, the head of TCP, explains the reasoning of the ban as a sanction by the Turkish Interior Ministry and TCP on playing K2 Network’s *Knight Online* game in Internet cafés due to the difficulty of taxing the locally generated income of the said game, which has thousands of paying users in Turkey. Recalling that the company appealed through its lawyers for the lifting of the decision by the Ankara Fourth Administrative Court rejecting their motion for stay of the ban, Şimşek mentions the information in the appeal documents where it says that “the company’s sales in Turkey have reached 3,842,000 dollars in 2006 and 8,958,000 dollars in 2007, and its monthly sales exceed 1 million dollars in 2008.” Emphasizing that millions of dollars are received from the players in Turkey and go abroad without taxation, Şimşek said they have applied to the Directorate of Incomes Administration in the Ministry of Finance for the assessment of the taxation aspect of the issue and of the action taken.⁸

⁷In Turkey, Internet cafés are regulated as a content provider by Law No. 5651 entitled Regulation of Publications on the Internet and Suppression of Crimes Committed by means of such publications, enacted by the Turkish government on May 04, 2007 and published on May 23, 2007 in the Official Turkish Gazette (Binark et al. 2009).

⁸See http://www.birgun.net/procs_index.php?news_code=1232018118&year=2009&month=01&day=15 (Accessed 15 Jan 2009).

Discussion

Based on the findings of this study, we may list the basic problems of the digital game industry in Turkey as follows: governmental actors lack a cultural and economic policy; game developers are unable to find investors or publishers at both the local and the global level; game developers lack communication and cooperation between themselves; there is no legal base that will regulate the game industry, protect copyrights, and classify the games; and finally, the mainstream media label the digital game culture as a negative activity.

We must reiterate that the media coverage of the digital game culture as a pointless leisure time activity, with an emphasis on “addiction” that allegedly harms the mental health and school grades of students, is another serious barrier confronting the development of the game industry. The mainstream media impose a single stereotype of games and game players.

Game developers seek government support in the form of investments in games. Independent game developers working in technocities enjoy some tax exemptions, but these companies cannot benefit from the government’s R&D support because they employ few people. This support is given only to those who have 50 or more employees. Considering the fact that the game industry in Turkey mostly revolves around independent small-scale producers employing few workers, the coverage of legal regulations for R&D support must be enlarged to include them. Even if one finds an investor to enable the development and publication of a game, it is a must under promotional capitalism to enable them to invest in marketing activities too. However, in Turkey, neither publishers nor distributors allocate funds for the marketing of a produced game or the running of a promotional campaign.

The digital game is an arena of cultural clashes, where different and alternative cultural productions and representational practices may exist. Therefore, opportunities for game production in Turkey must be encouraged, and this very creative industrial product must urgently be cleared of the false perception that it is just “a game,” and we must be aware of the length and complexity of the production process, the importance of marketing strategies, inclusions and exclusions to the scenarios, and the existence of different practices. Additionally, if we want to exist as a “producer” in this new creative industry, we need to get hold of global management strategies in order to grasp the rules of existence in global markets. The following anecdote taken from the process of seeking a publisher in the global market for *Sovereign Symphony* does address well the problems on the locality issue:

When we get to the US, we had a demo in hand, with a yenicheri (janissary) character and everything in it. Seventy or eighty percent of the companies we visited, for example Russians and French, asked why we put in that yenicheri... We replied would it be better if it was a samurai or a ninja... It is okay then, but not okay when it is a yenicheri etc.! They apparently got uncomfortable with it. There was such an interesting reaction, really weird... maybe out of some historical feelings. You simply cannot do the marketing, advertising... People take it quite differently. (Hakan Nehir, interview dated 28 March 2008)

To sum up, digital games are a natural part of our daily lives, whether it is a role-play, adventure, or strategy game. Further, it is one of the most profitable areas of creative industry and yet as one of the most untouched area in Turkey still to be exploited for a global role. As put in the introduction text of *Sovereign Symphony*, “You will decide which instrument you want to be” or do you wish to “be just a pawn pursuing sovereignty” (Oktay and Göker 2006, 18–19)? Or what?

Therefore, in order to see the digital game industry gain the desired impetus as a new and developing creative industry in Turkey, we recommend in this study that communication and cooperation between the developers must be established, governmental actors must provide the same incentives and investment supports to this industry as they do to other cultural industry products, and legal regulations must urgently be introduced for the protection of the intellectual rights and copyrights of game developers, so that the value chain of this ideal commodity can be established. As Kerr mentioned, developers, publishers, distributors, retailers, and all other actors involved in the process add value to the basic commodity in every stage of production and contribute to the final value for which the consumer is ready to pay (2006a, 44–45).

The problems and suggestions for solutions defined here constitute an important starting point for future studies. We must first focus on these problematic areas in order to make the digital game industry in Turkey evolve as an ideal type of commodity into a new creative industry. The responsibility of the future studies to be carried out on this issue must be to focus, with an integrated approach as suggested by Golding and Murdock (2005, 61–66), on the production of the texts and symbolic meanings created by the industry and on the political economy of the consumer/player.

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List of Interviewees

Armağan Yavuz, TaleWorlds/İki Soft
Başar Muluk, Yoğurt Technologies
Burak Barmanbek, Momentum DMT

Cem Uzunlar, Nette Hayat, currently Infosfer
Cemil Türün, Yoğurt Technologies.
Galip Kartoğlu, Zoetrope Interactive.
Hakan Nehir, Ceidot-Ceiron Game Studios.
Mevlüt Dinç, Sobee.
Murat Yavuz Kaplan, Mynet Internet Service Provider.
Yasin Demirden, Son Işık Game Studios.

Chapter 25

Mergence of Spaces: MMORPG User-Practice and Everyday Life

Elke Hemminger and Gareth Schott

Introduction

Role-playing games are a relatively modern cultural phenomenon with the earliest most influential game, *Dungeons & Dragons*, developed and published by Gygax and Anderson in 1974. Since its inception, the genre has proliferated in a diverse fashion (Dormans 2006) becoming a trans-media phenomenon (see Veugen, Chap. 3). Specifically, the increasing number of digital and online role-playing games (MMORPGs) have considerably increased and broadened the range of contributors thus making the acronym RPG more widely recognized if not necessarily better understood (see Raczkowski, Chap. 4, for discussion of genre).

In order to begin theorizing the practice of role-playing, we considered it necessary to understand the experiential demands of different forms of role-playing; we therefore included pen and paper, live-action as well as player-to-game interactive texts and massively multiplayer online role-playing games (MMORPGs) in our analysis. When examined more closely, RPG, much like the term computer or video game, is equally misleading in its inattention to the particular fusion of ludic and paidea during performances within different turn-based universes. While all RPGs share general characteristics (e.g. narrative form, fictive ecologies, range of roles), they are still able to vary profoundly in terms of the experience of role-playing on offer. For example, what takes place primarily in the imagination of the players in a

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'pen and paper' RPG is physically enacted in live-action RPG, heightening the kinaesthetic experience within its process of contestation.

In interactive screen-based RPGs, we find the most popular and possibly radical adaptation of the 'pen and paper' RPG. Here a single player controls a game character or a party of game characters that are maintained and developed throughout the game. Typically, character development shows itself in various statistics of strength, character traits and possessions. As the computer upholds the game system and keeps track of the game state, players are supported by the medium allowing them to concentrate their efforts entirely on the successful realization of missions and quests. In the first player-to-game configurations of RPGs, players did not interact directly with other players. Often derided by enthusiasts engaged in other more traditional modes of role-play, the first interactive manifestations of RPGs were often criticized for their 'hack and slay' method of playing that simply required the rapid killing of monsters in return for a quick rise in levels. Emphasizing as they do only one facet among many other motivations for engagement with RPGs, they forfeit other more varied forms of play considered so important in role-play. As one project participant expressed:

For me the decisive thing in role-playing is that you sit together, have fun, meet your friends, that you talk, from character to character as well. And that you can play different characters as well, that you have to interact in the group. That's decisive, not the fighting, not that I can slaughter 25 monsters or something. (participant P1)

With the development of the technological means to create expansive virtual settings for role-playing that can be shared by thousands of players through the use of client software and access to a server, the culture of role-playing (and digital gaming in general) has undergone profound changes. MMORPGs like *Everquest*, *World of Warcraft* and *Lord of the Rings Online* have developed unexpected ways in which players use these games, which necessitates academic treatment of such social spaces. For example, the capture of in-game footage and its dissemination (via the digital archival tools of Google Video, You Tube or *warcraftmovies.com*) serves to demonstrate players' celebration of their mastery of the prescribed experiences of the game and their grasp of its virtual ecology. In doing so, player practices in these virtual domains also frequently confront and challenge the well-defined cultural field of the game world itself. Documentation and creative practices exist (e.g. machinima) that illustrate other facets of players' 'lived' experiences. Such accounts that often see MMORPG characters used against the grain as players embellish and cut through the distinctive traits, intrinsic qualities and moral fibre of their adopted personas (e.g. *World of Warcraft* machinima *The Internet is for Porn* by Argent Dawn).¹ Played by people of both sexes and all ages, MMORPGs might be played collaboratively in coordinated groups, but they comprise much more than moving a figure on a screen – they are virtual worlds in which people now subsist, interact and generate experiences for themselves and others.

¹ See <http://www.clipfish.de/video/62668/world-of-warcraft-the-internet-is-for-porn>. Accessed 26 Feb 2011.

Virtual Worlds and Identity

In his monograph *The Saturated Self*, Kenneth Gergen (1991) more generally analyses the change in our understanding of identity in a post-modern society. The profound innovations in technology, resulting in various ubiquitous and mobile means of communicating, provoked Gergen to challenge basic assumptions concerning the self, namely the common perception that a healthy person should develop a firm, stable, coherent sense of self. In the past, failure to do so has been considered pathological (Gergen 1996b). Gergen's work documents a new flexibility in the self, influenced by the social circumstances usually described as post-modernity. A state of social saturation is created by new technologies that expose the individual to a constantly expanding number of relationships with persons or institutions and require the acceptance of numerous roles, the handling of a variety of norms, rules, views and codes, as well as tolerating inconsistencies and fragmentation of our self-conceptions.

By using the post-modernist concept of a relational identity, new approaches for research in the field of game studies are opened, as many works have already begun to show (e.g. Turkle 1997; Taylor 2006). This chapter is not about positioning RPGs within a framework, as either modern, post-modern or anti-modern, but about analysing them as part of a culture that frequently opens up new spaces to individuals in which to act in various roles. One example for this development is the virtual space of MMORPGs, where multiple avatars are the normative state of engagement with virtual worlds of RPGs. But even though post-modern culture opens spaces of relatedness, it does not automatically follow that individuals use these spaces in a post-modern way.

In her seminal work *Life on the Screen*, Sherry Turkle (1996) analysed the possible therapeutic effects of adopting different personalities in MMORPGs predecessors, Multi-User Dungeons (MUDs). In doing so, she also applied the post-modern concept of 'bricolage' in explanation of players 'acting as authors not only of text, but of themselves' (ibid. 156). Players of MUDs were found to use cyberspaces to play with their identity and so contribute to the cultural renegotiation of a new concept of the self. Combining Gergen's thesis of the 'saturated self' (Gergen 1991) with Turkle's early work on identity construction in MUDs (Turkle 1996, 1997), we can state that technological developments like MUDs and MMORPGs can be viewed as both drivers of relatedness and a means to deal with it. Games like *World of Warcraft* expose the individual and player to an almost limitless number of relationships and presences but at the same time offers the opportunity to deal with the challenges of this fragmentation of the self by adopting well-defined roles in a playful way, trying them out in the safe space of a game setting. As we will demonstrate, MMORPGs enhance this development in a fundamental way, so fundamental that the concept of distinguishing between real life and virtual world existence demands a thorough rethinking.

While it might be useful for the understanding of certain game aspects to cordon off game space from real life (Huizinga 1938), we argue that the concepts of space

as divided into separate dimensions has to be revised concerning MMORPGs. If we focus on the way players claim the newly emerging space of online gaming, we will see manifold user practices that mingle reality and game and offline and online life which cannot be analysed as separate phenomena. As Taylor has argued:

the challenge ahead involves exploring grounded practices, the structural conditions of production and use, and the real ways players make sense of these spaces. To imagine we can segregate these things - game and nongame, social and game, on-and offline, virtual and real - not only misunderstands our relationship with technology, but our relationship with culture. (2006, 153)

By providing a model of the user-practice of MMORPG players, the present study sought to clear the way for the development of a theoretical model of the fluid movement between the merged spaces of reality and game world (see Thimm, Chap. 11, for similar discussion of *Second Life*).

Virtual worlds like MMORPGs have rapidly developed into something that was planned neither by the game designers nor by the players themselves. They mingle with everyday life and are, as our research findings show, increasingly used in various ways of social interaction that for some can take precedence over the game. For example:

But in-game, all the stories and all that happens there, to be honest, I'm not interested in that. And I never read a quest completely ... I only click on the quests. And if somebody talks about the story I cannot take part in the conversation ... I'm not interested at all. (participant P2)

As MMORPGs become a significant part of the player's reality thus containing highly meaningful actions and emotions, it is no longer productive to consider game spaces as completely separated from 'real life' (see also Härig, Chap. 13). Instead, one way of understanding virtual spaces and their relationship with physical space can be derived from the discipline of geography, where post-modern thinker Edward Soja (2001) developed the theory of 'third space', the lived space as part of the general cultural web that is socially constructed. The term post-modernism is a complicated one, referring to a set of ideas that emphasize fragmentation, multiplicity, unclarity and relatedness (Gergen 1996a, b; Kvale 1994). For geography, post-modernism resulted in a cultural approach that focused on the way that culture influences places and the different ways people use these spaces (Arentsen et al. 2008). Soja introduces the concept of 'third space' in contrast to the modern, binary concept of space. His 'first space', the perceived space, consists of concrete localities that are also socially produced as results of human activity. It can be directly perceived, measured and described. Soja's 'second space' is the conceived space. It is mentally constructed and can be expressed through symbols and signs, for example, speech or written words. In addition to those two traditional spaces, Soja identifies a 'third space' or lived space that is beyond mental or physical constructions but incorporates both. They are created by the 'effects of a changing culture, and are spaces of transition; transition between localities and over time... They relate to both poles of binary conceptions of cross-cultural space and yet at the same time entirely transcend them'

(ibid. 9). The lived space contains social practices, the material world, experiences, emotions and mental constructs. Third spaces are simultaneously real, imagined and more than the sum of both.

In an attempt to utilize the theory of third space, the present research focused on the way players use the space that is given to them in virtual settings. This approach assigns considerably more meaning and significance to game space than is common. It also implies that gaming experience in RPGs can be more than a mental experience without connection to reality. If we want to understand the cultural impact of online games and other participative online spaces, we have to analyse the way in which users actually claim and occupy these spaces as lived spaces. The traditional view of media in general and games in particular as mere leisure activities with closed boundaries, cut off from reality and without real-life significance, is no longer adequate. Therefore, the central research question for the present study was how reality and game space interact in the actual user-practice of RPG players.

The Project

The research project represents collaboration between the Pädagogische Hochschule (University of Education) in Schwäbisch Gmünd, Germany, and the University of Waikato in New Zealand, which examined the MMORPG *World of Warcraft (WoW)* comparing it to other forms of RPGs. We focused specifically on the actual user-practice of players and the interaction of real life and virtual realms. In order to gain insight into the perspectives of the players, a triangulated research design was employed. Participant observation of online RPG culture and game-play was coupled with in-depth interviews and supplemented with a survey to capture additional contextual and demographic data. As stated, the primal goal of the project was to explore how the spaces of reality and game interact in the experience of playing RPGs. The question also determined the comparison of different types of RPGs; however, in this chapter, we focus more on the results on user-practice of MMORPGs. Interest in what ways the users make sense of online game space and what meaning they refer to it fairly obviously demands that our central question cannot be answered without taking into account the opinions, views and perceptions of the players themselves. Therefore, the research design and methods had to allow for direct contact between players and researcher.

Research Design and Methods

As the research focus is on personal perception, views and meaning attributed by the players, qualitative methods offered the most flexible and adequate approach for

generating conceptions and models within explorative research. The research design in this project was arranged as a combination of field research and interview study, supplemented by a questionnaire study. The questionnaire was administered at three conventions for 'pen and paper' RPGs. In addition, it was sent to gamers who could sign up for the study on a *WoW* online forum. For the interview study, 15 focused interviews were conducted with role-players. Of the interviewees, seven were 'pen and paper' players, eight played only digital RPGs. Of the seven 'pen and paper' players, two also played live-action RPGs and three also played digital RPGs, including MMORPGs.

The field study included participant observation in several RPG clubs, on conventions and during gaming sessions of both 'pen and paper' and MMORPGs. The first author of this chapter additionally engaged in the MMORPG *World of Warcraft* over a 2-year period (as a researcher), playing and becoming a guild member on the German server 'Die Ewige Wacht', which held 15,560 different characters (see www.warcraft.real.com). The analysis of the combined material of questionnaires, participant observation and interviews resulted in a detailed picture of the individual significance of playing RPGs and the way the players use the virtual spaces of these games. In the following section, select findings from the research project are presented as an illustration of game space as 'third space'.

The Mergence of Spaces in RPGs

The study clearly showed that explicit interaction between reality and game space is perceived as normal by players and was commonly identified in most game sessions. Defining contact of spaces as occurrences, in which the trigger for actions and emotions is located in one space (e.g. game space) whereas the effect of these actions and emotions emerges in another space, we suggest that the use of game space can transcend traditional spatial separation and results in a mergence of game space and real life. We also argue that mergence of spaces happens frequently in MMORPGs but only from time to time in traditional RPGs. For many players of traditional RPGs, total immersion is a desired state: 'all your everyday worries are gone so fast, if you are part of the story, of the mutual story-telling'. In contrast, the phenomenon of merged spaces results in the perception of MMORPG space as 'third space' or lived space, defined by Soja (2001) as both a perceived and conceived space, but transcending them as an effect of cultural change (Arentsen et al. 2008, 9).

In order to explain this phenomenon, the findings from the study were analysed for events that illustrate the mergence of spaces. During participant observation, we regularly found that real-life incidents cross the boundaries into game space and progress to operate as real experiences. The difference from common interaction lies in the significance for the players, who do not take these incidents as pure

in-game events but as real experiences that happen in game space. One example of this occurred while the football World Cup was taking place in Germany in 2006. In *WoW*, there exists a guild that calls itself ‘Die Eidgenossen’ – a term for Swiss citizens. Its members wear a guild doublet featuring a symbol that closely resembles the Swiss flag. After the Swiss national football team had won a match, the guild met in a virtual pub and, while chatting loudly for everyone else’s benefit concerning their victory, held a cheerful party with the support of many tankards of virtual dwarf beer. For the participants, the celebrations replaced the parties other fans had in the streets or in real pubs but obviously had the same significance.

When the first author began playing *WoW* as a player, prior to the study, it was a strict rule that real-life issues should not be mentioned in general chat channels. This way, immersion in the game would not be interrupted and the boundaries between game and reality were clearly drawn. Over the years, playing morphed into research, and it was observed that this rule also gradually softened more and more (with increasing experience and more developed relationships), so much so that it was not uncommon to experience players chat about the events of their day, such as what happened in school in the middle of a city. Conversations and experiences shared in a context where many other players can ‘listen’ in, as the exchange emanated from their in-game character, present on screen as speech bubbles. Again, we refer to football as one of the common topics that frequently appear in general chat. On the one hand, people chat about results and outlooks. Clearly, immersion in the *WoW* community and universe for some players *includes* the presence of real-world dimensions that allow players to connect beyond their fandom of and participation in the RPG genre. Many players deliberately choose to treat and use the game space as a space that accommodates and facilitates real-world connectivity between players beyond the act of game-playing, as one of our participants states:

And because I know, at the other end there is another human being and not just a computer intelligence [sic!]. There is a human being who also tries to do something in the game, it might not be vital now to help him with this, but yet there is a person who has questions. And therefore I want to help the person behind him as well. (Participant P1)

Other players more specifically highlight their use of game space for meeting friends, making appointments and chatting in general:

In the morning, when I go online, I meet people, you know each other, you chat...how was your day? It’s more like I’m playing because of the people now. (Participant P3)

Game features are deliberately extended and used for real-life encounters, such as prearranged ‘meetings’ with friends who live in a different country. Sometimes, the game itself creates an opportunity to discuss real life. We were fortunate to observe, for example, a meeting of two players while playing in the same ‘player versus player’ (PvP) group. To play in a PvP session, players have to sign up for a group because only a limited number are permitted to engage in this activity at the same time during a session. Groups are formed according to the time of

registration of each character that determines that players in the same group do not usually know each other. In this particular incident, one of the players used a dialect expression in the group chat channel to show his anger. Recognizing the dialect word the two group members discovered they originated from the same part of Germany sparking a discussion about regional issues and – once more – the local football club. The events of the PvP game happening around them subsequently lost much of its significance compared to the discovery of common ground in real life. While it could be argued that such communication itself breaks the role, as it inevitably strays outside the lexical field of the RPG universe with players using their own patterns of communication during text or voice chat, the players in this instance still continued to play in role. Likewise, while the game characters designed modes of speaking and moving are often exploited and used in an individual fashion, they also act in accordance to their task and available skill set in the game situation. The real self is only ever partly revealed but only as a part of the game character.

In the above-mentioned case, it was clear that both players were referring to their bodily, non-character self when engaged in discussion. This is, however, not always as clear as players demonstrate a tendency to casually and quickly switch between talking about their daily life and their game characters without making the difference explicit. Indeed, a number of our participants referred to situations in which they have been uncertain as to whether somebody was referring to himself or herself as a person or to himself or herself as a game character. This can be a problem in all types of RPGs when players have a discussion or insult each other without making it clear if they are playing in role. In traditional RPGs, occurrences like this seem to be more of an exception, whereas in MMORPGs, it is much more common to play the game character as a representation of the real self therefore adding uncertainty as to whether players are facing somebody playing their role or revealing themselves. As a result, players tend to attribute more seriousness to MMORPG interactions than in traditional RPGs because they presume real-life significance behind the actions and emotions of game characters. For the relatively newly created MMORPGs, their spaces have to be claimed by the players, owned and appropriated in their own distinctive way. Its ongoing fluid nature does not permit players to enter and exit the magic circle of play together, conversing before and after; such interactions are folded into the process of play itself.

Mergence is often an accepted condition of the MMORPG game world and therefore often quite harmless; however, there are instances where lack of observance given to in game principles and consequences become an emotional issue resulting in social sanctions for players. For example, there were many instances reported of players abusing the readiness of players to help by failing to honour or abide to an expectation for reciprocity. Some participants reported incidents in which low-level players were accompanied and supported through to the goal of a quest before disappearing the moment they had the item they wanted. This often resulted in leaving group members to fight their way back alone. Such actions go against the philosophy driving RPGs that is described as

I think the role-player is as such a friendly creature. Somehow in RPGs it is like tackling social problems together. Community is encouraged and is sometimes a central point. The interpersonal aspect is simply part of role-players, it connects the whole scene. (Participant P4)

Experience determines that such behaviour is a breach of the nature of the role-player and is not tolerated among the playing community. In such instances, anger and/or disappointment is directed at the player as a person, which can result in exclusion from in-game groups, not at his/her character in the game. In cases like this, the separation between reality and game space is heightened due to the negative outcomes which lead to those effected acting and responding to people, not as characters operating in a performance-led game environment characterized by opponents, contestation and danger. Indeed, the conditions of the game appear to be undermined by the very human nature of the deception. Players discussed being captivated by

the magic, that you have so much more possibilities. Our world happens in a rather limited framework ... And in a fantasy world, there are far more possibilities. There are creatures that are more than human. (Participant P5)

While the post-modern conception of a fragmented multiple self is a useful concept for understanding how virtual subsistence has achieved legitimacy and authenticity as part of players' everyday lives, it does not exclude more serious collisions of those separate selves. Indeed, one case example demonstrates exactly how players of *WoW* do not necessarily share and celebrate all forms of subversion equally. When the life of a *WoW* player ended, the subsequent attempt by their guild to facilitate an e-funeral raised questions concerning the 'discrete' nature of its world ethics and morals. Controversy was caused by guild 'Serenity Now' (Illidan, US) who, upon learning that the funeral would be an unarmed event, crashed the funeral, killing its attendees. The guild also produced a document of this *WoW* event, entitled 'So We Pwned a Funeral Today: Serenity-Now.org' that incorporates a forum backlash as context in its introduction prior to the actual game footage. Comments include 'congratulations you have stooped lower than any other guild in MMO history', and 'I hope Azshira's dad dies of a heart attack, then at the funeral some guy runs in naked and pushes the coffin over and runs around slapping people screaming LOL OWNED, then releases a video of it'. The footage shows an orderly funeral procession (accompanied by Mozart's *Requiem*), cut with footage of the attackers' journey to the funeral (accompanied by The Misfits' *Where Eagles Dare*), before the attackers arrive and disrupt the solemn proceedings. Forum debates centred on the ethics of the action based on a clash between its symbolism and significance to a real-world event against the logic of a PvP context where the event took place. One commentator summarizes the dilemma as 'to be honest the whole point of PVP servers is that you can kill other PCs. I agree it's sick, but at the same time walking around unarmed in the one type of environment where you can be killed is kind of dumb'.

In-game experiences that incorporate the real can also be positive. It remains a common gesture among guild members and friends to share virtual money, swap items and send each other posts including small gifts. We have observed and

experienced players who are especially generous in their interactions, evident by the gifts they share with low-level characters without any in-game rationale or motives. Here, the experience of meeting a stranger who is ready to give away items, money or time for free is a satisfying and uplifting one in a real sense because the player is aware that the character is managed by a real person who has taken it upon himself/herself to be friendly and generous to another real person managing another game character.

While most of the incidents described in this chapter occurred in MMORPGs, players also typically reported examples of a merge of spaces in traditional RPGs as well. The most important difference being that for traditional RPGs this merge is a lot less welcome. It has the result of not only interrupting the sense of immersion ('in the game, [if] people are doing something, two people start to talk about something else, then you lose the atmosphere ... Such things take you out of the atmosphere, they disturb the flow of the game') but also considerable damage to the social community, when boundaries between role and real person begin to blur. Participants reported intensive discussions following game sessions about implied real-life issues concealed in in-game actions and emotions. We were privy to questions being raised as to whether in-game discussion between two game characters was in fact substituting for a real dispute between those players, and concerns over how the attitude of a male game character towards a female game character was an illustration of how the player behind the avatar was feeling in reality. Players of 'pen and paper' and live-action RPGs especially emphasized how it is not always easy to separate one's own feelings, decisions or views from those of the game character but considered it to be essential for a good game that the personalities of player and game character should not consciously interact:

Well, I really have to take care to play according to my character, I mean, that I don't have my decisions, but the decisions of my game character, but still it should be a game that's good for the group. (Participant P4)

Beyond this, numerous other possibilities of a merge were noted when in-game companions decided to meet face-to-face or the doorbell interrupts an important raid, leading the player to either let others down or keep them waiting (perfectly illustrated in moc-game footage sequence 'Leeroy Jenkins'). Even in the course of one of our interviews, we experienced the interruption of a mobile phone conversation in which a guild member was ringing to cancel an in-game meeting scheduled for that day. In such moments, the game was so obviously part of real life for the player that it cannot be sensibly considered to be a separated space.

Four Levels of MMORPG Usage

The findings of our study confirm the presumption that the newly created space of MMORPGs can be used in a myriad of individually different ways carrying manifold meanings and resulting in varied points of focus during the act of

gaming. It was previously implied that user-practice of RPGs reveals essential differences between the different modes of play available. Traditional RPGs ('pen and paper' and live action) cannot be entered into or played alone, neither can they be engaged with for brief periods of play. Even though they are part of everyday life for the players as a hobby and thus certainly form a part of their experience, they are clearly separated from everyday life as well because every game session has to be carefully prepared in advance, involves several people and demands the time commitment of at least a couple of hours play. This separation is not absolute as we have seen in the analysis of interaction between real life and game. Game space in traditional RPGs is a space for experiences and playful identification, a sheltered place of reflection for real-life content. As some of our participants pointed out, the separation of reality and game is desirable in traditional role-playing but cannot always be maintained by all participants. Sometimes the boundary between person, player and game character is blurred or actively transgressed, which can result in serious disputes among the players.

In contrast, the traversing of boundaries between reality and game space is frequent and multilayered within MMORPGs. Online game space can be entered alone on the player's own volition and can subsequently constitute a completely different experience compared to 'pen and paper' or live-action game space. It is possible to log in and have a look at the virtual bank account of a character or search for guild members in order to plan a meeting later in the day. Because of the possibility to use game space as communication platform or a brief timeout from working, the boundaries between reality and game are not only blurred but in some cases non-existent. A mergence of spaces occurs easily in online role-playing, first, because it is not generally perceived as something undesirable and second, because players often treat emotional experiences in MMORPGs as their own, mediated by the virtual representation of a game character. Therefore, real person and game character are not as clearly separated from each other and in the same range as real person and game character interweave, the spaces of reality and game mingle as well.

Four levels of MMORPG usage (Fig. 25.1) were identified as a phenomenological framework for describing actual user-practice. It does not explain player motivations or identify user types, nor does it attribute evaluation of usage levels. Different levels of usage can occur in one gaming session, and preferences of a player can vary profoundly depending on gaming contexts. The levels of usage were identified as follows:

1. *Primal game-play*: Following rules, effectively using game features and ideal gaming strategy in order to level as fast as possible.
2. *Extended game-play*: Features of the game are used in order to deepen the experience of playing, for example, emotes and macros are used for acting as avatar, for digital role-playing.
3. *Secondary game-play*: The game itself is negligible, but game features, for example, communication channels, are used to contact other players who are currently engaged in playing. The game figures as a communication platform.

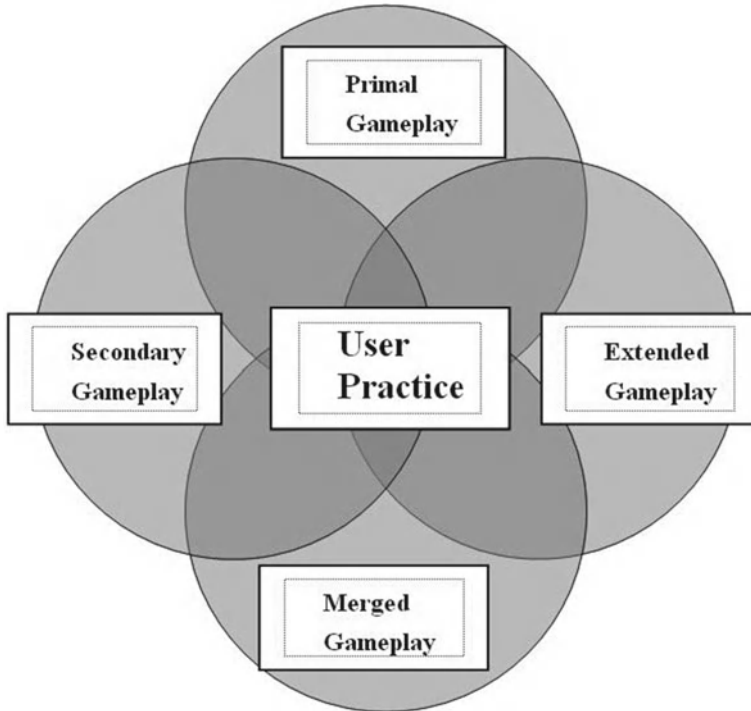


Fig. 25.1 Levels of user-practice in online role-playing (Source: Authors' illustration)

4. *Merged game-play*: The game is used as public space where real-life and game space merge into a virtual space, in which real and relevant experiences are made. The avatars represent not the person as player but as a real personality.

By describing user-practice of MMORPGs more systematically, the complex nature of every player's individual practice is highlighted. The model does not offer any information of the motivations connected to specific levels of gaming. Further research might be able to connect the levels of user-practice to the existing categories of player types or gaming motivations (e.g. Bartle 1996; Ermi and Mäyrä 2005; Yee 2005). The most important function of the model is, however, the illustration of the way MMORPGs can integrate with reality through merged game-play. The distinction between a mere interaction of spaces and their merge is not always easy, and more specific criteria should be developed via further research. In general, whenever a virtual space becomes a location for real experiences, virtual world and reality merge into one and complement each other and, in doing so, become a lived space for the players. Our research has revealed that the

concept of separated virtual space and reality cannot do justice to the complicated conjunctions between virtual worlds and reality. It is of more use to research to approach the issue of the merged spaces of reality and game as a 'third space' (Soja 2001). Cultural changes resulting from technological progress in digital gaming procured the online spaces of RPGs for the use of players. This space is now claimed, actively shaped and used in very individual ways by millions of players. The lived space of MMORPGs contains social practices, the material world, experiences and emotions, as well as social constructs thus meeting Soja's characteristics of 'third space'.

Previously in this chapter, MMORPGs were described as both drivers and outcome of post-modernism, but the results of the study show that individual player-practice can actually be quite contrary to the 'ideology' of new media. The analysis of observations and interview material revealed how important the issues of community and cultural rules in game space are to the players. The importance of in-game morals and friendship and the resulting interaction between real life and gaming are remarkable for suggesting a preference for issues that are neither modern nor post-modern but can be characterized rather as pre-modern or even romantic. If players prefer game settings and game characters that include these features, they are obviously not looking for a realization of post-modernity in gaming but for something quite different, if not directly obverse. As one of the participants observed, 'disenchantment of the world can be reversed while playing fantasy games or reading a fantasy story' (Participant P1).

Players' practice of role-playing is completely oblivious to the principles of cultural history and rather answers directly to the needs of the individual player. These needs can be opposed to modern commitment to reason, technological progress and individualisation. They can also be contrary to post-modern ideals of fragmentation, complexity and relatedness. In fact, the players' user-practice is in itself so complex and diverse that it can only be characterized as dependent on the specific situation in which it is taking place.

Conclusion

The mergence of real-life space with virtual space results in a growing cultural significance of online spaces as they increasingly blend with everyday life. Merged game-play transforms virtual space into public space that is relatively safe (relating to real-life consequences) but no longer necessarily anonymous, while also involving actions that are relevant and significant to the everyday life of players. Users of these spaces shape its culture by modifying and developing rules and language or creating artefacts across spatial, cultural and social borders. Such developments open up new facets for research regarding the results of exclusion from these public spaces, the long-term value of social online interactions and the questions of ethics

in online relationships. More detailed knowledge about who is using online game spaces in which way could provide us with facts about a possible cultural impact of online spaces as public spaces in a more general context. In connection to this aspect, it is important to link online game space to the wider online spaces of web 2.0. Merged game-play in MMORPGs is closely connected to similar activities on other social websites, and parallels between online chat rooms, virtual spaces for self-representation, forums and online game space are not only evident but imply an even broader cultural significance. In order to successfully deal with the challenges of cultural change spurred by such technical developments, further research is required to keep pace with the actual use of these technologies. People are being confronted with new forms of socialization in online spaces and rapidly changing ways of communication, but we are yet to fully understand how such public spaces should be supervised or controlled and, equally, how open they have to be to retain their appeal. Ultimately, it is time to acknowledge the significance of online spaces for its users and accept that for many people, online spaces enclose their everyday reality.

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Chapter 26

Interpretation, Conflict and Instruction in Online Multiplayer Games: Lessons from Warsong Gulch

Diane Carr

Introduction

Player 1: wtf...

Player 2: wtf

Player 3: opps ... lol

Players argue about goals, strategy, equipment and etiquette. They disagree about what constitutes competence and how expertise might be demonstrated and assessed. My interest in these conflicts grew out of our earlier research into learning practices in *World of Warcraft*, during which it became clear that players' management of shifting levels of expertise and incompatible expectations required effort and tact (Carr and Oliver 2009). Most of our interviewees, for example, had witnessed or taken part in arguments about loot, strategy, preferences and skills. Within an ongoing relationship, there is presumably some motivation to avoid or at least manage these tensions. This is one reason why it is interesting to look at the conflicts that occur within randomly assembled groups of players, such as the teams that take part in 'battleground' games in *World of Warcraft* (*WoW*). These tensions are examined in this chapter. The social nature of online gaming is obvious – and the relevance of research strategies affiliated with the social sciences is equally obvious. Yet approaches associated with the humanities are also relevant. For instance, it is arguable that theories of textuality are applicable because of the ways that players are present to one another during a game and because players themselves argue about what is going on.

Battlegrounds are small areas set apart from *WoW* as a whole, where volunteers join teams to play a short, intense game that offers player versus player (PVP)

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combat. Warsong Gulch (WG) is the smallest and most accessible of *WoW*'s battlegrounds.¹ Players enter Warsong Gulch to play a version of 'capture the flag', and despite the limits of the game-space (a field and two opposing forts) and the apparently clear rules, and the obvious goals (capture the opposition's flag three times, while defending your own), conflicts frequently erupt within teams over what constitutes effective and valid play. These quarrels can manifest as typed tantrums that combine evident frustration with attempts at instruction. It will be argued that these conflicts point to the complexity of theorizing interpretation in online multi-player games and indicate the difficulties inherent to the conceptualizing of learning, tutoring, pleasure and aggression in this context.

Background

MMORPGs (massively multiplayer online role-playing games) such as *World of Warcraft* are designed to accommodate different tastes and different levels of commitment. Players have the option to take part in PVP combat, form casual groups to undertake missions while levelling up their characters and join guilds to collaboratively battle the game's monsters ('player versus environment' or PVE). Players might focus on collectables (e.g. the attainment of gear, pets, achievements). There are ample opportunities to chat and socialize, pose, contribute to events or undertake solo adventures. These options are not mutually exclusive. As this variability suggests, there are different ways to play the game – and different ways to study it.

It is unsurprising, then, that the game studies literature on MMORPGs is methodologically diverse. As might be expected, there is generally a relationship between the manner in which the game is conceptualized (e.g. as a text or a social space), the disciplinary affiliation of the analysts involved and their research design: the evidence used, the types of questions asked and the kinds of problems investigated. Perspectives informed by the humanities, for example, have been used to explore intertextuality and myth in *WoW* (Krzywinska 2006, 2007) as well as representations of warfare (MacCallum-Stewart 2008) and depictions of in-world ethnicity (Langer 2008). Analysis of this kind is generally undertaken from the perspective of the player-analyst, which is a relatively common and uncontroversial approach (Corneliussen and Rettberg 2008). There is also MMORPG research literature that is methodologically affiliated with the social sciences. For example, quantitative studies of player activities have been published. See, for instance, Ducheneaut et al.'s paper (2006) for a large-scale study of patterns of play, preference and

¹There are many clips of Warsong Gulch game-play online at <http://www.youtube.com/> (try searching under 'warsong gulch tutorial' for example). An overview of the game that incorporates screenshots submitted by players is online at: http://www.wowwiki.com/Warsong_Gulch. (Accessed 19 April 2011).

levelling rates.² There are also indications in the game's Terms of Service that its developers, Blizzard, conduct research while monitoring the game and its players in various ways. See Williams (in press, 2010) for an insight into developer's research practices, an account of the resources demanded by quantitative research and the challenges involved in managing data sets on this scale.

Other social scientific research on MMORPGs is more qualitative and interpretive. For instance, participant observation perspectives from ethnography have informed research into player communities (see T. L. Taylor's (2006) book length study, *Play Between Worlds*) and their learning practices (see Nick Taylor's (2008) article 'Periscopic Play' for a discussion of this literature). The research on learning, expertise and mentoring in game worlds often emphasizes the social nature of MMORPGs, with a particular focus on very committed players involved in tightly coordinated group activities (see Wolf, Chap. 35). Within the literature on player communities, there is a tendency to look at either helpful play (cooperation, mentoring, guilds, learning in games – see Galarneau 2005; White 2010) or what might be described as unhelpful or anti-social play, including 'griefing' and cheating (Chee 2005; Lin and Sun 2005). These generally implicit good play/bad play distinctions are another reason why gaming in Warsong Gulch is worth investigating. In Warsong Gulch, teammates might fight each other while collaboratively combating the opposition, and instruction is frequently entangled with what might be described as aggression.

Methodology

This analysis is textual, opportunistic and retrospective. It is based on time spent in Warsong Gulch for pleasure. Whether casual play undertaken for the sake of pleasure constitutes a legitimate basis from which to generate analysis is open to discussion. To be coherent, however, the criteria used during any such assessment would need to be compatible with the disciplinary and conceptual framing of this research.

Casual players such as myself rarely feature in the MMORPG literature, and yet the capacity to please casual players is one of the reasons for *WoW*'s mainstream success (Ducheneaut et al. 2006). There are reports that a committed or 'hardcore' gaming persona is associated with credibility in some game studies circles (Taylor 2008), and yet the specifics of such categorizations remain elusive. For instance, levelling up to level 80 (the current ceiling in *WoW*) simply involves the performance of repetitive actions. That is why it is popularly referred to as 'grinding'. It suggests a familiarity with the game, but arguably that is all it suggests because despite the clear labelling of characters according to their experience level, skill and ability are variously constituted and measured in *WoW* (Carr and Oliver 2009).

² Also see Keilhauer (Chap. 20) for quantitative data on online gaming.

Even within PVP battlegrounds, skills and commitment are difficult to assess. For example, a low-level character might arrive in Warsong Gulch wearing excellent gear or carrying particularly powerful weapons. This would indicate that the player concerned is familiar with particular aspects of *WoW* as a whole (available resources, methods of acquisition, etc.). Plus, good gear grants characters bonus powers, which may lead to high scores, which could be seen as indicative of skilled play. Yet it is not unusual to see well-equipped characters playing badly. Perhaps their equipment was purchased rather than awarded. Perhaps the player is accustomed to playing a particular class (say, a hunter) and is experimenting with a new character and class (e.g. a priest or rogue). Or perhaps the player levelled up his or her previous characters while playing against the game's monsters, which means that he or she has had limited experience of fighting against other players. Battlegrounds are split into decade bands (10–19, 20–29, etc.), and one of the interesting things about the level 10–19 band (the main locale of this study) is that it potentially mixes experienced players using new characters, with new players levelling up a character for the first time. For all of these reasons, firmly establishing the commitment or the experience level of players during a game is not possible, and thus – in this particular context – any claim that rested on a distinction being made between casual and committed players (or, indeed, player-analysts) might prove unsustainable.³ While the focus on the level 10–19 band shapes this analysis, it is difficult to determine to what extent. I have played in different bands, and it is not my experience that more coherent, goal-directed play is common at higher levels or in different battlegrounds – even if it seems that it should be.⁴

Warsong Gulch is a pleasure to replay because of the amusing and unpredictable actions of my fellow players. It is a populated space and a social event. However,

³ Arguments about the ‘player-analyst’ as methodological strategy need to be considered alongside a more general issue, which is that – broadly speaking – those affiliated with the humanities do not engage with matters of methodology to the same extent or in the same way as those based in the social sciences. The point is that different disciplines have different conventions, and it would be conceptually inconsistent to use criteria developed in one disciplinary context (e.g. relating to measures of validity or rigour) to critique analysis that is obviously affiliated with another. It is noted, also, that there are questions pertaining to the notion of player-analyst that invite further consideration, including the issue of ethics. There is a great deal of literature on online communities research and ethics – much of which assumes a ‘human subject’ model of research. Natasha Whiteman’s work in this area has resonance for humanities-oriented player-analysts because she writes about the need for the ongoing, reflexive development of an ethical research stance, rather than the simple adherence to any particular policy or guidelines (Whiteman 2010). Furthermore, it is noted that there are many aspects of WG that might fall within the remit of ‘textual analysis’ (sounds, visuals, colours, character depictions) that are not addressed in this particular analysis.

⁴ I do not discuss cheating, ‘pre-made’ teams or ‘xp off’ battlegrounds in this chapter. Changes to the rules of battlegrounds during 2009 meant that previously obvious indications of commitment became less evident because the more blatant indicators of specialist PVP skills including ‘twinks’ (high-powered, low-level characters) became less common. For examples of rule changes, see *World of Warcraft* Client Patch 3.2.0 (08–04–2009). <http://www.worldofwarcraft.com/patchnotes/patch3p2.html#3.2.0>. Accessed 20 March 2011.

my pleasure in the game is also connected to my knowing that other players do not encounter 'me' in any recognizable sense. They encounter a hybrid agent: a mix of prerogative, acts, typed chat, game rules and software programming that manifests on screen as – for example – an armed and dangerous Horde-affiliated hunter accompanied by a wolf-sized spider. Likewise, it is important to my experience (and integral to my pleasure in the game) that the players I interact with are just as heavily 'filtered' or mediated – whether I encounter them as a blood elf accomplice or as a pink-haired gnome assassin. Thankfully, the convention in WG is to communicate by 'chat', which means that players converse using typed text that appears in a text box or window in the corner of the screen, rather than using their voices.⁵ There are certainly times when references to real-world events appear in chat (e.g. during the World Cup or the Eurovision Song Contest), but these are fleeting and unusual. Games in Warsong Gulch last a maximum of 25 min, and it is generally the case that the chat that is typed during that time will refer to the game in progress. I have not conducted follow-up interviews or analysed material from the forums. For all of these reasons, during play itself, and for the purposes of this analysis, my fellow players are only available in terms of how they are 'implied' (Chatman 1978, 151) by the phenomena that is on screen, which is accessed from the situated perspective of the player-analyst and focalized (Genette 1980) through the player-analyst's character – in the sense that the location of my character in the game determines to some extent what I see of the game. This is consistent with the conceptual framework evoked and the methodology employed.

This is humanities-styled analysis directed at the game as text. In this instance, the theory that underpins this approach is drawn from some of Roland Barthes' work, which I consider useful because it enables me to provisionally distinguish between – and then combine – structural and textual analysis (see Carr 2009). Barthes writes that textual analysis 'tries to say no longer from where the text comes

⁵ Regarding chat, text and the use of 'voice' in online games: I am deaf/HoH so I would not use voice in games anyway – but why would anyone want to? For one thing, witnessing a bossy elf feuding via typed chat with an inept yet self-righteous orc can be funny. Surely having to listen to people yelling at one another would not be. Additionally, the use of voice might reveal demographic information of various kinds including class, gender, nationality or age for instance – some of which might be used as ammunition by a game's dimmer participants. My scepticism regarding the virtues of using voice in games is one reason why I am not persuaded by attempts to tie concepts such as presence, immediacy, realism and immersion within online worlds with the framing of voice use as 'natural' and the erasure (or the perceived erasure at least) of a mediating interface. It does not help that all these concepts tend to be weakly defined, even in research that claims to measure such phenomena. An associated problem with the 'disappearing interface equals increased presence or more immersion, etc.' arguments is that they nearly always assume and hence normalize particular kinds of bodies and particular kinds of embodied perspective while inadvertently positioning 'others' as deviant and impaired. For further discussion of these issues, see Carr and Oliver (2010). This ties also to points made later in this chapter in relation to excluding practices within online communities – see, for example, this forum entry: http://www.threadmeters.com/pl3yVL/Deaf_player_cant_use_voice/ (accessed 19 April 2011). Finally, if text chat involves a layer of mediation or even disguise, it is interesting to speculate about links between perceived disguise and the anxieties relating to relative status expressed by some players.

(historical criticism), nor even how it is made (structural analysis), but how it is unmade, how it explodes, disseminates – by what coded paths it goes off’ (Barthes 1977, 127). Barthes explains that ‘textual analysis is founded on reading rather than on the objective structure of the text, the latter being more the province of structural analysis’ (ibid. 131). Based on these particular definitions – and he has others – the structural aspects of this analysis will relate to the elements of a game that could, in theory, repeat when the game is replayed. This includes the game-space, the interface and the rules, for instance. Depending on how the game is played in any given round, some of these features would be present and actualized, others might remain moot. Meanwhile, following Barthes again, the textual analysis of *WoW* will involve looking at how each game ‘is unmade, how it explodes’ during play. The procedures employed here combine structural and textual analysis to explore the game as an ephemeral text that is collectively actualized by players through and during play.

The research strategy employed has limitations in terms of the kinds of questions that might be addressed and the claims that might be made. Furthermore, it needs to be acknowledged that my fellow players are people even if I experience them as trolls, gnomes and elves operating in a fictive space, and despite my having retrospectively constructed them as textual figments for the sake of analysis. This work is not social science (see White 2002, for a discussion of humanities research, ethics and Internet studies), but there are still obligations to be considered, and a description of game participants suggested by Bernard Suits can be used to clarify these. According to Suits, ‘Triflers recognize rules but not goals, cheats recognize goals but not rules, players recognize both rules and goals, and spoilsports recognize neither rules nor goals’ (Suits 2005, 60). During the game, I invest in the game’s outcome and I ‘recognize both rules and goals’. If I had set myself alternative goals (such as monitoring a fellow player for the sake of observation) or if I ran tests of some description, or conducted experiments of one kind or another – as well as being ethically problematic in terms of consent, intrusion and privacy – then I would be moving away from the role of player and closer to the role of either trifler or spoilsport. In which case, the term ‘player-analyst’ would no longer be appropriate.

The Game

This analysis is based on the playing of approximately 600 rounds of *Warsong Gulch* for pleasure between 2008 and 2010 on different English language/European servers, using a range of characters drawn from most but not all of the possible classes (e.g. hunter, paladin, healer or warlock) and most of the Horde affiliated ‘races’ (usually troll, undead or blood elf). The rules have changed during this period, and the game changes every time it is played, so the notion of producing a representative account of the game as it unfolds during play is problematic. What follows is an indicative composite based on playing the game repeatedly. Fragments of chat have been incorporated. While playing, I do not save either the combat log

or the chat log, although I take occasional screenshots (as do other players, see links provided in the footnotes). During the game, players can chat with teammates, but they cannot ‘talk’ to the opposing team. There may be no visual connection between chat and a character, which means that I (or my character, at least) might be busy on the rooftop of our fort reading chat being typed by a teammate whose character is located mid-field.

To play in Warsong Gulch, I log in to *World of Warcraft* and then click on an onscreen prompt to join a queue. Once enough players are available, our characters are transported to the battleground. Each game is made up of two teams of ten players (one Horde, one Alliance). Teams begin the game in their own fort, with their own flag. Members of the team will be pulled from different servers. Any team’s composition is largely left to chance. Generally, it will be a mix of sexes, classes and species. Once volunteers are transported into the Gulch, there is a short waiting period before the game begins, during which players might greet each other by character name, request and share buffs (cast temporary spells that offer protection or increased power), compare gear or just stand around. Once the game begins, the gates are thrown open and the teams charge onto the field. Some players might stay in a group and directly assault the opposition’s fort in an attempt to grab their flag. Others peel away to engage in battle mid-field. As the game continues, some of the fighting will be closely connected to the overarching game goals (defend our flag, capture their flag). Some combat will be self-defence, and quite a lot of it will be fighting for the sake of fighting, fun and/or point scoring. Information including damage, healing and kills are tracked on a scoreboard (a separate screen) that can be checked during battle, but there are valid contributions to team success that are not rated. ‘Crowd control’, for example, involves casting spells that immobilize the enemy in useful ways but cause little damage. Losing a fight usually means a character being ‘killed’. Death in the Gulch means spending up to 30 seconds as a ghost in a graveyard waiting to be resurrected.

Events vary from game to game, but after the initial rush, it is possible that both teams will possess the opposition’s flag. Each team may be attempting to carry it back to their respective forts. Things often unravel at about this point. A certain lack of unified purpose becomes apparent. Flag carriers are left undefended. Enemy flag carriers are ignored. Players are not working together, and things start falling apart. If this happens, it is not unusual for the combat on the field (fireballs, arrows, swords, axes and curses) to begin to be accompanied by conflict within the team itself. Orders, instruction, critique, directives and appeals for assistance appear in the onscreen chat box.⁶ The relative value of different tactics is debated: ‘ffs if all u do is def [defend] how the hell do u expect to win?’ *WoW* has a default language filter

⁶Some text-chat abbreviations are translated here: http://www.webopedia.com/quick_ref/textmessageabbreviations.asp. Information about language filters and Blizzard’s policy on harassment is online here: http://us.blizzard.com/support/article.xml?locale=en_US&articleId=20455 and here: <http://www.worldofwarcraft.com/info/basics/chat-other.html> (all resources accessed in August 2010).

(which it never occurred to me to turn off) as well as rules about using rude words in chat, so swearing is represented by initials or punctuation symbols. Calls for information are issued, some of which are quite general ('where the !@%\$ is everybody?') and some which are more targeted ('dude, where are you running?'). Encouragement and advice are imparted ('GO GET FLAG don't die ... go get flag ffs' or 'go go go go go go go go go !!@%\$ GO GO GO GO GO'). There are elements of peer assessment ('we suck' or 'good job!') and reflection: 'FFS – how hard can it be?' Teammates share strategies, such as 'great now get def or attack!' as well as observations and suggestions: 'We're gonna lose ... go def dammit'. Players also offer one another more personalised forms of tutoring: 'goddamit, rogue you've got !@%\$ stuns ... use them on the healer'.

As these quotes suggests, some of the chatting in *Warsong Gulch* involves instruction. To take a single example in more detail:

Player A: Don't sheep him you noob mother%\$£&£!

Player A's suggestion was made during a group confrontation, where the opposing team had successfully attacked our base and an enemy character was in the process of carrying off our flag. I was new to battlegrounds at the time, and I was playing a mage. I temporarily stalled the enemy flag carrier by magically transforming him into a sheep. Player A is suggesting that casting this particular spell is an ineffective strategy ('Don't sheep him') and a sign of inexperience ('noob') and generally a bad thing (hence the swearing). Player A's disapproval appears to be fuelled by his/her knowledge of the game's rules. Changing characters into sheep will slow them down, but characters heal more quickly while in sheep form. So in this case, using the sheep spell was considered counterproductive because it restored the enemy agent that my teammates were attempting to kill. While the statement is blunt, it still qualifies as instruction, and the player that the comment was directed at did learn: I learnt to be careful about the use of a particular spell. I did not experience the comment as abuse. It stung, but it felt 'fair enough' because it was coherent in terms of game rules. It is also arguable that outbursts like this enrich game-play by injecting urgency, risk and drama.

Poor play (such as ignoring an enemy flag carrier as she runs past you) can provoke and frustrate teammates, and yet player reactions are inconsistent and unpredictable. It is not uncommon to see players attempt to direct a team or dominate other players. But these attempts often fail. Players trying to lead might be followed temporarily, or they might be ignored. Rude or tyrannical players are told to 'shut up'. I have witnessed disgruntled teammates rebel by threatening to return the flag to the opposition. I have seen players go on strike by electing to remain in ghost form rather than resurrect. Judging by the decidedly mixed quality of advice that is on offer, the players who issue it are not always experts. In fact, some players appear to start coaching and issuing orders precisely because they have a limited grasp of what is going on and misplaced expectations as regards their status.

Every game is different. Often, after a period of relative chaos, players will seem to recall the overarching goals ('capture the flag') and begin to work together. A trio of players might spontaneously team-up to attack the enemy base and reclaim a

stolen flag. An ambushed healer will cast a last minute spell that allows an injured character to survive and score. A small group of determined defenders will thwart an assault on a vulnerable flag carrier. These moments of drama, doom and glory are particular to a given round of the game, but the pleasures generated are fuelled by accumulated experience. The intense satisfaction experienced when things all come together seems owed in part to all those times that things went wrong.

The game ends when one of the teams has scored three times or after 25 min of play. The scoreboard flashes up, and then characters are returned to wherever server and location in the wider game world that they came from. The player can opt to immediately join the queue to return to the Gulch. If the player takes part in a string of games at a single sitting, he or she may re-encounter some characters, but this is not guaranteed.

Discussion

One of the attractions of Warsong Gulch is that it provides an arena for casual PVP combat. Different character classes have different skill sets (some classes specialize in melee fighting, while others inflict damage at a distance, and others have the power to heal). Rules determine a character's repertoire of actions and hence the actions available to a player. As part of a discussion on the topic of contested interpretation and attempted instruction within WG, it is interesting to think about the co-presence of rules and what might be described as aggression. This aggression takes two main forms. There is the clubbing, axing, freezing, stabbing, exploding, trapping and poisoning that takes place on the field between opposing teams. These are the actions on screen that look like violence. Then there is the arguing and name-calling that happens within teams using chat.

This doubling suggests one of the reasons why it is difficult to satisfactorily conceptualize 'violence' in games (in addition to problems relating to the apparent lack of physical damage). For the sake of this discussion, what I want to look at is the idea that consent is a key constituent of play as a voluntary activity (see Salen and Zimmerman 2004, 79; and especially Goldstein 2005, 344, 353) and that violence as a concept does not co-exist easily with consent. These are complicated issues to work with but what I wish to suggest is quite straightforward: If A and B decide to wrestle, then that might be 'rough play', but if A tackles and wrestles with B against B's wishes, then this might be violence (although the meanings of the act would depend on other phenomena including the context and the actors). To return to Warsong Gulch, the actions on screen that look most like violence are rule-bound. When you engage in PVP combat, you are taking part in a rule-based exchange of game resources (where certain attacks do particular kinds of damage, armour offers particular kinds of protection, etc.). You have volunteered to take part and – providing that you are familiar with the game's rules – it is reasonably clear what it is that you are consenting to.

What happens in the chat window, on the other hand, is much less rule-bound and less predictable. Consent is still implied (because it is a game and players can

log out), but the terms of consent are not as explicit. Consent is less informed. If the chat-fighting is less consenting and less voluntary, does this mean that the chat-based aggression could be considered as ‘more violent’ than the graphically rendered combat? Does this mean, in turn, that there might be more violence on the game’s forums than in its battlegrounds – or that virtual worlds such as *Second Life* could be experienced as more violent than games like *World of Warcraft*? This raises questions about what it is generally meant by the notion of violence in computer games within popular discourse and in academic research, which is interesting because ‘Variations in the nature of video game “violence” have rarely been studied’ (Goldstein 2005, 341). Similar issues have been raised in discussions about the difficulties associated with attempts to theorize harm and ethics in online multi-player gaming (Goguen 2009).

Events in Warsong Gulch also indicate the implausibility of positioning competitive play and collaborative play as if these are easily distinguished and mutually exclusive modes. In Warsong Gulch, teams combat the opposition while fighting each other. Yet, a minute later, these same teammates might be collaborating on screen (while privately and simultaneously competing to inflict the most damage or deliver the most healing according to the game’s score table). The construction of competition and collaboration as polar opposites is particularly prevalent in older ‘girls and games’ literature, where it is also possible to find collaboration framed as feminine and competition framed as masculine – see Jenson and Castell (2008) or Zaremba (Chap. 28) for a detailed interrogation of these ideas. On a related note, the manner in which aggression and instruction coexist in WG’s chat window also indicates how simplistic it can be to classify some forms of play or even game genres as ‘good’ (e.g. social, collaborative, incorporating mentoring and learning practices) and others as ‘bad’ (e.g. competitive, aggressive).

T. L. Taylor has demonstrated the importance of identifying evaluative notions that emerge and persist in game studies as a field or a ‘nebula of debates and theories’ (Brown and Dowling 1998, 20). In her paper about player-made modifications in *World of Warcraft*, for example, Taylor challenges the pervasive assumption that player-generated phenomena are necessarily enabling or liberating. She writes:

I want to juxtapose the common language of emergence and productive engagement with game systems – which I think often carries with it an implied notion of positive and ‘freeing’ interaction – with the development, by players, of tools that stratify, surveil, quantify, and regulate their fellow gamers. (2008, 195)

It is productive to consider Taylor’s points in relation to contested interpretation and pedagogy in the Gulch. As in Taylor’s example, players in WG are involved in peer assessment and regulation. These issues are significant because the kinds of assumptions that Taylor identifies and critiques are surprisingly widespread. In debates about virtual worlds and inclusion, for example, the focus is nearly always placed on software as either enabling or constraining – while social practices (including the choices that players make that have excluding consequences) are rarely if ever interrogated. For more on these issues and the implications for educators working in virtual worlds, see Carr (2010).

While it is doubtful that anyone would want to argue that the attempts at coaching found in the Gulch provide us with a model of pedagogy suitable for importing into formal learning contexts, suggestions such as ‘goddamit, rogue you’ve got !@%\$ stuns ... use them on the healer’ do involve instruction. Evidence of instruction is not the same, of course, as evidence of learning and yet my own experience (including the ‘sheeping’ incident) suggests that learning is a possible outcome. What I wish to consider here, however, is that player-to-player instruction in online games is generally assumed to be enabling, sociable and benevolent. This analysis of gaming in Warsong Gulch, with its focus on conflicting interpretation, suggests an alternative viewpoint, through which a player’s pedagogic efforts could be seen as involving an attempt to impose a particular interpretation on his or her fellow players. This perspective is also relevant to the earlier referenced concepts of textuality, especially the idea that the actualization of the game-as-text during play involves a kind of explosion of potential meanings. The implication would be that in-game pedagogues are striving to channel these potentials in a particular direction – one that aligns with their preferred interpretation.

The feral pedagogies of the Gulch might be associated with attempts to control meaning, but authority in Warsong Gulch is never straightforward. There are the rules of the game, the various goals, teammate’s tastes and prerogatives, enemies, victory, death and the perceived expertise and incompetence of fellow players to be considered. Players (and player-analysts) will construct and enact their personal versions of authenticity and meaning selectively, according to their situated perspective and interpretive resources. As argued, players’ attempts at leadership via chat could be seen as an effort to impose a particular interpretation on their peers. It does not follow that the outcome of these efforts is predictable. As a player, I appreciate these attempts because they so often enrich the experience of play by backfiring. I want to suggest that rather than ruining or closing down the meaning of the game, these efforts to exercise authority and regulate meaning bring the game to life. These attempts are delicious because they are repeated and because they repeatedly fail, and in the process they create a fractured dance where authority is constantly evoked and yet persistently thwarted.

Conclusion

In this chapter, a version of textual analysis was described. This approach involved conceptualizing the online, multiplayer game as an ephemeral text that is collectively actualized by players. Through analysis, it was possible to show that collaboration, competition, pedagogy and aggravation are thoroughly entangled during play. It became clear that players interpret the game in different ways. It was also argued that player-to-player pedagogy is a response to this variability and that instruction can be viewed as the attempted imposition of a particular interpretation of the game on fellow participants. It does not follow that such efforts should be regarded as sinister, especially given that they so frequently fail. What these attempts at order do indicate,

however, is the complexity of interpretation in this context and the applicability of Barthes' work on textuality. As noted, Barthes (1977, 127) refers to textual analysis as the study of how a text 'is unmade, how it explodes, disseminates [or] goes off' when it is accessed and enacted – and this is suggestive of the pleasures and chaos, mess, fall-out, tensions and conflicts encountered in Warsong Gulch.

Players in Warsong Gulch frequently disagree about the game they are playing, while they are playing it. These conflicts indicate the challenges involved in attempts to theorize meaning and interpretation in digital games. These challenges are theoretical as well as methodological. A holistic account of meaning would seem to call for a range of research strategies, each of which would target a particular phase or aspect of the relationship between game and player (from design and production contexts on one pole to contexts of reception on the other). If that is the case, then it suggests that it would be practical to share this labour across the field and nonsensical to insist that any single methodology (or single book chapter) could satisfactorily address the entire spectrum. Textual analysis undertaken from the perspective of player-analyst is one useful strategy, among an array of viable strategies, through which it is possible to examine aspects of online games and issues of interpretation.

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Chapter 27

'Pity There's So Few Girls!' Attitudes to Female Participation in a Swedish Gaming Context

Malin Sveningsson

Introduction

The gap between men and women who play computer games has decreased: according to the ESA (www.theesa.com) in 2008, 38% of the American gameplayers were female. However, it is important to take into consideration what kinds of games are included in such statistics. The computer games that are most often played by women are solitaire or casual games (Kafai et al. 2008), which are often not seen as 'real' games, neither by the game industry, nor by researchers or gamers (Fron et al. 2007). Furthermore, statistics suggest that the gender gap grows with the frequency of the gaming (Carlsson and Facht 2007).

A number of explanations have been proposed to girls' lesser involvement in gaming activities, for example, in boys' and girls' socialization into gender roles, and norms and values in society (Schott and Horrell 2000). Another factor that has been claimed to discourage girls from playing computer games is the general content of computer games. Game content is often problematic both in terms of how females are represented (Dickey 2006; Dovey and Kennedy 2006; Taylor 2006) and in terms of what types of activities the games depict (Schott 2005). Finally, explanations have been sought in the cultures of gaming communities. Since they are often dominated by boys and men, computer game culture has come to reflect men's preferences and competencies, while it has largely discarded women's playing preferences and styles (Dovey and Kennedy 2006; Schott and Horrell 2000).¹

¹As is argued by, e.g. Henry Jenkins (1998) and Carr (2005), it is here important to be aware of the fact that women's playing preferences may not be dramatically different from those of men, but such beliefs are largely a construction.

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Furthermore, as is true for all communities, gaming communities have their group dynamics, including strategies of inclusion and exclusion. Researchers have frequently found traits of homosociality² among male gamers, where female players have been actively or symbolically excluded (Bryce and Rutter 2002, 2003a; Delamere and Shaw 2008; Dovey and Kennedy 2006; Schott and Horrell 2000).

In the starting phase of a research project,³ I searched the web for information on girls and computer games. Instead of the statistics that I was looking for, I came across a large number of online debate articles and forum discussions concerning women's participation in gaming contexts. I was surprised to find that most posters – of which most presented themselves as male – seemed to be very women-friendly. This contradicted my preconceived ideas, as well as previous research, that highlight the misogynous atmosphere of computer game communities, where excluding mechanisms range from subtle actions such as patronizing behaviour (Schott and Horrell 2000) to sexual harassment and sabotage of female gamers' computers (Delamere and Shaw 2008).

Digital games are situated in culture, and the study of them must therefore be contextually situated. Computer gamers are members of an international social world of gamers, but also of other social worlds and communities, which influence their attitudes and opinions. This chapter will go deeper into the Swedish gaming context and look at how female participation is seen by the (predominantly male) members of general – as opposed to women-only – gaming communities. Are girls and women welcome in the gaming worlds, and if so, on what conditions? This chapter will also look at how female gamers experience the gaming contexts and how they feel they are being met within them.

The Research Material

The discussions analysed in this chapter were collected in three Swedish online gaming communities: www.goodgame.se, www.fuska.nu and www.gameplayer.se.

Fuska.nu (Swedish for cheat.now) focuses on sharing cheats and walk throughs to games for PC and console platforms. It was started in 1996 by an enthusiastic private person who is still managing the site, although now being sponsored to do so. The site also offers reviews, previews, demos, discussion forum, members' personal profile sites, clubs and a 'market place' where members can buy and sell used games. There are few interventions in members' discussions and activities. Apart

²The term 'homosociality' is used to describe friendships between people of the same gender and the tendency to specifically favour persons of the same gender. The term is most often used to refer to friendships among men.

³'Gender Play: Intersectionality in computer game culture', with Ph.D. Jenny Sundén, Royal Institute of Technology, Stockholm

from the registration site that informs new members that those who transgress Swedish law will be reported to the police, the forum has no explicit rules or prescribed standards of conduct.

Gameplayer.se was originally a project run by a printed computer games magazine, starting off in 2004. When the Internet site turned out to reach a wider audience than the printed magazine, the magazine was phased out and the website further developed. *Gameplayer.se* offers news, reviews, articles, cheats and hints and discussions on video and computer games. Communication platforms include discussion fora, chat rooms, blogs, web tv and users' personal profiles. *Gameplayer* has an editorial staff of 20 persons, of which two are female. They have more elaborated rules than *fuska.nu*: they state that their aim is to maintain a high and serious level; thus, all registered members must obey certain rules. Apart from following the Swedish law, members must respect rules against spamming and flaming. Discussion fora are meant to be public; hence, private conversations must be held through other communication media. Discussions are monitored, and if they get off the track, they get locked or deleted.

Goodgame.se is managed by an independent non-profit consumers' organization, run by non-paid board members. It works to improve the consumers' situation in relation to video and computer games. It monitors questions of pricing, marketing, competitive situations, game contents, etc. They also work to give groups in society that normally would not have the means (economic or otherwise) to play computer games an opportunity to do so. They help members to start their own gaming clubs, clans, organizing LANs and arranging gaming events, and the members' area includes a 'do-it-yourself section' on how to connect computers to a LAN, how to program in C++, how to develop games and mods, etc. Thus, besides protecting consumers' rights, *goodgame* also see themselves as educators and influencers of public opinion towards computer games. They take an active stance in issues relating to gender and ethnicity. The web site has four subareas. The 'games guide' collects reviews and articles of games. 'Junior' focuses on games for children; 'game academy' offers popular scientific summaries of computer games research and bibliographies. The 'members' area' collects discussion fora, chat room, members' personal profiles sites, a game swapping forum and information on the organization and its members.

The discussion fora of all three gaming sites were searched for discussions on girls and gaming, where the search string 'tjej' (Swedish for girl or woman) was used. While *goodgame* and *gameplayer* had several discussions on the subject, *fuska.nu* had only one. In order to reflect the perspectives of the three separate gaming communities, one discussion from each site was chosen. The criteria for the chosen discussions were that they should occur naturally (i.e. not as responses to game reviews or articles) and focus specifically on girls' and women's gaming.

The discussion from *goodgame* had the title 'Pity there's so few girls' and consisted of 335 messages posted between June and July 2003. The discussion from *fuska.nu* had the title 'How many girls play? Mostly guys or???' and consisted of 93 messages posted between November 2004 and May 2006. Finally, the discussion from *gameplayer* had the title 'Game talk for girls' and consisted of 196 messages posted during January and February 2008.

In order to know something about the players' experiences, semistructured interviews were made with seven adult female gamers, chosen to mirror a variety of gaming experiences. The interviewees were 23–50 years old; they played different kinds of games and platforms and had different life situations, the common denominator being that they were deeply involved in their gaming activity. Two of them played mostly first-person shooters online (favourite games being *Call of Duty 4*, *Halo* and *Rainbow Six Vegas 2*), three mostly played action and adventure games online (*World of Warcraft* and *Diablo II*), while two mostly played platform and adventure games offline (*Donkey Kong*, *Super Mario*, *Diablo II* and *Sacred*).⁴ Other favourite games mentioned were *Silent Hill*, *Civilization*, *Gunz* and *The Sims*. Three of the interviewees were found through acquaintances and four through online gaming communities (*goodgame*, *gameplayer* and *gameingeye*).

The sample was strategic, meaning that forum discussions and interviewees were chosen to cover a variety of diverse perspectives, rather than giving a representative picture. The interviewees are not representative of Swedish women, or even for Swedish women who play computer games, because they were chosen because of their deep involvement with the gaming activity, although being engaged in different games. The results cannot be generalized into a larger population but should be seen as tendencies. The discussions and interviews were subject to a thematic analysis, inspired by grounded theory (Strauss and Corbin 1990). In the discussions, recurring topics that concerned female gamers were categorized and organized in overarching themes. Informed consent was sought from the informants. Postings to discussion fora are seen as public material; thus, no consent was sought from the discussants (see Ess and Jones 2003).⁵

A Women-Friendly Atmosphere

The discussions started in similar ways, by members stating that fewer girls than guys play computer games. The responses that follow differ slightly between the discussions, but in all of them, there is a view of girls as being underrepresented in gaming contexts, and discussants express a wish that more girls would start to play:

Emil: I just checked the member statistics and saw that only 6% are girls. I think that's really sad.

Muziel: yeah...pity they're so few... but those who are there are really nice 😊.

Pelle: yep, i agree..... the more girls the merrier.....

⁴All informants played many different games, especially one of them who worked as a game reviewer, but these were their favourite games.

⁵All names of discussants, as well as informants, have been changed. All quotations from interviews and forum discussions have been translated (from Swedish) by the author.

Errol: Yeah, hell, it would be better if it was 50% 50%.

Muziel: UNFORTUNATELY quite few girls are interested in games 😞.

(*Goodgame*)

Prince_Pepsi 15: I guess there are fewer girls because video and computer games have always been seen as a guys' thing. But I think more and more girls will join the wonderful world of gaming 😊

Berra 18: let's hope there'll be as many girls as guys who play

(*Fuska.nu*)

In both discussions, only two cases occur where the general wish to involve more girls is explicitly called into question. In the first case, one male *gameplayer* discussant, Police, asks why a 50/50 distribution would be more desirable than an 80/20 distribution. Another discussant counters with asking what is wrong with a 50/50 distribution. Police answers that 'just because it isn't wrong doesn't mean that it has to be right', thereby closing the subject. Later on, Police makes clear that he is not against female gamers, he just does not think that equality means that everything has to be equally distributed, or that any specific measures have to be taken to involve more girls.

The second case occurs in the *goodgame* discussion, where one user, Wrangler, asks why the others consider it so important to get girls to start playing:

Wrangler: Why do you want to get more girls to play? I don't care. If they don't want to play, they don't need to.

Wrangler's posting quoted above is responded to and develops into an argument between him and five other discussants, where Wrangler is interpreted as being against female gamers, and is confronted quite harshly in several episodes. Not only do the other users oppose Wrangler's expressed opinions against female gamers, but a meta-discussion also emerges, in which three users (two male and one female) discuss Wrangler's bad attitudes towards women, and whether these should result in him being permanently shut off from the discussion forum, seeking support in the rules of the forum that prohibit incitements to racial hatred, harassment, threat, molesting or bullying. The discussion ends when a male board member enters, stating that even though Wrangler's opinions are bad, he has done nothing that counts as harassment but just expressed an opinion that diverges from those of most members. 'Instead', says the board member, 'we must try to get him to understand that girls are at least as good gamers as guys'.

In the forums studied, it was not accepted to openly question girls' gaming. In all three discussions, there was an overwhelming consensus in favour of female participation, and the few users who expressed diverging opinions were challenged or even ostracized. There was also a strongly expressed idea (especially in the *gameplayer* and *goodgame* discussions) of similarity in qualifications: women and men are seen as being equally skilled or at least as having the same opportunities at becoming skilled if they spend the same amount of time playing. The reason why fewer women are good at games, according to the *gameplayer* discussants, is that fewer of them play and that, in general, they do not put as much time and effort into it as men do:

Forever: Girls tend to be less interested in games than guys. And that's why girls in general are less skilled. But if a girl and a guy have the same degree of interest, they should be equally good.

Killer: Those who practise get better. There are no genetic differences that should affect this.

Mountain: Well, there are fewer girls who are at the same level as the guys who are seen as really good – but that's because female gamers are in the minority. But there was this girls' clan Fragdolls that played Quake (or was it CS?) who wiped the floor with many others.

Karim: What surprises me is that all girls I've met and played with online have been totally bloody divine at CS. I dare say without doubt that those girls who do play CS on average are better than guys. Easily.

(*Gameplayer*)

As stated in the introduction to this chapter, the general tone of the discussions contradicts previous research that reports on the misogyny in gaming contexts, where harassment and ostracizing of female gamers is claimed to occur as a matter of routine. It also contradicts the common view of women as being less skilled in issues relating to technology (see, e.g. Corneliussen 2007; Jenson and de Castell 2005). Judging from the analysed discussions, Swedish gaming communities seem to be more women-friendly than those of other countries. One can speculate about the reasons for this. One possible reason may lie in what cultural context the studies are worked out. Sweden has the reputation of being well ahead in the drive towards gender equality. The work with gender equality has come to be institutionalized through laws and regulations by the state, hence the term 'state feminism'. The state feminism's dominant perspective is a liberal feminist one, which stresses the similarities between the sexes. From this, it follows that political agendas, as well as most citizen's ideas of the meaning of gender equality, above all focus on equal rights. In Sweden today, gender equality is steadily on the political agenda, and feminism has come to carry enough positive connotations to be used in the most shifting contexts (Gemzöe 2004). Most Nordic people – both men and women – are pro-gender equality, in principle if not always in practice (Aarseth and Olsen 2004; Holter 2000). As a consequence, Nordic women may (at least theoretically) enjoy more freedom to enter male domains, professions and areas of interest than women of certain other nationalities. Following this argument through, Swedish gamers would perhaps differ from those of other nationalities in their view on girls and women who play computer games. Three of the informants who have experience from servers of other nationalities talk about the differences that the cultural context can make as to how one is being treated as a female player:

Josefin: I've heard from other girls that before they joined our clan (the PMS clan), they'd even considered giving up playing because they found it so unpleasant, being online alone as a girl. They got so much bad- like a lot of sexual innuendo. But that's something that I've heard mostly from American players.

Researcher: Why, that's interesting. Do you think there's a difference there?

Josefin: Yeah, there seems to be, if you compare the USA with Europe. If you look at what girls are being subjected to.

Researcher: Do you have any examples?

Josefin: Yeah, there's a girl in our clan, she played mostly with Americans before. But she never told people she was a girl after she'd met some- Some guys harassed her and so on.

Researcher: In what ways?

Josefin: Well, there was a lot of talk about rape and whore and so on.

Researcher: That's tiresome.

Josefin: Yeah, isn't it? So she thought she'd give up playing because of that. But then she started playing on European servers instead, like in Britain. And she thought they were much better. So now she only plays with Europeans instead and she thinks it's great.

One explanation as to why the results of this study contradict previous research thus has to do within what cultural context the studies are made – due to the widespread and commonly accepted state feminist agenda, Swedish gamers may feel that it is inappropriate to (at least openly) question female participation. But there are other factors that need to be considered. As two of the informants acknowledge, one is what game genres are being studied since all games have their specific player cultures:

Ulrika: I have noticed differences depending on if I play with Americans or Europeans. My experience is that there's much more sexist and racist remarks when I play with Americans than when I play with Europeans, for some reason. But I don't know, it may also depend on what kind of game it is I play.

Researcher: I've heard that there's sometimes a quite misogynous tone in the gaming worlds?

Sanna: Well, not where I've been, there, it's been very- But maybe it's different from online game to online game, sort of, there are different cultures. WoW is a very newbie friendly game, it's a rather nice and kind online game, but I imagine that if you play like Everquest or Eve, that type of heavier games, then it could be more difficult.

The last quote above opens up a discussion about game hierarchies. What, exactly, is a 'heavy' game? As I interpret the term, it refers to game genre, gaming style and game content, but also to the actual player base, and it is closely related to the term 'hardcore'. A 'heavy' game, then, is a game that is based on skills rather than luck, and it is played in a hardcore rather than a casual style. Hardcore games and gamers often enjoy a high status within gaming communities. Here, gaming communities do not differ from other social worlds – those who are skilled and experienced in doing the activity that the social world circles around, and spend much time doing it, will typically be the ones with the highest status (Shibutani 1955). For a variety of reasons, of which some deal with the duties and expectancies that come with traditional gender roles, where women can often not put as much time and commitment into their gaming as men (Enevold and Hagström 2008), the games that women play as well as their playing styles often tend to be casual rather than hardcore.

It is true that the kind of 'heavy' games that are discussed here are generally less newbie-friendly towards both male and female gamers. However, it generally seems to be harder for women to gain entrance into them and create themselves a space there – to be accepted and seen as authentic gamers. This holds even if they are hardcore gamers and even if they actually beat the boys at their own game (see Beavis 2005).

Martina: Often, when guys realize that it's a girl they're playing with, they get pissed as hell.

Researcher: Why, that's interesting. Why do you think?

Martina: Oh, I don't know. Not all guys but a lot of them react in a negative way when a girl shoots better than they do.

Researcher: Yeah? What do they do then?

Martina: Ah, they yell four-letter words and the most frequent expression is 'We're gonna fucking rape your ass'.

Even though many discussants expressed their conviction of female gamers as being equally skilled as male ones, there were also a few postings like the one below:

Wrangler:/.../But admit it you too think it's incredibly humiliating to lose against a girl in like CS or Q3.(it's never happened to me but if it happened I'd commit suicide)

Wrangler:/.../Don't get me wrong, I don't hate girls. They're much nicer to talk with than guys, and they're more juste. But in games I just refuse being beaten by a girl. It harms my honour and my self-confidence. That's the way it is. No need to get pissed girls.

(*Goodgame*)

On the one hand, girls are seen as being not skilled enough to compete with the guys. But *when they actually do win*, the guys get very annoyed. What makes it so humiliating to lose against girls is that girls are believed to be unskilled players. Guys may thus, like the discussants below, make up excuses for their loss:

Forever: I know what it's like. I got beaten in Mario Party (GC) in a branch where what you did was basically to push 'A' as fast as you could. I lost big time.

Nope: My sister beat me black and blue in MORTAL KOMBAT:DECEPTION and managed to do a fatality on me that I don't know how to do. She didn't understand what she did either 😊

But the thing about girls being worse at playing is really true. The girls I know are no good at it!

Cool: My sister beat me at Soul Calibur 2. I guess she just pushed the buttons a lot.

(*Gameplayer*)

In the posts above, the discussants in various ways try to make it clear that the girl won not because of skills but of beginner's luck. Or, the game belonged to a genre that did not count as a game anyway. Or, she did not care to understand the underlying logic of the game but won by just pushing the buttons indiscriminately. Despite the openly expressed rhetoric concerning women's and men's similar qualifications, excerpts like the ones above thus point to the existence of representations of girls as less skilled players, *or a wish to construct girls as less skilled*. We can thus conclude that even though the 'official' general opinion among Swedish gamers is that girls are welcome into the gaming worlds, there are conditions for their admissions. They should not become too skilled, especially not at games belonging to male-dominated genres, and they should not be too self-assured (see also the quote below on 'stuck-up' girls at LAN parties). As Schott and Horrell (2000) say, males are supposed to hold the expert role in relation to technology and computer games. From this follows that female gamers are admitted as long as they accept a subordinate position that serves to support the image of the male as expert, but not if they aspire at holding equal or superior positions. Of course, as Taylor (2008) points out, there are also important differences between player groups, guilds and clans, where each of them have different group cultures. Thus, some groups may be more women-friendly than others, and of course, individual players differ in their views too.

Questioning the Women-Friendly Atmosphere

The material has suggested that the Swedish gaming context is a quite women-friendly one, albeit with variations between game genres and player groups. But how true is this picture, really? Is it not only a manifestation of political correctness that exists mainly on the surface?

Voices have been raised that question the extent to which Swedish women are really more emancipated than those of other countries. It is also important to take into account the diversity – ethnic and otherwise – of Swedish women since most of the incentives to increase equality take as their evident point of departure middle class, heterosexual, native Swedes (de los Reyes and Mulinari 2005). Furthermore, it is true that Swedish laws and regulations that safeguard women's equal rights are more developed than those of most other countries. But these rights, say critics, exist primarily theoretically and rhetorically. When it comes to the point, there are still important obstacles that hinder women's entrance into male domains and into power positions (Corneliussen 2007). As in other Western countries, the 'glass ceiling' is very much present. It is true that attempts are being made to counteract this by allocating women into higher positions.⁶ However, the allocation according to sex has resulted in a discourse where women are often seen as less competent. The allocation according to sex is only done when the applicants' merits are equal. Despite this, it is common for men to raise arguments such as 'She got the job only because she's a woman'.⁷

The image of a women-friendly atmosphere in Swedish gaming contexts can be further challenged. For example, when the Swedish project for female game developers, 'SuperMarit', went to Sweden's largest LAN event, DreamHack, they tell a story about massive discrimination, on several levels.⁸ Similarly, some of the informants tell stories about opting out of LAN parties because of the too laddish atmosphere:

Researcher: Do you play in public? Like at LAN-parties?

Sanna: No, I don't because I think it's very- It's very hard for a girl to enter that culture. Because they (the guys) sit watching porn, and I feel that's quite repulsive. And to be alone at a LAN-event- I went to a LAN-event recently, and there were like two other girls. And, well, I don't mind hanging out with guys. I've got a load of male friends. But it's just that the LAN-culture is very very laddish. And there's this very obvious culture that becomes visible at such events, and it becomes very clear that games are for guys, it's the guys' territory.

⁶The rule is applied to even up the gender representation in all professions, although the female-dominated professions generally hold lower status and, thus, there are seldom discussions when men are allocated into them.

⁷What they do not acknowledge is that before the rule of allocation according to sex was introduced, the men would have gotten the jobs only because they were men.

⁸See SuperMarit's report from the event at <http://www.genderinstitutet.com/GIG-Press/dreamhack.pdf>. Accessed 12 December 2010.

One of the discussants addresses this from another perspective, that of a male player, looking at female participation:

Errol: Girls I've met on MMO's have been cool but girls who go to LAN parties can be quite stuck-up.

What the discussant actually says is that it is okay that females play online games from the home but not from a LAN party. One can also wonder what he means by the word 'stuck-up'. Is it, maybe, that most of the girls who play MMOs from the home keep a low profile while there is only a certain clique of female gamers who dare to confront the laddish atmosphere at LAN parties, females who have a tougher attitude, or who feel they have to adopt a tougher attitude to cope with the 'laddishness'? The girls who actually break into the male domain and attend LAN parties may not want to conform to the laddish culture, or they may even, as the SuperMarit women did, openly protest against it. The quote above may also be showing the discussant's own apprehension of the situation – females are not supposed to be visible and claim a space, and when they do, they get interpreted as being stuck-up.

Why is it then that the images we get are so different? Why are women welcome when playing MMOs from the home but not at LAN parties? Despite the growth in public gaming environments such as cybercafés, LAN parties and gaming competitions, most female video gaming remains a domestic activity (Bryce and Rutter 2002, 2003a, b, 2007). Thus, even though female gamers may have come to make up an important part of all gamers, they are not visible to the same extent as are male gamers. Visibility in public spaces has traditionally been the privilege of men, while women have more often been pursuing their leisure activities in the home (Ganetz 1992; Lewis 1993; McRobbie and Garber 1976). Wajcman (1991, 155) also traces the reasons why women take a lesser part in (public) gaming activities in the history of computer games and arcade halls.

Another explanation for the different attitudes to gaming girls online as opposed to RL is the disembodiment of online environments, and the opportunity of being anonymous and hiding one's gender. Girls and women are claimed to have a relatively high representation in online games. This, say Bryce and Rutter (2002), can open up their increased entrance into gaming communities. According to Bryce and Rutter, the anonymity of virtual game spaces provides the opportunity for female gamers to compete against male opponents free from the markers of gender and thus reduces stereotypical behaviour towards female gamers. Therefore, they continue, by building confidence in gaming skills and abilities, participation in online games may lead to greater female participation in public competitive game spaces, as female players start to feel that they can compete on an equal basis with male ones (Bryce and Rutter 2002).

One important distinction to make here is that such statements build on similar arguments to those used in early Internet research, where it was believed that because physical cues revealing gender, race, age and appearance were not visible, users would be liberated from discrimination based on such characteristics (Stone 1991, 1995; Turkle 1995). Like other online environments, gaming worlds may hide inequalities because they are not immediately visible. According to this view, it is

only the opportunity to *appear* as a member of a privileged group in society that makes it possible to escape discrimination. There is a gender blindness lying in the fact that the computer gameplayer is generally assumed to be a white, Western male, *unless anything else is said*:

Researcher: When you play online games, do you usually tell people that you're a woman?

Ulrika: I guess I've done both. When I played Diablo I told people as I got to know them. But I never said anything to start with.

Researcher: How do you feel you get treated from it? Have you noticed any differences?

Ulrika: Yes, I have. If you're a girl, often people don't take you seriously. You've got more authority, automatically, as a man. And you also get treated more unproblematically as a man. Like, they assume that you're a guy if you don't say anything else. And then you can just go on playing and have fun and just hang on, sort of. But if people know that you're a woman, then it becomes- It always becomes an issue in some way. Sometimes it may be in a positive way 'wow, a girl', sort of. But gender always becomes an issue.

As research has shown (see, e.g. Herring 1993; Nakamura 2000; Sundén 2003), gender, as well as race, tends to show with time in the users' language and interaction styles. Users may also *want to* reveal their 'true' gender. As the informant above acknowledges, the moment one reveals that one's offline identity diverges from that of the 'default gamer' (i.e. the white, Western male), one falls back into old familiar patterns and hierarchies (Sveningsson 2006).⁹ Nevertheless, it seems that one can play along and pass as the 'default gamer' for quite some time without being questioned. This makes visible the constructed nature of gender, where gender comes into being through how it is done, rather than being a real, pre-existing category. As Butler puts it: 'There is no gender identity behind the expressions of gender/.../identity is performatively constituted by the very "expressions" that are said to be its results' (1990, 33).

Gender Discrimination: Positive and Negative

The issue of discrimination of female players can be further problematized, as it is not always negative. Both interviews and forum discussions point to the existence of a quite widespread habit of positive discrimination, where female gamers are given diverse advantages that male gamers seldom or never get:

Sanna:.../on the whole, when you play you get quite a lot of both positive and negative discrimination from being a girl. When I got to know people in my guild, they thought it was fun that a girl joined and maybe you could get gifts in the game. And maybe you'd get a milder treatment too.

⁹However, Bryce and Rutter may have a point in their statement about female players' increased self-confidence, and that working up their skills online is probably crucial for their willingness to enter (competitive) offline gaming spaces.

This is something that some of the male discussants have observed and find irritating:

Lemon gin:/.../I hate girls who play because all guys become like: Oh, a girl! Watch up! Oh, sorry, you died: (While when a guy dies, OMFG you bloody noob learn how to play). And since I don't like this I kick all girls I meet when I host in games. But if girls and guys would play on equal conditions, no problem ^^
(*Gameplayer*)

There is a strong resemblance here with the discourse on the allocation according to sex that was mentioned above. Because women gamers are still in the minority, they are sometimes given priority in the gaming communities, or at least, they get more attention than the male players. The view of females as getting undeserved advantages was raised also in relation to gaming in competitive contexts, such as e-sport. In the discussion quoted below, male discussants, for example, note that female players are given attention for other things than their skills at playing:

Coward: Girl clans annoy me as hell, especially those like Fragdolls who are known firstly because they are girls and good looking. And then they have the guts to complain that people treat them differently because they're girls! If they choose to present themselves like that, that's the way they'll have to expect to be responded to./.../Fragdolls get attention because they are good looking girls who play, not primarily because of their skills at playing. In addition, nowadays they are being bought by Microsoft (sic!). Just because gaming girls may not be that many, I don't think their gender should have any relevance and I don't like it when girls themselves use the fact that they are girls to get attention AND then have the guts to complain that they get objectified, like Fragdolls do.
(*Gameplayer*)

In the discussion, the male discussants aim at the advantages female players can get in the form of sponsoring and media attention. It is very interesting (and quite unusual) to see men complaining about the objectification and sexualization of women, but then, on the other hand, it is rather the consequences of the objectification they are grumbling at.

As noted in the post above, some female clans seem to have realized that they are in a disadvantaged position and thus have chosen to take advantage of the situation and use their 'handicap' as a weapon, to even up the situation. *Fragdolls*, for example, seem to deliberately choose to position and present themselves in a way consistent with how females appear in games – in a tough, but as the discussants above also apprehend it, quite a hyperfeminine and sexualized manner (for female clans, also see Zaremba, Chap. 28).¹⁰ By appropriating these game aesthetics, they can perhaps be said to be acting as representants of third-wave feminism, mimicking and parodying, and using femininity as 'a constructive force to be used against patriarchy "from within"' (Sundén and Sveningsson Elm 2007, 8). However, third-wave feminism is not mainly about using femininity to gain advantages, but through parodying and sometimes exaggerating femininity demonstrating a

¹⁰For similar examples, see the reality TV show 'Play US', produced by MTV, that follows the Swedish female CS clan *Les Seules*.

criticism towards the roles that women are otherwise inscribed in – much in the same way as drag can be seen as a way to turn visible the norms and expectations that follow with gender. In other words, the fact that *Fragdolls* choose to present themselves in a hyperfeminine and sexualized manner does not need to be a sign of their being critical or subversive to gender inequalities in gaming contexts. Still, the fact that they speak up for girls' rights to play and to be visible in gaming contexts makes them a valuable resource, as does their mere existence as role models for other girls who wish to start playing at a competitive level. Apparently, however, the male discussants do not understand them this way, nor do they approve of it. Building on the argument that everyone has the same chances at succeeding in computer games, their view is that the same rules and conditions should apply to all.

Discussion

As this chapter has shown, the image of gaming communities as misogynous is not really true, but neither are they all women-friendly. The way women are being treated depends on how their gaming activities relate to a number of contexts.

First, the players' *cultural context* seems to affect how female gamers are met. Swedes in general have the image of themselves as embracing ideals of equality, in relation to class and race, but above all to gender (Sundén and Sveningsson Elm 2007). The culture that is constructed thus includes a large portion of political correctness. If we scratch the surface, however, we may find that the image is more complicated, and it is obvious that in the gaming communities, females are welcomed into only certain contexts and positions.

Another context to consider is the *context of game genres* (for a discussion of genre, see Veugen, Chap. 3, and Raczowski, Chap. 4). Certain game genres and gaming styles are seen as more appropriate for females than others. Women seem to be welcome in casual and low-status gaming contexts, while opposed in hardcore gaming, which is often more highly valued. Here, a discussion could be held about which comes first – the status or the gender of the users. Are first-person shooters male dominated because they are more highly valued within gaming communities? Or are they more highly valued because they are male dominated? And what happens when more and more women enter such areas that are coded as 'masculine'? Certain professions, for example, the teacher profession, have undergone a change where the status, as well as salaries, has decreased relative to other professions and where explanations have been made with reference to the increased number of women. The male gamers' opposition to females in the gaming contexts may thus be a way of preserving their status. This can also explain why the few women who have managed to carve their way into the male-dominated contexts sometimes are more unwilling than the men to let more women in – there may be room for a limited number of women, but if they become too many, the status will likely decrease, as will the special treatment that they receive as women in minority.

A third context concerns the *gaming scene*. Public gaming seems to be harder to get into for women than gaming that is done from the home. Explanations were proposed in the disembodiment of online environments, possibly contributing to a more friendly and egalitarian atmosphere, other activities that go on at the LAN events, and a traditional view on men's and women's access to and visibility in public places. But the most likely reasons lie in gaming goals and levels. LAN events are environments being largely characterized by their competitive orientation. It seems like the more competitive the gaming activity, the less generous towards women it is. The forum discussions show in an interesting way how discussants' attitudes shift when they start talking about competitive gaming. Discussants, who take a clear stance for girls' rights to play and argue for girls' equal qualifications, are considerably more sceptical towards female participation in competitive gaming contexts, especially if there is prize or sponsoring money involved. And despite the discussants' explicit statements that women have equal capacities and qualifications as men, they also express ideas that female gamers do not manage to meet the standards of professional or competitive gaming, but get allocated according to sex, or are given undeserved advantages because they are female. Female gamers may then have to strive harder, and generally be better, to prove their right to be there and to demonstrate that they are there because of their skills and not their gender. Paradoxically enough, the positive discrimination that female casual gamers may receive (or are believed to receive) because of belonging to a minority group may result in negative discrimination of female hardcore or professional gamers, who get to be seen as less competent and less deserved of their gains.

This chapter has shown that even though the users of the studied Swedish gaming discussion fora in general take a clear stance for women's gaming, the issue is more complicated than it may seem at first sight. On the one hand, there is an overwhelming consensus of girls being welcome into the gaming community, and the absence of gaming girls is seen as a problem that one wishes to solve. Of course, this is a good thing. However, as is true for society on the whole, inequalities do not always show on the surface but are to be found in deeper structures much harder to get at. The ostensible acceptance of women in gaming worlds means that Swedish female gamers instead have to fight against invisible structures more difficult to handle than explicit sexist remarks and actions. Just as there are glass ceilings in professional life, there seem to be also in the gaming context.

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¹¹The games are examples of what games the interviewees liked to play. In some of the cases, they did not state which number in the series they played, so I listed the one that is most likely, given the time they said they played the game (e.g. *Civilization*, *Halo*, *Donkey Kong*). In other cases, I just listed the name of the series (e.g. *The Sims* and *Silent Hill*).

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Chapter 28

The Gender-Offensive: Female Gaming Cultures Between Shooters and Marketing

Jutta Zaremba

Introduction

For the past few years, the game industry has discovered the marketing segment of female gamers: the constantly growing number of female players within PC and console, online, and mobile gaming has led to a warm welcome by the game industry. Female gamers became a special issue, sometimes used as a header as we can see in some press articles: for example, the *EA magazine* published an issue called “female gamer – playful woman” in 2006¹ presenting a beauty face with full lips subtly heading to the erotic aspect of female activities and presenting well-known German actresses like Franka Potente and Barbara Schöneberger. Also in 2007, the *Retro* game magazine headed an issue “Girls in Games,” showing a lascivious girl in a spaghetti-strapped shirt leaning around an old PC (Fig. 28.1).²

The first German game magazine for a female public started in 2007 and was called *Play Vanilla*, launched by the German company *Computec Media* who is also publisher of *PC games*.³ Designed like a lifestyle magazine, *Play Vanilla* is very gender-stereotyped: prominent women from showbiz should demonstrate that female gaming is trendy. In a press release, the magazine states that they are

¹*EA magazine* 04/2006: Die Spielerin – Frau verspielt.

²*Retro* No. 5, 18 September 2007.

³<http://presstext.de/news/061127006/erstes-weltweites-spielemagazin-fuer-frauen-play-vanilla-von-computec-media/>. (Accessed 01 March 2011).

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Fig. 28.1 *Retro* game magazine no. 5/2007, “Girls in Games” (Source: <http://www.retromagazine.eu/retro/heftarchiv/>). (Accessed 28 February 2011)

not interested in female gaming in general, but in what they call the feminine side of gaming:

Eva Padberg is cuddling Nintendogs-puppies, Yvonne Catterfeld is changing into a World-of-Warcraft magician during her spare time [...]. *Play vanilla* shows the fascination of computer- and video-Games for women: Karaoke-fun with Singstar, better living with the Sims, keeping in shape with Wii Fit.⁴

Smiling cover girls are linked with topics like “never again solo” or “what kind of player type are you?” As an answer to the question, why a game magazine for women is needed, *Play Vanilla* states that females prefer games that appeal to a woman’s heart, brain, and senses so that strategy games, sport games, or shooters should be left to nerdy males – the female readers’ answer in return is the fact that *Play Vanilla* was already stopped in 2008 because of lack of interest (Fig. 28.2).

⁴ http://www.computec.de/common/mediadaten/MD_CM_2009_O_playvanilla.pdf. (Accessed 01 March 2011).



Fig. 28.2 *Play Vanilla* magazine (Source: <http://www.hayungs.de/hayungs31/?cat=18&paged=2>). (Accessed 28 February 2011)

So, what does the academic discourse tell us about female gaming? Actually, here the topic of female players is treated very defensively: for example, in their essay *Killing like a girl – gendered gaming and girl gamers’ visibility*, Jo Bryce and Jason Rutter (2002) assume that girls prefer online role-playing games because they fit with a female “bedroom culture,” which means favoring playing at home and doing domestic social interaction. Moreover, within their study *Gender and Computer Games: Exploring Females’ Dislikes*, Tilo Hartmann and Christoph Klimmt (2006) concentrate on the reasons for female rejection against violent game content and sexual gender role stereotyping. They state that females are less attracted to competitive elements in computer games. In another study by Leonard Reinecke called *Why Girls Play* (2007), interviews with seven female players led to the conclusion that females mostly identify with the avatar. Girls would have difficulties in identifying with so-called male domains like war and competition. Going one step further, in her dissertation *Lara Croft’s Daughters*, Caroline Oppl (2006) analyzes different types of aggressive behavior of gaming girls. Here, the aspect of aggression – as a part of the debate on violence so

excessively examined within German game studies – is now transferred to female players.⁵

After this short – and of course incomplete – look at public press and academic writings, it seems that they all try to give us an impression of the average female gamer. With all respect to those studies and their results, I am not interested in presenting an idea of an average female gamer (and I wonder whether this exists at all). The danger of confirming existing gender stereotypes seems quite too immense. Furthermore, those studies mostly concentrate on casual female gamers only as being the majority. Instead of following this majority view, it seems to be every bit as important to take into account the already existing female gaming culture in the Internet: there, hundreds of female power gamers have been acting out since 1997, operating through dozens of female clans, web portals, and communities. Far from the restrictions of a “bedroom culture,” violence is not rejected but played with, competition is highly appreciated and fought out, and male (gaming) domains are occupied with female competence as well. This female gaming culture presents a variety of games and gender combinations, so I really wonder why they are ignored by academic research so far.

Therefore, the following look at three different examples of this vital gaming culture seeks to leave a first academic trace, having basic questions in mind: What are the concepts of being female gamers? What do media representations look like? What is the relation to the gaming industry? What kind of gender offensive does exist, and is there gender conformity as well?

The female gaming cultures will be analyzed on the basis of the recently founded method of online ethnography dealing with group formations in the Internet and their constitution of sociality and cultural impacts (Marotzki 2007). The important aspect of visual representation will be added since Internet cultures strongly operate and communicate via videos, photos, logos, banners, and so on. Therefore, a method of visual online ethnography is applied here, focusing on public pictures circulating within female gaming clans forming cultural images and gender interpretations.

***Zockerweibchen*: A Web Portal and Community for Gaming Girls**

The German *Zockerweibchen* was founded in 2000 by a mixed team: Heike Pressler and Uli Lächelt. The idea was inspired by an article in the *PC action magazine* about publishing a female-community website in order to bring together isolated female gamers of the young e-sports scene. That idea was put into practice by founding the *Zockerweibchen* portal for users interested in the section of female gaming.

⁵The issue of female aggression is also discussed in Carr’s paper (see Chap. 26).



Fig. 28.3 *Zockerweibchen* logo (Source: <http://steamcommunity.com/profiles/76561197976681334>). (Accessed 28 February 2011)

Zockerweibchen is an exception within the female gaming universe: being not only a web portal but also a host for a variety of female clans, teams, and communities preferring shooters, multiplayer online, and strategy games. So for the gaming community, the term *Zockerweibchen* has already become a synonym for “female e-sport.” With their naming, they stake out their female claims within the fields of male-dominated e-sports: the combination of the term “Zocken” – meaning tough gaming – and the term “Weibchen” as the word for small females in the animal world, is an ironical statement: tough male gaming is connected with weak female conditions. The stereotype character of both constructions is made visible; therefore, users can expect deviations from gender norms.

This irony also occurs in the visual parts of the logo: here a dark-haired lady in 1970s style is trying to provoke us with her raised eyebrow and a large pistol. However, on the right side of the logo, three cartridges look like lipsticks, especially the red one. This combination points to *Cate Archer* from the detective game *No One Lives Forever*, which is likewise ironical in the way it uses exploding lipsticks as weapons. Nevertheless, by preferring the colors red and black, action, danger, and erotic dynamics are signaled (Fig. 28.3).

Zockerweibchen is integrated into the *Figh7Club network* (F7C), a male platform for different e-sport leagues, clans, and communities. Therefore, *Zockerweibchen* can also offer comprehensive information and services that are particularly female clan orientated. Nearly 1,000 members are given insights into 141 registered clans, a dozen of them are female, like *aX.dangerous girls*, *maedchenblu.t*, or team *Bavarian Heaven Ladys* or *aTTaX.female*. Regarding dozens of online photo albums from the *Zockerweibchen Cup*, the tension between serious gaming tactics, sporty young female teams, and exciting in-game environments within an official competition is presented. On many documentary pictures and snapshots, the atmosphere of team spirit, the importance of strategy, and the pleasure and pride in belonging to a well-known female clan can be felt very closely.

In additional interviews, their special preferences and characteristics become more understandable. Items like “clan searches female gamer” or “female gamer searches clan” try to make weak clans a bit stronger, by enrolling new members with names like *angeeyes*, *Countess*, *play child*, *blood maiden*, *lunatic*, etc. Furthermore, *Zockerweibchen* organizes its own cup: here, official tournaments around *Counter-Strike* are delivered, with female teams gaming after a firm set of rules against each other in order to win money prizes (Fig. 28.4).



Fig. 28.4 Finals *Zockerweibchen* Cup 2/2007 (Source: http://picasaweb.google.com/lh/photo/GmF4iBxWktcMjz_2UqHwXA). (Accessed 28 February 2011)

Zockerweibchen members also make their own surveys, which are often connected with gender-specific questions. For example, they used to make surveys about the necessity of female contests on LAN gamings.⁶ The majority of female gamers favored this idea, whereas a quarter had no interest in having female-only-LAN events.

As well, *Zockerweibchen* has installed the topic “women in business”: various gender news are presented, such as a competition for the voice of the female *Mona* character in the adventure game *A Vampyre Story*. Another article introduces Kathy Vrabeck from the section of casual gaming at *Electronic Arts*, trying to reach promising target groups like young girls and silver gamers:

I’m not only trying to lead EA, but to lead the video games industry towards reaching that next-level consumer – the people we haven’t done a good job reaching: little girls, older women and older men. [These are] people who didn’t grow up with gaming and don’t necessarily think that gaming is for them.⁷

Or an article about women in the game industry, where Fiona Cherbak, staff manager at the *International Game Developers Association IGDA exec*, states that women are still not very good in self-promoting:

You may say that women’s “problem” with self-promotion is because they’re intimidated by a male-dominated workplace. But if we’re being completely honest here, I never put the blame on men. [...] Demonstrate that you’re equal to them and that you can do what they do.⁸

⁶For an analysis of LAN parties, see Ackermann (Chap. 29).

⁷<http://www.casualgaming.biz/news/27480/Kathy-Vrabeck-on-casuals-future>. (Accessed 28 February 2011).

⁸<http://www.zockerweibchen.de/news-artikel,Frauen-in-der-Gamingbranche-Selbstdarstellung-zum-Erfolg,33537,1.html>. (Accessed 01 March 2011).

Fig. 28.5 *Zockerweibchen* merchandising T-shirt
 (Source: <http://the-enlightened.de/wp-content/uploads/2009/12/zockerweibchen.jpg>)



So far, the “women in business” topic has got only a few short comments by the portal members and seems to be of less interest, probably because it is not e-sports specific at all.

A bit of self-promotion is done by *Zockerweibchen* through their small numbers of merchandising articles: trying to give an image of gaming girls in cool and sexy poses; T-shirts and key hangers should find their way to members and fans of the portal. Young sporty girls are acting out in kickbox poses, quite fiercely presenting the “me action” style of the “true” *Zockerweibchen* gaming attitude. However, these pictures look a bit like self-shot poses of playful young females trying to embody aggressive gaming only very recently (Fig. 28.5).

In addition, *Zockerweibchen* are quite busy getting known to the public: several videos are incorporated on their website, and some interviews can be found on *YouTube*, mostly recorded at LAN and cup events. Insider pictures of serious, alert young women are shown who are totally concentrated on gaming and teamspeak yet quite relaxed (Fig. 28.6). Key images of authentic female gaming cultures and their professionalism are made public. Also a TV report was broadcast in the news section of *RTL* (a private German TV station) in 2006, focusing on shooters, violence, and female players as a new way of dealing with it.⁹ The sponsor of *Zockerweibchen* was *Commodore Gaming*, but since their bankruptcy in 2004, now *Sennheiser Communications* is left as the only partner: this well-known German electronics company sponsors prizes at LAN events and donates headphones for teamspeak at female cups (Fig. 28.6).

⁹ <http://www.youtube.com/watch?v=8AMKb-nt0tA>. (Accessed 01 March 2011).

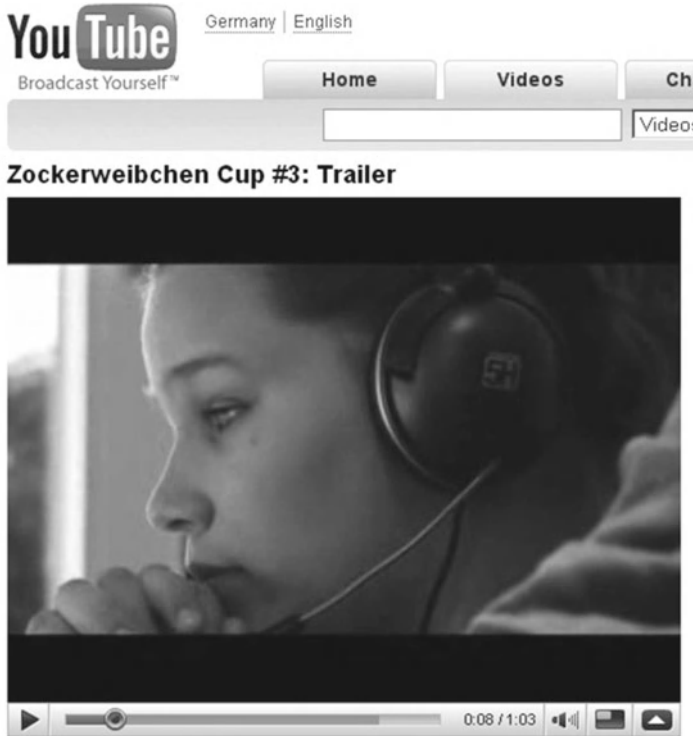


Fig. 28.6 *Zockerweibchen* videostill from YouTube (Source: <http://www.youtube.com/watch?v=P5AF29YyBOY>). (Accessed 28 February)

All in all, the huge portal offers much insider information about female gaming, specializing on e-sports and therefore embedded into a larger gaming network. They cooperate with male teams, and the website performance and all the photos and videos give the impression of an active and yet ordinary community: normal girls in fighting teams concentrate on playing shooters. And precisely here does the gender offense take place: in times of school shootings, girls next door naturally playing tournaments on *Counter-Strike* are not what young females are supposed to do. This everyday-life appeal of competing LAN girls is an offense to social expectations of nice and playful young females. But this gender offense also works in another direction: these average-looking shooter girls are also an offense to concepts of feminist resistance, imagining subversive girls rocking the gaming industry. *Zockerweibchen* do not exclude male alliances, nor do they perform any kind of female rioting.

***grrlgamer*: The Only Definitely *grrlgamer* Since 1997**

grrlgamer exists since 1997 and was founded by Nikki Douglas, a hardcore gamer and games journalist. She started *grrlgamer.com* in 1996 as a column on her first website *riotgrrl.com*, as part of the Riot Grrrl movement about annulling



Fig. 28.7 *grrlgamer* website (Source: <http://img.domstr.com/grrlgamer.com-6644bfe1-df77-4c64-ad04-a9f319185c68.jpg>). (Accessed 28 February 2011)

duality-gender concepts and supporting independence for women in the rock music business. *grrlgamer* was the first website about computer and video gaming for women, and it was also written and produced by women only. The name “*grrlgamer*” is meant to be as a counterpart to cute girlies, whereby the sound “GRRL” should be a sign of female aggressiveness (Fig. 28.7).

On the logo, the *grrlgamer* comic figures are a mixture of exaggerated J-Pop and 1970s style, whereby there are a gallery of important game heroines like *American McGee’s Alice* or *Red Ninja*. Here the celebration of 10 years of gaming puts *grrlgamer* comic figures next to the “hall of fame” of female avatars, stressing the strong bond between them and at the same time giving the impression that the digital heroines are the more “real” characters. So this visual juxtaposition of who is influencing whom and who of them is more “authentic” is a smart and catchy device for dealing with this serious cultural discourse. The logo shows that a great sense of (self) humor characterizes the strength of the *grrlgamer*. The text-based *grrlgamer* site compiles a wide range of games from PC, console, to handheld and therefore encompasses all sorts of genres from role playing and adventures, to shooters. Game reviews for all platforms exist – like for the mystery game *Silent Hill Origins* for handhelds. Also fanfiction can be found like *Triss* and *Shani* from the fantasy game *The Witcher* (Fig. 28.8). Furthermore, there are interviews with women in the games industry – i.e., with the composer Winifred Phillips of the racing-action game *Speed Racer*.

The articles on different topics are essay-like and sometimes polemical, often coming up with a good sense of humor: for example, there are contributions like *The Fat Maiden Revolution – Why Games Need Grrl Power*, which deals with a Japanese game where you play the character of an ex-beauty queen who has become fat. Or the article *Got Boobs? Breast Physics in Videogames* dealing with phantasmic dreams of male game developers.

Regarding the *grrlgamer* banners, we can see manga-like girls with extra large eyes, looking a bit alien-like, staring offensively at the viewer. A very slim three-girl team (resembling famous three-women gangs like *Charlie’s Angels* or *Charmed*) confronts us in a cool and stylish manner. Different weapons serve the fighting girls: the kickbox girl uses her hands and arms, the catsuit girl is calmly holding a machine gun, and the medieval Amazon is lifting a sword with both hands. They are all acting out very self-confidently and determined to fight. Here, female gaming culture is enjoying its power, diversity, and attractiveness in the shape of a trio (Fig. 28.9).



Fig. 28.8 *grrlgamer*, fictional interview with Triss and Shani from the game *The Witcher* (Source: <http://www.gamersintuition.com/article.php?t=interviewtrisshani>). (Accessed 28 February 2011)

Fig. 28.9 *grrlgamer* figures (Source: <http://www.cafepress.co.uk/grrlgamerstore>). (Accessed 28 February 2011)



All in all, the color pink dominates the whole website, which is a comment on the so-called Pink Games which the *grrlgamer* despises. At the beginning of the 1990s, the gaming industry discovered the female gaming market by offering girls a separated stereotyped playground: within the gaming world, Pink Games started in 1992

Fig. 28.10 *Evolve Pink Geisha Wii Case* (Source: <http://www.consolesource.com/ecomm/catalog/Evolve-Pink-Geisha-Wii-Case-p-2666.html>)



with *Barbie Fashion Designer* for PC gaming, went on with *Nintendogs* in 1995, and are still alive with games like the high-school comedy showdown *Mean Girls* (following the successful comedy movie in 2004) for Xbox published in 2009. Moreover, Pink Games work on changing the console design: Like the Sony PlayStation in 1996 and a PlayStation Portable Pink in 2008, the Game Boy for girls became a *Game Boy Advance Pink*; also Nintendo Wii offers a pink version, including an evolve case called *Pink Geisha* (Fig. 28.10).

The *grrlgamer* complains about Pink Games because the game industry mixes up women with teenagers. For the *grrlgamer*, no extra games for women are necessary. Instead of Pink Games, game developers ought rather to concentrate on producing good games. Anyway, members of *grrlgamer* laugh about the strange ideas the game industry seems to have about good games for girls. They state that they share the same technical interests and gameplay preferences as male gamers – an aspect the gaming industry is neglecting very often: “It’s been a lie telling the world that grrls play no more games other than Solitaire. My very first computer game love was Quake. I’m sure the guys at ID software never thought of Quake as a game for women.”

Nevertheless, *grrlgamer* is also in touch with the game industry: for example, in 2003, they started *Simgrrl*, a service for *The Sims* and *The Sims 2* where users can download a vast amount of skins, room sets, etc. This supports a very convenient manner of female gaming, since *The Sims* belong to most favorite games of girls.

Fig. 28.11 *grrlgamer* merchandising: messenger bag “frag’em” (Source: <http://www.cafepress.co.uk/grrlgamerstore.26337030>). (Accessed 28 February 2011)



Besides *Simgrrl*, others sponsors are listed: One is *PlayFirst*, a successful publisher of casual games; another one is *Play-Asia*, an online purchaser of entertainment products based in Hong Kong. As well, *grrlgamer* incorporated a shopping mall on their website: a variety of shirts, bags, or mouse pads can be bought, also several goods from their sponsors. Like the yellow messenger bag “frag’em” (fragging means temporarily killing another player). Fragging as a kill count and score system used in various first-person shooter modes (e.g., death-match) is now accompanied by a cool blonde comic figure closing her eye and pointing her pistol toward the viewer. This once again shows the playful irony of *grrlgamer* combining the discourse of virtual violence with the image of a fictional female gamer, connecting rough cultural gaming practices to smart female expertise (Fig. 28.11; Zaremba 2005).

In general, *grrlgamer* is a website made by its members during their leisure time. Here they can be gaming experts, journalists, designers, and individual players at one and the same time. Founder Nikki Douglas sees the *grrlgamer* site as a creative expression of gaming attitude, when she states: “This is my generation’s truest art form and I plan on being a part of it until they call me GrannyGrrl!”¹⁰ They are a community, feeling independent from big sponsors and companies, but choosing acceptable sponsors for their wide range of games and platforms. They try to survive as a large-scale meeting point for the various needs of female gamers: fun in excessive playing, in writing game reviews, and comments on the latest trends are some of them.

It is remarkable that *grrlgamer* does not present the usual team photos or videos on their website or elsewhere on Web 2.0 platforms: instead, they put the focus on clever comments and designs. Gender-offensive signs are revealed in many critical comments about gender and gaming routines. They are explicitly engaged in feminist approaches, as Nikki Douglas puts it: “Feminism is such a part of our culture, yet you can’t find its ideals in any of the games being made for young women.”¹¹

¹⁰ www.grrlgamer.com/crew.php. (Accessed 16 October 2010).

¹¹ <http://www.wired.com/culture/lifestyle/news/1999/02/18052>. (Accessed 01 March 2011).

PMS Clan: Play Like a Girl

The female-only clan *PMS* was founded in 2002 by Amber Dalton and her sister Amy Brady. The *PMS Clan* currently has over 800 female members across various platforms and games, yet specialized on shooters. Their members take part in various gaming competitions and online tournaments. For the Xbox section, *PMS* members present a telling collage of their personal manga-like, fiercely fighting but also feminine avatars. Here, expertise in shooting with big weapons seems to be important, and this determination meets overt playfulness of fictional characters. Nevertheless, this collage shows up like a manifest for female gaming: as common motivations, skill, honor, trust, experience, teamwork, strength, loyalty, and friendship are appreciated here within female clan gaming. Correspondingly, this claim is stressed by the copyright of this collage called “female ownage by pms”. (Fig. 28.12).

Although *PMS* acts out exclusively female, there also exists an alliance with the male *H2O clan*, whose slogan is called “play with girls.” The male team first began as technical support of *PMS* and now has become a clan itself and is promoted as the male counterpart of *PMS*. Conventionally, the ladies have long hair, and the men wear short cut. The team photo gives the impression of a friendly gaming family, linked through the same clan shirt and place. Yet the teams are dominated by female members; therefore, it looks more like the slogan should better be (*PMS*) “play with boys” (Fig. 28.13).

The naming “*PMS*” is a play on female aggressiveness: Normally, *PMS* is a well-known abbreviation of the postmenstrual syndrome, a medical notion for an uncomfortable biological condition of women. However, the clan uses the abbreviation *PMS* for “Pandora’s Mighty Soldiers”: signifying disastrous female behavior, Pandora brings evil over mankind in the shape of female beauty, and her powerful soldiers put militant claims on the gaming world. So the logo puts the old myth into the gaming world: a fiercely acting Amazon is fighting vigorously with her console, and a cable that looks like a snake connects the technique and the female player, leading to Pandora’s box, not yet opened. The logo is a metaphor hinting at the power of a female gaming culture which is “wild and dangerous,” not guaranteeing peace. So according to *PMS*, the choice for the genre of shooters has specific reasons: shooters are the most strongly competition-oriented feature in clan environments; they guarantee the largest fun, and the danger of shooters enhances the sex appeal of female gamers (Fig. 28.14).

This professional performance corresponds to the close cooperation of *PMS* with the game industry: the really large number of as many as seven sponsors can be found: the high-end PC company *Alienware*, the graphic developer *ATI*, the mobile system company *Plantronics*, the graphic card company *Sapphire*, the memory card manufacturer *Patriot Memory*, the ecommerce and lifestyle brand *Pro Gamer*, and the game server company *DarkStar Communications*.

Also, when we look at *PMS*-play divisions, we notice a completely business orientation toward well-established hardware trademarks: the PC division is marked by the *Microsoft* logo, followed by the *Xbox*, the *PlayStation 3*, and the *Nintendo Wii* division. The last division *Pro Players* provides a hint about what all these efforts



Fig. 28.12 PMS Clan Xbox (Source: http://media.photobucket.com/image/pms%20clan/4thNoun/PMS_XBOX.jpg). (Accessed 28 February 2011)

should lead to: all those sponsors and trademarks should guarantee professional gaming, this time including female mastership. Their ultimate goal is to provide a safe and competitive playing environment for female gamers, and they are also urged to bring females into the top ranks of tournament champions (Fig. 28.15).

Their members range from casual players to the ultracompetitive ones. A citation from PMS about its attitude toward professional gaming reveals much of its competitive business character:

All members go through a month long recruitment and orientation process before they are accepted into the clan. We take pride in screening our members for best attitudes and



Fig. 28.13 *PMS and H2O clan* (Source: <http://www.pmsclan.com/gallery.php?task=picture&aid=36&pid=170>). (Accessed 28 February 2011)

Fig. 28.14 *PMS Pandora* logo (Source: <http://www.facebook.com/PMSClan>), (Accessed 28 February 2011)



behaviors, and monitor them regularly to make sure our image is fun, but respectful. We promote only those who are the best examples of behavior into leadership roles, which has helped us become the success we are today.¹²

¹²<http://www.pmsclan.com/page.php?page=About%20Us>. (Accessed 01 March 2011).

Fig. 28.15 *PMS* play divisions (excerpt homepage) (Source: <http://pmsclan.com/>). (Accessed 28 February 2011)



In order to maximize their publicity, the *PMS* team uses every chance to present itself smartly in the media: a lot of photos show proud clan members at game fairs and events, putting forth their stylish mix of attractiveness, victory, and fun. Above all, clan leader Amber Dalton dominates public appearances: she is the head of *PMS* and the icon of the clan. The handbook *Next Generation Business* selected Amber Dalton as one of the “Game Industry’s 100 Most Influential Women” because the setting up of *PMS* has helped to break the stereotype of gamers and offers a safe and friendly environment for female gamers to play in. Dalton is central in most of the numerous press articles and TV interviews, which also exist on *YouTube* and *MySpace*. So within the female gaming scene, Dalton meanwhile owns the image of a star. Like professional setcards of a model or artist, Dalton presents various portraits of herself on her homepage. On her photos, she tries to create the image of an intelligent, rough, bitchy clan leader, strong and seductive. She is the platinum blonde loving black leather and wearing *PMS* shirts with the feminist symbol. Visually continuing the tradition of leading biker or punk ladies, she always tries to be a bit cute as well (soft pink lipstick, nice smile) in order not to appear threatening to male players (Fig. 28.16).

In various interviews, clan members state that their mission is to change the perception that competitive online and offline gaming is dominated by male hardcore gamers. Increased publicity over the years has made *PMS* Clan one of the largest female gaming clans in the industry. In addition, the *PMS* Clan has managed its appearance in the virtual *Second Life*, projects its image as a team in games like *Final Fantasy* where all hard clan sisters sit with their legs crossed, or they plan to launch *PMS-TV*. All in all, *PMS* is working on a constant public spreading of its legendary portal, using all sorts of visual campaigns and messages (Fig. 28.17).

The *PMS* gender offense is a combination of female aggressiveness, mastership, and sexiness. In all their public appearances, they try to form an international gender elite: only the most successful, skillful, and pretty gaming girls should join the

Fig. 28.16 PMS Clan leader Amber Dalton (Source: <http://www.gadget.co.za/pebble.asp?relid=1292>). (Accessed 28 February 2011)



Fig. 28.17 PMS Clan in *World of Warcraft* (Source: <http://guildzilla.com/content/uploads/4f/3c/4f3c1398d3092c81b2ff706889de4dfa.jpg>)

female family. Nevertheless, they give shape to a new gender stereotype which we already know from the pop music business: if female aggression shows up, it must be embedded into maximum attractiveness so that no threat for men arises. They demonstrate cool and powerful women gamers with Domina-like qualities, who men should feel pleasure in competing with, like their male partner clan *H2O* does. So *PMS* creates a prototype of sexy gaming babes, operating by permanent product placement. They try to increase their market value in order to maintain the image of professional and erotic females. Therefore, no surprise that the gaming-babe prototype matches perfectly with the interests of the gaming industry. Here, ambitious self-marketing goes hand in hand with business campaigns, leading female players to attend public interest.

Recent Prototypes Within the Female Gaming Network

In this universe of female gaming cultures, international exchange takes place mostly within the e-sports scene where tournaments bring together teams and clans from many different countries worldwide.¹³ At the same time, *Zockerweibchen* have quite a critical view at ongoing media events concerning female players: for example, in their survey on the question if the *MTV* show *Play Us*, starring *Les Seules*, would be a success, many members thought it would be boring to watch or embarrassing for a female team. Regarding other female portals and platforms, they show no direct cooperation between each other. They of course know about the existence of other female portals, yet they all have their own gaming friends, affiliates, and (business) partners. There are some initiatives trying to comprise female gaming activities: for example, *Game Girl Advance* (GGA – www.game-girladvance.com), a fanciful weblog and online journal founded in 2002 to bring alternative perspectives to video game and girl culture, or the *Gamer Girls Unite* (GGU – www.gamergirlsunite.com), a website with the latest female-related gaming news informing coplayers around the world paying extra attention to female gamers and characters since 2003.

Of course there are many more female clans and portals than the three mentioned above: for example, within the “all female gaming clan” *girlzclan*, nice and friendly family girls and women meet for playing shooters, designing skins for sexy avatars and wallpapers with tacky or comic-like appeal. There also exist the famous *Frag Dolls* in US and UK teams: launched following a casting call from *Ubisoft*, they are industry driven, professional female players with high gaming ambitions and optimized (erotic) media performances, also the very well-known Swedish clan *Les Seules*, their team leader *Aurora* being selected as “Female eSports Player of the Year 2005.”¹⁴ These Swedish female programmers

¹³ For a discussion of e-sports as a youth phenomenon, see Adamus (Chap. 30).

¹⁴ http://www.esl.eu/de/pro-series/summer_2011/news/15147/GC-2005-Res-mee/. (Accessed 01 March 2011).



Fig. 28.18 *Les Seules*: *Play Us* reality TV show for MTV (Source: <http://www.mymym.com/en/article/99.html>). (Accessed 28 February 2011)

managed – as the only female gaming team ever – to get portrayed by the reality TV series *Play Us* on MTV.¹⁵ On their promo cover, they are presented as five black fighting divas, determined to make their way through the gaming (or TV) world. In a dark and rotten surrounding, they look like angels of revenge, armed and perfectly styled to embody five different, but yet stereotyped sorts of gaming girls. They appear to be clones of sci-fi TV series like *Dark Angel* (starring Jessica Alba) or the numerous female detectives “women with guns” prototypes who try to make their way for violent but obligatory beautiful female characters within the mediascape (Fig. 28.18).

Interestingly, by looking at visual representations of female gaming portals, we can discover correspondences with existing categories of virtual heroines: three basic heroine constructs can be found so far over the last decades of gaming (see Zaremba 2010): the *harmless fairy characters* – princesses, elves, witches, and so on – deriving from fairytales; the mass of *hypersexual heroines*, purely fighting avatars with phantasmic body proportions and an arsenal of dangerous weapons; and the recent development of *broken individualist figures* who appear to be like “authentic,” solo fighting women in tough jobs and with ambivalent feelings.

¹⁵<http://www.youtube.com/watch?v=O3At3jhdX30>. (Accessed 01 March 2011).

Like the major construct of female avatars, quite an amount of the existing female clans (e.g., *PMS*, *Frag Dolls*, *Les Seules*) also prefer the construct of the *hypersexual, erotic prototype*: in a crossover of comic figures, avatars, and photo arrangements of female gamers, strength, ambition, and sexiness are addressed toward male and female audiences. Here, we have icons and stars in the persona of some of the leading and most successful women.

Moreover, we can find a modification of the third avatar construct of the individualists broken into *individual real gamers*: this time without the aspect of ambivalence, “authentic” representations of gaming girls and women at LANs and tournaments are shown in order to point to their obviousness and seriousness within the gaming culture. Besides individual portraits and preferences, the team spirit is playing an important role signaling the sporty female real gamers. Those real gamers offer identification patterns especially for young females with interests in gaming and socializing at the same time.

In addition, we can watch a new, third category: the *(self-)ironic offensive gamer* (i.e., *grrlgamer*, *GGA*, *GGU*) striving as strongly for feminist approaches as for fun. Deep insight into feminist matters and everyday politics is combined with high pleasure in gaming and online communication.

In general, all female clans, portals, and websites are social networks. According to Jim Banister, members of a social network are not only consumers and producers but also distributors, merchandisers, and salesmen at the same time (Banister 2004). This is very true for the social network of female players, who are not only working in the field of gaming but also acting out in gender domains. All female communities stress the fact that their existence alone would be an act of provocation for the male-dominated game universe, even more of a provocation since many of these female gamers prefer shooters. So within the gaming world, they are constantly constructing a brand of dangerous and self-confident “female gamers.” The fact that they are a genuine product is treated very differently by each community, as we can see from their handling with sponsors and from their own public performances. Of course it makes a difference if female gamers take their clan as a stepping stone for a professional career like *PMS* or as a communicator for fun in gaming like *grrlgamer* or for serious teamwork like *Zockerweibchen*. Anyway, we should go on with further investigations into the development of this lively culture and their gender strategies (Zaremba 2006, 2008, 2009).

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Chapter 29

Playing Computer Games as Social Interaction: An Analysis of LAN Parties

Judith Ackermann

Introduction

When people think about LAN parties, they often still do not have positive images in their minds. They imagine dirty gyms or cellar rooms, where a horde of adolescents sit together, each at their separate computer, eyes glued to the screen, never even glancing at each other. People carry images in their heads where the lights are out, nobody is talking and the only sound is the permanent shooting from the machines. Sometimes somebody shouts out for joy or cries out in agony because either they have killed an enemy or their character has died. People imagine that during the whole time, conversation only takes place via the computer's chat tool or via a headset.

This alleged 'not-talking-phenomenon' is a problem the author has had to deal with since starting research on this subject. The common prejudices are reflected in questions like: 'Is there any communication at all?' or 'Aren't all the players sitting in front of their monitors merely typing cryptic letters into the chat function of their PC?'

These statements show a huge dilemma of LAN parties: most people believe they know something about them, but the majority only reproduce the prejudices they know from hearsay or that are transported through the mass media. Like ego-shooters, LAN parties are often put into the context of possible causes for killing sprees. But on the contrary, most LAN-party participants never make themselves suspect in society.

This chapter argues that LAN parties are characterized by a continuous alternation between work and game phases and cannot be seen as game-only events. In addition, it shows that playing computer games together in a real, locally existing group trains users in many aspects of social behaviour such as cooperation,

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communication, resilience, patience, sense of responsibility, engagement, helpfulness and skills in conception, planning and organizing.

In order to give a general insight into the course of LAN parties and into the range of re-occurring modes of behaviour, in a first step, the term ‘LAN party’ will be defined in a more detailed way, and examples from the data material will explain how knowledge is gained at a LAN party by way of communication. After that, the process which is necessary to successfully start a group game will be examined more closely. This will show that at LAN parties, work and game phases alternate throughout. Another point will be made on the special value of LAN parties as a shared experience in a social group of adolescents (see Adamus, Chap. 30). This includes examining the adaptation and changing of game rules to increase the individuals’ pleasure in the game as well as the changes in the group structure, which can be identified by the communication. Finally, the conclusion takes a look at the media educational potential of LAN parties.

LAN Party: A Definition

Vogelgesang (2003, 68) divides the phenomenon LAN party into three subcategories: private LAN, LAN party and LAN event. The categorization depends on the number of participants, on the degree of familiarity within the group and on the possible connection with non-game-profits, such as prizes and awards (e.g. in a real tournament). Private LANs are related to a high degree of familiarity. They take place in a private area (e.g. at somebody’s home) with few participants who normally all belong to one single group of friends. LAN parties have up to 100 and sometimes more participants from different groups of people who do not necessarily belong to the same circle of friends. They take place in a public location, like a gym, which is hired by an organizer or a team of organizers. Participants must register for the LAN party and pay a small fee to cover the costs. LAN parties still focus on the game and its surroundings. The third category, the LAN event, comes with a high degree of publicity, having up to 1,000 or more participants. In 2008, the LAN event ‘DreamHack’ in Sweden connected more than 10,000 gamers for a computer happening. Players normally attend a LAN event as ‘clans’, which are organized and structured like traditional sports clubs. LAN events hold tournaments and offer prize money (see Jansz and Martens 2005, 340). As the general definition of play excludes outgame profits (see Huizinga 2001, 15), LAN events do not fit into this category.

All three LAN happenings mostly allow gaming for a period of 48 or 72 h and call for a lot of work in the run-up to the event itself.

LAN parties especially take planning, investment and negotiation to set up and attend to assure that everybody turns up at the same time and same place with PCs, network cards, sleeping bag, food and are met by a functioning and reliable network. (Bryce and Rutter 2001, n.p.)

The co-presence of the players is crucial for the comprehensive game experience at such happenings (Hand and Moore 2006, 168). ‘When they are not gaming, players eat, sleep, and socialize within the confines of the event’ (Simon 2007, 183). Swalwell (2003) emphasizes the importance of social aspects at these kinds of computer events.

Like older games, laning is social in that it depends on the presence of other players. Though it is not necessary to talk with them all and shake their hands (which could quickly become meaningless at a large lan), the presence of these other players constitutes the experience in important ways. (Swalwell 2003, n.p.)

Simon (2007) also argues that we should understand LAN meetings as being motivated by social aspects, rather than aspects of the game:

[T]he games themselves do not define the limit of the LAN-Party, as players [...] socialize between the rows of computers; exchange software, music and films; drink in the bar; smoke outside; and engage in a host of other embodied practices normal to human sociability. (Simon 2007, 183)

As the main motives for visiting a LAN happening, Jansz and Martens (2005, 333) discovered the players’ wish for social contact and their need for knowing more about games. The competition motive was ranked only as the third strongest motivation.

If one wants to look at the social aspects of playing computer games, it is most beneficial to analyse LAN parties of medium size. They present the best opportunity for observing the development of group structures and the growth of abilities inside a group. Most LAN-party participants either come in small groups or as individuals. The dynamics in such a group is much bigger than in an already established group of friends. Therefore, the analysis of interesting group and learning processes has much more potential.

Social psychology (e.g. Brown 2003, 570) suggests that one can avoid or at least decrease prejudice against other people or groups of people by putting different groups together in a larger group and giving them the same goals. This fact definitely applies to a LAN party, as the participants all have the same goal, which is playing together. This goal can only be reached by working together.

At a LAN party, we have to deal with a special form of interdependence. This is caused by the fact that the joint experience of the game can only be realized if all the computers are connected to the same network. This is without doubt one of the reasons for the cooperative and friendly atmosphere, where everybody helps each other in order to achieve this aim. Yet this seems to stand in contrast to the high degree of violence taking place in many of the frequently used multi-player games.

This violent game content is often condemned by the public, forgetting that children’s play has always had lots of violence in it. Watching children playing ‘cops and robbers’, we see much actual violence, which is acted out more strongly than in the virtual reality of computer games. The children throw stones or sticks at each other and grapple with each other, which can really hurt. In the computer game,

physical violence to the game character never hurts the human player. However, the set of statements is similar:

W2: You killed me.
 W1: Yes, but I was killed myself directly after that.
 W2: I killed you, too.
 [...]
 X: I was already dead, before I even heard the shot.
 [...]
 L: Ey!
 W1: What is it?
 L: Miss jay, that was me.
 W1: Yes, I know, but I didn't kill you.
 L: Yes, but you shot at me.
 [...]
 W1: Yes, but not on purpose. I don't do that.¹

This dialogue recorded during a round of *Counter-Strike* (2000) could also have occurred in a game of 'cops and robbers'. It shows that the principles of the two games are comparable. There are two groups, the terrorists and the counterterrorists, or the cops and the robbers, fighting each other. Like the real game, the computer game also requires a lot of planning and agreements before and during the play. In both settings, players regard the part of the robbers or terrorists as the more exciting one, as this is the role they will probably never play in real life.

The difference between 'cops and robbers' and *Counter-Strike* (2000) is that the distance between the role and the self is larger in the computer game than in real life play. It is much easier to exit the game while sitting in front of a computer than while acting in person. The game character will continue following the game goal, even if the human player is talking privately with other players. The computer action can be easily interrupted and started again at the same point. Real life play would not allow this. All action, including possible cheating, is stopped if the game is halted. This makes it more difficult to break the rules and gives the whole atmosphere a taste of fairness and cooperation. The computer acts as a kind of independent judge. It does not favour one team over the other and is able to shuffle the team constellation at random.

The players know that in the game everybody is equal. This seems to trigger a special feeling of connection and could be a reason why they wish to set the whole LAN party without help from outside, creating their own adult-free area. This wish is more developed in male adolescent groups than in groups of females, possibly due to hormonal dispositions. Maccoby (1998, 291) argues that androgens might be responsible for a stronger wish for dissociation in males.

Another reason might be that for males, the mastering of technology may be a status symbol. Boys and men fear the exposure of their failure in technical problems

¹ Transcript from LAN party, 31 August 2007, time 4:46:43 – 4:47:13. This transcript and the following have been translated by the author from the recorded German dialogues. For the sake of readability, the usual transcript symbols for pauses, lengthenings, stress, etc., were eliminated and replaced with normal punctuation.

Fig. 29.1 Boys trying to get a computer running, LAN party, 24th August 2007, time 0:32:15



through accepting help from outside. Girls, in contrast, do not link a possible lack of knowledge in the field of technology to their self-image in a negative way. That is why they do not have problems with the acceptance of help such a case.

Furthermore, antiquated sex stereotypes become more visible in the mixed sex test group. Here, the female adolescents do not engage as intensively in technical problems or questions as they do when they are part of a female group. This gives reason to believe that arranging the LAN-party setting in a mixed sex group might increase rather than decrease sex stereotypes.

As girls or women seem to have a smaller frustration tolerance than boys or men (see Fritz and Fehr 1999, 74–76), it appears only natural that they prefer delegating complicated tasks to others.² This spares them the experience of feeling incapable of solving a problem on their own. In the group of boys, we remark a completely different behaviour trend: the adolescents even watch out for very complicated tasks or technical problems. If they are able to solve them, they will receive a status rise.

Figure 29.1 shows three boys who try to get a computer running during a LAN party. They were informed in advance that this computer was not working, so they brought tools. The overall time they took to get the machine running was 92 min. This shows the great motivation potential of computer games: even if users see that the attempt of repairing a broken computer is hopeless, they try for a long time anyway. The boys' perseverance is caused by the fact that the group game can only be realized through connecting all the computers to the network, a task which rarely takes less than 1 or 2 h (Nanchez and Schmoll 2002, 5).

² Zaremba (Chap. 28) shows that some female gamers explicitly dissociate themselves from this kind of role allocation.

Achievement of Competences

The participants normally bring their own equipment and computers. They connect them by using the prepared technical environment. ‘The players supply all the computers, screens, and peripherals, and [...] handle network administration’ (Simon 2007, 183). Feibel (2004, 110) points to the enormous effort required if 500 adolescents are to manage to connect 500 computers during 5 h. In this first phase of the LAN party, we see a lot of social interaction. The users who know how to install the network instruct the others. In a kind of snowball system, they in turn use the newly gained information to guide more people through the installation.

Because everybody sets up their own computer, the adolescents learn much about the underlying technology, especially when plugging in cables and changing settings. Newly gained knowledge is passed on immediately. Experienced users learn to impart their knowledge; inexperienced ones get a first understanding of the computer technology.

This form of learning brings forth an immediate positive result: the possibility of playing computer together. Mogel (1991, 113) calls this mechanism *funktionslust* which can be translated as ‘pleasure in the function’. This mechanism contains two effects: on the one hand, the pleasure in the function itself (i.e. being able to play a computer game together) and on the other hand, the pleasure of having effected the function by oneself (i.e. by preparing the computers, connecting them, etc.).

The knowledge is transferred from one individual to another. According to the social psychologists Schulz-Hardt and Brodbeck (2007, 443–486), the repeated and single-handed solving of similar problems leads to an individual learning, which is defined as a lasting change in the individual’s behaviour or in the individual’s cognitions. This reinforces the thesis that with every LAN party, the participants become faster and more skilled in connecting their computers.

Another aspect of LAN parties that requires the repeated solving of a similar problem is finding the game host. After the installation of the network, it is necessary for the game host to start the game for everybody and thus make sure that the collective game works properly. The host’s computer must be in contact with all the other computers in the network, which is often not the case for all the computers on a LAN. Theoretically, every computer is able to communicate with every other, but in practice, only some of them have direct contact to every computer. The others have to communicate through one leading (i.e. the host’s) PC.

This leading PC has to be tracked down out through a lot of communication. The choice of this PC does not depend on personal abilities or desires and thus cannot be influenced by the players. The important role of the game host is simply a technical feature of the LAN party. Still, the person whose computer is found to be the host often earns respect from the others. Often the host position has to rotate, which is one reason for the permanent alternation of game and work phases at LAN parties, which could be elaborated in the empirical study.

Alternation of Work and Game Phases

We already observed the first long work phase in which the participants need to install the network properly. Together with the large work phase at the end of a LAN party, where they decompose the network and get their computers back home, this puts the whole LAN party into a framework. Inside this framework, we find an inversely proportional development of the length of the work and the game phases. Each game phase requires a lot of coordinating and organizing, making up the work phase. This contains lots of discussion about the team constellations, the finding of a new game host, the decision about the game settings and about starting a new game.

These organizing processes are conducted with lots of face-to-face communication. The players reflect about problems that occurred during the last game round. Additionally, they agree on their tactics for the next round. People who play the game for the first time get a lot of help. The players' main goal is to have a fair match. If players lack knowledge or abilities, these gaps are closed by direct help and by making the teams up equally of experienced and inexperienced players. Additional rules ensure the protection of new players, and even inside the game, the experienced characters support the beginners. The work phases also allow time to reflect on the game content and leave room for suggestions for improvement. In the following example, the girls in the mixed sex group have encountered the problem of distinguishing their team members from the opposing group. They discuss how to solve it.

W4: Can't we, like in sports lessons, such things.

(W5 laughs)

W2: Me, too, I think they should have such glow things.

[...]

W2: Okay, how can I now find out who is in my team and who isn't?

W4: Me, the one you are killing!

W2: (*laughing*) I'm sorry, I kill everybody who moves in front of me. No, there is one. He is dead.

W4: That was me!

[...]

L: Ey, I am on your team!

W1: Oh yes, how do I recognize that, please, who is with me, please?

W4: I wonder, too.

L: By their appearance.

W1: Yes, what appearance? So how do they, does the one and the other team look like?

W2: Can't we do it like this, that that that the one team always has the same manikins and the other team also always has the same manikins?

L: Okay.³

The above example shows how the adolescents add their own rules to the existing set of rules in order to improve their game experience. As we have seen, some of the

³ Transcript from LAN party, 31 August 2007, time 4:25:20 – 4:31:13.

participating girls have no experience in the game and are frustrated because their characters die so easily. Therefore they define special rules for themselves:

W2: But we shouldn't kill each other immediately. That is mean.⁴

In order to ensure a fair battle between the experienced and the inexperienced players, they arrange the game according to their special abilities. For example, they create a common basis by choosing game modes that are new to everyone:

L: We could also simply play a great many fun maps that nobody knows.⁵

They also create teams that do not have the same number of members to make the inexperienced team stronger, or they let the computer choose team members at random:

A: Yes, therefore I shuffle. Then it's hopefully a bit mixed.⁶

According to Mogel (1991, 124), children use adapted rules to remain part of a social group and in order to be able to follow their own ends at the same time. Applied to the field of LAN parties, this explains why none of the players ever tried to profit from the inexperience of other players. This goes along with Klimmt's entertainment mechanism 'suspense/release' (2006, 81–94). When a player is faced with a challenge inside the game, suspense starts to build up. When the problem is solved, the player experiences a feeling of positive release. However, if the tasks are too easy, the entertainment experience is disturbed. In this case, the player can easily predict the outcome of a game episode, which leads to a lack of suspense and, finally, to boredom.

Shared Experience

The special atmosphere with its big dimension of mutual help offers LAN-party participants a shared experience. This is due to the fact that they are constantly confronted with the necessity of solving problems together. In addition, each solved problem leads to a common enjoyable action. This does not only apply to the game itself but also to the surrounding action, for example ordering a pizza. Considering this, it is not surprising that some people in the group plan to meet again and play computer games together. At all three of the LAN parties that were analysed for this chapter, this was the case. Some members of the mixed group even exchanged e-mail addresses:

L: Okay, if you should want to play CS⁷ some time again...

W2: Yes.

L: Simply just phone and then we organize something.

⁴ Transcript from LAN party, 31 August 2007, time 4:22:56.

⁵ Transcript from LAN party, 31 August 2007, time 1:18:43.

⁶ Transcript from LAN party, 24 August 2007, time 1:35:10.

⁷ Short for *Counter-Strike* (2000).

W1: Very nice. Then we have to exchange phone numbers now, or else, or e-mails. We give them to you and you simply write to us if you are doing something. (*laughs*)
L: Yes, exactly.⁸

In the same way as this new subgroup emerged from the community event, the LAN-party setting can evoke many more changes in existing group structures. The changes depend on different team compositions and success in the game. An unexpected game victory, for example, is able to bring about a change in the position of the group leader. This again reminds us of the traditional children's play, where the players' abilities are also defined only inside the game and are detached from the players' real physical or psychological dispositions (Oerter 1999, 101).

Furthermore, Schenk-Danzinger (1988, 288) argues that there is a development in children's play from the age of nine or ten onwards. From that age, children start to place more emphasis on influencing the game result through their individual performance as part of the group. Examples are team games like football or team handball. Schenk-Danzinger points out that the individual's courage, bravery, perseverance, initiative and presence of mind during the team game can advance their position in the group. This is understood as the true motif for player commitment. All social values in this age group, which are courage, loyalty, bravery, readiness for action, comradeship and justice, can be practised in the team game. This practice is very important for the children's socialization process (Schenk-Danzinger 1988, 289–290).

Players who are successful in the community game are more involved in the follow-up communication. In the case of computer games, it is irrelevant if the player's victory is based on fortune or on ability. According to Witte (2007, 196), people who talk a lot and who act self-confidently in a group are judged to be more qualified than others. Group leaders often stand out for talking more than the rest of the group. The leader's talk is tolerated because he or she is believed to outclass the others in his or her personal resources. This includes being less afraid in groups, being able to approach other people and having more self-confidence (Prose 1974, 30). Leading figures are the most able to praise others and to suggest solutions for group problems. This goes along with features like social status, education, money, goods and love (Foa and Foa 1980, 81).

The following excerpt of a LAN-party dialogue transcription shows how the communication strength differs, depending on the game's success. The example is taken from the female only LAN party. The group positions are already organized, and the leading positions are occupied by K1 and K2, the two most experienced girls in *Warcraft III* (2002). These two girls explained the game rules to the other participants, organized most of the technical work and won the first game rounds.

The following dialogue takes place about 2 h after the beginning of the LAN party and 1 h after the first game. Now, for the first time, two players other than K1 and K2 are called the best players of the round. H and F3, who have never played the strategic game *Warcraft III* (2002) before and who are themselves very surprised

⁸ Transcript from LAN party, 31 August 2007, time 5:42:03 – 5:42:28.

about their victory, have won by pure luck. They have not applied any strategy but just fought every enemy by pushing buttons at random. K2, looking at the final score, compliments them on their success.

K2: You were the best.

H: But without, without wanting.

K2: Confess, you practiced.

H: No, I have simply... (*laughs*)

F3: Me, too.

H: No, I have always simply into the bunch, always into the middle. (*laughs*)

F3: I have also always simply just.⁹

The lack of strategy in the game of H and F3 becomes clear very quickly. They don't even find a verb to describe what they actually did: 'simply always', 'simply always just'. There is no doubt that they won the game by sheer luck, but still the acknowledgement they receive leads to a change of atmosphere in the whole group. Mirrored by K2, H and F3 begin to see themselves as experts on the game and start to claim the group positions of K1 and K2 for themselves.

H: I think you two do that with too much strategy.

K1: You are right.

K2: No, not at all.

K1: No, not at all.

(K1 and K2 laugh).

K2: We do it the same way as you.

H: (*ironically*) Yes, I see.¹⁰

H and F3 challenge the status of K1 and K2 and criticize their game strategy. They present their own non-strategic play as the more desirable tactic to win *Warcraft III* (2002), which actually is a strategy game. In the next phase of the follow-up communication, the other participants accept the new status of H and F3 and integrate them more strongly into the group communication. For example, they ask them about their tactics in the game, although the two already confessed that they did not use any tactics at all.

F5: Do you then simply click there, below on the field, and go in and click all the time?

F3: There is a corner below, where you can look, where it is red.

F5: Yes, exactly.

F3: And I go there, where it is red.¹¹

Another example is the following:

F1: Simply go there, and then the right mouse button, right?

H: Simply there, where you want to run, you do a right mouse button.

F1: Yes, and then I do the enemies constantly with the right mouse button, when I click there constantly?

H: Exactly, you can click there once, that's enough.¹²

⁹ Transcript from LAN party, 7 September 2007, time 2:29:02 – 2:28:13.

¹⁰ Transcript from LAN party, 7 September 2007, time 2:28:14 – 2:28:23.

¹¹ Transcript from LAN party, 7 September 2007, time 2:28:29 – 2:28:39.

¹² Transcript from LAN party, 7 September 2007, time 2:29:40.

H and F3 willingly give advice to the less experienced users. As the group mostly consists of inexperienced players, the other participants can follow the explanations of H and F3 better than those of K1 and K2. That is why they accept their new group positions. But still, if there are any really difficult situations, the talk comes back to K1 and K2, especially forwarded by H and F3, who have become central figures in the group construction. So we can state that K1 and K2 are still the experts on the game, although H and F3 have become the first contact persons for the whole group.

Conclusion

The above observations show that LAN parties are able to reorganize group positions. This can be a possibility to integrate outsiders, which in turn can be useful in a school context: pupils who are not accepted in the class compound can get a chance to be more included into the group. In addition, LAN parties function as a shared experience for the participants and, in this way, can form a strong bond between the group members.

The high motivation potential connected to computer games is crucial for the concentrated and continuous work observable at LAN parties. This generates a gain of technical knowledge. The fact that the work is directly linked to the desired benefit of playing the computer together increases the willingness to work and help others.

As it is necessary to organize the whole group before each new round, the adolescents enhance their social abilities due to a shared goal. As the pleasure in the game decreases when the battle is not balanced and the victory of their own team becomes foreseeable, the players profit from helping inexperienced participants. This distinction between the wish for a personal victory on the one hand and for fairness on the other is important for real life, too.

From that perspective, LAN parties can be seen as a kind of mirror image of society, where the members pull together even though, according to the game plot, they are meant to be enemies. This is an approach to computer games which tends to be neglected by public opinion.

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Chapter 30

Playing Computer Games as Electronic Sport: In Search of a Theoretical Framework for a New Research Field

Tanja Adamus

*Shot the pretty boy, killed him on commodore.
Need a new game, need a new something more.
Got a new face, got a new way to score.
Got a voice like something I've heard before.*

(The Birthday Massacre "Video Kid")

Introduction

The impression of a lonely and socially isolated gamer informed the discussion about the impact of video and computer games¹ on adolescents especially at the beginning. The actual development with a high increase of multiuser and massive user games, for example, *World of Warcraft*, indicates instead that even playing in and with virtual worlds is bound to a social context and appropriate communities. Thus, video gaming has formed the basis for the development of various player cultures. The phenomenon of electronic sports can be described as one of these cultures with a strictly distinct understanding concerning the purpose of playing video games.

This chapter deals with a topic which is currently only recognized by a few scientists even in the field of game studies; thus, besides the discussion about a theoretical framework for e-sport, it will mainly deal with a detailed introduction to the world of electronic sport. Referring to the research on gaming cultures conducted so

¹ Although some authors differentiate between the terms computer games and video games, in this chapter, they will be used synonymously.

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far, I will shed some light on the differences between these communities and the e-sport culture and finally discuss a preliminary analytical approach to the phenomenon, dealing with the question of a possible theoretical framework either of the youth subculture or scene, which may serve as a basis for further theoretical and empirical work on this topic.

Communities of Play, Gamers' Cultures, and the Blind Spot of E-Sport

The emergence of playing communities is not a new phenomenon limited to computer games. They can be found in a lot of other contexts too, for example, chess or bridge clubs or pencil and paper role-playing communities (see Pearce 2009, 3). However, digital networks allowed new forms of playing communities to appear on the spot, and while some of them are only extensions to nondigital forms of play, others offer completely new forms of experiences (see *ibid.*, 5).

Referring to the world of computer games, we have to differentiate between the whole community of computer game players, the gaming scene itself, and those communities alluding to a single video game, a whole genre or special way of playing (see Geisler 2009, 146–147). In this context, common phenomena are, for example, massively multiuser online role-playing games (MMORPG) (like *World of Warcraft*, *Lineage*, *Everquest*), LAN² gaming, and of course e-sport.³

Regarding studies and published articles, in this context, it seems quite striking that most researchers have focused on MMORPGs, which are apparently especially interesting from a more sociological background.⁴ Among them are – to name but a few – the ethnographic orientated works of Celia Pearce (2009), who accompanied a group of the Uru-Diaspora (players whose original game world had been closed and who had to migrate to other virtual worlds), those of T. L. Taylor (2006), who has explored the world of *Everquest* from a player's perspective, or the huge survey studies of *Projekt Massive* (see Seay et al. 2003) or Nick Yee who has done research on *Everquest* (Yee n.d.b) as well as on *World of Warcraft* (Yee n.d.a).

Research questions in this context mainly address social issues, for example, questions of in-game cooperation (Smith 2005; Lin et al. 2003), conflicts and their management (Smith 2004; Siitonen 2009), the establishment and maintenance of norms in player communities (Verhagen and Johansson 2009), role theory (Boudreau 2005), or the formation of social relationships (Yee 2009). Based on the four player types Richard Bartle discovered in the context of multiuser dungeons (MUDs)

² LAN=Local Area Network.

³ Empirical evidence for the impact of online gaming on adolescents' media usage can be found in Keilhauer (Chap. 20).

⁴ Further examples for the study especially of *World of Warcraft* can be found in Hemminger and Schott (Chap. 25); Wolf (Chap. 35).

(see Bartle 1996), Nick Yee (2005) discovered 11 motivational factors for playing MMORPGs, which he grouped into the three main components: achievement (with subcomponents advancement, mechanics, and competition), social (with subcomponents socializing, relationship, and teamwork), and immersion (with subcomponents discovery, role-playing, customization, and escapism).

Another topic which has attracted several scientists' attention – although not in an amount comparable to the research on MMORPGs – are multiplayer games, especially first-person shooters like *Counter-Strike*. As in the context of MMORPGs, the main research questions here mainly focus on social aspects considering issues of, for example, communication (Manninen 2000; Wright et al. 2002) or teamwork (Manninen 2001, 2003),⁵ but there is also work with a psychological background, for example, on the development of expertise in gaming skills (see Reeves et al. n.d.).

The above-mentioned examples do of course not represent all the work that has been done on gaming cultures in general, they are intended just to create a kind of overview about the main topics and aspects that have been researched in this context. E-sport – and also LAN gaming – has not evoked such enormous interest, although some aspects seem to allude to them, for example, the component of competition in Nick Yee's model of the motivational factors for playing MMORPGs or the description of the power gamers in the works of T. L. Taylor (e.g., 2003), who seem to be at the least comparable to e-sportsmen (and women). However, it seems as though we have found a blind spot on the map of current computer game cultures and the status of their scientific research.

Competition in the Worlds of *Counter-Strike*, *Warcraft*, and Co.: An Introduction to the Phenomenon of Electronic Sport

This section will give an introduction to the phenomenon of electronic sports and its main characteristics and structures as well as present an outline of the few scientific approaches which have been made toward this topic so far.

E-sport does not refer to every kind of sport where technical or electronic components are necessary for participation. Moreover, it is a notion used for a very special way of engagement in playing computer games. Although it is a relatively new and not well-researched subject, there are already existing two definitions of this phenomenon, which are often referred to as the wide one and the narrow one. The latter one describes e-sport as the competitive engagement in computer and video games, either as a solo player or in team modus, emphasizing its closeness to the traditional notion of sport and pointing out the importance of special skills such as hand-eye coordination or reaction time as well as strategic or tactical knowledge

⁵For an empirical study on teamwork in off-line gaming, see Dahlskog (Chap. 21).

(see for the original German⁶ definition Müller Lietzkow 2006a, 30). The other, wider, definition of e-sport has been provided by Michael Wagner and characterizes e-sport as “an area of sport activities in which people develop and train mental or physical abilities in the use of information and communication technologies” (Wagner 2006a, 439). Although Wagner’s understanding of the phenomenon is especially from a pedagogical point of view more interesting, it is not the one which seems to be concordant with the self-perception of most e-sportsmen and women. Thus, in the further discussion of e-sport in this chapter, I will refer to the narrower definition.

Actually there are hardly any data on how many persons actively participate in e-sport worldwide. There are estimations which, with regard to Europe, refer to 22 million participants in electronic sport⁷ and 1.5 million electronic athletes in Germany (see ESB n.d.). The Electronic Sports League (ESL), one of the most important leagues in Europe, reports ca. 2.5 million registered users in April 2010 in Europe (see ESL 2010). In South Korea, where e-sports are very popular and even officially accepted as a new form of sport, the latest available data report more than 430 registered professional gamers,⁸ that is, players who practice e-sport as a form of work and earn their living from it. The World Cyber Games, an e-sport tournament comparable to the Olympic Games for traditional sports, state that there were approximately 600 players from 70 countries who participated in the grand finals in Chengdu, China (see WCG 2009), a number which surely does not take into account the large number of all those players who did not qualify for the finals. However, all these available data imply that e-sport is not just the hobby of a small marginal group of computer game enthusiasts but can be considered as a remarkable phenomenon of gaming culture.

There are almost no empirical data available so far which could be referred to in order to describe the e-sport culture worldwide with regard to aspects such as gender, age, or social status. A small survey conducted in 2001 among the participants of the CPL World Championship and the World Cyber Games having 420 responses seems to underline the impression that most actors in e-sport are juvenile males⁹ (see Pedersen 2006), which is also supported by some surveys on the German e-sport scene (see ESL 2006, 2007, 2008; Müller-Lietzkow 2006b, 104). These facts do not seem so surprising considering that they are at the same time typical characteristics of computer game players in general, as several empirical studies in this context depict (see, e.g., Lenhart et al. 2008, 9; or for the situation in Germany

⁶Some of the cited works on e-sport here have unfortunately only been published in German. Since they provide an important and fundamental basis for the understanding of e-sport, I refer to them nevertheless.

⁷See <http://de.wikipedia.org/wiki/E-Sport>. (Accessed 14 May 2010). The English Wikipedia entry on e-sport does not mention any numbers: <http://en.wikipedia.org/wiki/E-sport>. (Accessed 14 May 2010).

⁸See <http://pbs.org/wgbh/pages/frontline/digitalnation/virtual-worlds/video-games/starcraft-training.html?play>. (Accessed 14 May 2010).

⁹For approaches to the female side of gaming, see Zaremba (Chap. 28) and Sveningsson (Chap. 27).

MPFS 2008, 38–40). Thus, it can be concluded that the actors in e-sport represent a special, but in its structure still typical, part of the greater group of computer and video game players.

Regarded from a more structural point of view, e-sport seems to be very similar to other (traditional) forms of sport. As already explained, e-sport mainly focuses on competition, which in this context appears precisely in the form of two opponents (either individuals or teams) who are competing in a video game. As in other sports, the actors in e-sport are organized in teams, which are called clans. Unlike traditional sports clubs, in the majority of cases, these clans are not named after the city or local region where they come from. Instead, they often choose names having a more imaginative character. Among the most famous clans worldwide, there can be found some called *mousesports*, *Evil Geniuses*, *fnatic*, or *Meet Your Makers*. Most professional clans also pay their members monthly fees; thus, for them, playing video games becomes more work than actual play.¹⁰

The appearance of imaginative names can additionally be found on the side of the players, who in e-sport do not perform under their real names but choose nicknames. Some of these so-called nicks seem quite normal in their spelling like Moon, Grubby, or hero,¹¹ but there are also others which seem to persons who are not so familiar with computers and new media to be very peculiar and – at first sight – unpronounceable, like GitzZz, fragm^n, or r0oK!e.¹²

E-sport also contains different disciplines, which in this case actually are different computer games. Although in general any computer game that allows playing against another could be a possible discipline in e-sport, there are certain core games, which are most popular even from a worldwide perspective. Among them are:

- First-person-shooter games, for example, *Quake*, the *Battlefield* series, or *Counter-Strike*; the latter is also often referred to as the most prestigious discipline in e-sport
- Real-time-strategy games, like *Warcraft III* or *Starcraft*
- Sport games, as the *FIFA* or *Pro Evolution Soccer* series
- Car-racing games, like *Need for Speed*

Matches in e-sport often take place in the context of leagues or tournaments, in most cases in the form of elimination contests. The winners of the final matches gain prize money or material prizes, for example, computer hardware. Although most matches in e-sport are played in an online modus, connected via internet, most

¹⁰ A detailed discussion about the social aspects of clans and their meanings to the players based on empirical data can be found in the empirical work on this topic by Martin Geisler (2009), which has unfortunately only been published in German until now.

¹¹ A first systematic attempt to structure clan and player names can be found in Adamus (2006).

¹² The playful use of change between capitals and lower case letters, brackets, numbers, and punctuation marks in these contexts is a typical appearance in the context of e-sport and is called leetpeak.

tournaments' finals usually take place as big events in town halls or congress centers, with the participants acting live on stage in front of an audience of spectators. In this context, it is also possible to hear somebody cheer for his favorite team or player or see participants writing autographs for their fans. Among the most famous tournaments are events such as the ESL (Electronic Sports League), the CPL (Cyberathlete Professional League),¹³ or the World Cyber Games, the e-sport pendant to the Olympic Games. The latter has already been the focus of scientific research resulting in two published articles on this topic: one analyzing the WCG from an economical point of view with a focus on sponsorship and comparing them in this respect to the Olympic Games (see [Young-nam n.d.](#)) and the other one refers to a more sociological point of view and discusses e-sport and the WCG as examples of a fundamental change in social systems in the context of a "second modernity" ([Hutchins 2008](#)).¹⁴

However, despite all the above-described parallels between traditional sports and e-sport, the question whether e-sport really fits into the definition of sport still seems to be of great matter and has made its way even into scientific discourse. Although e-sport is officially accepted as a form of sport in about 60 countries worldwide (see [Thiborg n.d., 2](#)), especially in Asia, for example, in South Korea or China, critical voices claim that e-sport lacks some important characteristics especially with regard to physical engagement. Besides the fact that there exist other forms of sport for which these claims apply in the same manner (chess, curling, motor sports to name but a few examples), it does not seem to be true that e-sport is a bodiless sport, as [Emma Witkowsky \(2010\)](#) has proved in her discussion about the sportiness of e-sport. [Kalle Jonasson and Jesper Thiborg \(2010\)](#) regard this topic from a sport scientist's point of view and via a comparison with the definition of sport by [Allan Guttmann](#), and they claim that e-sport is on the way to fully adopting the characteristics of modern sport (*ibid.*, 292), although it does not yet fulfill all requirements. From a more metatheoretical perspective, [Tanja Adamus \(2009a\)](#) interprets this discussion as a sign of one of the main problems in traditional sport, that is, the lack of a common and widely agreed upon definition of the term sport in general.

An aspect which definitely needs further research is the question of the emergence of e-sport, that is, its historical development. There seems to be a kind of common agreement on the fact that e-sport appeared by the end of the 1990s when the first multiplayer games were published.¹⁵ The possibility of partaking in a virtual competition against human antagonists, instead of computer-controlled bots, then led to the formation and establishment of LAN gaming and LAN parties (see [Ackermann, Chap. 29](#)). Although it seems obvious that to a certain extent e-sport seems to have emerged as a special form of LAN gaming, the links between these

¹³ Although it should be mentioned that this famous league actually has been closed due to financial problems.

¹⁴ For further research on the World Cyber Games, see [Wimmer \(Chap. 33\)](#).

¹⁵ For the impact of genres on the different historical development of e-sport in Asia versus Europe and America, and the consequences for its social status and acceptance, see [Wagner \(2006b, 2007, 183\)](#).

two phenomena have not been recognized or have even been overlooked. Jeroen Jansz and Lonneke Martens (2005), for example, present in their empirical survey of the visitors to a Dutch LAN event and the motivational factors for their participation some results which contain clear hints on e-sport, but these remain unrecognized by the authors.

In sum, it should become evident that e-sport provides a broad and complex phenomenon among the variety of gaming cultures, which is definitely in need of fundamental, theoretical, and empirical research.¹⁶ The further remarks in this chapter will thus try to provide an attempt at a theoretical framing of e-sport, which might serve as a basis for future studies, and the formulation of more precise research questions.¹⁷

Theoretical Framework (I): E-Sport as a New Youth (Sub)Culture?

The notion of e-sport as a new and digital youth culture seems to be a very popular one among many of its protagonists. However, from a scientific point of view, this understanding needs to be discussed with the reference to a precise definition of the term youth subculture. In my opinion, one of the most detailed and viable conceptions of subculture for youth research is provided by the theoretical work of the British Cultural Studies. Thus, I will refer to the constitutional article by Clarke et al. (1979) to display their definition of subcultures and discuss whether e-sport corresponds with it.¹⁸

Essential for Clarke et al.'s notion of youth culture is their understanding of a society which consists of antagonistic social classes forming the basis for different cultures which provide maps of meaning for their members and thus influence the way social relationships are experienced and understood (see Clarke et al. 1979, 40).

¹⁶ A very good example of how these claims could be fulfilled can be given by the study of Jana Rambusch et al. (2007) on gameplay in *Counter-Strike* with an explicit reference to its notion as a discipline of e-sport.

¹⁷ E-sport provides many interesting research fields especially for educational research, for example, with regard to questions of learning processes and the development of competencies. On the theoretical basis of the model provided by Jenkins et al. (2006), Adamus (2009b) offers a first attempt to structure the possibilities of achieving media literacy by engaging in the context of electronic sport.

¹⁸ Referring to this definition of youth subculture might of course lead to some further questions and points for discussion. The most problematic aspect in this context seems to be the idea of a society, which contains different social classes. However, I think that it is possible to leave this aspect behind and concentrate more on the idea of a dominant or hegemonic culture, which even in the so-called postmodern societies definitely exists, although this existence might not be apparent to the majority. Thus, subcultures can be interpreted as ways of resisting this hegemonic culture, so the theoretical approach referred to in this context does not lose any of its explanatory value.

According to their social class, the different cultural groups can be placed in a hierarchical order on the basis of their influence in society. The one with the highest impact can be defined as the hegemonic culture which became society's dominant culture despite the existence of other different cultures (*ibid.*).

A subculture always emerges as a subsystem within a larger cultural group and also remains a part of its parental culture despite all differences between them. The scientific analysis of a certain subculture always has to consider its relation to the parental culture as well as its relation to society's hegemonic culture. Subcultures can consist of a loose or constant structure and do not need to have a precise identity, but must be so discrete from their parental culture that they can be identified easily. If a subculture can be distinguished from its parental culture with regard to the aspect of age, then it will be defined as a youth subculture (see *ibid.*, 45).

Youth subcultures provide a new and different solution to its parental culture's main problems through their clothing, activities, or lifestyle (*ibid.*, 47). Thus, a subculture solves the conflicts of its parental culture in a "magical" way, which in this context means that they are only providing solutions that work on a symbolic level (*ibid.*, 95). Consequently different subcultures within the same parental culture can be understood as distinct ways of providing solutions for the same social conflict (*ibid.*, 73).

Every subculture possesses its own style, which is created by its members in a process of absorbing and reorganizing material objects to express the collective identity of the group (*ibid.*, 94). In most cases, these objects were originally used in a different context before being rearranged into an accessory of a subcultural style; this phenomenon is also described as bricolage (see Clarke 1979, 136). Style always has two main functions: the creation of group identities and on the other hand serving as a form of resistance against either parental or hegemonic culture (see *ibid.*, 141).¹⁹ Media in different forms have often played an important role in manifold subcultures as a symbolic resource to express feelings and experiences (see Hepp 1999, 186).

The main concern in this section is to find an answer to the question whether e-sport can be regarded as a new youth subculture.

The little available empirical data suggest that for the most part, the actors in e-sport are adolescents, so at least the assumption of "youth" seems to be fulfilled easily. Additionally there are two other elements of e-sport which also seem to fit very well into the above-depicted concept. The first is the influence and prominence of the media (in this context new media and especially computer games) on the establishment and distribution of the phenomenon. The second aspect is the notion of culture as an expression of social and material experiences, which also seems to match with e-sport, as it can be considered as a space especially for adolescents to deal with their experiences in life, for example, to give them opportunities to feel competent in a certain field of activity – a feeling they often seem to miss in their ordinary lives.

¹⁹ This opinion is often referred to as the "resistance through style/resistance through rituals" paradigm.

However, it seems more complicated to answer the question whether e-sport has its own style, which is an aspect of great importance for the notion of a subculture. At first sight, it seems to be quite difficult to find anything which could be regarded as “style” in any respect. However, a closer look unveils that in the context of e-sport, there exist typical forms of behavior which can be considered as “rituals” in a wider sense, and also the use of leetspeak in the clan’s or player’s names can be regarded as a form of style. Nevertheless, there are no visible elements of style on the part of the actors, such as a special way of clothing, fashion, or hairstyle.

A more fundamental problem with the above-displayed notion of subcultures is due to the fact that e-sport as far as we know today – although it might provide a magical solution for certain of the players’ problems – seems to lack any aspect of resistance against any forms of hegemonic culture. Instead, it even seems to have accepted most parts of this culture and its values, for example, the importance of success and competition or the acceptance of manifold ways of sponsorship.

Theoretical Framework (II): E-Sport as a Youth Scene?

In the current discussion on youth research, the concept of subcultures as depicted above has lost its impact; instead, the notion of youth scenes is the preferred one, when referring to manifold phenomena such as skateboarding, techno, or graffiti. On the basis of the theoretical definition of youth scenes by Roland Hitzler et al. (2001),²⁰ this section will provide an insight into the main characteristics of this term and discuss whether e-sport corresponds with them.

At the very basis, youth scenes can be described as communities of shared attitudes. In modern societies, adolescents no longer find partners for their interests in traditional social communities but in groups focused on special issues, who in the sociological discourse are referred to as scenes. Here scenes are considered as networks focusing on a particular topic on which all members of the particular scene concentrate their activities and thus do not only share a general interest but also typical attitudes or conducts. A further important feature of scenes is their impact on communication and interaction to express the common interest and affiliation of its members, which is achieved by the usage of typical symbols, signs, and rituals constituting every scene. However, scenes do not claim to provide patterns of interpretation for all parts and situations of life; they expect their members to behave in a certain way only at special times and places (mostly in the context of typical “events”) (see Hitzler et al. 2001, 20–21).

Scenes can be considered as phenomena of self-expression since they only become visible through their events and only exist when they are recognized by

²⁰I will refer to this notion of youth scenes in the following sections because it is the most detailed and common scientific definition of this phenomenon so far.

persons who do not belong to them. The first entrance into a scene is gained just by expressing interest in its central topic. However, to become an accepted member, it is necessary to acquire a certain level of cultural knowledge of typical behavioral patterns. On the other hand, there are no forms of internal sanctions for leaving a particular scene. Thus, scenes can be described as typical posttraditional communities. Since the active engagement in a scene's main activities is only a part-time one, the feeling of belonging to a scene is a changing sequence. As a consequence of these aspects of lability, concrete and reliable times and places to meet other members of a certain scene have become highly important (see *ibid.*, 22).

Another core feature of scenes is their dynamic character, an aspect which especially refers to the proposals for experiences in the form of events, which have to fulfill both the need for exclusiveness on the part of the regular participants as well as the accessibility for those who only participate sometimes in scene-related activities. In contrast to subcultures, scenes recruit their members from manifold social and individual backgrounds. On a microsociological level, scenes thus reflect a development of modern societies in general, which leads to the assumption that adolescents can develop competencies and abilities here, which might also be valuable for their further life (see *ibid.*, 29–30).

By comparing e-sport to the above-depicted definition of youth scenes, it becomes obvious that there are several very similar elements between them. Without any constraints, e-sport is focused on a certain central issue, that is, the competitive engagement in computer and video games. It can be clearly stated that all activities in e-sport are based on this core element. Also the prerequisites of interactivity and communication seem to be fulfilled, since e-sport is interactive with regard to the fact that it consists mainly of matches in which two opponents play against each other and are consequently behaving in an interactive way. Also these encounters are the basis for many communication processes, either among the actors themselves or in the form of news coverage and interviews with the participants.

As with other scenes, e-sport is obviously a part-time activity: even those of its actors who describe themselves as professional gamers still participate in many other social communities or fields of society as well. Although they might share particular symbols, rituals, or even attitudes, this does not imply a special whole way of living. However, as stated above relating to scenes, also e-sport only becomes visible and recognizable through its activities and events, where even an audience and spectators exist. As youth scenes do, e-sport has a dynamic fundamental trait of character: there are no great obstacles to becoming a member of it or on the other hand to leaving the scene. The only prerequisite for becoming a member of the e-sport scene is that one must have reached a certain level of skill in a particular computer game and thus be able to partake in matches and tournaments (more or less successfully). Moreover, matches, leagues, and tournaments can be interpreted as typical meeting areas, even if they are often only taking place on the internet. Finally, one last element of the definition of youth scenes which seems to be applicable to e-sport is the fact that here the actors do not necessarily share a common

social or local background, and groups (e.g., clans) can thus emerge independently from other social institutions or circumstances.

However, there are also two problematic elements with regard to the definition of e-sport as a youth scene. The first one is the aspect of lability, which is hardly to be found in the context of e-sport. Apart from players who change their clans, or the yearly changing set of certain less famous disciplines in international tournaments and leagues, e-sport in its structure and most components is indeed a very stable phenomenon. Most of the leagues and tournaments were established 5 or even more years ago, and there is also a precisely defined set of computer games, which have remained the core disciplines for several years now. Thus, e-sport also lacks the dynamic most other scenes possess, especially in the context of popular events. In e-sport, the famous events have received their exclusive status through the claims the actors have to meet for participating in them. Once an event has been established, in most cases, it remains at this level until it has to be canceled due to other factors (in most cases financial problems). However, it seems plausible that these two problematical aspects could be explained as owing to the self-image of e-sport as a new form of sport, one which requires a certain level of organization and structure. Thus, it should at least be questioned whether these facts should really be regarded as counter-arguments for the understanding of e-sport as a youth scene and not as acceptable constraints.

Conclusions

The aim of this chapter was to shed some light on a phenomenon that has been a kind of a blind spot in the current scientific discussion on computer games and players' cultures. To meet with this demand, a detailed insight into the world of electronic sports was offered, which also served as the basis for a further theoretical discussion concerning the attempt to find a first theoretical framework besides the already described and obvious notion of e-sport as a new form of sport. The most promising concepts in this regard seemed to be understanding e-sport as either a youth subculture or a youth scene.

Summing up this chapter, there is strong evidence for the thesis that e-sport is more than just a new form of media usage among adolescents. The comparison with fundamental theoretical notions for both concepts has shown that there exist many similarities in these cases. However, it must also be mentioned that for both definitions, there seem to exist a few – more or less grave – problematical elements, which require further research on these topics.

The necessity for further fundamental as well as more specialized research is not a claim only with regard to the intention of this chapter but to the phenomenon as a whole, where much more work is required to get a more precise understanding of this special form of gamers' culture. Since there are no hints yet that e-sport will lose any of its popularity among adolescent gamers (in case it seems to be the other way round), there will be a lot of possibilities for further scientific studies.

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Chapter 31

Machinima Filmmaking as Culture in Practice: Dialogical Processes of Remix

Lisbeth Frølund

Introduction

The term ‘machinima’ (machine, cinema and anime) was coined by gamer and machinimator Hugh Hancock and collaborators. I attempt to understand filmmaking practice at the intersection of games and films as a cultural phenomenon and take an inter-disciplinary stance to machinima that crosses the humanities, arts and social sciences. This viewpoint on machinima filmmaking is useful for the exploration of how authorial practices involve the individual machinimators, their cultural contexts (such as communities where game and filmmaking are social practices) as well as the various semiotic resources that remix in a media ecology.

My dialogical theoretical perspective serves to understand machinima as a practice of remix of games and various ‘texts’. My approach is also inspired by game and media researcher Henry Jenkins (2006) and his notion of media convergence, not as media platforms neatly converging into some unified whole, but convergence as somewhat disjointed and complex practices and processes. The cases presented in this chapter focus on the authorial, dialogic practices of two machinimators who make machinima films in *Second Life (SL)*.

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Authorship, Media Ecologies and Remix in Game Player Cultures

This study of machinima¹ is based on the dialogic approach of Bakhtin (1981) who originally referred to the novel, folklore and events such as the carnival, though his work is increasingly used to theorize about multimedia texts and is applied to linguistics, communication studies as well as education (Linell 2009). One of Bakhtin's influential notions is the chronotope, a matrix where the temporal and spatial sequences of a text meet, where *dialogues*, in the sense of encounters between characters and events in a given place, occur:

From a narrative and compositional point of view, this is the place where encounters occur [...where] *dialogues* happen, something that acquires extraordinary importance in the novel, revealing the character, "ideas" and "passions" of the heroes (Bakhtin 1981, 246).

In a sociocultural-historical optic inspired by Bakhtin, all of our narratives and games are in dialogue with our cultural heritage, including folklore.

In a neo-Bakhtinian approach, *authorship* is an evolving, complex sociocultural-historical network, made up of a variety of networks and meanings that evolve within a *media ecology*. Contemporary views contribute to Bakhtin's notions and expand the notion of text to all kinds of multimedia text (such as Ito 2009; Lemke 2002). Thereby, meanings are seen as shifting and continually transforming as people engage in various language practices, such as machinima authorship. Media convergence and media ecology are more recent terms referring to 'the technological, industrial, cultural and social changes in the ways [that] media circulates within our culture', also termed our current convergence culture (Jenkins 2006, 282). Jenkins discusses the emergence of fan culture and new participatory possibilities for creating and distributing multimedia online, such as machinima film. Media ecology is one of the terms used to describe the complex moves of media across media platforms and media genres, including the uptake of popular culture and authorship of amateurs. For instance, Japanese anime and manga fans create media ecologies that involve sharing their fan fiction through online communities, and their communication patterns include various Web 2.0 social networks like YouTube and Facebook (Ito 2009). *Remix* embraces a similar idea, but it also refers to a technique; the term originates as a description of DJ practices of sampling music and reassembling, or re-appropriation that is also called 'mashup' (see distinctions of remix and mashup in Sonvilla-Weiss 2010; discussion in Lessig 2008). Such technological and social changes are seen by many as dynamically connected throughout history, from the invention of the printing press to the many advances of today, such as digital 3D animation and editing software (see Manovich 2006, 2001).

¹The research on machinima as a creative practice is a subproject in 'Sense-making strategies and user-driven innovations of virtual worlds', a collaborative research project at Roskilde University and Copenhagen Business School. Online: www.worlds.ruc.dk.

Machinima brings up a host of new questions about authorship, media ecologies and remix, for instance, on who are the authors, where, when, how and what is created in these practices.² Remix is becoming more apparent today because anyone can readily distribute their films on YouTube, or rewrite *Star Wars* as fan fiction and post it (Jenkins 2006). Remix may not be a new phenomenon or a totally new concept, but it is now easier to remix technically due to the suitability of digital technologies and editing tools for remix purposes. So, while remix of texts is historically grounded as a dialogic, authorial practice, remix as a technique is arguably more available now due to digital editing tools and distribution of multimedia texts on sites like YouTube.

Machinimators (or any authors) can remix from semiotic resources for the representation of meanings, and that sort of linguistic practice is viewed as a social practice by various sociolinguistic approaches inspired by Bakhtin (van Leeuwen 2005; Halliday and Hasan 1985). Remix is herein related to dialogic notions of the 'inter-animation' of multiple voices: in other words, remix is part of how language evolves as a continual dialogue within texts, between people and with previous works and authors. The term semiotic resources is applied broadly to the available resources for representation, exemplified in the semiotic resources as used by a machinimator (or any author) to convey meanings, for instance, a narrative (or a graphic style, the look and sound of a character and so on). The specific resources selected for a machinima refer to all previous uses of the semiotic resource and are in dialogue with similar narratives. This dialogic encounter with similar semiotic resources occurs whether or not an author or an audience is aware of the encounter.

Background to Machinima in Relation to Game Culture

The term machinima refers to the film production practice whereby machinimators use real-time computer graphics rendering engines that are built into games. This kind of practice was started in the 1980s demo scene by gamers (i.e. fans), with, for instance, id Software's *Doom* and *Quake*. These early films were termed 'Quake movies'. Fans have played a strong role in developing machinima, as a 'guerrilla' movement (Jones 2006, 2008). Jones sees machinima as an important outgrowth of video game fan culture, but distinguishes inside-out (the fans) and outside-in (the storytellers) machinima (2008). The game and its fan culture often spawn affiliated machinima communities, especially *World of Warcraft* (WoW), *Halo*, *Half-life* and *The Sims*. *The Sims* (by Electronic Arts) was quick to capitalize on the creativity of fans and showcase films.³ *SL* (by Linden Lab) has showcases in *SL* and outside and various affiliated machinima associations, for instance, the

² Similar questions arise in the context of modding (see Unger, Chap. 32).

³ *The Sims 3*, <http://www.thesims3.com/moviesandmore/createmovie> (Accessed 27 May 2010).

Machinima Artist Guild. There is software for machinima that is not connected with a game (such as the Moviestorm programme). But machinima films and machinima practice are usually related to a game world or platform and constitute a community referring to that game world.

Kelland et al. (2005) refer to machinima also as ‘virtual puppeteering’ in a collaborative film team including virtual puppeteers (the actors or performers of the avatars) in different physical settings, an instructor (directing the performers) and camerapersons (capturing the performance).⁴ There may be a final phase of post-production to edit images and sound.

The emergence of filmmaking in game ‘spaces’ was not expected or heralded by most game companies and has been related to user-driven innovation, fan culture and Web 2.0 social networking (Jenkins 2006). Machinima has been seen as an example of how amateurs, semi-professionals and professionals drive innovations online (Haefliger, Jäger & von Krogh 2010; Jenkins 2006, 2007). Academic interest in games and authorship includes the perspective on learning and emerging online game cultures of linguist and game researcher James Paul Gee (2008).

Henry Lowood, curator of the Machinima Archive⁵ at Stanford University, has written extensively about its history, its relevance as documentation of virtual worlds and game cultures and the innovation of machinimators (Lowood 2005, 2006, 2008a, b). Lowood traces the development from gamer to filmmaker:

Beginning as players, they found that they could transform themselves into actors, directors, and even ‘cameras’ to make these animated movies inexpensively on the same personal computers used to frag monsters and friends in Quake and other games. (2005, 11)

Lowood points out the importance of how game players adopted digital games as a medium for expressing their creativity and that making machinima (as well as watching it) may help players be ‘creative’ with digital games, and this creativity of players is a significant aspect of game culture today (2008b).

Examples of well-known machinima include the ‘Red vs. Blue’ series by Rooster Teeth Production (2004–2010), made with the *Halo* game engines, which is a spoof on *Halo*; the game/film characters in the machinima discuss the meaning of life and the premises of the *Halo* game. *WoW* has rich background stories which have inspired many machinima films. A popular series is ‘Blood Spell’ (2006) by Strange Company, made in *Neverwinter Nights*. A noteworthy machinima series made in *SL* is ‘Molotov Alva and His Search for the Creator: A Second Life Odyssey’ by Douglas Gayeton (2008), which takes up aesthetic and philosophical issues of virtual worlds (see Horwatt 2008).⁶ Independent

⁴ Information on making machinima includes Wikipedia and how-to-do books, such as Hancock and Ingram (2007) and Marino (2004).

⁵ The Machinima Archive is a collaboration between the Internet Archive, the ‘How They Got Game’ research project at Stanford University, the Academy of Machinima Arts and Sciences and Machinima.com, see: <http://www.archive.org/details/machinima> (Accessed 27 May 2010).

⁶ ‘Molotov Alva’ was shown on Home Box Office, USA. It is no longer on YouTube, but available for purchase via Gayeton’s website, or can be viewed on a Dutch showcase for digital art: <http://molotovalva.submarine.nl/> (Accessed 27 May 2010).

filmmakers also experiment with machinima, such as within live-action films as a way to recreate war flashbacks or dreams, for instance, 'In-world War' by Brant Smith (expected 2012) created with the Online Virtual Environment (*OLIVE* Platform) and co-developed by Forterra Systems.⁷

The various types of machinima are distributed with different media ecologies, including via web portals (YouTube, machinima.com, the Machinima Archive, in *SL*, etc.), machinima associations and/or by individual machinimators (on their own sites, blogs, Vimeo, etc.). YouTube is a central hub in the media ecology of amateur and the more professionally made machinima. The media ecology of machinima films varies in relation to game cultures, as the two *SL* cases in this chapter demonstrate. *SL* is just one type of game space⁸ for machinima production, but it offers a cheap, versatile virtual film studio and networks for meeting, collaborating and distributing films inside *SL* and outside, via YouTube, etc.

Overview of Data: Presentation of the Two Machinimators and the Metrotopia Machinima Contest

The two machinimators presented in this chapter are among 13 machinimators who entered machinima films in the Metrotopia machinima contest, sponsored by Roskilde University (2009). The Metrotopia machinima contest rules stipulated that the film entries should have a theme of superheroes, be max 6 min long and take place partially in a *SL* SIM (a simulator, abbreviated SIM, essentially a place where avatars interact) called Metrotopia.

I selected two machinimators for the in-depth presentation in part 2 of this chapter. The focus is on their authorial practices in collaboration with others, the media ecologies and the specific ways of remixing, which includes using various semiotic resources. The first case is Remi, an Asian man in his twenties who is a graduate student. The second case is Glasz, a southern European woman in her forties who works in the applied arts. Both relate their machinima filmmaking interest to experiences from various role-playing games, and both make films only in *SL*.

The background of the 13 machinimators who entered the Metrotopia machinima contest spans from being amateurs at filmmaking to pro-ams (professional amateurs): a few are professionals (integrate machinima with jobs as graphic designers). I chose to explore the practices of these 13 machinimators because there was an initial contact through my university, and the Metrotopia machinima contest film entries show an interesting diversity. As of mid-2010, I have conducted a survey with eight (of the 13) machinimators from the contest and interviewed five (of the

⁷<http://www.inworldwar.com/> (Accessed 27 May 2010). My further study into machinima focuses on how indie filmmakers, such as Brant Smith aka DJ Bad Vegan, use different 3D game platforms for filmic experiments.

⁸For a discussion of the issue if *SL* is a game or a virtual world, see Thimm (Chap. 11).

eight surveyed) using *Skype* voice chat and emails. I have also collected data regarding their participation in online communities (such as websites, *SL*).

Methodology and the Dialogic Perspective

The applied methodology attempts to track trajectories of authorial practice, media ecology and remix in several ways. My methodology aligns with a social semiotic view of how social actions shape agency, authorship and texts (see Kress 2003; van Leeuwen 2005) and refers mainly to mediated discourse analysis (MDA) (Scollon and Scollon 2001, 2004). I use the methodological framework of MDA to analyse the specific trajectories, analysing the nexus of social changes in the intersections of discourses. This framework is inspired by dialogic philosophy, social semiotics, discourse analysis and ethnography, as well as the micro-sociological studies on identity by Erving Goffman (1959). The guiding principle of MDA is that through the study of detailed multimodal, mediated discourses and social interactions, we can gain understanding of social changes on the macro level. The two machinimators and their experiences portray a micro view, but exemplify broader issues of contemporary authorship, media ecologies and remix in relation to game player cultures.

The methodology refers to virtual ethnography (Hine 2000) and includes visiting the sites and communities of machinima practice and conducting qualitative interviews. A similar integrated approach is ‘discourse-centred online ethnography’ applied to a study of German-based websites of hip-hop and diaspora groups (Androutsopoulos 2008).

Data Presentation and Analysis: The Machinimators Remi and Glasz

The following data presentation provides further introduction to the two machinimators with a short biography in order to offer a glimpse into their social networks and preferences in regard to games, films, literature, etc. Then, there are some short transcripts from interviews and analysis; Remi is presented first, followed by Glasz and then a collated analysis.

Remi

The following three interview excerpts (A–C) demonstrate Remi’s discourse about his game playing and his authorial practices regarding two machinima, the media ecology of the films, and remix.

Remi's Game- and Machinima-Related Practices

Remi enjoys playing games; his favourite is the *Final Fantasy* series of video games which he starts playing at the age of 13. While Remi is a long-time gamer, he is a newcomer to machinima. He entered *SL* around 2008 and has participated in making two machinima films. The first machinima was about Gamelan (traditional Indonesian music). Remi's second machinima film was submitted to the Metrotopia machinima contest (I recommend viewing his contest entry entitled 'Metrotopia – The Forgotten Evil' on YouTube).⁹ Remi does not have a background in the arts. He has since lost interest in machinima filmmaking.

He participates in several Asian SIMS in *SL* and is active in networks across sites like Facebook, as he says: 'it's all linked'. When Remi talks about belonging to social groups, he frequently uses we, as in: 'one of us starts making', and he talks about sharing contents or posting as a collective activity, for example, 'we just put it out there, [we are] making laughs for each other'.

Remi discovers an Asian SIM with a community 'café and a camping ground' in 2008 (now closed) where Remi leaves his 'avatar for half a day' at a time. Thereby, he meets friends (other *SL* players), such as a good friend who is a 'shape-shifter', i.e. he often transforms his avatar's shape. As it turns out, this friend is a Japanese with an interest in Indonesian culture. In excerpt A, Remi tells of the early activities in *SL* with experiences of shape-shifting and shopping (for instance, getting pose-ball scripts for animations, skins and costumes which are kept in inventories in *SL*).¹⁰ The shape-shifting and shopping becomes what Remi calls a 'disease'. Although he does not know it at the time, he uses these inventories later for making machinima:

Excerpt A: Remi's early game experiences in SL:

Remi: What we used to do was...I mean, my good friend, who taught me a lot about *SL* is actually a shapeshifter.

L.: He's a shifter?

Remi: Shapeshifter means he changes shapes and forms almost every day. When I first met him, he was actually a female. But I found that other days he's a male. Because he got a male name and because I was new back then, ah and I thought 'hey what is going on', I didn't have any idea what was going on. Then after a while, okay, [I realized that] this guy changes form every day and the next morning you see him as an orange, and the next morning you see... as anything else. And then that disease came to me, so in the end I start buying stuff.

Some other people say: 'oh yeah, I like that'... they buy some stuff as well. So people start having all kinds of funny stuff and funny avatars inside their inventories. They're shopping around... Some of us want to go to a ballroom [to dance] so we got formal clothing... and pose-balls. So during a movie you can put it all together.

⁹ 'Metrotopia – The Forgotten Evil' (Metrotopia Contest Entry). <http://www.youtube.com/watch?v=T8Bfp81XAQ0> (Accessed 27 May 2010).

¹⁰ Pose ball is an *SL* inworld object used to animate avatars, e.g. dancing, sitting, etc. Online: <https://www.xstreetsl.com/modules.php?name=Marketplace&file=item&ItemID=1524059> (Accessed 27 May 2010).

In 2010, Remi gets more into social games and role playing in *SL*, and he describes his role-playing activities in *SL*, including the practice of speaking in the third person, or in character. He participates in an *SL* game SIM called Toxian City, described on their website¹¹ as ‘dark urban role play’. Remi leaves his avatar there most of the day and finds that it offers experiences related to playing *Final Fantasy*¹² and other console games. However, Remi has since lost interest in Toxian City.

Remi’s Authorial Practices

Remi collaborated on two machinima films in 2009. His interest started in connection with his graduate studies, and he was inspired by viewing machinima on YouTube. One of his *SL* friends found the programme *Camtasia* (a freeware programme from the website Wegame¹³). Experiments with *Camtasia* led Remi to suggest to his *SL* friends that they capture their avatars playing Gamelan instruments in the Asian SIM. His first machinima is as part of a Gamelan avatar concert in mid-2009 made with friends as a team. The first machinima was a fun and collaborative process for him, as he explains below.

Excerpt B: Making ‘Gamelan Bali SL’:

Remi: You know there’s this traditional Indonesian musical instrument called Gamelan... and we sort of thought about, ‘hey, why don’t we have it in Second Life?’... we were just talking fun, but then one day... someone [a Dutch-Indonesian builder in *SL*] makes Gamelan instruments, then someone else shows us *Camtasia*... the picture is not that smooth but my friend... the camera video guy... has shooting skills and editing skills.

Remi is amazed at how easy it is to capture directly from the screen with *Camtasia* and it is fun to work on ideas for the machinima and pool their skills. His friend, the ‘camera video guy’, has professional skills. The team uploads their first machinima, ‘Gamelan Bali SL’, on YouTube in fall 2009.¹⁴ However, the machinima gets what Remi calls an ‘unpleasant comment’ posted on YouTube about the inauthentic mix of Gamelan instrument styles, and the comment includes a sarcastic remark: ‘get a REAL life’.

After the fun collaboration on the Gamelan machinima, Remi gets some ideas for a second machinima and suggests entering it in the Metrotopia contest. He takes on a different set of ‘roles’ in the machinima film team, as a concept developer, a film director and one of the avatar performers. The film ideas evolve between Remi

¹¹ ‘Toxian City’: <http://www.toxiancity.com/> (Accessed 27 May 2010).

¹² Demo video on ‘Final Fantasy’ (made by professionals as a trailer and released by the game company): <http://www.youtube.com/watch?v=2SJPeFNbhOs> (Accessed 27 May 2010).

¹³ *Camtasia*. Online: <http://www.techsmith.com/download/camtasiatrial.asp> (Accessed 27 May 2010).

¹⁴ ‘Gamelan Bali SL’ machinima on YouTube includes a posting on inauthentic instruments: <http://www.youtube.com/watch?v=5kqlh50gYBY&feature=email> (Accessed 27 June 2010).

and two main collaborators that he calls the ‘scripter’ and the ‘camera video guy’. Remi reports that there were many semiotic resources of inspiration for their remix, including *Transformer I*, *Star Wars*, *Final Fantasy* series and the Japanese manga/anime *Scorpio Milo*. They reuse the name Antares, which refers to the Scorpio galaxy and *Scorpio Milo*.¹⁵ In excerpt C, Remi describes how their ideas develop collaboratively around the theme of superheroes for the contest:

Excerpt C: Making ‘Metrotopia – The Forgotten Evil’:

Remi: We haven’t got an idea of what we’re gonna use, so I said ‘let’s just use Transformers and Star Wars’ [especially use the idea of] some fighting at the end, near the climax... use something like that... as [I was also inspired by] the Final Fantasy series...

Remi’s discourse in the interview includes many remarks on how filmmaking becomes ‘boring’ and repetitive. The collaboration on ‘Metrotopia – The Forgotten Evil’ starts out ‘fun’ but becomes difficult, challenging to organize and time consuming. It takes ‘more than 12 hours’ to shoot it ‘right’. Remi has to renegotiate with a SIM for permission to film, and he plays up to five avatars as virtual puppets. After the shooting, he oversees sound recording and editing sessions with the ‘camera video guy’. Remi values friendship and making the machinima becomes ‘too risky’ for the ‘SL happiness’ of himself and his friends. After completion of the Metrotopia machinima, Remi and his team give up making films, even though they get several paid offers, because making machinima is ‘too much like work’.

Data Analysis: Remi’s Authorial Practices, Media Ecologies and Remix

Remi’s approach to *authorship* is mainly as a collaborative process with others and seems to be part of his participation in many online social games and networks. Initially, his discourse refers to it as play, activities that are fun and challenging. Yet, he abandons making machinima when it becomes less ‘fun’ to collaborate. Remi presents various ways of playing ‘roles’ in regard to authorship and participation in game communities. For example, when he talks about shifting the appearance or shape of avatars, the ‘shape-shifting’, he does not mention the design or appearance of the avatar as particularly interesting. He highlights the social interactions, such as going out with others (as *SL* avatars) to a ballroom and dancing. Role playing also is mentioned in regard to taking on special roles (such as choosing the behaviour of avatars and getting pose-balls for animation) and following formal, discursive role-playing practices (for instance, speaking in character). Taking a role in relation to making films as a team is different, i.e. being a film director is sort of a role and resembles a job, which in the end is not fun for Remi. He seems to prefer the direct performative aspect of role play with avatars.

¹⁵ Scorpio Milo, a character from the manga *Saint Seiya*: http://en.wikipedia.org/wiki/Scorpio_Milo (Accessed 27 May 2010).

The *media ecology* in the case of Remi refers to transformations of theatre and music traditions across time that are depicted in the machinima and distributed online on YouTube. For instance, Gamelan has ancient roots from Bali and Lombok, Indonesia, as music for rituals and as accompaniment to puppet theatre enacting Hindi mythic tales (Timar 2006) which also refer to the struggle of good vs. evil. Remi and his friends use a theatrical concert scene, an illusion of 3D animated film stage, with avatars as musicians. *SL* players perform, re-enact and remix an ancient puppet tradition into a different and newer sort of ‘virtual puppet’ in an intersection of theatre, game and film. Remi values Gamelan highly (as does his *SL* Indonesian group), ascribing it a positive cultural significance – so the negative comment about the machinima on the YouTube site is upsetting. This negative comment offers a counterpoint to Remi’s enthusiasm for role playing and remixing with machinima. It brings up the issue of authenticity, and it is a conservative voice, perhaps an opposition to the remix of sources and traditions.

Remi’s *remix* of semiotic references is apparent in the Metrotopia contest machinima, which is inspired by *Transformer I*, *Star Wars*, *Scorpio Milo* and *Final Fantasy*. The dialogue with these references is pertinent in several ways: they are cross-media, are global franchises and refer to ancient folk tales of good vs. evil. They are global and thereby offer a common pool of semiotic resources that can be references to Remi’s international film team. They refer to ancient sagas and myths and represent themes that are universal, as Bakhtin might point out, whereas the Gamelan machinima illustrates a somewhat different remix of ancient, local traditions of music to puppet play, but now as a re-assemblage with virtual puppets in a machinima film.

Glasz

Three excerpts are presented concerning Glasz: excerpts D and E demonstrate, her practices on two machinima films, and excerpt F is on the media ecology of her films.

Glasz’ Game- and Machinima-Related Practices

Glasz started creating machinima in 2008 as a role player in *SL* but does not have any experience with video console games. She participated in a vampire clan (the now disbanded *Carthage* in *SL*) where she made her first machinima upon request and continues to pursue it. She describes making machinima as a creative, enjoyable and collaborative process. The machinima that she submitted to the Metrotopia machinima contest won a prize (I recommend viewing her entry entitled ‘Wonder Woman’ on YouTube¹⁶).

¹⁶ ‘Wonder Woman’ (Metrotopia contest winner). Online: <http://www.youtube.com/watch?v=d5aouCBUPmE> (Accessed 27 May 2010).

Her interest in making machinima includes the intention to ‘capture the beauty’ and ‘archive memories of places’ in *SL* before they disappear. Glasz’ profession relates to the arts and cultural heritage, and she connects this to her machinima practice. But she does not bring machinima into her professional life, and she considers making machinima a hobby that she enjoys as a creative and social pursuit. Another hobby is management of a web blog where women share work in the arts with the aim of women’s empowerment.

In *SL*, her practices include being a curator of art shows and organizer of music events, and she captures these sorts of events as machinima. She makes what she calls narratives or stories as machinima, often based on selected semiotic resources from literary sources (such as a novel by Julio Cortazar) and various popular films. Through her activities as a role player, she has developed an extensive international network of collaboration with clothes designers, avatar performers, scriptwriters, musicians, etc. Glasz participates in several networks of machinimators, including the Machinima Artist Guild, MaMachinima, Machinima Monday and more.

Excerpt D relates to the machinima entitled ‘Vampire Ceremony of Kindred of Insomnis’ (2009) by Glasz, described as a ‘beast turning ceremony’ on YouTube.¹⁷ It shows avatars in a sort of sacrificial rite on a stage with many avatars, where individual avatars drop into a hole where a beast awaits them and seems to eat them. This machinima was captured in one session (i.e. no editing) with ambient sound.

Excerpt D: Making the Vampire machinima:

Glasz: I usually collaborate with avatars. For example, the last one I did for the vampire clan... well, it’s a fantastic scene and a beast appears on the stage for a sacrifice, and the clan feed the beast with human flesh [as] avatars. The scenery, the stage, and all you see in that machinima was done by the clan builders, I only went there to film it. This machinima is one of my YouTube hits and gets a lot of views and feedback... although the vampire clan has disappeared.

Excerpt E is about Glasz’ Metrotopia machinima contest entry ‘Wonder Woman’. The film has a main character Wonder Woman as a superhero, shown as an old woman turning into a young woman, who changes into the ‘superhero’ costume. The remix in Wonder Woman refers to the character from a media franchise, which includes comic books, TV, and more. Glasz has a humorous take on the superhero theme. She captured the film on her own, but the preparation involved her wide network, such as a clothes designer. The collaboration is important to her, although the many credits and thanks Glasz gives to collaborators are not explicit here.

Excerpt E: Making the Wonder Woman machinima:

Glasz: The Wonder Woman machinima was filmed and edited by me.

Other times I get a lot more help, other avatars help me... [we work together]

But I don’t usually use my own clothes designs. It depends on the character and what you want to show, the story, ambiance in each movie, you know.

L.: So how do you work with others in terms of making costumes and designing the avatars and finding the locations?

¹⁷ Glasz’ vampire film. Online: <http://www.youtube.com/watch?v=sJ5yrgnXSvM> (Accessed 01 June 2011).

Glasz: It's very important to have a good team and contacts to ask for an avatar, or other collaborations. Locations, places are usually done [by others], and then I go and film but other things, like the animations for avatars, the clothes, the look, is all very important. For example in 'Wonder Woman', it was fundamental to use the avatar and outfit made [already] by others... I contact them to use it, and later, I show them the video done with their items.

Excerpt F refers mainly to media ecologies and how much she values getting feedback in many venues.

Excerpt F: Glasz on machinima showcases:

Glasz: Getting the critical comments from the moderators [in the Machinima Artist Guild] and the technical comments is always interesting, so you can think about what you're doing wrong and what could be better. And you learn by getting comments on your movies and watching the movies by the others, it is very interesting for learning, that a community shares knowledge and interesting links. ...

Where I show machinima? Well, on YouTube, of course, Vimeo, contests, KoinUp, FaceBook... sometimes I upload movies on machinima.com... a site with all kind of machinimas from several games (not only SL) and I try to move them as far as I can... I uploaded the Wonder Woman machinima in machinima.com and it gets very good reactions, and a lot of people viewed it there...

I think feedback is very important...

There is an important circumstance on machinima making – we machinimators work inworld, like in SL, sometimes just for fun, but movies are shown online on a site like YouTube, Vimeo... This is a challenge... to make movies in SL that can be understood and get feedback from anyone, any real life audience. You do movies inside a virtual world and get reactions [outside] ... in real life world...

In terms of *authorial practice*, Glasz started as a role player, but she develops a strong interest in authoring and learning, sharing and growing as a machinimator. She talks about machinima filmmaking as having fun, but also relates fun to role playing in the vampire clan. Both types of practices are described as social and collaborative. Glasz wants to contribute to communities of practice, both among gamers and machinima filmmakers.

The *media ecology* she creates for her films relates to her aim of cultural preservation and documentation of what she sees as the beauty of *SL*. She states that she wants to bring machinima to a wider public through different online venues – to 'move' it.

Her *remix* integrates a wide spectrum of semiotic resources, such as capturing the vampire ceremony which in turn is in dialogue with numerous vampire legends and popular films that are part of global media franchises. She reworks stories from a media franchise like Wonder Woman, which she gives a feminist and humorous slant, as well as literary novels and films. This remix practice is described by her as being playful and experimental, as she endeavours to try out multiple styles and narratives in her machinima films.

Data Analysis: Comparing the Authorship Practices, Media Ecologies and Remix of Remi and Glasz

The *authorial practices* of the two machinimators demonstrate differences in their progression. Glasz talks of the fun of authoring machinima, and she collaborates with a wide network that she continually cultivates through doing machinima

projects and other types of creative activities connected to *SL*. This is quite distinctive from the way that Remi talks about machinima as becoming ‘boring’ and how making the second machinima became a risk for his friendships and happiness in *SL*. Remi ascribes high significance to collaborating both in terms of immersive and interactive experiences with role-playing games and participation in communities online. But when he attempts to make the Metrotopia machinima films with friends, it turns out to be hard work and too much like everyday work responsibilities, rather than a hobby. He actually has high ambitions and is interested in making money, but gives it up, whereas Glasz has the ambition of having fun and explores different ways of doing machinima and her ambitions refer to learning about machinima through collaboration and feedback. The case of Remi suggests that this kind of multimedia authorship or the creation of user-driven contents by amateurs has some limits; it suggests that when a hobby becomes a professionally oriented activity, it shifts away from a fun and playful practice and risks becoming ‘like work’.

The *media ecologies* involved in the four machinima films presented here appear quite different. Glasz actively seeks out a large sphere for feedback and says she ‘moves’ her machinima films as far as she can; for example, she gets the Wonder Woman machinima on machinima.com. She finds it a worthwhile challenge to show the machinima films made in *SL* beyond *SL* and values responses from an audience that is outside of the *SL* context. Remi seems upset about the negative feedback on YouTube, in the example of critical remarks on the Gamelan machinima. An important aspect of authorship is feedback, and here, the two machinimators indicate different attitudes and their films create different media ecologies, where Glasz appears to get her film involved in larger circulations. Also, the long-time role player Remi ascribes a different set of meanings to representing games and films in machinima than the arts-oriented role player Glasz. Reflections on the cultural perspectives of *SL* and machinima to narratives and our ‘symbolic systems’ for inventing language would probably seem remote to Remi. Glasz spontaneously reflects on the preservation of culture and the ‘beauty’ of some of the SIMS in *SL*. She ascribes a positive significance to capturing SIMS in *SL* as machinima and representing it to others outside *SL*.

The *remix* practices of the two machinimators indicate some overlaps. All of the four machinima films presented herein employ remix of the characters, narratives and styles that stem back to numerous sources, from global media franchises with comic books, TV series and films. Vampire myths go back to Dracula and older sagas, and various media franchises exist around popular contemporary vampire films and books (albeit not analysed in detail, since Remi’s references to media franchises exemplify this point).

Conclusion and Implications

The conclusion presents a wider view on the dialogic practice of authorship, remix and media ecologies. This is followed by comments on user-driven innovation with special attention to the importance of YouTube on the cultural practices emerging at

the intersection of machinima films and game cultures. At the end, there is a discussion of the implications for game studies.

The repetitive practice of *authorship* exemplified by machinima is presented here through the dialogic optic, which concerns the ‘inter-animation of voices’ whereby many voices of many authors potentially participate. It may be seen as a stretch to apply this notion of authorship to amateur machinimators, but this sort of ‘inter-animation’ may potentially reinvigorate authorship in general. For when fans or gamers become amateur filmmakers and move their communities of practice into showcases such as YouTube, they encounter different audiences. The screen-based digital technologies make it easy and cheap to capture images and audio and to distribute this kind of home-made films online. This in turn may lead to more sharing of stories in our culture. However, this does not mean that amateur film narratives will replace professionally created narratives, and contemporary audiences still go to the cinema and theatre.

Media ecologies seem to be shifting rapidly, as Jenkins (2006) and others relate. Dialogic and social semiotic theories point to how sign systems and the meanings that any reader, viewer or audience ascribe are open and culturally divergent. But an audience may interpret something altogether differently than an author intended to convey. An audience may not understand the particular signs of a subculture. For instance, Glasz mentions this as a challenge in relation to showing her machinima to audiences who are not familiar with *SL*. The shifting media ecologies bring diversities of meaning-making out to a wider public, such as demonstrated by comments on machinimas posted on YouTube. Meanings are thereby under negotiation by different viewers in their various contexts, and meanings undergo continual processes of transformation of our language.

The remix of semiotic resources is a cultural practice related to the dynamics of all sorts of multimedia texts created by fans, gamers, bloggers, etc. who create contents for online distribution. Machinima exemplifies the rise of user-driven contents (Jenkins 2006; Haefliger, Jäger & von Krogh 2010).

However, Jenkins (2009) points out that there is a long history of media production and of participatory cultures that predates Web 2.0, and these cultures paved the way for the rapid adoption of YouTube as a platform for all kinds of do-it-yourself media. The cultures and community groups were ready; ‘YouTube may represent the epicentre of today’s participatory culture but it doesn’t represent its origin point for any of the cultural practices people associate with it’ (ibid., 110).

This chapter suggests that game studies can get a great deal of inspiration from machinima as part of the game culture specifically and from considering a neo-Bakhtinian perspective on multimedia authorship, play as well as games. Machinima crosses the interactive and narrative (as authorial practice and as ‘text’), and it also poses challenges for the traditional ways of categorizing academic disciplines. It seems to me that taking an insular view of games and a narrow focus on the recent popularity of computer games would be missing out on how games and play relate to the evolution of language and a vast array of everyday media practices.

The current digital technologies and tools for capturing from the screen (such as Camtasia) may be leading game studies toward game culture and literary studies.

This could provide a broad view on a folkloric, storytelling culture, where games and stories are created and distributed by authors and where game literacy is seen as integrated with wider debates on the plurality of contemporary literacy. The network hubs for machinima (such as YouTube) are significant for distributing user-driven multimedia contents of all kinds. YouTube is part of a media ecology with trajectories of remix from games and various semiotic resources. One challenge for game studies is to engage more with inter-disciplinary perspectives, as Espen Aarseth (2005) suggests. For instance, I find it promising that academics with an interest in game studies collaborate with cross-media companies on research and development of so-called serious games (aka educational digital games) and design viable platforms for multimedia authorship (Sonvilla-Weiss 2010).

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Chapter 32

Modding as Part of Game Culture

Alexander Unger

Introduction

It is one of the achievements of the academic engagement with digital games that it facilitates the development of a more differentiated view of this media. While digital games have for a long time been regarded as “bad media,” nowadays, these games slowly get recognized as cultural artifacts and playing digital games is viewed as a relevant cultural practice. This position is not yet established in all areas of the public and academic discussion, but the rapid development of digital games and their genres, as well as the virtual impossibility to ignore the spreading of digital games in our lifeworld (not only of youth), make their significance harder and harder to overlook. The notion of *game culture* expresses the idea that playing games is far from being determined by a powerful medium and underlines the fact that we have to recognize this specific aspect of media culture as social, creative, and connected to processes of meaning making. In this sense, creative practices such as machinima (see Frølund, Chap. 31) and modding of digital games are also an important part of game culture. Especially, modding seems to be a highly relevant practice since it describes the manipulative engagement of “users” with digital games. There is actually no stronger argument against media determination or strong media influence than consumers becoming the producers/manipulators of their media. Surprisingly, modding is somehow a side issue of the academic study of digital games and deemed to be “heavily under-researched” (Sotamaa 2010, 239). To counter this tendency, this chapter tries to give an outline of the social practice of modding by regarding it as a special (sub)culture of game culture that is far more complex than was at first thought.

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The Culture in Gaming

It is only recently that scientists started to talk about digital games as relevant cultural products (see Aarseth 2003) or indeed about a culture of digital games. From this fact, we can see that digital games have not been considered elaborate cultural artifacts and playing games as a cultural practice for very long. If we take a look back at the development of the academic engagement with digital games, the first step toward the concept of a game culture was to go beyond the idea that digital games procure a “reductive logic” or “inhuman rationality” to the player and thus influence their way of thinking (see Fromme et al. 2008, 763). Today, we know that there are a lot of games available that open up complex game worlds that offer the gamer a lot more opportunities of action.¹ Moreover, there are also forms of subversive usage like cheating or using loopholes in the game mechanics that break up the seemingly closed logic. We also find forms of metacognition within games, like references to other games, ironic statements and settings, or resistive NPCs. Finally, while looking at new genres like MMOs and social games, we also have to take into account the social interaction within game worlds (not to mention the social interaction while playing single player games in groups). This form of interaction differs from interaction with a software program and also exceeds its logic.

All these examples show that the idea of digital games manipulating the players into thinking in terms of a reductive logic falls short and fails to consider the appropriation of these interactive game worlds by the player. Even on this immanent level, we see diversity in the way of playing and appropriation that is not just determined by the game or the designer’s will. To sum it up, digital games, even from this angle, have a lot more degrees of freedom than one would think at first glance. These degrees of freedom along with independent ways of appropriation can be regarded as the soil on which new cultures with their unique ways of usage and interpretation can grow. It is part of the nature of such cultures that they are emergent and in this sense hard to anticipate – by game designers as well as by marketing experts.

This argument gets even stronger when not only the game and the user as a player are focused upon but also the manifold practices around games. This is the second step to widen the perspective on digital games that goes beyond any form of clear-cut and strong media influence. Anyone that seriously engages with games has to realize that gaming is not just the playing of a certain game but also a number of activities around the game itself. Accordingly, we have to take into account that some players start to write stories about their avatars or the game world and thereby extend the narration of the game world. We also have to take into account forums, where people discuss games and strategies, and websites where players post walk-throughs or hints or offer patches and cracks. Furthermore, we cannot ignore forms

¹ It also seems obvious that every game, digital or not, has a certain framework and a set of rules, without which we cannot really talk of a game at all. This does not necessarily mean that every framework results in a determination (see Unger 2007).

of social organizations like guilds in MMORPGs, who establish moral codes within that seemingly amoral context of violent gaming. Also, we should take into account players who use games to shoot movies, or start manipulating the software code of the games to their liking (modding). If we understand a culture as a certain way of using and appropriating cultural artifacts and by this developing specific cultural practices like enfolded specific rituals, ways of articulation, shared discourse, collective action, and forms of meaning making, the examples mentioned are all relevant parts of game culture (see Adamus, Chap. 30). While the above-mentioned definition of culture is well established in the discourse of the social sciences, favoring an anti-essential approach (see Charon 2001, 175–182), it seems like it needs to be extended when looking at digital game culture. Especially, if we look at practices like machinima or modding, we see that these are not only practices of meaning making, concerning the context of or the discourse about games, but they also manipulate the cultural artifact “game” itself. Thus, it seems as though we are dealing with a new level of user activity that is closely connected with the manipulation of the digital medium software, respectively, game software. Manipulative practices can be regarded as a core element of any “user culture” and especially modding as an “integral part of modern game culture” (Nieborg and Graf 2008, 179), which on the other hand is not really in the focus of academic engagement with this culture (see Poremba 2003). It seems that the study of digital games still has to realize manipulative practices as a core part of the culture it investigates. But before getting deeper into manipulative practices like modding, let us take a closer look at the game culture under discussion and its relation to the game industry.²

Gaming Industry and the Influence of the “Consumer”

While talking about game culture(s), it is surely important to pay attention to the often underestimated cultural practices of gamers. Nevertheless, it is impossible to understand this commercially framed culture without taking into account the commercial side of game culture, respectively, the game industry (see Binark and Bayraktutan-Sütçü, Chap. 24). However, the connection between the game industry and game culture is not as easy to grasp as one might think. It is beyond debate that the “creative” industry produces the cultural artifacts, respectively, the digital games that players use and appropriate. From that point of view, it seems as though the argument that game culture is owned by the industry has more to it than we would like to admit. But if we look at the recent developments in media culture, we see, with notions like *Web 2.0*, *Remix* (Lessig 2008) or *Convergence Culture* (Jenkins 2006),

² One could also argue that we are dealing with a digital game culture as a whole, which embraces all games and social practices connected with digital games. On the other hand, certain games and the special usage cultures around them could be regarded as game cultures (for example, posting *YouTube* videos of gamers playing high levels of *Guitar Hero: Worldtour* songs to show their skill to the community).

that the relation between the media industry and the consumers is far from being a one-way street anymore. Firstly, there was always a certain influence by the consumers on the media industry and its products, simply by the familiar market mechanism of supply and demand. This is the reason why it seemed appropriate to clarify whether there are enough potential buyers for a product, to find out what kind of product the consumer actually wants, and to discover what needs he wants to satisfy by buying it (user-driven or user-centered design). Besides this, we also see that consumers increasingly demand transparent processes of production and also start to interfere with them, when they feel that they are getting out of line.

This also applies to digital game production, especially if well-known brands, stories, or even “universes,” like the *Marvel Universe*, *Lord of the Rings*, *Matrix*, and so on, are implemented into games. Just one example: in Germany, there is an equivalent to the pen-and-paper role-playing game AD&D called “The Black Eye” (*Das schwarze Auge*, DSA; Kiesow 1984). While this game has often been regarded as a childish version of more serious RPGs like D&D, AD&D, and MERP, fans of the RPG perked up their ears when a digital game with the DSA system and appending fantasy world “Aventurien” was in production (24 years after the first release of the DSA RPG system). They started to watch the development of the DSA: *Drakensang* and discussed all the available preview material (films, pictures, etc.). A lot of the discussion in fan forums was about one monster of the fantasy world Aventurien, the *Tatzelwurm*.³ The *Tatzelwurm* actually is a remote relative of the mighty dragons and part of the DSA bestiaries ever since it was published in 1984. When a trailer was published, where the *Tatzelwurm* spits fire, the community went mad, since even a newbie to DSA knows that this minor dragon cannot spit fire.

The discussion became so intense that the developer had to react to it, first by apologizing and claiming a misunderstanding between him and the publisher as the reason for this mistake.⁴ The developer also started justifying their interpretation of the *Tatzelwurm* with long explanations on how its look changed with new releases from the original pen-and-paper game and how they had tried to find a satisfying way to model it and its abilities. Finally, the fans won and the *Tatzelwurm* was not able to spit fire in the official game, which became quite a success (still, the *Tatzelwurm* could knock out PCs with its bad breath). It is more than arguable whether the game would have been that successful if the developer had ignored the criticism from the fan base. To sum it up, it seems that developers today cannot afford to ignore the fans, their wishes and views; they have to include them into the development somehow. Here, we see a new relationship between producers and consumers, which goes along with a new balance of power and influence that was discussed by Henry Jenkins in his book about convergence culture:

The term participatory culture contrasts with older notions of passive media spectatorship. Rather than talking about media producers and consumers as occupying separate roles, we might now see them as participants who interact with each other according to a new set of rules that none of us fully understands (2006, 3).

³ See <http://www.globalgameport.com/archive/index.php/t-12191.html> (accessed 1 August 2011).

⁴ See <http://drakensang.onlinewelten.com/articles.php?id=6> (accessed 8 August 2011).

This new relationship between consumers and producers becomes even clearer if we take a look at the (sub)culture of modding.

Modding as a Productive Games Culture

When people start talking about modding, they often refer to *Counter-Strike*, as probably the most well-known and successful mod for digital games ever. However, *Counter-Strike* is by far not the only modification for computer games available. If we start searching a little more precisely on the WWW, we find thousands of gamers, who are in the “business” of manipulating games and offer their modifications for free. I want to take a close look at some figures relating to modding, to show the extent and relevance of the phenomenon, before going deeper into the definition and the field of modding.

If we take a look at moddb.com, we find over 8,000 modding projects and over 3,800 released mods ready for download (accessed 4 August 2011). While moddb can be regarded as one of the HQs of the modding community, it is not the only website where mods are available. There are also modding websites for certain games and game series, like *GTA* (gtainside.com), *Total War* (twcenter.net), or *Civilization* (civfanatics.com), that function as platforms for communication and distribution for the more active and manipulative fan base. They are also places where mod developers and mod “consumers” can meet and discuss new projects and their development. Those sites offer very different “mod content.” Besides major mods and “total conversions” (TC), we find thousands of files with small user created content. For example, gtainside.com offers over 2,400 skins, 4,498 cars, 611 maps, and 2,821 files denoted as mods, *only* for the game *GTA: San Andreas*.⁵ To give some figures about distribution, the most popular mod or TC for *Total War: Medieval 2* seems to be the mod *Third Age* with 1,293,923 downloads.⁶ *Clouds across Europe*, the most popular TC on twcenter.net, has a total download number of 352,291.⁷ *Fall from Heaven 2*, a fantasy mod for *Civilization 4* comes up to 480,505 downloads.⁸ While these are just a few examples of modding, especially for the genre of strategy games and not for FPS, which are often focused upon in academic discussion, the figures show that modding is far from being a sideline of game culture but, in fact, a rich field that should be systematically researched.

Having given some figures, we can now take a look at the definition. “Mod” is an abbreviation of modification and a term coming out of the community of modders,

⁵ See <http://www.gtainside.com/news.php> (accessed 1 August 2011).

⁶ See <http://www.moddb.com/mods/third-age-total-war/downloads> (accessed 1 August 2011).

⁷ See <http://www.twcenter.net/forums/downloads.php?do=file&id=1301> (accessed 1 August 2011).

⁸ See <http://forums.civfanatics.com/downloads.php?do=file&id=1> (accessed 1 August 2011). Since the files are also available on other sites like moddb.com or file sharing sites, the real download numbers are much higher.

rather than from academic discourse. In this sense, a mod is any form of noncommercial modification of a proprietary digital game. To be more precise, any modification of the software code of a proprietary digital game made by nonemployed fans or gamers that is produced and distributed via the WWW (see Unger 2009). Thus, mods are smaller or bigger programs that can be downloaded for free from certain websites and can be installed over the original proprietary game. By installing the mod, specific parts or modules of the original software are replaced or extended. Thus, the spectrum of mods can range from small mods, which only change some parameters of the original game via the creation of new maps, levels, or textures as well as new scenarios, to TCs that “mod” the original game and its context of meaning so far that a new game is actually created (see Nieborg 2005). For example, the already mentioned game *Counter-Strike*, that is, based on *Half-Life*, not only changes the narration of the original game (from a science fiction story to a special forces versus terrorists scenario), but also the overall game mechanics and rule system. The mod converts a single-player FPS into a multiplayer online game for which the original game was never designed (see Nieborg and Graaf 2008, 178; Kücklich 2005).

Technically speaking, mods are nothing other than patches or add-ons well known from commercial games and developers. However, looking at mods from a social and cultural perspective, they have nothing to do with commercial patches or add-ons. The reason for this is that mods are produced by players who are not employed by game companies and who thus do not follow their orders. This leads to two important points: firstly, mods are collectively produced or, to put it another way, products of *collective intelligence* and skills. Secondly, modding, as the practice of creating mods, is a form of UCC⁹ culture where fans actively engage with cultural artifacts and change them within. Modders are the prototype of the active user in a “convergence culture” or a “Web 2.0 culture” who is in a strict sense a user and producer (manipulator) of media.

Thus, mods are products of a subculture that dwells in a legal limbo and accordingly has a sensitive status in relation to media law and the game industry. On the one hand, mods can extend the *shelf time* of commercial games because people may buy outdated games to have access to available noncommercial mods (see Kücklich 2005; Nieborg and Graaf 2008). Also, mods can be resold as commercial games (*Counter-Strike*, *Damnation*) or contribute to a new release of a game series, for example, *Fallout: New Vegas*, which integrated a lot of mods players created for the prequel *Fallout 3*.¹⁰ Besides, the modder community offers a huge pool for recruiting new game developers for the game industry.¹¹ Finally, mods can also be regarded

⁹ User created content.

¹⁰ The game magazine “Game Star” called *Fallout: New Vegas* a deep bow to the mod community. See http://www.gamestar.de/spiele/fallout-new-vegas/test/fallout_new_vegas.44882,2318592.html (accessed 1 August 2011).

¹¹ There are indeed some modders who try to get the attention of well-known game studios with their “work samples,” that is, their mods. But, as 16 qualitative interviews with modders have shown, this is only one motivation among others.

as pools of user creativity that game developers can use for free and by this save the expense of producing this creativity on their own. This possible absorption of a noncommercial culture and its products by the game industry has been criticized in the academic discussion, especially by the criticism of the transformation of players into playbours, who labor for the game industry for free (see Kücklich 2005).

On the other hand, it is almost impossible for the game industry to control the modding culture, also with respect to copyright law. Modders tend to “borrow” from copyright-protected material and brands without acquiring the corresponding licenses, which can get game companies into an awkward situation.¹² Manipulating copyright-protected material or even using the framework of a commercial game belonging to one company to integrate a brand that belongs to another one surely goes against copyright law. While these forms of manipulation can be regarded as new ways of medial articulation often described as “remixes” (see Unger forthcoming a), the game industry tries to suppress or at least to control them with licenses like the EULA. For this reason, some publishers and some game series (*Fallout*, *The Elder Scrolls*, *Civilization*, and so on) foster modding through so-called SDKs (software development kits) that make modding quite easy (while it is still a complex process) and others try to avert the development of a too active player community. Nevertheless, there are few games successfully “protected” from modding (see moddb.com). In this sense, we can look at modding as a subversive practice, which goes along with the manipulation, reinterpretation, and progression of proprietary products by more or less open and noncommercial fan communities.

Another question raised when looking at mods is, why do players gather as teams and start modding at all, in other words, what is their motivation? One motivation for sure is just the sheer possibility of modifying commercial products like games. This also goes along with the motivation to add to the game world with more realistic or premium content like new and real cars for the *GTA Series* or some left out historical fractions for games like *TW: Medieval 2*. In this sense, following Sotamaa (2010) and Postigo (2007), modding can be considered an “artistic endeavor and a creative outlet” (Sotamaa 2010, 5) extending the given game world.

On the other hand, modders start modding projects because they feel that a commercial game falls short of their expectations. This can be caused by some flaws in the rule system, missing units, fractions, or scenarios or the inappropriate reproduction of the general master (like a game about Middle Earth that fails to integrate hobbits). Another motivation that is often the trigger for modding is, besides the extension of the game and the game world, the idea of using a certain game, or its game engine and basic game mechanics, as a framework into which a different story or narration is integrated. As Sotamaa shows, some modders like “the challenge the games pose as complex code-based systems” (2010, 8) and like to manipulate these

¹² While there have been some cease-and-desist orders against some mods like the case of Hasbro against the modder of a GI Joe vehicle pack for *Unreal Tournament 2004*, it seems a lot of copyright violations are ignored maybe because the field of modding is far to big to be controlled via cease-and-desist orders, or because the profit gained through modding exceeds the losses.

systems, even to implement new ideas. Looking at *Civ4*, we find a wide variety of mods that do not extend the more or less realistic scenarios of the vanilla game (reenacting human history starting from 2000 BC), but integrate other story worlds like “Dune” or “Star Trek.”¹³ Last but not least, modding can also be motivated by the idea of being even better than the pros.

Another very important motivation factor to be taken into account is also the feedback of the team and the community, especially the acknowledgement of the modder’s work. Besides the slight possibility of getting recognized by professional game developers, the acknowledgement is the currency modders get paid in for their efforts. This is quite similar to other UCC practices like machinima, open-source programming, writing for Wikipedia, and so on. The modding community and modding websites like moddb.com also started to offer awards for modding projects like the “Mod of the Year Award.” On moddb.com, the top 100 of the best already-released as well as upcoming mods are chosen every year.¹⁴ This also shows that modding, while being a subculture, is developing some institutional structures. Nevertheless, these examples show that creating or at least manipulating digital media or code is the very core of this productive (sub)culture. Accordingly, modders do not only consume, comment, or interpret the cultural artifacts of our commercial (media) culture, but change and manipulate them.

Engaging with Modding Culture

After this short overview of the fields touched by modding, I would like to come back to the core, respectively, the productive output of this media culture: the mods and how they and their production can be researched. As mentioned above, mods are manipulations of the original software code of a game. Nevertheless, they can be distinguished from open-source programming that produces software from scratch. If we look back into the history of digital games, we find that modding is actually as old as one of the first computer games *Spacewar!* (see Lowood 2006, 30). However, modding became a lot easier when games like *Doom*, with a modular software architecture, were developed, which separated the game content from the game engine. This opened up the possibility for the “users” to change or even create new games through modifying the game content without the hard task of programming or reengineering a game engine (see Lowood 2006, 24).¹⁵ With the provided or fan-programmed SDKs, new units, maps, and so on could be created and distributed via the WWW.

¹³ Thus, modding, especially if we look at TCs, can be regarded as a new “user-driven” type of transmedial storytelling in the sense of transforming stories from noninteractive to an interactive medium.

¹⁴ See <http://www.moddb.com/events/2010-mod-of-the-year-awards> (accessed 8 August 2011).

¹⁵ As a matter of fact, there are also engine mods, but usually, the engine and some other elements of the original game are used as a framework or sandbox to create modifications.

This opened up a low-threshold access to modifying commercial games and to adjusting them to the player's wishes and needs. This "new" possibility had a long-lasting impact on the game culture and the way players participate in it. It is one thing to hope and wait that a developer will provide a certain scenario as an add-on; let us say a James Bond scenario for *Half-Life 2*.¹⁶ It is another to gather a team and start that project on your own rather than wait forever. If we take a short side-glance at the discussion about remix culture (see Lessig 2008; Stalder 2009), we learn that manipulative practices do not only change consumer practices but also our outlook on the products. We normally recognize a game as a product that is (more or less) fixed and final and has to be "consumed" in the released state. A modder may have a different perspective on games. He still may see the released product, but regards it as material or a framework for his own projects. He would rather see the potential for something that the game is not yet, but may become.

If we regard modding in relation to other UCC practices and classify them with regard to the depth of intervention in the software code, modding could be arranged between practices barely touching the original product and its code, like machinima, and practices completely (re)creating it, as in open-source programming. This is important to realize because modding is a lot harder than shooting a machinima movie, but it is not as tough in terms of programming as open-source projects and is accordingly open to a larger clientele. Besides, modding also includes tasks that need no or only very basic informatics skills (like research on historical facts and 2D arts). To sum it up, while in the open-source area the software is programmed from scratch, modders use the framework of a given game to create something new or to implement their ideas within this framework.

Besides this important technical framing of modding, the mods that are de facto produced by the modding community vary greatly in their extent. They can range from very basic one-person projects that, for example, change the tread pattern of a car tire in *GTA: Vice City* to total conversions produced by teams with 20–60 (serious) members that integrate the complex story world of J.R.R. Tolkien's "Middle Earth" in a medieval strategy game like *Total War: Medieval 2* and leave nothing but the game engine untouched. Accordingly, one task that comes along with defining mods is the necessity of a typology as well as an analytical model for mods. If we take a look at the German version of Wikipedia, we find a rough typology of modding that I would like to recite and advance here.¹⁷ It does not need to be mentioned that the transition between the different mentioned types can be fluid. There is also a certain overlap with Sotamaa's categories of modders: *mission makers*, *add-on makers*, and *mod makers* (see Sotamaa 2010, 6) (Table 32.1).

Another way to get closer to a typology for mods is to take a look at download sections of modding websites. For example, twcenter.com, a website for mods of the Total War Series, pragmatically distinguishes between patches (for mods as well

¹⁶ See <http://www.moddb.com/mods/goldeneye-source> (accessed 1 August 2011).

¹⁷ See http://de.wikipedia.org/wiki/Mod_%28Computerspiel%29 (accessed 10 August 2011).

Table 32.1 Typology of mods

Mutators/tweaks	Small programs that modify limited aspects of the game, like changing the game's speed or adding/modifying some game rules. Mutators also can be attachments that do not influence the game play and its mechanism at all, but only have an "aesthetic" effect, like changing the weather conditions or implementing the option to listen to your own mp3 collection while playing
Add-ons	Provide some extensions to game like (small) commercial add-ons or patches: new maps, new units, new skins, and so on. The original game mechanism and game setting are more or less untouched or just slightly modified or extended
Mods	In a proper sense include changes and attachments to different layers of the game. Mods can include add-ons and mutators, or better, they also manipulate the rule system as well as the visual layer. Often, they try to establish a new fraction, setting, or narration. In this sense, mods change the original game, its narration, rules, and mechanism in a significant way, but not as much as total conversions
Total conversions	Total conversions are the supreme discipline of modding. They manipulate the original game in so many ways that a new game is actually created. Still, these changes can apply to different levels of the game. Nevertheless, a total conversion needs to invent a completely new game or to modify the rule system, the narration, and so on in a way such that it feels like playing a new game. This often includes a complete replacement of the visual/audible game content as well as major changes in the game mechanics and the narrative

as the original games), mods (including larger mods and total conversions), minor mods and tweaks, tools (also community-produced tools to support modding), battles/saved games, miscellaneous, skins, and models.¹⁸ If we add skins/models and tools to the previous table, we get a rough typology for a start.

Skins and models can be regarded as raw material that is more or less freely distributed and can be used in different projects. This displays another important aspect of modding culture; while modding is different from open-source projects, the culture of modding is based on an "open-source attitude," namely, the idea of "copyleft" (see Sotamaa 2010, 12): every product can be reused and manipulated as long as the original author is named. There are a lot of TCs available, which include minor mods from other authors. For example, there a lot of mods for the TW series that include versions of the famous *Darth Mod*, which pimp the campaign and battle for a more demanding, but also more enjoyable game (while some versions of the *Darth Mod* uses skins that are developed by other authors).¹⁹ Or a mod for *GTA Vice City* that allows one to create more fancy tires for cars and motorcycles, which became a basic mod for most car modifications.

¹⁸ See <http://www.twcenter.net/forums/downloads.php> (accessed 1 August 2011).

¹⁹ See <http://www.moddb.com/mods/darthmod-shogun-2> (accessed 1 August 2011).

To sum up, modding is a practice that affects different levels of a digital game and can go as far as creating a new game due to significant changes on all relevant levels of the game or by inventing a completely different game mechanism and/or narration. Looking at TCs and major mods, it seems important to point out that those are often produced top-down. This means that TCs often follow a “mission,” like replacing the more or less historical narrative of *Civilization 4* with the “Dune universe” that implies changes for all layers of the original game deduced from that “mission.” For example, a serious “Dune game” cannot be created without *sandworms* and the drug “*spice*.” While it is one task to visually model *sandworms* and *spice* fields, let alone the corresponding units like spice harvester, it is another to integrate *sandworms* as a unit and *spice* as a resource into the rule system and scripts. And it is still another task to integrate the ability of the *Fremen* to travel with *sandworms*, to script the random appearance of *sandworms* and their aggressiveness against other units or to integrate *spice* into the building and technology tree.²⁰ Staying true to one idea and to implementing it in every detail seems to be the credo of a lot of TCs.

While the heuristic typology displayed above helps to classify mods, the Dune example shows that we still need a more detailed analytical model to explain what a mod is. It is also obvious that it is not enough to regard a mod on its own, because the modifications can only be described by comparison to the original game. It is beyond the scope of this chapter to display a final model for mod analysis, but we surely can get some input from the available models for game analysis (see Konzack 2002; Aarseth 2003; Kringiel 2009) since we need a general model of the layers of a game that can actually be modified. I also developed a rough hermeneutic model for my own research and to support my students while analyzing mods. The layers focused on by this model are *narrative*, *audible*, *visual*, and *interface* as well as the *rule system*. While this gives some insight into the mod and how it changes the original game, it is also necessary to play both games to have the possibility to compare the *gameplay* in the sense of finding out how it feels to play and if this feeling is “authentic” in regard to the mission. Here, we can also get an *overall impression* of how much the mod extends the original game, whether the mod runs stably and whether it is coherent with regard to the narrative, the rule system, and so on.

Besides this first evaluation, the overall impression leads to another aspect, which actually should be the starting point of a formal analysis apart from describing the original game: the *concept* or mission. A lot of TCs and major mods follow a general idea that can be categorized as *invention*, *extension*, or *adjustment*. Invention actually means inventing a new game in a ludological sense, narrative sense, or both senses. Inventions often come along with a lot of *references* to other media and their genres, brands, and story worlds, which can also be analyzed. Just looking at the skins available for *GTA*, we can distinguish different types of references. A *Duke Nukem* skin for *GTA: Vice City* can be described as an *intermedial reference* because

²⁰ Recognizing key elements of story worlds and transforming them into interactive scripts seems to be a key concept for modding as a form of transmedial storytelling.

it refers to a different character and story, but stays in the medium digital game. A skin for the avatar that changes him to an agent of the well-known *Matrix* trilogy creates a new *cross-media reference*, because it not only changes the story, but also implies a reference to a different medium (film). Finally, the skin of a Russian police officer opens up an *extramedial* reference to our “real” world. While this is just the beginnings of a classification, it shows that references can be another research focus that illuminates how and what references “consumers” inscribe into media objects. With references, we also go beyond a formal analysis and the “object” mod in a strict sense.

If we go further in this direction, we get into touch with the sociocultural layer (see Konzack 2002). This step also implies a methodological change from formal analysis to quantitative and qualitative methods, but gives us access to new areas of the game and of the modding culture. In my research projects, I mostly used qualitative methods (expert interviews via Skype) to get a better insight into modding teams, including their organization. This includes aspects like leadership style, recruitment, work tasks, communication (internal/external), continuity, dropouts, and so on. While supporting the position of Sotamaa that especially the modding teams, their practices, and motivation should be the focus of qualitative research (Sotamaa 2010), we still need adequate methods to realize such research projects. One of the many methodological challenges is the task of displaying the teams, its members, and the hierarchical layers (core team, member, associate, and so on) in a proper way.²¹ When we start looking at mod teams, we cannot really afford to ignore the next layer of modding culture, the modding community that is often closely connected to the modding team, and the mod production. In this sense, mods can be regarded as “articulations” that are made available in a more or less public sphere and thereby get involved in certain discursive practices or can trigger communication: mods get praised, criticized, and commented on. The comments can drive the modding team into updating the mod and so on. In this sense, the communication between the community and the modding team and its effects can be another research focus, which can even include game magazines or commercial game developers that get entangled in the communication. However, after using a formal analysis for the mods and qualitative interviews for the modding teams, we now need the method of forums and chat analysis (see Sveningsson, Chap. 27) to research this layer of modding culture.

A closer look at the community shows even more aspects of the modding culture which emerge that can again be the object of research. Quite close to a formal analysis

²¹ I tried to solve this problem by creating team maps, which show who is a member of the team and how far or how close they are to the core team. I made it a rule that the three layers we find in most of the bigger teams should be covered through interviews. This opens up the opportunity to compare the understanding of the project and its meaning for different actor groups. This leads to another problem, namely, that while modding teams are often scattered all over the world, it is barely possible to use face-to-face interviews. In my opinion, interviews via Skype or Team-Speak should be conducted because they are by far closer to a face-to-face communication (especially when using the video option) than e-mail interviews.

is the fact that mods integrate other mods. Besides the above-mentioned *Darth Mods*, the total conversion *Third Age* for *TW: Medieval 2* integrates no less than 11 submods, from a “mod” for smoother coastline to an AI tweak for battle as well for the campaign map as to the overhauled faction of Gondor. As in other UCC fields, the use of products from different authors and teams is not regarded as being unsocial or even criminal, but is a common procedure of such cultures that extend their resources and even enhance the reputation of the original author. So we find a particular culture of “internal” sharing, reusing, and reputations that can be examined.

To close without having covered the field completely, we can also focus on the presentation of mods on websites and, even more complex, on the development or evolution of mods. Like commercial games, the top mods and TCs get developed and updated after their release. For example, the above mentioned mod *Dune Wars* was first released in December 2009; the latest version 1.9 was released in November 2010. This shows a development phase with at least nine new versions within a year. There are also cases where mods are taken over by (entirely or partly) new teams that continue the project. This is the case with the mod *Fall from Heaven* that has been re-released as the mod *Fall from Heaven II* and as the “modmod” *Fall Further*.²² We can also look at this development as a certain path of evolution and oscillation between modders, the modding community, official magazines, and the game industry, especially when mods or modders get involved in the commercial system, for example, when mods are presented at game fairs or are used as a master for a commercial game.

Conclusion

The above sketch of the modding culture and its possible research fields is far from complete. What should be evident is that mods are an important part of game culture, but that the culture of modding is much more than just the products. Even when we regard modding culture as “just” part of general game culture, we have a multilayered phenomenon that calls for a wide variety of methods and research designs and, most of all, for a serious and systematic engagement with modifications that also includes playing mods. Furthermore, this chapter has tried to show that modding is a highly reflexive and creative way of engaging with digital games. As mentioned above, modding can be regarded as a creative practice that allows “consumers” to modify the commercial products they play and change them to their liking. Also taking into account the host of mods on the WWW, one can rightfully claim that modding should be a core subject of digital games studies. Finally, modding can also be regarded in a political way that modders may even not be aware of.

²² See <http://forums.civfanatics.com/showthread.php?t=292121> (accessed 1 August 2011).

When looking at TCs like *Dune* or *Third Age*, we have to realize that modding also reclaims modern folk stories and myths that have actually come to be completely under the control of a proprietary media system. The reclaiming of stories and cultural artifacts is a development that cannot be underestimated: it may be the trigger for a significant change in our media culture and consequently a change in our way of researching media (usage) cultures (see Lessig 2008; Gauntlett 2007). These changes can already be studied in the modding culture.

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Chapter 33

Digital Game Culture(s) as Prototype(s) of Mediatization and Commercialization of Society: The World Cyber Games 2008 in Cologne as an Example

Jeffrey Wimmer

Introduction: Digital Games as a Key Medium for Society and Sciences

Digital games¹ as a key medium of our society are a common topic of social discourse, although the discussion is mainly narrowed down to the aspects of the protection of minors, the addictiveness, and the level of violence. In a current analysis of the omnipresence of the phenomenon of digital games, for instance, Juul noted: “To play video games has become the norm; to not play video games has become the exception” (2009, 9). Parallel to this, cross-national and cross-disciplinary research on digital games – so-called game studies originating in the 1990s – has evolved into an institutionalized scientific discipline with many corresponding conferences, an international research association (DiGRA), and a number of peer-reviewed journals. After this promising start, game studies as a quickly developing field of research meet a double challenge due to the specific characteristics of their object of research, especially its interactivity and the different modes of action based on it: On the one hand, it must be analyzed whether efficient definitions of terms, theories, and methods already exist, and on the other hand, it must be decided whether the greater urgency is to develop new theoretical and methodical frameworks for research and analysis.

¹The term “digital games” fits better analytically than the terms “computer games,” “video games,” and “screen games” as it is a generic term that refers to the different digital technologies which make playing games possible. Hence, the different gaming platforms such as consoles or computers as well as handhelds or cellular phones are included (see Kerr 2006, 4).

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In terms of communication and media studies, gaming constitutes an incredibly complex phenomenon of mediated communication that is based on a global, multilayer, and mostly only virtual game culture. Furthermore, digital games and especially the many online “playgrounds” are meanwhile considered as communication media that we use to connect with society. The term “playing digital games” not only refers to the different modes of action that cannot always be selectively separated, such as rule-based gaming action (“game”), purposeless action (“play”), compensated action (“chore”),² or performance-oriented action (“e-sport”) (Schmidt et al. 2008, 12). Digital games can be considered as a medium that combines the attributes of other conventional media (film, television, traditional games, social software, theater, etc.), which gives it special significance in communication and media studies. Because of their manifold and complex occurrences of both interpersonal and public communication and the resulting processes of information selection, distribution and appropriation, especially online games and virtual game worlds represent a *communicative space* (Kücklich 2009b) that can assume the significance and functionality of public spheres.³ This is particularly true for the lifeworld (Habermas) of young gamers (see also Keilhauer, Chap. 20). More specifically, this means that digital games have become a serious factor of personality development (Stephenson, Chap. 15) and of sociopolitical socialization (Fromme and Biermann 2009). More and more, they are gaining relevance in the processes of social communication. Current research results of the convergent media world of teenagers reveal that digital games, along with the messages of mass media, constitute one of the central components of our society’s mediatization process. Consequently, the question, which social, cultural, and thus *meaningful significance* digital games possess and how this is induced, arises (Krotz 2008). Similar to this is Malaby’s (2007) proposal that “rather than focusing on the game as something outside of life, we should understand games as meaning-generating spaces within life.” An observation of the culture of gaming, especially in terms of the quality of experiences and everyday usage (see also Hemminger and Schott, Chap. 25), will allow us to better understand these complex processes, although we still know very little about the highly diverse digital game cultures (Mäyrä 2008b; Quandt 2010).⁴ This chapter presents a theoretical approach to the phenomenon of digital game culture, which was exemplarily applied empirically in the context of a case study of the World Cyber Games 2008 (WCG) in Cologne.

²An ideal example, often cited in the media, is the phenomenon of “gold farmers” in online role-playing games, who sell game avatars and game items to other gamers outside the game.

³For the characteristics of public spheres in more general, see Wimmer (2009, 46–49).

⁴Nonetheless, digital game cultures are well described concerning individual dimensions, such as the fields of juvenile gamers, girl gamers, massive multiplayer online games, and participatory game cultures, for example, the modding scene (see Unger, Chap. 32).

Digital Game Cultures in the Era of Mediatization and Commercialization

From an analytical perspective and following Hepp (2008), we can define digital game cultures as an aspect of the current media culture with increasing significance, whose primary resources of meaning are manifested in digital games that are mostly mediated or provided through technical communication media such as handhelds or consoles. In order to grasp the meaning of game culture in reference to digital games, we recommend considering the ideas of Mäyrä (2008a). He claims that game studies should focus on the interaction between the game and the gamer and on the context resulting from this (similar to Juul 2005; Taylor 2006; Mortensen 2009). According to Crawford and Rutter (2006, 149–150), we can almost speak of a “cultural turn” in game studies: Digital games are “cultural artifacts which are given value, meaning and position through their production and use” (also see Squire 2002). The insight that digital games always relate to a real and concrete context is recorded by King and Krzywinska:

Gameplay does not exist in a vacuum, any more then games do as a whole. It is situated instead, within a matrix of potential meaning-creating frameworks. These can operate both at a local level, in the specific associations generated by a particular episode of gameplay and in the context of broader social, cultural and ideological resonances. (2006, 38)

Hence, digital game culture(s) refer to the many different ways and often highly sophisticated practices of the everyday use of digital games, the different related experiences, and their integration in the gamers’ everyday life (e.g., Butler 2007; Quandt 2010). Representing the findings of many other authors, Mäyrä identifies the analytic character of game cultures as specific *subcultures* of game appropriation (e.g., LAN gamers, modders):

Game cultures are often recognized as subcultures organized around games and playing, bringing together enthusiastic players who organize in their speech and behavior the meanings attached to these play forms. (2008a, 28)

In recent research, special attention has been given to the characteristics of digital game cultures, which Mäyrä (ibid., 25) describes as “rituals” – such as the many gaming events and the occurrence of community building at LAN parties or with online games, the thus following integration of the gaming experience into real-life contexts and the induced character of meaning of gaming (e.g., Jansz and Martens 2005; Wimmer et al. 2010; Götzenbrucker and Köhl 2009).⁵

Research into game culture in its role as an (often juvenile) subculture, however, neglects the “silent majority” of “casual gamers” and their gaming experience, since they do not show the characteristics of a subculture, but nevertheless account for the

⁵Further characteristics or manifestations of game subcultures are (1) “languages,” the respective sub-cultural use of certain terms and ways of interaction; (2) “artifacts” such as “original packed games, gaming devices, books, posters” that demonstrate an identification with the subculture; (3) “memorabilia,” souvenirs of individual or mutual gaming experiences; and (4) “shared places,” shared places of reflection and dialogue about the gaming experience, such as online discussion forums.

majority of gamers in our society (Quandt and Wimmer 2009). Then again, it must be kept in mind that the borders between the different forms of manifestation of game culture are not considered static but rather express the constantly moving and changing processes of meaning. This is a plausible reason for using the plural rather than the singular and thus heuristically referring to game cultures:

Rather than a single “game culture,” there are several of them, as visible and invisible sense-making structures that surface not only in games themselves, but in the language, practices, and sensibilities adopted and developed by groups and individuals. (Mäyrä 2006, 103)

Central dimensions of game cultures, beside the outlined subcultures in terms of game internal and external communities, are individual *gamer* cultures (e.g., specific gamer characteristics and their sometimes very sophisticated modes of game play), game *meta* cultures (e.g., fanzines or “*co-creative*” use of digital games, especially concerning technological aspects in terms of “poaching” or “modding” phenomena, etc.), and, on a social macro level, digital games as *cultural objects* (e.g., digital games as *brands* in the process of convergence of the entertainment industry, etc.) (see for details on this systematic Egenfeldt-Nielsen et al. 2008). Supporting this insight of the complex connections between game reality and societal reality, Hand and Moore point out the duality (Anthony Giddens) of game experience and game context in connection with game culture:

Digital gaming may be seen as both embedded within existing sociocultural frameworks (as “cultural artifacts”), and as enabling novel articulations of community and identity to emerge (as forms of “culture”). Digital gaming represents a distinct cultural form which at once problematizes current understandings of community and identity, and allows us to explore emerging patterns of community and identity formation. (2006, 180)

Hence, the different elements of the *processes of meaning* that distinguish the communicative phenomenon of digital gaming must be examined *holistically* when analyzing the social and cultural implications of digital games. Considering the circuit of media culture (du Gay 1997; Hepp 2008),⁶ we can identify two important analytical understandings: On the one hand, we see the process-like genesis of digital game cultures, and on the other hand, we acknowledge the constantly prevailing economic context of the gaming industry. To understand the genesis of digital game cultures, it helps to imagine the different, mostly mediated processes of articulation of (media) culture entangled in a circuit. Hepp (2008) distinguishes five different process elements:

- The level of (economic) (*re*)production of and within digital games describes the structures, methods, and processes of “producing” cultural products, especially in the gaming industry and consequently the field of game development.
- *Representation* refers to the articulation process that “illustrates” culture in cultural products. In digital games, this process usually depicts, for example, violence or

⁶This model puts the focus of observation on a better understanding of media culture, grasping media cultures as a collective phenomenon that is distinguished by the levels of media production, media content, their reception and adoption, and also their (political) regulation and identification.

gender roles in games, their attributed meaning by gamers, and also the portrayal of games and game cultures in the public discourse and mass media.

- *Regulation* covers the influence of nonproducing institutions and formations (e.g., politics) on (media) culture. In the case of digital games, this involves the legal regulation of game content or the determination of age limits for the protection of minors by the USK (German Self-Monitoring of Entertainment Software).
- *Appropriation* describes the process of actively embracing the culture in everyday life. A good example is the development of game-specific norms and rules within certain gaming communities, such as clans.
- *Identification* refers to the cultural process of articulation that describes the (continuous) process of constituting identity based on communicated patterns and discourses. The level is observable, for example, when members of a clan or a specific scene wear certain garments or use a special lingo in order to show the clan or scene membership and distinguish themselves from nonmembers.

As a second aspect, we point out that digital games and their game cultures can be examined individually, but can only be understood in their full complexity if they are observed in the context of a comprehensive process of changes that expresses itself in the ever-changing forms of media and communication. More precisely, especially digital games fit well into the context of the processes of mediatization, individualization, globalization, and commercialization that are currently reshaping society and our everyday life (for details, see Krotz 2007; for this basic argument, see Simon 2006; and for the WCG in particular, see Hutchins 2008). In fact, because of their development and appropriation contexts, digital games represent the ideal communicational manifestation and at the same time booster of these processes of social changes.

A good example for these rather abstract thoughts is demonstrated by the tension and apparent conflict between digital games as commercial products and their individual appropriation (e.g., Humphreys 2004; Kücklich 2009a). Commercialization can be understood as the interpenetration of economic and market values into game culture(s). For instance, Wark declares that digital games can constitute “primers in junk consumerism” especially for the youth, which is here understood as the main target group of the leisure industry (Wark 1994, as cited in Lister et al. 2008) (see also Meister et al., Chap. 19). The successful transmedial marketing of the computer game Pokémon serves as a prominent example. The employed methods that exploited naive traits of children’s game culture were strongly criticized: “The result is a particularly pure form of kiddie capitalism, in which acquisition is no longer just a means to further play, but the very essence of play itself” (Burkeman 2000, 2).⁷

Likewise, Kline et al. (2003) reckon that digital games seem like the “ideal commodity” of post-Fordist capital, exemplifying its digital production practices,

⁷Neither theoretically nor practically resolved is the issue how far the gamers’ power of individuality and creativity reaches. For example, Jessen demonstrated empirically that single player games such as *Tomb Raider* can be played in teams, which automatically prevents separation and isolation of the gamer: “Contrary to appearances, the computer and the games are absorbed into the existing children’s culture. This happens very much on that culture’s own terms – and often in ways that are quite contrary to the interests of the toy market” (1995, 6).

marketing techniques, and consumption habits that ideally integrate people into the “consumer society” (Bauman 2007). The computer gaming industry has grown enormously and quickly gained professionalism over the last few years (e.g., Kerr 2006). For example, the exorbitant economic potential that digital game culture promises to the organizers of the WCG is only indicated and well concealed on their home page. The exciting experiences in terms of a digital “world cultural festival,” however, are emphasized quite pretentiously as the essence and purpose of the WCG.

Case Study of World Cyber Games 2008: Distinctive Processes of Generating Meaning Within the Scope of Digital Game Cultures

In view of these obvious constellations of tension between game industry and game cultures, this chapter attempts to investigate the characteristics and different processes of articulation of publicly observable digital game culture(s) in the context of the WCG gaming event, as large gaming events such as the WCG provide our society with the opportunity to observe and experience game cultures. According to the specific processes of media culture (see section “[Digital Game Cultures in the Era of Mediatization and Commercialization](#)”), three concrete research questions were of particular interest to us: (1) *How were the WCG and connected game cultures staged?* The actions of the organizers and participants were recorded for the articulation process of *production* by conducting semi-structured interviews and engaging in participant observation. (2) *How were the (mediated) representations of the WCG and the connected game cultures?* The analysis of *representation* covers the organizers’ press work (press conferences, press releases, press statements, etc.) as well news coverage in newspapers, television, and online media, using both qualitative and quantitative content analysis. (3) *How was the reaction to the WCG and the connected game cultures?* The process of *appropriation* as the “embracing” of the WCG by the participants and guests was studied with semi-structured interviews and participant observation. The evaluation was conducted according to the standards of the grounded theory (Glaser and Strauss 1967).

Domestication of the Gaming Industry: The Production of the WCG and Its Perception by the Gamers

According to the organizers, more than 800 gamers⁸ from 78 countries attended the gaming event⁹ and tried their best in 14 computer games. Their performance was

⁸In contrast to the size of the audience, the proportion of female gamers at the WCG is negligible, clearly making the tournaments a male domain.

⁹About 1.6 million gamers are said to have competed in the preliminary rounds.

followed by nearly 500 journalists and more than 20,000 visitors. The Olympic Games serve as the explicit historical role model, trying to symbolize the “natural” development of sport towards e-sport (a central slogan of the WCG is “Evolution of Competition”). The organizers claim that a logo designed similar to the Olympics’ logo, an anthem (“Beyond the Game”), and a virtual Olympic Flame should promote the Olympic ideas of fair play, competition, and also friendship and intercultural communication.¹⁰

In contrast to this, the commercialization of the gaming experience becomes inevitably evident through the *monetization of gaming success*, as gamers have the chance to win relatively high prize money. Of course, the monetization of gaming success is a quite natural form of commercialization of sporting and gaming events – the Formula One or soccer and football leagues often provide much larger sums of prize money – and should not be understood as a characteristic only specific to digital game culture. Sponsoring is also fairly common, although *financial and/or logistic support* (e.g., in form technical equipment and computers) of the WCG and the participating teams has taken sponsoring to a new level. Nevertheless, officials and gamers perceived the intensive support by the gaming industry as “normal.” However, the influence of the sponsors should not be underestimated. *Samsung* as the main sponsor of the WCG at that time was strongly involved in deciding what was offered as prize money and which new games were chosen for contest. A good example is *Asphalt 3* that concurred with the marketing of a new cellular phone. A spokesman of WCG explained this *economization of the game selection* in the following way:

The most important factor is that there are players of the game. [...] Then there are other factors, such as how is the selection of a publisher? Are there updates [...]? If problems are noticed during the tournament, does the publisher react, or does he simply put the game on the market and say: In a year, there will be a follow-up, why should I make the effort to change anything? How is the portability, can I make the whole thing attractive alone, and inspire the audience? [...] there are new concepts such as *Guitar Hero*, there are new platforms using cell phones – we have to cover that, too.

Unlike other sporting events, the development of the computer games at the WCG is not based on tradition. Apparently, only games that have economic success are played.¹¹ Because participants, but also the hundred thousands of gamers at home, must purchase new game versions again and again to be able to continuously participate in the WCG, the game developer draws additional profit by *permanently updating* the game version. This can also lead to last-minute official announcements of the version to be played at the WCG, often only a few months prior to the event. In light of these circumstances, it seems quite logical that the marketing director of *Samsung* was one of the speakers at the opening ceremony.

¹⁰The rather superficial application of the symbols of the Olympic Games was vividly demonstrated when the digital flame was “extinguished” by a programming mistake and the display only showed the source, which did not provoke any remarkable reactions from the organizers, participants, or audience.

¹¹The following games were part of the WCG 2008: *Fifa Soccer 2008*, *Need for Speed: Pro Street*, *Command & Conquer 3: Kane’s Wrath*, *StarCraft: Brood War*, *WarCraft III: The Frozen Throne*, *Age of Empires III: The Asian Dynasties*, *Carom 3D*, *Red Stone*, *Virtua Fighter 5*, *Project Gotham Racing 4*, *Counter-Strike: 1.6*, *Halo 3*, *Guitar Hero 3*, and *Asphalt 3*.

Team sponsors provided the participants with traveling opportunities to the WCG and furthermore have strong influence in certain countries. For example, Pedro Sanchez¹² as an employee of *Samsung* is not only responsible for the Brazilian national soccer team as their team leader but also for the organization of the WCG in Brazil. He openly states the reason for the sponsorship: “We want to establish our brand among teenagers, so they remember it and still associate *Samsung* with the Games 5 years from now when they have greater spending power.” This statement clearly indicates the intention to *generate target groups* via sponsoring, i.e., acquiring new customers that are either part of the aspired target group or that could form a new one. The importance that generating target groups has to the business is not only understood by company representatives but also realized by visitors of the WCG, who do not show much concern about this practice – the following is typical of this attitude:

Well, I think this is exactly their target group. This makes it absolutely essential for them to be here. [...] Rather, I think it’s a problem for those companies that are not here. [...] Now we have about six stands from Samsung here that sell a bunch of electronics with a bunch of hostesses, that are very pretty by the way, and that doesn’t bother me at all. I mean, it’s the perfect place for them to put out their stuff. This is why I really don’t judge this at all. (Interview Jan-Hendrik, aged 25, mechanic)

This opinion is shared by a 20-year-old German student, who points out the necessity of sponsoring for realization of the WCG:

It is annoying, but the game is sponsored, too. So I’ll call it a tolerated downside. Because if it wasn’t like this, there would probably be no WCG or at least not on this scale. So I see it as a tolerated downside. (Interview Pia)

These statements demonstrate the tension between the WCG, digital game cultures, and sponsors. Without the financial and logistic support of the companies, the WCG would not take place at all or only on a limited scale, and the companies consider their support a profitable investment in the future. The participants of WCG see sponsoring as part of the gaming routine, or they show great understanding since the tournaments are only made possible by the cash and noncash benefits of the industry.

Branding E-Sport: The Media Representation of the WCG

As a second step, the focus is now laid on the different forms of mass media representation of the WCG. In this context, the term *media messages* refers to the journalistic range in the process of *cultural meaning production*, whereas meaning production was examined on two different levels: We studied the PR activity before and during the WCG for the level of production and the journalistic articles about the WCG for the level of representation.

¹²The names of the interview partners have been changed.

Communication Goals of the WCG Organizers

The communication goals mainly relate to the desired public image of the WCG. What image the participants and guests eventually perceived should be regarded independently (see section “[Domestication of the Gaming Industry: The Production of the WCG and Its Perception by the Gamers](#)”). Primarily, the organizers were concerned with drawing *parallels between e-sport and sport*. However, the issue was not to answer the question whether e-sport is considered a sport, since it is quite obvious that the parallels cannot be seen in the physical efforts of competitive athletes and e-athletes. The similarities are much rather in the structures. Especially, the professionalization of e-sport was highlighted by the PR agents: Psychological support, team building activities, and media training were part of the national team’s preparation and are deemed as resemblances to sport. It is not the primary idea to elevate computer gaming to a new discipline of sports, but rather to obtain a similar level of significance as compared to that of professional sports. This claim is further emphasized by the referral to the Olympic idea.

A second concern was to present the event as *entertainment for everyone*: entertainment through following the matches and the chance to go rock climbing or accomplish other sports. On site, however, the WCG seemed less like an open event for everyone. Rather, they appeared to be an insider event carried by sponsors and companies, directed at those who are considered members of the game culture surrounding the WCG. In contrast to the services offered to participants, there were no rest areas, catering services, or food courts for visitors, which also accounts for this impression. All in all, there were not many visitors, aside from the peak hours at weekends and for different gaming disciplines’ finals. Hence, the audience of the preliminary rounds was mainly composed of participants, representatives of the press, organizers, and security guards. This form of in-group orientation is also displayed by the circumstance that the rules of the different games were not explained or publicly posted, which gave nongamers no chance to really follow the tournaments’ progression and become enthralled by a game. At first glance, the participants and spectators often appeared indifferent to the games, which was usually due to their concentration, though, and did not mean they were not enthusiastic; they simply did not seem to openly show their excitement very often. This raises the general question if a visit to the WCG as a gaming event is addressed mainly to gamers and the affiliated e-sport culture, while the media coverage of the gaming event is clearly directed at the general public.

The focus on publicity also relies on a third vital goal of the PR managers: the *reduction of stereotypes* concerning digital games. By referring to the term “nerds” and often bringing computer games into connection with violence, particularly the German media coverage puts the subject “digital games” into a negative context: For the WCG 2008, this attitude should principally not even come begin to develop in the media. The press conference at the beginning of the WCG, a show that mainly consisted of an image film and stressed the already mentioned criteria of professionalization and economic relevance of e-sport, was held mainly for this purpose. When facing prejudice, the PR managers replied to it by referring to the multifaceted

character and the growing influence of games on our everyday life. On the one hand, this draws attention to the normality that digital games possess these days, and on the other hand, this serves to eliminate the cliché that computer gamers represent a homogenous group of male teenagers with behavioral disorders. The extraordinary effort in dealing with journalists was a main instrument that was used to avoid media stereotypes from the start. Numerous visits to editorial offices and interviews with the major media carriers were used to share information on the WCG that the PR staff considered most important.

Finally, the *establishment of a certain image* of the WCG as the fourth communication goal mainly consisted of the repeatedly accentuated *key figures of the WCG*. These key figures address the topics of internationality, transculturality, and profitability and represent the main facts that the media representatives and the audience should associate with the WCG. What image of the WCG was ultimately portrayed in the media coverage?

Journalistic Portrayal of the WCG

To demonstrate the effects of the intended communication goals on the media coverage, a qualitative selection was taken from the total of 1,731 TV, print, and online reports on the WCG that were published merely in November 2008. Three criteria were chosen for the selection: First of all, it should ideally represent the entire scope of the coverage of the WCG. Secondly, an interview with a PR manager already revealed which reports he regarded as very suitable and which ones did not adequately reflect the communication goals from his point of view. Thirdly, regional daily newspapers as well as national quality newspapers were included in the selection. From these articles, four basic medial messages could be determined:

The WCG were firstly described as a *sporting event* – for example, by calling them “the Olympic computer games” (*Süddeutsche Zeitung*, 10 Nov. 2008), “the world championship of the virtual athletes” (*Neue Zürcher Zeitung*, 11 Nov. 2008), “a sort of world cup for computer games” (*die tageszeitung*, 11 Nov. 2008), or by comparison to sports (“The WCG are for computer gamers what the Olympic Games are for athletes,” *Weser Kurier*, 13 Nov. 2008).¹³ To describe the WCG, *all* articles refer to the figures provided by the PR staff (800 gamers from 78 countries, prize money worth half a million US dollars). Furthermore, the professionalization of the event is portrayed by drawing parallels to events of professional sports (national teams, flags, tracksuits, anthems, and support staff) and listing the range of media at the WCG (300 PCs, 42 game consoles, loud music, stage shows, presentations, and large projection screens). Additionally, the commercialization factor and the increasing influence of sponsoring are mentioned in the *Süddeutsche Zeitung* and *die tageszeitung* as a consequence of the professionalization of digital game cultures (e.g., by stating that despite high popularity, games of *Nintendo* were not played).

¹³Quotations from German newspapers have been translated into English by the author.

A second central message, discussed in every article to a greater or lesser extent, is the *question whether e-sport can be established as a professional sport* in Europe. It is initiated, for example, by comparison to South Korea, where “computer gaming has been an accepted sport for ages” (*Süddeutsche Zeitung*, 09 Nov. 2008) and the participants “play in stadiums, idolized by fans and earning hundreds of thousands of dollars with computer gaming” (*Der Tagesspiegel*, 07.11.2008).

A third characteristic is that the *WCG are used as an occasion* to discuss general issues such as the increased propensity to violence or to resort to clichés such as the accusation that all computer gamers are supposedly “nerds.” In all articles, the previously prevailing critical perspective on digital games is debated in favor of continued establishment and further acceptance of digital gaming as a new sport phenomenon. This is either portrayed by quoting gamers – “There is false prejudice towards us gamers [...]. We are talkative people, and gaming even encourages interaction among one another” (*Weser Kurier*, 06 Nov. 2008) – or by explaining that gamers “are not lonely basement dwellers, but much rather ambitious and professional athletes” (*Süddeutsche Zeitung*, 17 Oct. 2008). An exception, however, is an article in the *Berlin Tagesspiegel*. Here, the critical perspective on e-sport and shooter games is backed by an expert opinion, quoting the psychologist who supervised the German team. She “questions games such as *Counter-Strike*: ‘They do not have a calming effect’” (*Tagesspiegel*, 07 Nov. 2008).

Finally, *digital games* are described as *tasks* that require *sophisticated and sometimes highly complex patterns of action*. For that matter, the media primarily presents detailed descriptions of the coordination effort between body and virtual gaming environment: “Their hand-eye-coordination would please a bomber pilot; their fingers move across the keyboard and controller like the tentacles of a squid [...]” (*Süddeutsche Zeitung*, 09 Nov. 2008).

In general, the communication goals aspired to can be found in the media coverage. The key figures provided by the PR staff are restated in almost all articles and consequently provide the most essential points of reference. The bottom line is that this helped achieve an additional communication goal of PR, with the WCG giving the debate on digital games a more candid frame that is less biased than the previous line of discussion that was strongly influenced by stereotypes. Nevertheless, the coverage does not neglect a critical assessment of, for example, the correlation between ego shooters and violence. But all in all, the parallels to sports and the Olympic Games put the event in a professional perspective. If the WCG can ultimately be regarded as a sporting event turns out to be a rather sketchy issue, which is also indicated by the articles’ publishing in strongly varying sections of the newspapers examined.

“A Time to Make Friends”: (Trans)National Meaning Dimensions of Adopting the Gaming Event WCG

Because of the communicational transmission process of online games, digital game cultures intrinsically have a strongly transnational character that, as mentioned

earlier, is emphasized quite pretentiously by the WCG-PR. At the same time, constant territorial identification also takes place at the gaming event, revealing symbolic points of national reference such as flags and anthems at the opening ceremony of the WCG. Considering that the WCG was designed by a marketing agency in cooperation with a corporate client and is not an “ethnic” development originating from digital games culture, it needs to be investigated whether the organizers’ confident proclamation of the WCG as a global gaming event actually met the final perception of the games. The examination of the interviews and the participant observation provide indications of the various overlapping *local*, *national*, and *global* meaning dimensions.

Clearly distinguishable is the strong *national identification* on the part of the gamers. On the one hand, there are a large number of gamers, from a whole range of countries, making friends with each other in the youth hostels of Cologne, while on the other hand, there are always nations competing against each other. The gamers see the WCG in this context: They are proud to be able to represent their country – as exemplarily explained by the Brazilian gamer Gabriel: “Yes. This makes me proud. Especially because Brazilians have a bad image and reputation everywhere. I am a patriot. Brazil is Brazil.” All gamers welcome the creation of national teams in lieu of the usually typical transnational teams or clans, claiming that the *competition of nations* makes the WCG an event of particular importance. The orientation on the Olympics was consequently not just a predefined marketing strategy but also a concept that the gamers already identified as an element of their game culture.

However, the organizers now try to gently moderate this perception: It is not the nations that compete, but rather the larger geographic-cultural areas, which are also represented in the logo’s coloring. By using slogans like “crossing barriers” and “feel and enjoy,” the organizers attempt to create the feeling of a large, transnational community that celebrates success, but also has fun in doing so.

This basic tension of the WCG becomes apparent in a number of *country-specific biases* of both the native and international guests. This is demonstrated in the following example. Several interview partners, especially those from countries other than Germany, strongly criticized the German organization. Many expected that the Germans would organize the WCG perfectly and were disappointed that there were mistakes. Others complained that the organizers and the city of Cologne did not take into consideration the international guests and only commented on the games in German, or that mainly the German participants were given the chance to play on the privileged main stage. These biases not only refer to the atmosphere and organization but also to the gaming manner in general. For example, the Koreans were often described as exceptionally “masterly” in gaming:

In Brazil, many gamers are good at Need for Speed and Carom3D. They also play Fifa well, but loose when it comes to concentration. The Brazilians are strongly influenced by their surroundings, while Europeans seem rather cold and the Koreans don’t show what they feel. If a Brazilian loses a game move, he shakes his head. (Pablo Soares, Brazilian gamer)

Conclusion: Digital Game Cultures from a Research Perspective

Debord stated – as early as 1954 (2000) – that the problem of late capitalism will not be labor; its problem will be the advantages of spare time. For him not only bread must be a staple but also games. However, what happens if these games remain completely in the hands of industry? For Debord, it was definite that if someone else takes an oar into his hands, and in particular from below, the exploitation then depends not only on the working conditions but also on the gaining of free time – even by means of manipulation and unification of a certain giant leisure industry, which he calls “spectacle.”

Digital games gain more and more influence on the contemporary leisure industry. This analysis is hence dedicated to the cultural practices of digital games. To understand the genesis of digital game cultures, it helps to imagine the different, mostly mediated processes of articulation of game culture attributes entangled in a circuit (production, representation, regulation, appropriation, and identification). Starting with this analytical grid, this analysis relates not only to the particular structural (objective) meaning of the “spectacle” WCG and the inherent game culture(s) in the game industry but also to the most individual (subjective) meaning of this spectacle in the area of game appropriation. The WCG example demonstrates that digital game cultures nowadays refer strongly to the fields of identity, characterized by a complicated interdependence of both deterritorializing and reterritorializing effects (Morley and Robins 1995). While the WCG took place on site as a gigantic LAN, the tournament’s official games such as *Command & Conquer 3* or *Counter-Strike* are played worldwide daily by thousands and thousands of gamers in their spare time. The experience of individual gaming in a local and everyday context is structurally connected to a transnational and highly commodified game system. Nevertheless, the reputation of the WCG as an authentic place of digital game culture has hardly been tarnished by the increasing commercialization. Quite the opposite, for many gamers, this process is a sign of social acceptance and establishment of gaming. Apparently, they have become accustomed to the role of the entertainment industry in everyday routine of gaming. Interestingly, we witnessed no sign of creative play or other forms of bottom-up game cultures like modding, etc., during the WCG. But this fact could be explained through the strong competition character of the WCG and the process of self-selection of the participants. Also, the very successful public branding of gaming as e-sport does not leave much room for the other very versatile and complex forms of digital game cultures and their relevance to the gamers, either in context of the WCG or the current public debate.

These research results presented here as examples should indicate that the consideration of the manifold, mostly communicatively expressed digital game culture(s), can contribute an enormously productive, outright necessary change of perspective to the often small-minded and populist public debate on computer games. The fact that digital games should be seen as a special form of media entertainment, which

does not occur outside everyday life, seems decisive. Due to their interactivity, especially online games are strongly embedded into social interrelations and cultural practices, through which they win valence and significance without ever losing their character as economic (media) products (see, e.g., Kerr 2006).

To conclude, it seems appropriate to plead for the identification of additional dichotomous analytical approaches and to promote the approach to digital games in two dimensions: (1) with regard to content, as continued analysis of both the daily use and the quality of experience of gaming or rather the interaction between game and gamer in the context of different digital game cultures, and (2) concerning the methodology, in the form of a synthesis of the different qualitative and quantitative approaches to game analysis.

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Part V
Educational Approaches and Learning

Chapter 34

Social Interactions in Virtual Worlds: Patterns and Profiles of Tween Relationship Play

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Introduction

Online games and virtual worlds have become popular entertainment media for millions of adults, youth, and children. The time spent online in company with others addresses not only leisure needs but increasingly also social needs. This was best captured in Gee's (2003) description of game players' bonding in affinity groups because of their shared interest in the game. Most gaming studies have focused on college youth and adults while largely ignoring younger players. Yet even a casual observer will notice how rapidly teens have adopted social networking sites like *MySpace* (2003) and *Friendster* (2002) as their own for continuing friendships and developing casual relationships (Buckingham and Willett 2006; Mazzarella 2005). Researcher Danah Boyd suggests that one attraction of these sites is that they "provid[e] teens with a space to work out identity and status, make sense of cultural cues, and negotiate public life" (Boyd 2008). Virtual worlds offer many of the same benefits but, in addition, provide an imaginary space in which players can engage with others (Thomas and Brown 2007), a feature that makes them particularly suitable for relationship play.

This chapter will focus on the importance of relationship play in *Whyville.net* (1999), a tween virtual world devoted to engaging players in constructive educational activities and promoting socially responsible behavior. Using log files

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covering a 6-month time period from online and an after-school clubhouse, we describe the different types of play within *Whyville*. This includes identifying the key categories of *Whyville* gameplay and social interactions, exploring gender differences (or lack thereof), and describing general participation patterns as well as providing specific case studies representing different player types. Furthermore, this chapter will delve into the development of relationship play, in particular how tweens learn about and engage in flirting and dating practices and how they deal with risk and safety issues involved with online solicitation.

Background

Online activities are now seen as essential parts of youth life that bridge the relationships across online and offline spaces: School friends often meet online after school and in the evening, while individuals who meet online, often through an offline friend or family member, frequently talk on the phone or meet each other in person (Gross 2004; Lenhart et al. 2007, 2008; Roberts et al. 2007, 1999). Researchers now recognize that youth also use these spaces to build closer relationships with one's same-sex peers and to begin having romantic relationships. Wolak and colleagues (Wolak et al. 2002) found that 14% of the youth surveyed reported close online relationships and another 2% reported romantic relationships. Subrahmayam and Greenfield (2008) further suggest that teens, already concerned with finding a romantic partner, "address this need more freely and frequently in a virtual communication environment than has been heretofore possible in the 'real' world." In a study of conversations in a teen chat room, Subrahmanyam et al. (2004) found that participants tackled many of the developmental tasks of their offline lives online, but with some important differences. They suggest that the anonymity of the Internet and the lack of physical bodies allow youth, in particular girls, to be more free both in what they say and to whom they say it, as well as in their exploration of gendered and sexualized identities. The "cyber pickup" phenomenon and the importance of the "a/s/l" (age/sex/location) code in relation to pairing off is representative of what adolescents would do offline.

Most of the findings we discussed above have been studied with adolescents 14–18 years old though two trends suggest that we need to examine younger age groups as well. The first trend is based on researchers' observations that many adolescents today enter puberty at a much younger age than in previous generations. Tweens, a term referring to young people *between* 10 and 13 years old, straddle the boundaries between childhood and adolescence. Yet few of the existing research studies have covered this particular age group. A second trend is based on observations that many online spaces have opened up for younger players than in the previous decade. *Toontown* (2003), *Club Penguin* (2005), and *Neopets* (1999) (to name but a few) are aimed at younger players, and millions of them have joined these places to hang out with each other. We know little, if anything, concerning what tweens do on these sites because most of the existing research has focused on older players. From our previous research on *Whyville*,

we know that tweens spend most of their time in virtual worlds socializing with one another and engaged in identity play (with their avatars as the vehicle for these explorations). Beyond these central activities, players develop niches depending on their interests and levels of expertise. Often, girls and boys played in same-sex groupings, but sometimes came together, as evidenced in the diffusion of teleporting and projectile throwing practices through the after-school gaming club (Fields and Kafai 2009, 2010; Kafai 2008).

Thorne's research (1993/1998) on the gender separation of boys and girls of tween age provided us with a better understanding of how boys and girls might occupy these virtual spaces. Thorne observed that boys and girls, especially in spaces like the lunchroom and the playground, tended to separate themselves on the basis of gender, but sometimes also came together. The notion of "borderwork," or what she called "the interactions across gender boundaries," allowed us to understand how gender relations among children are produced in particular social spaces at particular times. For example, the playground and the lunchroom were notable spaces where gender play occurred because of the ways in which gendered social relations developed in spite of a relative lack of adult intervention or supervision. These findings are especially relevant for our research because virtual worlds offer a similarly low level of adult involvement. But most pertinent are Thorne's observations on how sexual meanings infuse cross-gender chasing, kissing, and pollution games that not only search out but also recoil from physical proximity. She argued that it is exactly these very "ambiguities of borderwork [that] allow the signaling of sexual or romantic meanings" (Thorne 1993/1998). As tweens transition from childhood into adolescence, they begin to establish themselves as romantic or sexual actors, and dating relationships become central activities anticipatory of the more full-fledged versions in high school years.

Our goal in this investigation is to examine how tweens have moved their flirting and dating games from the playground into the spaces of virtual worlds. In tracing their online gameplay, we first look at types of gameplay and participation patterns common among all players within *Whyville*. This includes all aspects of play within a website and identifying the importance of casual and multiplayer games, economically motivated activities, avatar construction, and public and private forms of online communications. We then focus on the emergence of relationship play (flirting, dating, brevity of online courtships) through detailed analyses of log files and after-school club interactions.

Context, Participants, and Methods

The data for our study came from an investigation of a tween virtual world, called *Whyville.net*. In *Whyville*, citizens play casual science games in order to earn a virtual salary (in "clams"), which they can then spend on buying and designing parts for their avatars (virtual characters), projectiles to throw at other users, and other goods. The general consensus among Whyvillians (the citizens of the virtual community of *Whyville*) is that earning a good salary and thus procuring a large number of clams to

spend on face parts or other goods is essential for the primary desire of Whyvillians, developing relationships. We collected log files of 595 participants over 6 months' participation in *Whyville* from January to June 2005. As a subset of data collection, in early 2005, we set up an after-school club where 21 tweens in the fourth to sixth grades (9–12 years old) came to play on *Whyville* for an hour most days after school. Most youth were new to *Whyville*; so learning to participate in the site was a common (if tacit) goal. Because of this, we selected six case studies for detailed investigations from the club members, knowing that we could see their first 6 months of development in participating on *Whyville*, including their discovery, learning, and changing participation in flirting and dating practices. Our analyses are supplemented by hundreds of hours of our own play on *Whyville* over the past several years.

Online Participation: Quantitative Analysis

The primary data used to construct participation summary overviews, player profiles, and word counts were based on log files. These log files consist of over 7 million data points indicating location visits and activities over a 6-month time period (approximately 26 weeks). In order to look at individual patterns of participation within *Whyville*, we created 13 categories of locations and activities: (1) ymail – e-mail, (2) Whypox – Whypox-related activities, (3) whisper – private chatting, (4) social – social activities, (5) multigam – multiplayer gaming, (6) misc – miscellaneous activities, (7) info-com – information seeking, (8) house – house construction games, (9) games – games for salary, (10) face – avatar-related activities, (11) economic – economic activities, (12) chat, and (13) BBS – bulletin board reading or posting. Because player participation in each of these categories ranged from 0 to 92,407 visits or clicks over 6 months, raw and standardized number (mean=0 and SD=1) of visits were used in various analyses to simplify interpretation. Raw numbers were used to describe player participation among the 13 categories. To create and identify player profiles, or groups of similar players, we used standardized numbers in a two-step cluster analysis. Positive standardized values indicate greater than average (50th percentile) participation, while negative values indicate less than average (50th percentile) participation. This analysis has all the features of traditional cluster analysis (e.g., k-means approach; model fit criteria based on log-likelihood distance and Bayesian criteria).

Online Participation: Qualitative Analysis

To begin to understand players' differential participation more closely in *Whyville*, we chose three girls and three boys from the after-school club as case studies, choosing two players (one girl and one boy) from each of the three categories generated by the cluster analysis. We isolated their log files and, by going click by click

through the data, created minute-by-minute then daily narratives that noted patterns and developments in participation. Each line of the log files contained username, time stamp, location, and, if applicable, chat or whisper text. The lines ranged from 15,000 to 54,000 for the case studies, demonstrating a range of participation. Because of the labor intensity of this process, we sampled by selecting the first seven days of a player's *Whyville* life to see the initial developments then sampled every 5 or 6 days across the 6 months of participation, a total of about 30 days (see Fields and Kafai [in press](#) for a detailed look at one player).

Findings

As it turns out, learning how to participate in virtual worlds is no trivial matter. Whyvillians have to master avatar design (Feldon and Kafai 2008; Fields and Kafai [in press](#); Kafai et al. 2010b) and deal with issues of ethnic representation and social activism (Kafai et al. 2010a). Peer-to-peer learning is how many participants learn how to navigate virtual worlds, online and offline (Fields and Kafai 2009, 2010). On a typical day, Whyvillians log into *Whyville*, engage in various activities, and visit different locations. They can check their ymail (e-mail) accounts, participate in various science focused games to boost their virtual salary in “clams,” read articles posted and written by other members of the community, and visit popular locations, such as the virtual beach or moon, to interact with other players.

Throughout this process, social interactions are prominent. From a player learning the eyes and ears of avatar construction to teleporting to secret locations, information is shared among users. In addition, online resources, such as *The Whyville Times* and online bulletin boards, are rich sources for players to read and share information about how to survive in *Whyville*. Kafai et al. (2010c) identify 51 articles written by other Whyvillians about the importance of avatar appearance, how to distinguish between real-life and virtual dating practices, and the importance of remaining safe while engaging in online flirting and dating. From previous word frequency analyses, we know that terms associated with discourses of flirting and romance such as love/luv, kiss/kisses, bf (boyfriend), gf (girlfriend), and m/o or mo (make out) are popular (*ibid.*). Expanding on these findings, we describe in more detail patterns and variation in social interactions oriented around flirting.

Player Participation

Working in collaboration with Numedeeon, the company that hosts *Whyville*, we collected and analyzed tracking data for 595 recruited players to study their travels and activities in *Whyville*. Using these 13 categories of activities and locations, we examined the raw number of times players participated in each category (see Table 34.1). In general, public chatting, avatar-related activities, and socializing

Table 34.1 Descriptive data (means and standard deviations) and *t* tests among the 13 *Whyville* categories of activities

Categories	Overall		Girls (<i>N</i> =462)		Boys (<i>N</i> =219)		<i>t</i> -test
	Mean	SD	Mean	SD	Mean	SD	
Chat	6,209.85	11,822.87	6,670.59	11,993.56	6,913.64	12,679.61	-0.48
Face	3,714.41	5,359.62	4,074.40	4,798.74	3,851.47	6,638.31	0.42
ymail	3,159.89	4,502.16	3,581.21	4,875.54	2,958.65	3,757.85	1.49
Social	1,609.06	2,332.00	1,702.85	2,246.88	1,796.82	2,625.32	-0.79
Misc	679.53	2344.28	718.67	2515.26	763.40	2,283.26	-0.18
Economic	670.25	991.49	649.63	815.30	877.11	1,327.27	-3.15*
Whisper	574.65	1,277.84	597.89	1,170.97	693.56	1,600.27	-0.73
Game	548.06	649.32	518.47	561.66	728.25	777.62	3.45**
BBS	373.98	1,733.01	460.87	2,044.27	298.73	1,162.17	1.04
info_com	370.75	857.97	400.35	869.22	400.45	933.73	0.11
Multigam	182.41	621.77	136.13	391.84	318.69	976.98	-3.55**
House	155.01	256.98	155.09	221.82	187.11	326.99	-1.30
Whypox	38.02	37.92	36.68	28.66	47.21	50.80	-2.89*

Note: * $p < .01$; ** $p < .001$. Results were based on independent sample *t* test and were replicated using negative binomial regression

in public spaces were the most popular activities representing the core aspects of *Whyville* gameplay. There were only four significant differences in participation between girl and boy Whyvillians across the 13 categories. Compared to girls, boys participated significantly more in the economic, gaming, multiplayer gaming, and Whypox-related aspects of *Whyville*. Given the scope of the data, these significances were relatively small. For instance, the greatest differences between boys and girls were in economic gameplay and multiplayer gaming (which was roughly 180 clicks over a 6-month period or less than one click per day).

Player Profiles

Results from the two-step cluster analysis (via SPSS) identified three mutually exclusive groups of *Whyville* players as the best model fit for the data. The leveling off in terms of the ratio of change in BIC values after the 3-cluster model suggests subsequent models do not provide better fit or additional information. In addition, models with fewer or greater than 3 clusters are less interpretable and distinctive. Figure 34.1 showcases the distribution of three clusters that we named core, semicore, and peripheral gamers.

The groups showed distinct differences in their respective profiles (see Fig. 34.2). Peripheral gamers (59% of players) were the most limited in their *Whyville* participation and showed little more than a passing interest. This can be shown by their below average participation across the 13 categories. The semicore gamers (34%)

Fig. 34.1 Percentage breakdown of player groups

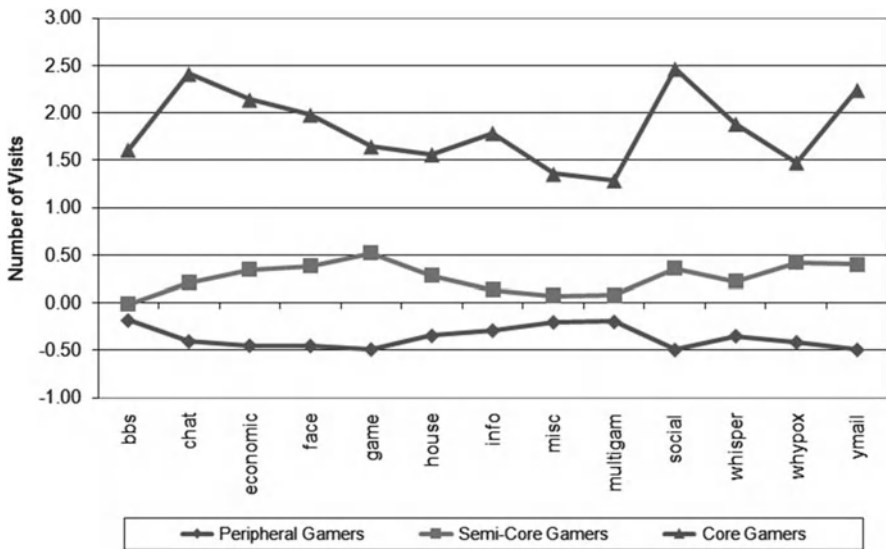
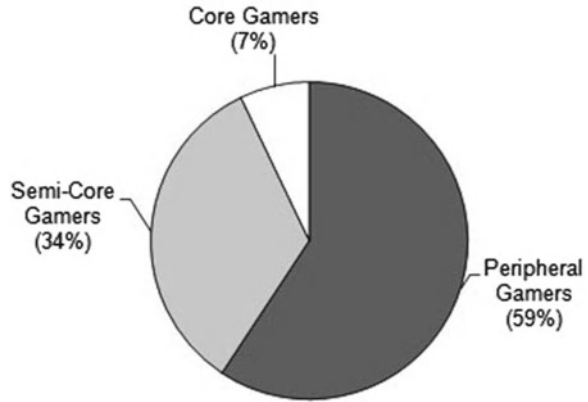


Fig. 34.2 Player profiles (Note: All location counts were standardized with an $M=0$ (representing the 50th percentile of the sample) and an $SD=1$. Positive values indicate group means greater than the 50th percentile, whereas negative values indicate group means less than the 50th percentile of the sample)

were the “average gamer,” and were relatively active participants in all aspects of *Whyville*, with key focuses on game, Whypox, and ymail as well as face, economic, and social categories. The core gamers (7%) were the most heavily involved Whyvillians across all 13 categories, with particular involvement in the core social aspects of the virtual world (i.e., social, chat, ymail, whisper) as well as economic and face locations. In addition, chi-square test for independent samples also confirmed no gender differences within the 3 clusters, $\chi^2(2) = 1.69, p = .43$. In short, the

cluster analysis identified three types of participant profiles that were similar among boys or girls. Separate cluster analyses for boys and girls revealed similar results. This leaves us to study what kinds of differences we might find at a more qualitative level of analysis through our case studies of three girls, one from each cluster of participation.

Patterns of Relationship Play

In examining the case studies of six players (three boys and three girls), we discovered commonalities in their flirting relationship play, despite their varying levels of engagement with *Whyville*. In particular, we observed a common pattern their romantic relationships followed (in these three case studies, all of these involved members of the opposite sex). They progressed from an initial, typically public, solicitation to a more private follow-up and, rarely, a longer-term commitment to one another.

The initial solicitation of a relationship with the opposite sex usually took place at one of the popular, crowded areas of *Whyville* such as the “Beach” or “Sector Y,” though we sometimes observed similar behaviors in less crowded areas. Often, the individual seeking a relationship publicly expressed interest by asking other people to say if they were single, asking others to affirm his/her good looks, or asking for more information about the other Whyvillians present. For instance, a player might say, “123 if ur single” and other players would respond with “123” or whatever number combination was suggested. Similarly, a player might say “555 if im hot” (a variation of the “beauty contest” genre of interaction in *Whyville*), to which people respond “555” if they agree. Finally, a player might say “a/s/l” (see Subrahmanyam et al. 2004), to which other players respond by giving their age, gender, and general area of where they live (large city, state, or country), as in 12/F/LA or 13/M/USA. Among our case studies, we noticed that players often lied about their age in these circumstances, giving ages of 13+. Apparently, being a teenager is seen as more acceptable for dating than being of ages 9–12.

This pattern of solicitation was also conducted more privately through whispering (private person-to-person chat) or at least through chat directed to particular individuals. Often, Whyvillians will go to a crowded chat space and spam other users – going from one individual to the next saying “r u single” or other similar pickup line (listed above). Also, in the 2005 and 2008 after-school gaming clubs, we observed girl players offering boys money (in “clams”) if they became their boy-friends (bf). This happened to one of the case study players (notably, we never observed a boy offering a girl money for the same reason). While it is less common than the spamming pickup lines, it did happen consistently to kids (and adults) who were “boys” on *Whyville* in both clubs. We believe that this is because there are far more girls than boys on *Whyville*, and boys, therefore, are more sought after for relationships. A final means of directly soliciting particular individuals in flirtatious

encounters is throwing projectiles – particularly hearts or kisses (Fields and Kafai 2010). After buying projectiles at the shop, a heart or kiss may be thrown at a specific individual to solicit a response.

Once flirtations were solicited in public or private, and someone responded by giving the affirmative that they were single, someone hot, a/s/l, or by throwing a heart projectile back, then the flirtation reached a new stage: the follow-up. While there were several ways to follow up a relationship, almost all included relocating to a more private space: going away from the crowded, populated area of solicitation to a more private place – often a planetary location such as the Moon, Mars, or Saturn. Even though maintaining a private conversation was easily possible in a public area by whispering, players preferred to move to a quieter space to chat. These conversations included discussions of shared interests and often drew to a close with a declaration of feelings for one another, such as “I love you” or “I really like you.” Sometimes, before the conversation ended, one person may ask “r we bf/gf?” in an attempt to confirm the status of the relationship. If all went well for the new couple, the flirtation/relationship might be extended through *Whyville*’s version of physical contact – avatars standing next to each other (akin to cuddling or holding hands) or avatars standing so close together they look like they are partially on top of one another (akin to kissing). Sometimes, there would be a discussion about making out (“do u want to m/o with me?”), but it typically went no further than placing the two avatars very close together – Whyvillians do not tend to role play.

Coordinated dancing is also a way to virtually “touch” an avatar, a stronger statement of intimacy. A simple dance where two avatars moved up and down with a slight bounce in synchronized motion was one form of this. Interestingly, dancing in sync is relatively difficult in *Whyville*. Players must use their understanding of graphing (math) and timing to design dances in the dance studio, where dances are built by choosing a “step” (a movement from one point to another on an x-y coordinate graph) with how many seconds each “step” will last. It costs money to make a dance, and each dance is given a name by the Whyvillian designer. To dance at the same time means that both avatars must type “dance bop” (or “dance waltz,” “dance ___”) and press return at the same time. So in some ways, being intimate on *Whyville* is a complicated procedure.

Though we found further continuation of a relationship after an initial get-together rare when a “relationship” continued beyond the initial solicitation and follow-up stage, ymail was the preferred means of communication, extending the interaction from synchronous to asynchronous chat. The exchange of gifts is also part of solidifying a *Whyville* relationship. For instance, it was common for the boys in our 2005 after-school club to give gifts to their girlfriends (usually some jewelry face parts like a necklace or earrings). When asked what it means to have a girlfriend on *Whyville*, one boy responded, “You give them stuff.” In some cases, the relationship also extended outside of *Whyville* by exchanging IM names and, in one rare instance, an exchange of phone numbers.

In spite of these rare instances where relationships extend beyond an initial flirtation and a follow-up, our case studies did not reveal many “dating relationships”

lasting more than a few days, reconfirming Thorne's (1993/1998) offline observations that gendered borderwork was short and playful. In fact, dating in *Whyville* was generally seen as a casual thing – many players commonly had more than one girlfriend or boyfriend at a time. In our 2005 club, having multiple girlfriends was a topic of great interest for the boys, emphasizing the triviality of the relationships. Having a boyfriend or girlfriend in *Whyville* was usually more about achievement than intimacy. In researching the case studies, both boys and girls moved from one flirtation to another with few breaks in between. If an affirmation of being bf/gf were given (often the situation implies that such a pronouncement was made), it did not seem to affect future spamming pickup lines to others. Certainly, individuals sometimes said, in response to someone else's solicitation, that they were not single. However, this seems to have been more to discourage an individual than actual "truth" – minutes or hours later, they would engage flirtatiously with someone else.

Discussion

Our investigations of tween flirting and dating practices in *Whyville* suggest that virtual worlds evolve to provide opportunities for relationships play beyond casual gaming and the social interactions nested within gameplay (Thimm, Chap. 11; Keilhauer, Chap. 20). Similar to computer and console-based digital games, *Whyville* players begin by working through gameplay at the individual and group levels. This requires players to decode progressively complex science-based games, explore numerous virtual environments, and strategize to solve casual single- or multiplayer games (for more details, see Kafai and Giang 2008). In addition, *Whyville* functions as an informal learning experience with games that involve interaction among all community members (e.g., the spread and tracking of a virtual infectious disease; Kafai et al. 2007). Throughout this process, social interactions begin to evolve beyond the initial intent of the game designer (Wolf, Chap. 35). This illustrates the need for gaming researchers to consider these aspects of relationship development in their analyses and designs.

Within *Whyville*, the analyses of participation patterns and profiles identified player types that were consistent with digital game research (Wolf, *ibid.*). However, the importance of social encounters across casual to heavy gamers prevailed. An in-depth look at log files and cases studies reveals the magnitude of flirtatious behavior we observed in *Whyville* to be extensive. The flirting seemed to stay on a surface level and imitate popular models and discourse of flirting such as pickup lines, *a/s/l*, and so on. Even if players do move beyond these casual flirtations, they generally stay at the level of lighthearted conversations.

As Thorne (1993/1998) observed, sexual meanings often underlie many aspects of gender play on playgrounds, schoolyards, lunchrooms, and classrooms before they become embodied in social relations in adolescence. We did not have room in this chapter to detail the case studies that provided the foundation for our summaries

of flirting and dating. The three boys and girls, ranging in their virtual world participation from core to peripheral players, displayed considerable variety in their explorations of romance, both in the amount of flirting they engaged in (from light and infrequent to nearly continual flirting) and in the continuity of flirting (players changed their practices over months of participation). This variation occurred regardless of player participation type (core, semicore, peripheral) and should not come as a surprise given the transitional status of our tween players moving from childhood into adolescence.

At this point, our analyses were more descriptive, trying to map out the territory of flirting and dating practices and public commentaries of tweens in one virtual world given the absence of other research and the dramatized public discourse around it (Cassell and Cramer 2008). We acknowledge several limitations of our findings. For one, the methodology employed in log file analysis, particularly the qualitative analysis, is relatively new (Fields and Kafai 2009). Our methods in this chapter could be viewed as a trial of new qualitative analyses of log files versus other methods such as ethnography (Boellstorff 2008; Taylor 2006). While our methods provided detailed views of several participants' *Whyville* activities and a large database of word frequencies, allowing us to go beyond self-reports, the findings are limited in other ways. For instance, the log files only provide one-sided conversations recorded by individual usernames. Thus, reading the logs was often like listening to a one-sided telephone conversation. While this mattered less for the word frequencies, it meant that we had to use some inference in regard to the individual participants' flirting encounters, including when a flirtation started, who initiated it, and what the response was. Further, we do not have all of the participating members' online data. For instance, we do not have screenshots of their movements (to see how "intimate" interactions emerge among avatars) or ymail e-mails (to document aspects of romantic relationship beyond initial flirting). These issues limit the application of our findings given that they were collected in one particular virtual world at one particular period of time. We need more extensive studies that capture flirting and other relationship activities in the moment and across time.

These findings suggest that we need to think more carefully about the management and support of tweens in these situations and suggest opportunities for further outreach. It is evident from our results that tweens turn to online places such as virtual worlds to explore and experiment with relationships, and we do have plausible explanations why it makes sense for them to do so. We also know from related research that tweens turn online to find out about reproductive health information because they do not feel comfortable to discuss their concerns and questions with health professionals, and their parents often do not provide enough information. Indeed, teens and tweens receive most of their health-related information from peers. Virtual worlds then could become promising access points for information about methods of prevention and sexual reproduction and provide a forum for discussion of issues relevant to them. Participation in online games such as virtual epidemics (Kafai et al. 2007) could help them understand the dynamics of transmission for STDs.

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Games, Virtual Worlds, and Social Networks

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Chapter 35

The Instructional Design and Motivational Mechanisms of *World of Warcraft*

Karsten D. Wolf

Introduction

Massively, multiplayer online role-playing games (MMORPG) have become very popular in the past few years. In the year 2005, there were only 2.5 million subscribers of MMORPG worldwide (Woodcock-Sterling 2008). Three years later, the most successful MMORPG, *World of Warcraft* (WoW), garnered 11.5 million paying subscribers¹ alone. While these games have pioneered online gaming using the Internet, networked gaming such as so-called browser games (games played with a web client) and LAN gaming (LAN, local area network; playing multi-user games against other players) have become mainstream in many videogame genres. An emerging trend is so-called social games played in online networks such as *FarmVille*. The JIM study 2008 (MPFS 2008) reports that 24% of German 12–19-year-old boys (2004: 14%) play online games daily or several times a week and 33% play multi-user games. Nine percent mention *World of Warcraft* as their favourite game. There is a strong gender difference though: the numbers for German girls in the same age group are much lower (7% play online games and 4% play multi-user games frequently). The trend for online gaming is further strengthened by the online support in the latest generation of home video consoles such as Nintendo Wii, Sony Playstation 3 or Microsoft Xbox 360, as well as handheld consoles (Nintendo DS, Sony PSP) and new smartphone generations (Apple iPhone, Google Android).

In terms of user engagement and playtime, several studies have reported that especially MMORPG often lead to excessive usage hours (Cypra 2005; Yee 2006;

¹Blizzard Press Release 11/21/2008, <http://us.blizzard.com/en-us/company/press/pressreleases.html?id=2847816>, accessed 2 December 2012.

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Wolf 2007; Klotz 2008; Jäger and Moormann 2008).² The studies report an average gaming time of around 24 h per week. These figures are partly supported by Nielsen Games³; although the average gaming time per week for *WoW* seems to be going down at least in the USA, *WoW* players alone approximately spend more than 200 million hours in the game, a time sufficient for *WoW* players to build the Chinese wall once every year.⁴ There is a growing concern in media education that online gaming diverts too much time from important adolescent activities, such as schoolwork, sports, socializing, learning to play musical instruments or other creative activities.

From a teacher's perspective, there is a need to address the question why a sizeable part of their students are so fascinated by these games and willingly spend more time on playing and mastering *World of Warcraft* than they spend in school. Knowing about the instructional design and the motivational mechanisms of *WoW* could be very fruitful both for the design of so-called serious games, which try to use game mechanics to train skills as well as for designing classroom interaction, instructional media and online learning communities.

This chapter therefore seeks to answer how *WoW* succeeds in teaching its users to become masters of such a dauntingly rich game, how *WoW* keeps the players motivated and, finally, what we can learn from this for the design of educational and training games as well as for online learning communities.

Game Breadth, Depth and Complexity

World of Warcraft is a multi-user role-playing game situated in a fantasy context. To play the game, players have to create a character first. They can choose between ten different classes (such as mages, priests, death knights or warriors) and ten races (such as humans, dwarves, orcs or trolls), resulting in 61 combinations (some races cannot be combined with certain classes). Players can also choose two out of ten primary professions (such as alchemy, enchanting or tailoring) and learn secondary professions (fishing, first aid and cooking). As in every role-playing game, the players gain so-called experience points for different tasks they finish successfully.

²This phenomenon has been observed even for the text-only predecessors of MMORPG, so-called multi-user dungeons (MUD) in the early 1990s (Kelly and Rheingold 1993).

³Nielsen GamePlay Metrics reported 1,043 min on average played per week (17 h) in June 2007. In April 2009, Nielsen reported 614 min (10 h), and in March 2010, 543 min (9 h) was reported. This lower average value could indicate either an underrepresentation of casual *WoW* players in the above-mentioned studies or a growing proportion of casual gamers in *WoW* over the last 2 years. The game itself seems to have become less time demanding. The boss statistics on the Guildprocess website show much higher boss kills (percentage of game success) in the latest expansion (about 50% in *Wrath of the Lich King*) than in the older expansion (about 16% in *Burning Crusade*) (Data retrieved from <http://wow.guildprocess.com>, accessed 6 March 2010).

⁴This is a rough estimation: length of the Chinese wall: 6,000 km; hours of work for each metre: 1,600 man-hours.

The more experience the characters have, the higher their level is. Levelling up means to collect experience points to reach higher levels. The characters become more capable with each level, e.g. they learn new magic spells, gain more health or can use stronger weapons and armoury. With each level, the players also receive talent points they can use to customize the abilities of their character. The players can play solo for themselves, against other players (PvP – player vs. player) or group together with others, either in ad hoc groups or in guilds, which are hierarchically organized permanent groups of players. Players can have more than one character, called *Twinks*, to replay the game from another perspective or to support their main characters, e.g. by developing additional skills and professions to collect, create and enchant items.

The designers of *WoW* face a compelling challenge: they have to make the game as deep and complex as possible to keep hardcore gamers subscribed and paying a monthly fee, but at the same time, the game must be very accessible to allow newcomers and casual users to enjoy the game as well. For example, while the experience point system is an easy entry into the game, other reward systems such as achievements, reputation and honour extend the basic game mechanics later in the game.

The game starts with an easy-to-understand system of quests, which are tasks the player has to fulfil, such as collecting certain things or killing a certain amount of monsters. Up to level 20, this can be done solo, but in the later game, the quests become more difficult to master and require the cooperation of many players in groups; so playing together becomes more and more a necessity. The classes have different responsibilities while playing together. For example, warriors are so-called tanks who try to draw the attention of the enemy. They can take a lot of damage. Mages are *damage dealers* who can attack from a distance with strong spells. Priests are *healers*, who are responsible for ensuring the health of all of the other players while in combat. Depending on the enemies, this results in rather complex strategies of preparing the party for an encounter (e.g. finding certain artefacts such as weapons or armoury, collecting ingredients for creating buff potions or learning certain spells) and orchestrating the combat with up to 40 players in a virtual environment.

World of Warcraft is actually several games in one. The *breadth* of players' activities in *WoW* can be categorized in different game types⁵ (for actual usage data of the game types, see Ducheneaut et al. 2006):

- (a) *Player versus environment* (PvE): solo gaming and cooperative team play. Players play solo or with other players against computer-controlled characters: (1) solo questing, collecting and levelling; (2) participation in parties (up to five players) and raids (depending upon the raid dungeon up to 25 or even 40 players); (3) guild participation; (4) party and raid leadership; and (5) guild leadership.

⁵ These game types must be separated from the different game *servers*: in *WoW*, there are PvE, PvP and role-playing servers, emphasizing a certain aspect of the game, but not excluding the others.

- (b) *Player versus player* (PvP): competitive solo and team play. Players play solo or with other players against characters controlled by other players: (1) PvP duelling with some other player; (2) battleground PvP in groups of eight or up to 40 players; and (3) arena tournament PvP, where teams with two, three or five players can play against other teams.
- (c) *Role play*: immersion into the story of the game and role-playing the character as in ‘old school’ pencil-and-paper role-playing games such as Dungeons & Dragons.
- (d) *Community play and socializing*: *WoW* can be used for chatting and hanging around with other players in a virtual 3D world.
- (e) *Trading, professions and auctioning*: trading items with other players and a complete eBay-like auction system allow for economic gaming. Players can choose different professions to produce sought after items or even offer paid services such as enchanting other players’ items.

Another dimension of *WoW* is *depth* of gaming content. Patches and expansions (*Burning Crusade*, *Wrath of the Lich King*, *Cataclysm*) add more areas to explore, quests to solve, dungeons to raid, races and classes to play, professions to learn, rare item combinations to collect and innovative game elements to learn (e.g. player and guild achievement system, glyphs). For example, the announced expansion *Cataclysm* will add 27 class-race combinations and a completely new development system for high-level characters (Path of the Titans). Blizzard, the company that develops and publishes *World of Warcraft*, describes the depth of *WoW* as follows:

There are thousands of hours of game play in the game [...], and nearly infinite goals for players. Because our live team is regularly adding new quests, creatures, and items, the game will never truly end.⁶

Altogether, this creates a high replay value of the game and allows each player to follow his or her own gaming interests and preferences. By combining breadth, depth and the interaction of the players (communication, cooperation, competition), *WoW* succeeds in creating a complex, lively and challenging gaming environment.

Instructional Design Approaches

The challenge in the instructional design of *World of Warcraft* is the above-stated breadth, depth and complexity of the game. To help players to learn and master the game, very different approaches have been combined. The following analysis is supported by ten structured qualitative interviews with expert *WoW* players (Siebenmark 2008).

⁶ *WoW* → Info → F.A.Q. → Gameplay: Is there a way to finish *World of Warcraft*? How long can I play? (<http://www.worldofwarcraft.com/info/faq/gameplay.html>, accessed 24 November 2010).

Table 35.1 *World of Warcraft* learning resources matrix

	In-game learning	External learning resources
Provided by Blizzard	Quests Tool tips Help database Loading screen tips Dungeon Masters and support	<i>WoW</i> website: News Patch notes Game guide Database Forums Real-life events (BlizzCon, Regional Arena Tournament) Podcast (BlizzCast) Developer blog/microblog
Provided by commercial third parties and community-created content	Add-ons	Magazines and websites Guildsites and fansites Blogs and wikis Walk-throughs Strategy guides Fanzines and conventions Fanfiction and Machinima Contests
Ad hoc user-generated content	Asking other users Training and practising with other users in guilds	Forums Mailing lists and newsgroups

Again, *WoW* provides *different* paths for learning about the game. They can broadly be split into learning resources provided by Blizzard, by other third-party resources (such as magazines) and by the players themselves. Another dimension is whether learning takes place in-game or externally (see Table 35.1).

Quests to Stimulate and Structure In-Game Discovery Learning

WoW uses the quest system to train essential skills, enforce practice time, introduce new concepts or send the player to other game areas. Quests set goals but provide no information about the single steps to reach them. Most of them are not overly complex but require the player to practise his or her skills. Because of the high amount of repeats to solve some quests (e.g. kill 10 creatures of the same type), the players have enough time to experiment with new abilities such as spells or items. Positive feedback is given by successfully finishing the quest and receiving experience points; negative feedback comes in the form of losing health or even death of the character.⁷

⁷Death is not permanent in *WoW* but forces the players to recover their character as a ghost from a nearby graveyard, which takes some time to do. In a raid, the death of a character can endanger the success of the whole group and has to be prevented by all means.

Although the often simple character of the quests seems to suggest a direct instruction or explicit teaching model (Rosenshine 1986) or a cognitive apprenticeship model (Collins et al. 1989), both would necessitate formal human tutors or computer tutoring. These are not available in the game. In the context of game design, Bopp (2005) introduces the concept of immersive didactics. Methods of immersive didactics can be objects with stimulative nature, sequences of actions to be learned or forms of mastery modelled by non-player characters to be imitated by the player. *World of Warcraft* does not make strong use of these methods. For example, there is only a matching between quest level and player level: depending on the level of the character, quests will be shown as green (easy to do), yellow (moderate) or red (hard), as well as grey (too easy). This system helps the player to choose a level of challenge they are most comfortable with. Quests are also instrumental in moving the player into other regions of the world with more adequate quest levels.

In *WoW*, there are only few class-specific quests which ask directly for the use of a specific ability of a character. Even these class-specific quests focus more on a class-specific *reward* than on class-specific *actions*. It is up to the player to try out their abilities to solve the quests. Therefore, learning with quests are rather acts of discovery learning, a concept introduced by Bruner. In discovery learning, ‘students interact with their environment by exploring and manipulating objects, wrestling with questions and controversies, or performing experiments’ (Ormrod 1995, 442). While the goals are set by quests, the players have some choice to select between different quests. The (in-game) quest information, map location information and help systems as well as external online resources provide the background information needed for successful discovery learning (Leutner 1993, 129).⁸

Expansive Problem-Based Learning

As quests become more demanding, the complexity of the game starts to grow. Players will eventually reach a point where they do not know how to reach their goal. Solving the quest has become a problem. For all that exploring, manipulating and experimenting, the player has come up against a wall. This creates a situation Holzkamp (2004, 29) describes as expansive learning: to solve the problem, the player has to actively seek a solution and expand his knowledge and skills.

The following problem-solving process can – depending on the type of player – either follow an analytical style of problem solving (Bransford and Stein 1993) or a more playful style dubbed *bricolage* by Seymour Papert (1991). The *WoW* universe offers a rich choice of both in-game and external learning resources for these tipping points in the development of the player. People who prefer to ask others for help can ask dungeon masters or other players or visit forums. Persons who prefer to find out

⁸ Usage of *WoW* databases, strategy guides and walk-throughs can reduce the amount of discovery learning substantially by providing exact locations and other information.

on their own can search databases for some background information, such as specific locations. Players who look for easier solutions can consult walk-throughs or install add-ons helping them to quest faster.

The learning setting in *WoW* differs from instructional problem-based learning approaches (see Hmelo-Silver 2004 for a definition) because there is no teacher to facilitate the learning process and give detailed feedback on the effectiveness of the player's strategies.

Learning Within a Community of Practice

To be truly successful with limited tutorial resources, another layer of learning support has to be in place, which is the *WoW* community of practice. A community of practice (CoP) is a concept described by Lave and Wenger (1991) as 'group of people who share an interest in a domain of human endeavour and engage in a process of collective learning that creates bonds between them' (Wenger 2001, 2).

In one of our *WoW* studies (survey with 1,099 participants; Wolf 2007), players showed a strong sense of community: long-term membership, interest in community building, a heterogeneous level of knowledge, strong reputation mechanism, sense of belonging, tolerance for beginners and newcomers (lurking), ample possibility to communicate, high level of mutuality among players and established rituals. The community of practice perception in *World of Warcraft* is highly correlated with the players' aspiration for community: people looking for communities can obviously find a supportive environment in *World of Warcraft*.

Participation in the community is possible both in-game (especially within guilds) and outside of the game, in user-generated content and discussions on the web or even in real-life events such as conventions or contests. The players develop extremely high expertise in the game by engaging in these communities. *WoW* has succeeded in attracting a very rich, diverse and large community around the game. A Google search returns 207 million hits for 'World of Warcraft Community'. Communities for other popular computer games follow at a distance (*Sims*, 24.6 million hits; *Halo*, 17.2 million; *Star Wars*, 9.6 million). Other dedicated MMORPG communities are very small in comparison (*Warhammer Online*, 1.7 million; *Lord of the Rings Online*, 1.6 million; *Age of Conan*, 1.3 million; *Star Wars Galaxies*, 1.2 million; *EverQuest*, 0.5 million; search on 6 February 2010).

Summary

At first sight, *WoW* seems to be very directive in its learning support by its use of quests. On further analysis, this impression changes. Because of the complexity of the game, there is a surprisingly large amount of self-organized learning not only

happening but being indispensable for mastering the game. Extending pure discovery learning, most of the learning in *WoW* happens in self-organized problem solving. This is embedded in a very large and diverse network of smaller and larger communities of practice.

Motivational Mechanisms

Learning within *WoW* takes a lot of time, and players not only spend many hours daily playing *WoW*, but they also spend a considerable amount of extra time for obtaining information as well as discussing and learning about *WoW* outside of the game (Siebenmark 2008). This raises the question about the motivation of the players.

Why do gamers spend so much time playing computer games and especially MMORPG? There is a consensus in the literature that video game playing is highly intrinsically motivated. People play games because they have fun doing it.⁹ But what elements of games cause players to have fun exactly? There have been a lot of studies and analyses over the past years. Some of them concentrate on certain motivational aspects. Typical examples are studies about the role of *competition* (Vorderer et al. 2006) or *flow* (Hsu and Lu 2004; Sweetser and Wyeth 2005). Table 35.2 gives an overview of four different approaches to create a *comprehensive* systematization of computer game elements to support motivation.

As can be seen in Table 35.2, there are wide overlaps between the theoretical, empirical and practical models presented. There seem to be four major motivational clusters in MMORPGs:

1. Competence, achievement and power
2. Relatedness, communication and community
3. Autonomy and decision making
4. Presence, immersion and imagination

In our survey, the players stated *relatedness* and *presence* as primary motivational reasons to play *World of Warcraft* (Wolf et al. 2009). Self-determination theory seems to be a suitably fitting basic framework for understanding motivation in MMORPG. Again, as there are different player types with individual motivational structures, successful MMORPG must provide gratifications for all player types (Bartle 1996, 2004).

⁹ In the context of MMORPG, it must also be acknowledged that there are people who play for reasons other than fun, because they are addicted (Wolf 2007), burned out (Yee 2008) or collect in-game currency or level up characters to sell them later to other players. In the context of this discussion, we are not interested in these negative side effects and will leave them out.

Table 35.2 Categorization of possible motivational aspects of playing MMORPG^a

Ryan et al. (2006)	Lazzaro (2008)	Yee (2008)	Wolf et al. (2009)
Competence	Mastery	Achievement	Competence and power
	Power-ups	Becoming powerful	Becoming powerful Being a powerful character Admiration of others
	Goals	Making progress	Achievement motivation
	Progress		Collecting
	Scores and levels		
	Overcome obstacles		Success
	Challenges		Challenges
	Puzzles		
	Monsters	Competing with others	Competition
	Create and test strategies	Analysing game mechanics	Learn soft skills for real life
Relatedness	Relationships	Social	Communication and community
	Communication	Socializing with others	Small talk Socializing Transcend real world distances
	Relationships	Making good friends	Playing with nice people Interesting people Playing without prejudices
	Cooperate (Compete)	Working with others in a team	Being part of a community Team play
	Mentor Perform Lead		Being influential (guild) Commitment
Autonomy			Autonomy Solo gaming
Presence	Imagination	Immersion	Playing and imagination
	Exploration	Exploring the world	Curiosity and discovery
	Investigation		Diversity of game
	Figuring it out		
	Role play	Role-playing	Role-playing
	Imagination		Identification with character
	Interpretation	Escaping from real-life problems	Relaxation Escapism Hobby/habit
Creativity	Customizing your character		

(continued)

Table 35.2 (continued)

Ryan et al. (2006)	Lazzaro (2008)	Yee (2008)	Wolf et al. (2009)
		Being immersed in the MMO	Flow
	Story		Atmosphere and storyline
			Game mechanics
Intuitive controls			Technical aspects (graphics, usability)

^aThe framework by Lazzaro contains a fourth aspect, i.e. values, which were left out for this compilation. See Bartle (Chap. 12) for a discussion of values and morality in MMOs.

Conclusion

Learning in *WoW* takes place in a highly informal setting. There are no classrooms, no formal curricula, no lectures, no teachers and no report cards. But there are guilds, quests, gaming guides, other players and experience points. The success in teaching 11.5 million players to become experts for a ‘tuition fee’ of about 15 € per person a month would not be possible with a traditional instruction model but relies heavily on self-organized learning.¹⁰ *WoW* provides a playground for experimentation with instant (computer-based) feedbacks backed by a rich community. This seems to create a kind of immersive learning environment (Appelman 2004) which uses different experiential modes currently not available to traditional classroom teaching.

Creating a compelling game is only one part of the success. There have to be meaningful and open enough tasks providing interesting problems to solve. The learning curves have to be smooth and be supported by in-game learning tools and external background information. But even that is not enough. The equally important (but probably much harder) part is to cultivate a game community. Otherwise, the game will only be a short-term success. If a player wants to quit *WoW*, it is not just about ceasing to play a game: it entails leaving a community. Blizzard is famous for building up interest in a game while still developing the final product, doing very long beta tests¹¹ and supporting a game for a long time.¹² Because it takes a considerable amount of time for communities to grow, this strategy actually helps to develop community structures around the game.

Immersive didactical methods (or stealth teaching) try to hide their instructional nature by strengthening the presence of the player (Bopp 2006). This is only effective

¹⁰ Informal and self-organized learning mostly is based on experiences made in the game. See Mitgutsch (Chap. 36) and Dahlskog (Chap. 21) for discussions of the scope and constraints of experience-based learning.

¹¹ In a recent interview, Frank Pearce, one of Blizzard’s founders, answered a question about a possible release date of *Diablo III* in 2011, first announced 2 years ago on 28 June 2008: ‘We’ll ship it when it is ready, but we are not going to rush it out’ (Interview from 05/24/2010 on vg247.com, <http://tinyurl.com/33sz8a2>, accessed 24 November 2010).

¹² The real-time strategy (RTS) games *StarCraft* and *WarCraft III* were released in 1998 and 2002, respectively. They are still the most popular RTS in e-sports.

if the learning objectives are simple linear tasks and if sufficient feedback can be generated by the game. For example, most video games today embed tutorials and training sessions into their level design to minimize the player's awareness of instructional sequences. In contrast, *WoW* does not provide much of a training *how* to do something by sequencing or modelling but for the most simple tasks. For example, there are no tutorials how to play effectively together with other players or how to build and manage successful guilds. The game offers *goals* to the player to be reached in self-organized collaborative problem solving processes – without hiding the need to learn. The players are very aware of skills they have to learn; so learning about the game *is* a part of the game.

For the design of sophisticated educational software, this analysis can provide ideas to increase their motivational appeal and learning potential. *World of Warcraft* reaches its enormous motivational pull by fulfilling basic human motivational propensities and psychological needs (see Table 35.2). Educational simulations, micro-worlds and construction kits such as *Lego Mindstorms*, *Scratch* or the *Arduino* project already focus on discovery learning and problem solving (also see Klopfer and Purushotma, Chap. 38). To provide rich learning feedbacks, they need to be supported by an active community (of practice).

Another key factor to initiate learning is the presence of interesting problems and learning opportunities. The developers of *WoW* not only add game content constantly but also fine-tune the gameplay mechanics meticulously. Each software patch brings patch notes which describe literally hundreds of small changes to the game. Some spells become a little bit more powerful, some item characteristics get downgraded and so on. This is based upon detailed statistical analysis of the users' gameplay to balance the game and make it both challenging and enjoyable. In contrast to other niche MMORPG, the developers of *WoW* succeed in striking a balance between the different types of users. This means losing some of the real hardcore players, because *WoW* does not overdo its complexity, its maturity of content and time requirements in comparison to other MMORPG.

Gee emphasizes that successful games are 'learning machines' (2007, 2). Based on the analysis of *World of Warcraft* in this chapter, the most successful future educational games (and non-games) will be embedded within *learning communities* (Brown 2006). They will immerse learners in authentic problem solving to experience competence, autonomy and flow driven by a playful curiosity in a social network.

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Chapter 36

Learning Through Play – A Delicate Matter: Experience-Based Recursive Learning in Computer Games

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Introduction

Are computer games constructive tools to foster learning? The debate on whether playing fosters or obstructs learning reaches back to the roots of the institutionalization of education in general. While historically the act of playing was often stigmatized as sinful and regarded as a counterpart of sensible activities such as working or praying (see Fink 1979), in the eighteenth and nineteenth century, the potentials of playing were recognized and promoted by ludologists, educators, psychologists, anthropologists, and philosophers. Today, we know that children unconsciously adapt their play to specific developmental tasks (Piaget 1974) and that their stages of development are connected to the kind of games they play (Garnitschnig and Mitgutsch 2008). The fact *that* players achieve an enormous amount of information through playing digital games seems undeniable (see Gee 2003), but even so we still have only little knowledge of *how* players learn through playing. Therefore, the question of *how* players learn in games and what impact the digitalization of play has on their experiences is a major task for educational research. Although research on learners' behavior, cognitive learning models, and the impact of neural connections on learning results reached a new level in the twentieth century, the experience-based process of learning still remains a puzzle. Gregory Bateson's statement in his theory of playing and learning is valid even today: "The word 'learning' undoubtedly denotes change of some kind. To say what kind of change is a delicate matter" (Bateson 1972, 283). This is in line with German educator Klaus Prange who stated that "learning is the unknown in the educational equation" (Prange 2005, 82).

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However, if we assume that educational theories on learning and playing relate to the learning process of the players, the question of *how* players learn is fundamental.

This chapter will outline insights into the experience-based process of learning and its recursive motion, structures, and patterns. The relation between experiencing, learning, and playing will be investigated based on a philosophical and phenomenological approach. Furthermore, I will examine a form of learning that has for the most part been overlooked by research in game studies. Therefore, instead of a linear understanding of learning, i.e., as acquiring data, information, and knowledge, the recursive process of experiencing unknown situations and of restructuring former experiences will be the focus of this chapter.

Learning and Playing

The question of how games and learning relate to each other can be traced back to the ancient debate on whether playing fosters or prevents learning (Aristotle: *The Politics* (1984), 1339 a26). From a historical and theoretical point of view, the impacts of playing out of cultural habit and developments have been investigated and examined (e.g., Schiller 1795; Huizinga 1956; Caillois 1958), and several educational concepts related to games were established (e.g., Locke 1689; Rousseau 1762; Fröbel 1826; Montessori 1909). While in the 1960s and 1970s educational approaches to learning and playing were developed (Baer 1995; Kreuzer 1983/1984), researchers on play could not elaborate a systematic concept of learning through playing (see Scheuerl 1981). Since the early 1980s, digital games have captured academic interest (McCowan 1981; Sedlak et al. 1982). In the early years of the twenty-first century, the debate on learning through digital games has reached a new quality on an interdisciplinary level (Mitchell and Savill-Smith 2004; Van Eck 2006; Pivec and Pivec 2008). In contrast to the previously dominant research on risks and environmental effects of playing for youth (see Anderson and Bushman 2001; Kirsh 2001), the positive and beneficial aspects of playing have become a major topic of game research in recent years. It is argued that computer games are a constructive tool to foster learning. As the Federation of American Scientists states:

The success of complex video games demonstrates games can teach higher-order thinking skills such as strategic thinking, interpretative analysis, problem solving, plan formulation and execution, and adaptation to rapid change. (2006, 3)

However, if computer games have the potential to teach skills, how do they foster learning?

Within the development and establishment of “game studies” (Aarseth 2001), educational aspects of playing were most often examined from the perspective of narrative structures (Murray 1997), analyzed on the basis of theories of playing (Aarseth 2001; Frasca 2003), or associated with questions of game design and learner motivation (Prensky 2001, 2003; Juul 2005; Bogost 2007). While questions regarding aspects such as the transfer of enriched content to games (Fritz and Fehr 2003; Mitchell and Savill-Smith 2004; Schwartz et al. 2007) and semiotic domains

(Gee 2003, 2004, 2008), forms of cultural convergence (Jenkins 2006; Buckingham 2007) within virtual (Fabricatore 2000; Frasca 1999, 2003) or multimedia-driven environments (Klopfer 2009; Klopfer and Purushotma, Chap. 38), educational design (Poole 2000; Garris et al. 2002; Shaffer 2006) or the implementation of games in schools (Klopfer et al. 2009; Pivec and Pivec 2008) have already been discussed, a systematic learning theoretical approach appears to be missing. As Yishay Mor et al.'s (2006, 49) review on learning patterns in games shows, there is a great lack in educational theories that take into account the learning processes in digital games. Repeating what has been said above, we do know *that* players learn while playing, and we have insights *why* they are motivated and engaged, but we have no clear notion of *how* they are learning.

It is an easy task to identify the reason for this research deficit: In the last several years, research on learning in digital games has become a main topic in so-called game studies (Aarseth 2001). As game studies, using a multidisciplinary approach (Neitzel et al. 2005), are starting to become established as an academic discipline in its own right, research on learning in computer games is based on other disciplinary roots than those of educational studies. As Wolf states:

The emerging field of video game theory is itself a convergence of a wide variety of approaches including film and television theory, semiotics, performance theory, game studies, literary theory, computer science, theories of hypertext, cybertext, interactivity, identity, postmodernism, ludology, media theory, narratology, aesthetics and art theory, psychology, theories of simulacra, and others. (Wolf and Perron 2003, 2)

This convergence of approaches within game theory leaves a blind spot when it comes to educational aspects: What can an educational approach offer to the field of game studies? To close the research gap on learning in games and to use the advantages of the multimethodological and multidisciplinary field, the enhancement of theoretical concepts on learning is crucial. As Ian Bogost (2007, 235) states: “This is a noncontroversial generalization: learning theories are intended to guide and structure educational practice.” If learning theories intend to structure and guide educational practice and playing computer games is researched as a dimension of educational practice, the educational approach relates to a concept or theory of learning. James Paul Gee argues that “game design is not accidentally related to learning, but rather that learning is integral to it” (2008, 24). In line, an educational approach is needed to open up deeper insights into the relation between playing and learning (see Bopp, Chap. 39).

Concepts of Learning in Computer Games

The trend to observe learning in games, digital game-based learning, or learning games has become obvious in the last few years but has in fact already started to emerge in the late twentieth century (e.g., Malone 1981). A frequently applied term used to describe learning in games is *digital game-based learning* (DGBL). In the majority of studies, DGBL refers to Marc Prensky's book of the same title, which embraces “any marriage of educational content and computer games” (2001, 145).

Prensky points out that the process of learning is highly related to the learners' motivation. It may be concluded that *Digital Game-Based Learning* facilitates a reasonable symbiosis of meaningful content (learning) and an engaging environment (games), transformed through digital media. However, learning in games is not only a topic addressed by DGBL but also a matter of interest for game studies in general, media studies (Jenkins 2006; Buckingham 2007), education sciences, psychology, game design, and many others disciplines. In general, computer games have developed into a challenging factor for the twenty-first century learning and its theorization:

Theories of learning and instruction embodied in school systems designed to teach large numbers of students a standardized curriculum are dinosaurs in this new world. [...] Thus we argue that, to understand the future of learning, we should be looking beyond schools to the emerging arena of video games. (Shaffer et al. 2005, 110)

Assuming that games provide fruitful aspects for learning, how can these aspects be explained? And how can learning be fostered through the fun effects of playing? According to Ian Bogost (2008, 163), "The future of educational games starts with an industry that, by and large, isn't really interested in figuring out how, when, why, and to what end videogames might serve the ends of educators." While the computer industry does develop and sell games that foster learning, it focuses on the market rather than on educational rationale. So what is the status quo of research on the usage, potentials, and limitations of digital games for education and learning?

Reasons as to why computer games engage learners were recently pointed out by Alice Mitchell and Carol Savill-Smith's (2004) in their review of the literature:

- Computer games represent fantasies and follow the simple principle of winning or losing, with instant outcomes (Prensky 2001; Roubidoux et al. 2002).
- They use aesthetic modeling and recognizable features to engage the learner's attention (Poole 2000).
- By stimulating the learner's enjoyment with visual feedback (Bisson and Luckner 1996).
- They provide a complete and interactive playing environment and an immersive experience (Prensky 2001).
- They open up different solutions and ways of solving problems (see Gee 2003; Mitchell and Savill-Smith 2004).
- Their risk-free environment and their instant feedback loops foster experimental explorations and discovery learning (Kirriemuir 2002).
- They change the learner's relation to information or particular content (McLellan 1994) and encourage the player to learn in new ways (Kirriemuir 2002).

Furthermore, game researchers argue on the following:

- Playing digital games implies cultural, cognitive, social, and self-directed forms of learning (Kutner and Olson 2008; Johnson 2005; Aldrich 2004; Gee 2003), and it proceeds in an informal learning environment (Fromme et al. 2008).
- Games provide potentials to situate abstract content and information within an engaging environment (Lave and Wenger 1991).

- They cultivate higher-order thinking skills by which the player reflects on a different level. John Beck and Mitchell Wade define this way of thinking (2004, 167) as “going meta.”
- Computer games enable “situated” and “embodied” learning (Gee 2003, 86) that provides a shift or transfer of different semiotic domains, identities, and relationships between real and virtual experiences.
- Games are simulations of microworlds that confront the learner with his/her expectations and prior experiences and open up new forms of epistemic learning (see Shaffer 2006) that foster innovative problem solving and exploration (Squire 2006).
- Games have a “persuasive and expressive power of procedurality” (Bogost 2007, 340), which has an impact on our cultural, ethical, and social development (Hayes 2007).
- They hold the ability to be completely learner-centered and to engage the learner’s attention by amusement (Prensky 2002; Klimmt 2006).
- They encourage a particular framework of media literacy in the dimensions of representation, language, production, and audience (see Buckingham 2007; Salen 2007; Petko 2009).
- Learning in games is a multimodal (Klopfer 2009) activity where “people perform complex tasks within rich and highly immersive multimedia-driven, interactive environments” (Klopfer et al. 2009, 27) and develop new forms of participation and convergence cultures (Jenkins 2006).

From this brief overview of fruitful aspects of digital games for learning, it becomes clear that games include several aspects that support the learning process. Some argue that every game is a learning experience, as the game could not be played if the players did not learn how the game mechanics, the rules, goals, and settings work. Therefore, games as simulations can be defined as learning experiences (Juul 2005). But what kind of learning experiences are we talking about here?

While “learning” in our everyday life is often reduced to an act of *acquiring something* (e.g., information, content, knowledge, or education), the fact that every learning process starts with a particular experience of something *as something* is mostly overlooked (Waldenfels 2004). Thus, we cannot choose to *make* a particular experience like we order “items” from a catalogue – “experience” *happens to us*. In this context, John Dewey, a pioneer in research on learning, states:

To “learn from experience” is to make a backward and forward connection between what we do to things and what we enjoy or suffer from things in consequence. Under such conditions, doing becomes a trying; an experiment with the world to find out what it is like; the undergoing becomes instruction – discovery of the connection of things. (1985 [1916], 140)

Dewey shows that learning cannot only be understood as a linear act of acquiring knowledge, but needs to be seen as a circular process of suffering, doing, experimenting, transferring, and playing! Game designer Raph Koster argues that “games serve as very fundamental and powerful learning tools” (2005, 36), as they open up territories for exploring our expectations and experiences. In games, we challenge

our thinking and learning through trying and exploring. Furthermore, the intermediate playground provided in games frames the knowledge we achieve and relates it to certain actions and challenges. James Paul Gee recently stated (2008) that experiences in games foster learning through (a) the interpretation of the relation between situated reasoning and goals, (b) the adaptation to new situations, and (c) immediate feedback by which players can recognize and assess their failures and anticipations. Furthermore, games lead the players (d) to improve their interpretations of these experiences and (e) to learn from other people's experiences (2008, 22–23). If games foster learning, they do so by enabling access to novel experiences and by challenging the player to apply these new learning environments to his/her prior experiences.

The process of experiencing is a key for establishing a transfer between playing and learning. Games provide different experiences and foster learning in specific ways. While most “educational” games focus on the transfer of information and concentrate on the quality of the content to be acquired, some digital games offer the players room for novel experiences and open up a deeper, substantial, and complex form of learning. In the following section, this delicate but essential process of learning will be examined. For this purpose, a phenomenological approach will be outlined which is adaptable to a concept of learning in digital games and which shows a potential of games that most concepts of game-based learning have overlooked so far.

Experiencing – Learning – Recursive Learning

The interrelation between learning, experiencing, and media is a key figure to take into account when investigating the processes of learning. Learning relates to experiencing and, vice versa, experiencing relates to learning – learning without experiencing is impossible; experiencing without learning is formless and not adaptive (see Buck 1989). As we experience something *as something*, we use a medium like our body, language, a gadget, signs, or symbols as tools to recognize and understand the world and to participate in it. In the late 1960s, Buck showed that learning sciences mainly focus on the results of learning, while the process of experiencing within learning had been sorely neglected. Today, we may have many concepts at our disposal that explain *how* learning *results* can be *measured*, *what adaptation* can be done on *what development stage*, *where* in the brain learning can be *observed*, or *how* different media can *support* our attention span; however, what remains basically uncharted is *which pathway* experience takes within the learning process (Buck 1989; Prange 2005; Meyer-Drawe 2009). As learning theories are intended to structure educational practice, further research into the interrelation between experience and learning and the process of experiencing and learning are needed. How can we know how to teach if we do not know how someone learns?

If we understand learning as an experience-based, cognitive, emotional, medial, cultural, and social process of change, we still need to differ between the formal and

informal settings in which learning takes place and the *process of learning* itself. Therefore, I want to highlight three essential forms of learning: (1) *acquiring* new data, information, and knowledge; (2) *expanding* existing experiences and knowledge; and (3) *restructuring* prior experiences and anticipations. While our school systems focus on the formal instruction of learning as achieving and expanding, the *restructuring* of prior experiences, judgments, and knowledge is mostly related to informal settings. While computer games are often understood as informal tools to foster learning as achievement and expedition (see Prensky 2002; Mitchell and Savill-Smith 2004), I will focus on the third form of learning which is characterized by restructuring, reorganizing, and challenging expectations.

Recent studies focus on the so-called negativity of learning, which has been mostly overlooked in the field of game studies and in most systematic concepts of learning (see Buck 1989; Fromme 2001; Burgos 2004; Meyer-Drawe 2005; Mitgutsch 2009a). An insight into the meaning of the negativity of experience for learning can only be given by examining learning as a process of gaining experience. Learning in this respect indicates that expectations and prejudices are confronted with unexpected resistance. How can learning in this sense be defined?

The historical roots of theories of learning and negativity reach back to Aristotle's theories of *epagoge* (often translated as induction) (see Aristotle's *Metaphysics* 1999). For Aristotle, one's experience rises from a particular experience to the universal experience of causes through the process of induction (*epagoge*). But what about the novel experiences that prove our expectations to be wrong? Centuries later, Francis Bacon reclaimed the superior force of *negative instances* overlooked by Aristotle in his theory of induction. Gaining experience is dependent on *negative instances* that help to correct incomplete preexperiences and anticipations (see Bacon 2000; Mitgutsch 2008). Departing from Aristotle's *epagoge* and the theories of induction by Bacon, Hans-Georg Gadamer states in his book *Truth and Method* (1998) that the refutation of wrong generalizations through new experience is constitutional to every process of experience. He argues that the "negativity of experience" has a certain productive meaning to the process of gaining experience. A new experience does not merely lead to a realized disillusion, it gains "better knowledge through it" (Gadamer 1998, 353).

The central aspects of Gadamer's considerations about learning through irritations, disillusionment, and failure are as follows: one experiences something new about an object (1), about the limitation of one's own prior anticipation (expectation) (2), about the limitation of one's own consciousness (3) and, finally, one reaches a new horizon of consciousness as an experiencing subject (4). The educationalist Günther Buck transformed Gadamer's analysis of negativity and experience in the educational discourse. In his book, *Lernen und Erfahrung* (1989) (German for "Learning and Experience"), he describes the relation between learning and experience as reciprocal and conditional. Learning is founded on experience and – vice versa – experience depends on learning. If the learners' anticipation of *something* is disillusioned, their knowledge of this object (1), of their former anticipation (2), and of their horizon (3) transforms. Learning from the productive negativity of experience manifests itself as an overcoming of dogmatic anticipations and proceeds as a

change of the horizon of experience (Husserl 1999). Buck calls this fundamental kind of learning *umlernen* (ibid., 42), a process of *recursive learning* fostered by negative instances. In this process, the experience of disillusion (Mitgutsch 2009b), the confrontation with our own anticipations (Meyer-Drawe 2009), and the irritation of our knowledge (Fromme 2001) are key moments (Benner and English 2004). According to the philosopher Bernhard Waldenfels (2002), every process of learning immediately opens up a large number of new preexperiences, expectations, and anticipations that enrich further experiences. Furthermore, the learners do not *passively receive*, nor *actively gain*, experiences: things *passionately* (Greek: *pathos*) *move* them. To enrich learning, the instructor's task is to open up an undogmatic environment which allows for *passionate* experiences. The disappointment one experiences while learning might feel like suffering, but it enables new experiences and gathers momentum in the learning process. It has been shown that the dimension of passion and disillusionment within the process of *experience-based recursive learning* is essential for a theory of learning in general.

The Concept of Experience-Based Recursive Learning in Computer Games

In the outlined approach, learning is understood as an experience-based recursive form of learning through irritations, confrontations, failure, disappointment, and disillusionment. Recursive learning can be identified as part of a fundamental transformative learning process in which the learners' body of experience is restructured through a change in the frames of reference patterns that structure their expectations and interpretations (see Mezirow 2010). Hereby, the question arises why games could be a useful environment to foster this kind of transformative learning? In our everyday life, we tend to avoid negative experiences (see Bacon 2000) even if they may provide us with correct knowledge or novel experiences (Buck 1989). Why? Since the consequences of failures might be productive for our learning, they are often hurtful and irritating as we suffer from their impact on our lives. When we fail in real life, this may lead to getting a bad grade, losing a job, getting hurt or sick, or even losing our lives. Playful experiences on the other hand are different. They enable us to explore our competences and limits within the "magic circle" (Huizinga 1956) of the play space (see Stephenson, Chap. 15). Playing is the voluntary attempt to confront ourselves with unnecessary challenges in a satisfying way (see Suits 2005); in games learning through failure is engaging and sometimes amusing. To sum up, the basic structure of an experience-based path of recursive learning in games can be illustrated with the following graph (Mitgutsch 2009a).¹

¹The complexity of a theory of recursive learning (German: *Umlernen*) as argued by Günther Buck or Käte Meyer-Drawe can only be touched on briefly here (see Buck 1989; Meyer-Drawe 2009; Mitgutsch 2009a).

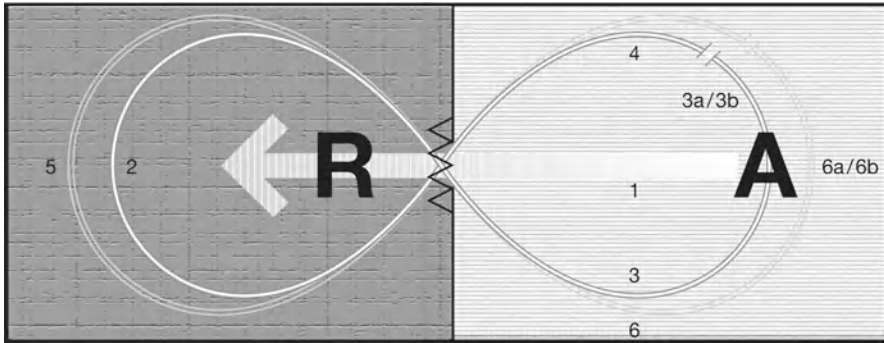


Fig. 36.1 Model of recursive learning in computer games (Source: Mitgutsch 2009a, 182)

In games, the passionate experience starts with an impulse given by the game: Before the players become aware of the phenomenon which we call “experience,” something adverse happens to them. In the game, the players react to circumstances which befall them – or as Dewey expresses it – which they suffer from. But the players do not just stay passive nor do they stay completely in control – in fact, they do both at the same time. In a game, we are addressees of simulated challenges and active respondents within our game play – we are actively passive. Recursive learning starts with the experience of something adverse (A) happening to the player (1) and making him/her a “respondent” (R) to this experience. Therefore, the player’s experience (left box in Fig. 36.1) collides with the patterns provided in the game (right box in Fig. 36.1) (see Koster 2005).

Moved by the passionate experience (1), the players relate the impetus of the game to experience patterns they have already acquired or expanded. On the basis of these prior experiences (2), the players develop new expectations and anticipations (3) of how to master a challenge provided by the adverse object (A). In computer games, the players react to these adverse experiences by developing new anticipations of what and how to put something into action.

These expectations or anticipations of the object can now be approved (something works as anticipated) (3a) or disproved (3b) (something works other than anticipated). Although these “negative experiences” as Gadamer calls them (1998) are disappointing, they are very productive for our learning (Mitgutsch 2009a). But in contrast to real-life situations, the disappointments (3b) in a game can be motivating and challenging – and sometimes even fun! If the player’s expectations are approved, new knowledge can be achieved, and the horizon of experience can be amplified, but the player already anticipated how the challenge can be mastered. At this moment, learning in its common understanding takes place (see learning 1 and 2). In case the expectation is refuted (3b), however, the process of recursive learning is set in motion: The negative experience reverses (4) onto the learner him/herself and forces him/her to restructure his/her horizon of experiences and to transform his/her way of anticipating (5). Based on this reverse transformation, the learner develops, in a circular movement, new anticipations and expectations (6) that are being tested

and again approved (6a) or disapproved (6b). The players learn recursively through failing and dealing with confrontations in the game. But if this recursive learning process affects the transformation of the players' view on the world, others, and themselves is a question yet to be answered.

Conclusion

To sum up, experience-based recursive learning can be defined as a circular process based on resistant experience that passionately transforms the players' experience, their preexperiences, their knowledge, and themselves. In accordance with this theory, the following question needs to be addressed: How can the recursive learning process be fostered? So far, there is no empirical data available that gives deeper insight into measurable recursive learning processes and into how relearning can be fostered through playing. In an adaptation of other concepts, this aspect of framed experience already takes place in computer games nowadays: In line with James Paul Gee's 36 learning principles in video games, playing games involves active and critical learning (principle 1), the reflection of metalevels of semiotic domains (principle 5), a gain of self-knowledge (principle 9), the aspect of rethinking (principle 15) via multiple routes (principle 16), and the reflection of cultural models of principles and of learning itself (principle 30 and 31) (see Gee 2003). As Gee argues games teach learners about their prior experiences and enable them to put their prejudgments and their previous beliefs into perspective. Therefore, learning based on play engages the learner not only by providing entertainment and challenge but also through confrontation and passion. The virtual environment itself, with its own culture, its "magic circles" (Huizinga 1956), its specific social aspects, its implicit knowledge and beliefs, and its drive to confront the learner's prior experiences, seems to be the vital key to enrich learning. It opens up a multitude of potentials that allow the players to experience unknown situations, to shift between learning frames, and to experiment with situations that they would not have access to in their normal lives. Instead of leading the learners to the correct path of acquiring knowledge and true content (what many "educational games" are about), the learners – in a recursive learning environment – are forced to be players that experiment without functional pressures of negative consequences or social sanctions. To support this uncontrollable way of experience-based learning, the players should be capable of reflecting upon and rethinking metalevels of semiotic domains, models of game and learning cultures, and predetermined goals that restrict their learning habits.

While it is true that a number of aspects of recursive learning have already been implicitly discussed in theories of learning in games (e.g., Gee 2003, 2008; Squire and Jenkins 2004; Bogost 2008; Shaffer 2006; Klopfer et al. 2009; Juul 2009), more evidence is needed on an empirical level; on a qualitative level, research into players' biographies and in their learning experiences which use a broader experience-based understanding of learning are needed (see Mitgutsch 2011); on a quan-

titative level, learning patterns in games which enable deep forms of learning need to be explored. And from an educational design perspective, more games need to be developed which provide more than just useful content, i.e., games which offer recursive learning environments and foster the rethinking and restructuring of expectations. Learning through play is a delicate matter – but to understand the potential of computer games to foster learning, we need a broader understanding of learning than merely labeling it as a cognitive process of achieving information and knowledge. Games – of a digital nature or in real-world settings – enable us to use *negative experiences* as productive and motivating tools to think and learn. Recursive learning in games is a delicate challenge that we should accept as an educational task.

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Chapter 37

Learning Instruments: Baroque Music Gets Game

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Setting the Stage

For many, the world of Baroque music not only feels like a relic from an inaccessible past, but it often looks and sounds that way as well. The project we describe here was commissioned by the Tafelmusik Baroque Orchestra in Toronto, Canada, whose mandate is to create an audience of appreciative and informed younger listeners through the design and provision of educational resources about Baroque music (<http://www.tafemusik.org>). Tafelmusik already does an enormous amount of public outreach: Baroque education days for school children, teaching resources aligned with the provincial curriculum, the production of an award-winning CD for kids, and most recently their attempt to use the media that many youth (especially boys) are still so fascinated with – videogames. For us, as academic researchers and educational game designers, this was a golden opportunity to develop a learning-rich and challenging game which takes advantage of mainstream game conventions and reconfigures these for use in an informative and enjoyable interactive resource to support learning about the culture and conventions of Baroque music.

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In the first part of this chapter, we cover a theory that has gained traction in education studies in support of media learning, making a case for “ludic epistemologies” with reference to our previous design-based educational research. We present a project that directly tests our own assumptions about games and learning: a Flash-based Baroque music game named *TafelKids: The Quest for Arundo Donax* (<http://www.tafelmusik.org/education/webgame.htm>). We then describe the process of creating the game, focusing on the tension between constructing an online resource that an audience aged 8–14 would find both fun and engaging and the directive to include historical information and facts, as well as to convey some of the sounds, musical structures, and conventions of Baroque music, history, and culture through play. Finally, we present results from our play-testing, where we identify a very different set of “learning outcomes” than those typically identified in instructional design (Gagne et al. 2004). While the tension between an educational game and its curricular content is not new (de Castell and Jenson 2003; Kafai 2006; Ito 2005; Rieber 1996), what we attempt to show here is the process of working through that tension in order to reach an audience that might not be particularly disposed to Baroque music, but that is certainly disposed to and already motivated by learning from playing digital games.

In describing the various elements of the game, including the overall learning environment and mini-games, we highlight some of the different expectations between our design team and our client, in terms of what counts as knowledge in a game meant to cultivate an appreciation for music. Similar differences were encountered, though to a lesser extent, in our play-testing with children aged 12–14, and we will highlight what we think was most significant from those sessions. We conclude with an account of the difficulties we had in reconceptualizing educational ‘content’ in the transition from one medium (sound, in the case of the *TafelKIDS CD*)¹ to an interactive, multimodal, and highly graphical medium and consider this from a standpoint of broader questions concerned with representation and epistemology.

Learning and Play: A Classical Connection

Jean Francois Lyotard and Marshall McLuhan, while writing from very different points of view and on different subject matters, both foresaw digital media bringing fourth different ways of knowing. For McLuhan, it is only when we are fully past a shift in media that we can understand what changes it had wrought epistemologically and ethically (McLuhan 1964). On Lyotard’s view, computerization brings a

¹ *Baroque Adventure: The Quest for Arundo Donax* includes a CD of Baroque music played by the Tafelmusik Orchestra, interspersed with a narrated story of Frances and Edward Purcell’s quest to retrieve Arundo Donax, the plant used to make reeds for oboes and bassoons. The CD also includes an illustrated booklet depicting scenes from the adventure. More information about the production can be found at http://www.tafelmusik.org/media/presspdfs/Tafelmusik_ChildrensCD.pdf. Accessed 17 March 2011.

corresponding shift in both the forms and relative values of knowledge, as well as the social and instrumental legitimacy that is placed on it (McLuhan, 1964). Following a Marxian distinction between use value and exchange value, Lyotard argues that what and how we know is very different in the “postmodern condition”: knowledge that has worth in and of itself is less valued (Lyotard 1984). Instead, knowledge becomes something that is produced in order that it might be sold. In Lyotard’s often quoted words, “it is and will be consumed in order to be valorized in a new production: in both cases, the goal is exchange” (ibid., 4–5).

It has been argued that formal education has, in recent decades and often through the deployment of digital technologies, embraced this conception of education having an instrumental, not intrinsic value (de Castell et al. 2002; Noble 1998). This has meant, in part, that education is viewed as a commodity to be exchanged: for marks, for credentials, and for increased opportunities in a globalized ‘knowledge economy.’ In this model, the classical notion of knowledge formation as an inherently beneficial, even pleasurable pursuit, seems to have very little play – as evidenced by a public education system which, in recent decades in Canada, has made arts and music education almost obsolete in its move toward standardized testing and a return to ‘fundamentals.’

The difference between narrative and scientific knowledge on Lyotard’s view of postmodern epistemologies highlights a rift between institutionalized knowledge structures like university and school-based curricula, and more participatory, community-nested, oral traditions of knowledge creation through multimedia production, online social sharing, and interactive activities such as computer games. In our development of this small-scale Flash game, we have tried to subvert the instrumentalist educational economy Lyotard described, through the creation of a learning resource which has little to no “exchange value” – distributed online for free, it is unauthorized by any formal curriculum and disconnected from any official assessment. At the same time, this tool harnesses the conventions of playful interaction to support a more open and exploratory, rather than simply economic-utilitarian, notion of knowledge formation.

By privileging embodied interactive play, and deprivileging propositionally organized information, we have tried to design an experience which offers players opportunities to simply understand a certain genre of music better and, we think, enjoy it more. The conceptual and interactional conventions already present in digital games become scaffolding for building an experience of learning that is already familiar and enjoyable, a kind of “stealth” engagement with Baroque music and culture (Prensky 2006). In borrowing heavily from the imitative and enactive learning accomplished through games like *Guitar Hero* and *Dance Dance Revolution*, we have sought educational value of a different, and indeed itself a classical, form: one which resuscitates the very old and very powerful connection between learning and pleasure and between education and play (de Castell and Jenson 2003; Huizinga 1960).²

² For similar approaches of combining learning and playing, also see Mitgutsch (Chap. 36) or Klopfer and Purushotma (Chap. 38).

We believe we were able to harness two different forms of knowledge to the creation of our Baroque music game. The first is the possibility for interactivity – both conceptual and embodied – as users play and ‘keep time’ with Baroque music. The second is the combination of visual and auditory modes of presentation, offering complementary, not redundant, understandings through participatory play. These two aspects present opportunities not possible in pedagogies built from other media and have the added bonus of arriving nested in a context already popular with the intended wider (youth) audience.

The description that follows is intended as a case story of design-based research (Brown 1991; Collins 1992; The Design-Based Research Collective 2003; Mateas and Stern 2005), one that builds on and extends our own previous work designing educational resources. As in our previous design projects, this involves exploring and documenting different ways of enacting play-based learning or “ludic epistemologies” (de Castell et al. 2007) and an avoidance of instrumentalist, content-driven educational forms.

Instrumenting Content

While Baroque music is enjoyed by many (think here of the prevalence of Vivaldi’s “Four Seasons” as elevator and wedding music), it is not necessarily a subject area with which many among the public would be more than obliquely or shallowly familiar. And, while we might know something about the likes of Bach, Purcell, Vivaldi, or Handel, we might not necessarily know what particular instruments make up a Baroque orchestra, nor would we be aware of the differences between a Baroque bassoon and its contemporary cousin. So when we began the project of creating a digital game about Baroque music, history, characters, and instruments, we realized that we would have to become well-versed in a highly specialized discourse and subject matter ourselves, and that we would have to find ways to make it intelligible to a lay audience, in a way that is also viably educational as an exemplar of “ludic epistemology” (de Castell et al. 2007).

Not only were we attempting to straddle the distance between insider and outsider knowledge of Baroque music, but we were also faced with the problem of taking a traditional curriculum concerned with Baroque historical figures and instruments and translating it into play-based learning activities capable of meaningfully engaging youth for whom whatever is past is “bo-ring!” The two primary epistemological issues we had when developing the game were based on the above problems: (a) how to take the highly specialized knowledge of a professional Baroque musical group (Tafelmusik) and represent it in the form of a game for children and (b) how to convert the organization’s educational objectives into both play-based and knowledge-based digital media. This includes not only historical knowledge but also the introduction, through interactive activities, of the tempo, arrangement, orchestration, and notation characteristic of Baroque music – and, very importantly for us, how to make it possible for children playing an online digital game to experience some of the same

pleasures that knowledgeable and skilled musicians and devotees enjoy when performing or listening to performances of Baroque music.

There were three primary spheres of knowledge that Tafelmusik wanted to cover: a historical understanding of Baroque music, including notable historical figures and instruments; a practical understanding of Baroque music encompassing instruments and composition; and an opportunity to access and gain some familiarity with and enjoyment of Baroque music. With these primary goals in mind, we began by first informing ourselves: what instruments make up a Baroque orchestra, who were the primary Baroque composers... and so on. We were given a kind of script to work from in the form of an award-winning CD produced by Tafelmusik for children in 2006 with the same title, *The Quest for Arundo Donax*. The CD tells the story of Henry Purcell's two children, charged by Queen Anne during England's war with France to travel to the court of the French King Louis XIV to acquire a special cane (in Latin, *Arundo Donax*) from which high-quality reeds required for woodwind instruments like oboes and bassoons were made (and are still made today).

The storyline takes characters through Venice and a visit with Vivaldi, and then places them in Versailles where they are granted access to the court of King Louis XIV and fulfill their quest for the scarce reed. It was through this narrative that we confronted our first challenge: how to take a very linear story and build a Flash game around it. This constraint was notable as the narrative worked very well as a story in a noninteractive medium, but because it adhered to a specific time and place, it left little room for the kinds of open-ended and nonlinear exploration games can afford. In the end, we left the original narrative in place as an overarching framework, but moved to a less linear structure that granted a greater degree of choice. This, in turn, meant large concessions in terms of historical dates, timelines, and geographical localization of music – strict historical fidelity gave way to agency and play. What we settled on, then, was a 'retooling' of the story to fit a less plot-driven game world: Henry Purcell's two children would become the game's playable characters and would travel to destinations which had previously been part of the original narrative – Venice and Versailles – and these would become the locations of the mini-games. The mini-games would allow for some of the knowledge building that Tafelmusik sought from all three angles: historical facts, instruments and instrumentation, and musical appreciation.

Our second major obstacle concerned the content prescribed by Tafelmusik, only some of which was directly related to the game (and the narrative). How could we incorporate information on select instruments and composers, including obscure facts about their contributions to Baroque music? Our project became then not one of cutting and pasting content from one (textual) medium to another (games), which is all too often the case in educational design projects (Jenson and Taylor 2006, 2007), but one of careful, time-consuming redesigning of propositionally organized content to better suit an interactive medium (de Castell et al. 2007) and of conveying high brow culture to an audience with decidedly popular knowledge and taste. For instance, Tafelmusik's "Baroque Learning Centre" website (<http://www.tafelmusik.org/flash/learningcentre/index.html>) offers an overview of musical instruments and composers which we were required to incorporate, if not in a game

format, then in a kind of extracurricular format. We decided this information was best left secondary to the game itself, but we incorporated it as an embedded interactive feature (see the following subsection). What was not possible, however, was to transfer content directly from the Learning Centre site into the game: it simply did not ‘translate’ and was not conveyed in a way that would make sense in a game medium or to its intended audience. For instance, on their website, the bassoon is described the following way:

The trumpet in the baroque era remained very basic in design and function. Originally without valves, slides or holes, the baroque or natural trumpet was limited to exact notes within the harmonic series in each key. The key, and therefore the available notes, is determined by the length of the brass tubing, which could be changed by adding crooks of different sizes. (ibid., n.p.)

Rewritten for our purposes, there is a qualitative difference in the information being imparted. We wrote:

The trumpet is a member of the brass family. [Next]. It has the highest sound in the brass section. [Next]. The Baroque trumpet could not play all of the notes in the scale even though it had tubing that was twice as long as trumpets made today.

The information in these two texts is not very different, but the presentation is. Where the original emphasizes the relationship of trumpet design to sound, we made this more accessible by comparison to current versions of the instrument. More importantly, we separated the text across a series of ‘bubbles’ players click through, affording at least a small degree of interactivity in what is otherwise a straightforward reading exercise. We arrived at this necessary re-presenting of information precisely by being ourselves members of the public intended to benefit from making this insider knowledge available, following our reasoning that we wanted to create a curious audience, one that might seek out more Baroque musical experiences in the future. Part of that is also evidence by our reframing of how the information on instruments was presented – whether or not the facts are actually ‘fun’ is open to interpretation, but serious attempts were made to present relatively obscure information in a way that ignited some curiosity on the part of those who took the time to read.

But these were just the facts, and what seemed to us to be the primary objective of the game was to engage an audience with Baroque music itself. The following section describes our attempts to do so, by designing a responsive game shell (which houses the mini-games and where a player’s progress is displayed) and three quite different mini-games that draw on currently popular and accessible gameplay mechanics to deliver relevant content in ways that a wider (and younger) audience might find compelling.

Cultivating Playful Appreciation

After logging in, first-time players are taken to the court of Queen Anne where, as in *The Quest for Arundo Donax* CD, the two characters (children of Henry Purcell) are introduced. A brief, sparsely animated cutscene introduces the narrative and



Fig. 37.1 Interactive map marking locations, games, and content (Source: Authors' screenshot)

gives players their quest – to play the mini-games, fill out the musical score on the map (representing their progress through the games and the facts about composers and instruments), and find the elusive Arundo Donax plant so the English bassoon and oboe players are able to replenish their dwindling supply of reeds. Next, players are invited to choose their traveling costume from a small array of clothing options and are taken back to the map from which they can navigate to mini-games and content. The following sections will describe the individual elements that comprise the game and discuss how each affords a specific learning outcome driven by play.

Pushing Content to the Margins: A Baroque Game Shell

Given that, as we have indicated before, we had a significant amount of textual material be embedded somewhere in the website and that we also needed, narratively, to convey a sense of movement, we created an interactive map to house both the mini-games and much of the prescribed content (Fig. 37.1). This stylized map of Europe was partially based on the original narrative that moved the characters from England to France, and on the original artwork that was created to accompany the CD. Embedded in the map is much of the textual, curricular content prescribed



Fig. 37.2 The game shell, showing Baroque instruments at the *bottom* (Source: Authors' screenshot)

by Tafelmusik: where famous Baroque composers lived, what they were known for, an example of one of their compositions, and descriptions and audio samples of Baroque instruments.

Musical instruments are perused by clicking on the interactive frame near the bottom of the screen, toggling between instruments and composers (Fig. 37.2). Images of both instruments and composers are identifiable but blurred until they are played, at which point the image becomes crisp and clear, indicating to players what they have listened to and what audio tracks they still have left to complete. Historical figures and composers are explored by clicking on their location on the map, which activates a series of animated bubbles presenting brief facts about that figure's life (e.g., Purcell in England, see Fig. 37.3), while a short musical excerpt composed by that figure plays. During the first activation of that content, a player cannot close the facts and stop the short musical piece, in effect, requiring listening for the duration of the track, even if users do not choose to read the facts about the composer's life. This enforced listening is meant to introduce the player, however briefly, to the broad musical repertoire that makes up the Baroque canon. It is here that the educational content is most didactically and heavy-handedly served to players. Because we wanted an enforced structure of click-listen interaction to occur, the game shell



Fig. 37.3 The game shell, showing composers' portraits on the *bottom* (Source: Authors' screenshot)

seemed to be the primary place to house the content we were to encompass within the larger framework of the website. The following three mini-games, however, offer an increasing level of player interaction and challenge, providing a much more endogenous style of learning appropriating popular game genres.

Playing within a Baroque Orchestra

The two primary objectives of this mini-game are to learn about the instruments that comprise a Baroque orchestra and to distinguish among those instruments, based not on facts about that instrument but rather upon one's ability to recognize the distinctive voice of each, delivered through an interactive nine-piece orchestra. The game's tutorial begins with players listening (in whatever order they chose) to each of the instruments playing its own part of a larger orchestral piece. Once players have listened to each of the solo voices of the instruments, the entire orchestra plays the piece, bringing each individual instrument's part together – for which we also introduce small items of musical discourse (e.g., the command to play together: “*tutti*”). In level one, players discern from a random selection of solo musical pieces

which instrument is playing. In level two, the vocabulary of multiple voices is introduced, and players are asked to try to identify, based on their distinctive sounds learned in prior levels of play, which instruments are playing together. In the final level, the player can arrange instruments in any order, attempting their own orchestrations with all the various parts available to them.

In this game, we are trying to introduce the different instruments, sections, and configurations of a classic Baroque orchestra by ‘stealthy’ ear training through musical experience rather than through textual explication. Our goal was to help players unaccustomed to hearing and discriminating the multiple voices that together compose orchestral sound, how to apprehend that complex and beautiful interweaving. This worked well because the small snippets of sound were brief enough to retain in memory, such that even after such brief exposure as was entailed by playing through the game, one could easily call up to the ‘mind’s ear’ the harmonies and counter-melodies of other instruments as they listened to just a single instrumental voice, as well as to really hear ALL the parts when the excerpt was played “in tutti.” Most of what is to be learned through playing this mini-game is readily accomplished through trial and error on the part of the player, as well as through replaying the parts that a player misjudges. Through a decomposition and playful *re*composition and recombination of orchestral music, players can come to appreciate and indeed hear the orchestra, not only as a whole but also in parts, affording a completely different and far richer experience of Baroque music.

Bach to Basics: The Musical Inscription Game

While the orchestra game fosters attentive listening to subtle differences between various Baroque instruments through a basic point-and-click, the main objective of the Musical Inscription game is to introduce players to Baroque musical notation through active participation with the musical score, evoking values of production (e.g., players are co-producing the music through correct mouse clicks in time to the music). Inspired by the popularity of rhythm-based games (particularly, *Nodame Cantabile* and *Osu!Tatakae!Ouendan!* or the more commonly played varieties *Guitar Hero* and *Rock Band*), the game features a moving horizontal timeline of an original Baroque score in which some notes have been made active (e.g., clickable).

Players are required to click the correct position of active notes on this horizontally scrolling musical score. After an introductory cutscene featuring an angry Bach (Fig. 37.4) whose musical scores have been partially faded out by exposure to the sun, the game begins with players having to fill in parts of a continuo (Baroque bass line). Listening to the music helps players to read ahead, and anticipate the next actions. Players then progress to more complex arrangements requiring more notes. In the final level, the player is faced with concurrent scores representing two different parts of a piece that advance in time with the music (Fig. 37.5).

The educational affordances of this game stem directly from our appropriation of popular commercial rhythm games that, unlike conventional games, require a listening



Fig. 37.4 Bach introduces the Music Inscription game (Source: Authors' screenshot)

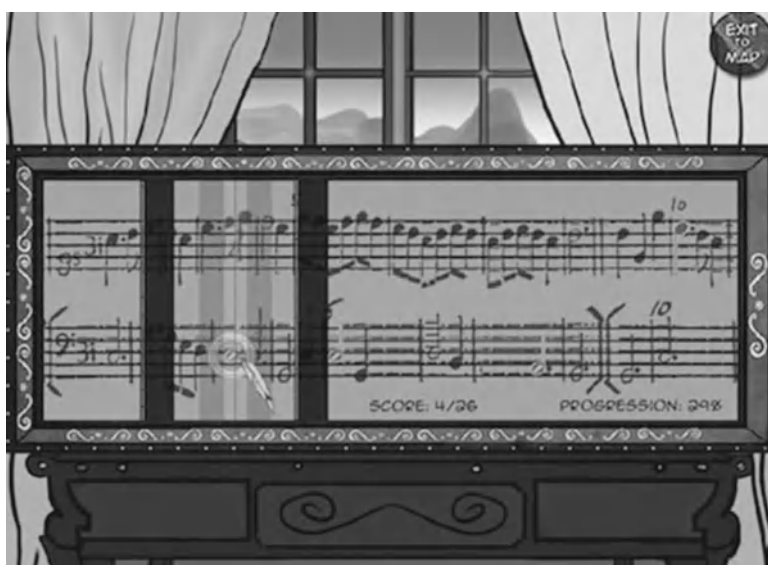


Fig. 37.5 Music Inscription game, level 2 (Source: Authors' screenshot)

attention and eye-hand (embodied) coordination. Invoking Truax's notions of "listening positions" – modes of listening attention that he argues have specifically developed alongside advances in technology and media soundscapes among others – rhythm games move the listening position of the player from background or



Fig. 37.6 Dance for the Sun King’s pleasure (Source: Authors’ screenshot)

distracted listening to “analytical” listening (Truax 2001). According to Truax, analytical listening is a type of auditory attention that goes beyond appreciation and into deconstruction of the basic building blocks of music: tempo, timbre, flow, pitch, and envelope, among others. Where Truax’s point rests on noninteractive listening, however, rhythm games offer another dimension, as they activate melody and harmony through their inputs. This affords a unique kind of listening that is not only analytical, but *participatory*.

The Gigue Is Up: Learning Baroque Dancing

After completing the mini-games described above, players unlock the last mini-game, taking place in the Hall of Mirrors at Versailles – the court of Louis XIV, the Sun King. Here, the narrative reaches its conclusion as players must dance their way into the king’s favor so that he will grant them a supply of Arundo Donax to take back to England.

As with the Musical Inscription game, play mechanics are modeled after popular rhythm games: in this case, *Dance Dance Revolution (DDR)*. Like *DDR* and its multiple PC or web-based spin-offs (such as *Stepmania* and *Flash Flash Revolution*), players must press key combinations in time with icons moving vertically across the screen (see Fig. 37.6).

Whereas the dance animations performed by avatars in *DDR* and its spin-offs have little connection to player inputs, characters in this dancing game actually

perform Baroque dance steps, from the basic *plié* and *elevé*, to more advanced steps like the *pas assemblé* and *pas-coupé*. In this way, skillful players are performing a digitally mediated Baroque choreography.

Each difficulty level corresponds to a type of dance, from the relatively slow Menuet, to the more up-tempo Gigue, and finally to the fast-paced Bourrée. Well-timed keystrokes, synchronized to downbeats in the music as with real Baroque dance, result in fluid dancing motions that raise the Sun King's "Mood Meter." Pressing the wrong key or mistiming a keystroke causes the character to stumble, resulting in a lower Mood Meter score. A high score wins the favor of the Sun King, resulting in a concluding cutscene taking the player back through each stop on their journey to the sound of growing applause.

As with our other mini-games, this game engages players in a form of Baroque cultural expression, rather than through the exposition of historical facts. This is accomplished through the amplification of player input, which Poole (2000) among others describes as one of the central pleasures digital games afford: with minimal, but timely input, the player's character executes complex and fluid movements imitative of the grace, decorum, and precision that were upheld as virtues of formal Baroque dance.

Play-Testing: A Different Set of "Learning Outcomes"

In documenting our design process, we have highlighted where divergent conceptions regarding the educative value of knowledge mobilized in play, versus knowledge expressed as facts, emerged between the development team and clients. Our play-testing sessions provided a similar set of tensions as students engaged with the very content-heavy game shell and played through the mini-games. In these sessions, groups of students, aged 12–14 (150 in total) played the game for 60 minutes, with little or no instructions on what to do or how to navigate.

Each of the play sessions was observed by one or more of the authors, and documentation included video, audio, and extensive field notes. These sessions occurred within an impoverished community in a large city in Canada, and none of the 150 students had ever listened to or encountered Baroque music prior to playing the game. In this section, we focus on two significant aspects we observed during play-testing: the ways in which the users played (or did not) and the ways in which they took up and navigated curricular content on the interactive map.

Gratifyingly, in each of the play sessions, we observed clear indications of high engagement: pleasure, excitement, chatter, laughter, and the desire to keep playing. It was common to see pairs of students either playing together on the same computer or making gameplay decisions based on what their neighbor was doing. Of the three mini-games, the two that were based on popular rhythm games (the Musical Inscription game and the Baroque Dancing game) were most played. In one of the sessions, a competition was struck between two groups of boys as they competed for high scores in the inscription game, calling their scores out as they completed each

Fig. 37.7 Players “meat” the new dancer (Source: Authors’ screenshot)



level. In another session, for the first and only time, a particularly skilled player at the dancing game was successful at unlocking a hidden element we had purposefully built into the game. Once a player achieved a nearly perfect score on the highest level of the dancing game, a new character was unlocked: a stick figure built out of different meats that one of the programmers had used in order to test the game (Fig. 37.7). The student and all of those in the session were *delighted*, giggling, shouting, “I want to do that too,” and so on, as they gathered around to watch him play as the meat dancer. What was significant to us was that we had, almost inadvertently, but certainly through *play*, created an audience of Baroque listeners, with a population of students who had never before experienced Baroque music.

The orchestra mini-game was played much more in the play-testing session we held in a school-based music class than it was in the other sessions, in part because the class created a context for thinking and listening to music and instruments that was not created in or through the other sessions. For instance, the participants in the music class were already generally familiar with the parts of a modern orchestra, and their music teacher was delighted by the fact that Vivaldi’s eyes follow the mouse around the screen when one plays the game. The music class sessions were characterized by the same kind of keen enjoyment we witnessed in the other sessions, including a willingness and desire to keep playing.

Content Versus Play

While it was not surprising to us that the students instantly recognized the interactive map and its associative content as ‘curricular,’ they did spend considerable time exploring the map, clicking on, listening to, and sometimes reading the pop-up bubbles. Admittedly, this was partly due to the fact that they ignored the instruction set. Of particular interest was how students who were lost or stuck on the map would call over one of the researchers for assistance. To them, it was easier, and perhaps more instinctive, to ask an expert how to play than to read the instructions provided at the beginning. The act of ignoring instructions is an arguable norm in gaming culture that we have observed elsewhere (Jenson and de Castell 2008; Jenson et al. 2007). Skilled players skip instructions and immediately start playing because they believe that they have encountered enough game genres to be able to figure out how to play. These students, many of whom were self-described gamers, perhaps expected the game to emulate the design of more familiar games, which would then allow them to skip over instructions and jump right into playing. While this strategy was somewhat successful when playing the mini-games (as two of them are based on popular rhythm games), the map could not be played this way, most likely due to its function as a reservoir for static content.

Secondarily, but no less significantly, when we constructed a worksheet to help guide the participants through the map, we observed players reading the content in quite a different way than we had intended: they saw it somewhat as justification for the fun that they had playing the games. So when we attached a worksheet to the play sessions, they were eager to fill in the blanks, though with varying degrees of completion.

When asked what someone of their age might learn by playing the mini-games, participants remarked that they communicated *history about the Sun King* and *dancing types of dances* (dancing game), *how different instruments sound* (orchestra game), and *how the music looked* (inscription game). These remarks cannot be read as a decisive indicator of the game’s success as a learning tool. They do advance the possibility, however, that educational games should be less concerned with communicating information and more concerned with developing affect: with keeping players pleasurably engaged in a space where educational content is spread across all elements of design (from graphics, to narrative, to – crucially for this game – sound and music) (de Castell and Jenson 2003). From this perspective, we read indications of pleasure and enjoyment as *educationally* significant, as these are suggestive not only of players’ appreciation for Baroque music (however temporary) but also of playfully attentive engagement with Baroque cultural forms. In a very real sense, then, we viewed markers of high user attention such as laughter, periods of uninterrupted screen looking, and a willingness to *voluntarily* continue playing, as evidence that learning was ‘in play.’

Retuning Our Learning Instruments

To reiterate, the idea that learning should be pleasurable, engaging, and actively participatory is not new, yet centuries of the primacy of text has resulted in pedagogical models privileging retention, regurgitation of facts and writing as the main vehicles for expressing learned content. In a world of Web 2.0–based learning and play, where interactivity and multimodality are more than mere buzzwords but simply the way things work for many students, the challenge for educational game designers is to not simply repackage the same old content in new forms, but to explore how games can support the cultivation of positive dispositions and outlooks. In other words, we can start to use digital media not only to educate differently, but also – through that experience – to recognize different forms of knowledge and therefore different ways of learning (Kress 2003; Lankshear and Knobel 2003; Klopfer and Purushotma, Chap. 38), such as affective relationship to the material, imaginative creativity, deep understanding, risk-taking and experimentation, or even simply having fun as potentially valid and valuable.

The case that we present here of experiencing Baroque music through the medium of a Flash-based game constitutes a twofold example of this new-old approach to education which aspires to a “ludic epistemology.” On one hand, it traces our work as designers attempting to merge both static and participatory models of learning and play while leveraging popular gaming conventions and resisting patronizing efforts by educational media to disguise itself (mostly unsuccessfully) as entertainment. On another hand, the experience from our play-testing highlights potential indicators of learning not typically attended to in instructional design: pleasurable engagement, communal learning, confronting game challenges, competition, changing and negotiating game rules, and, most importantly for all of our participants, an embodied opportunity to experience Baroque music. In a time when there are few, if any, music programs remaining in public school, these kinds of resources can, at the very least, provide a preliminary and pleasurable encounter with musical genres and traditions to students who might not otherwise have reason or opportunity to listen to, or care about, them. To put it as one of our early user testers did: “I never heard this kind of music before: that means it’s educational for me, right?” Right indeed: if only more educational experiences were so transparent.

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Chapter 38

Using Simulations as a Starting Point for Constructing Meaningful Learning Games

Eric Klopfer and Ravi Purushotma

Defining Good Learning Games

In 1965, The Nobel Prize Authority awarded eminent US physicist Richard Feynman with that year's prize for his groundbreaking work in quantum electrodynamics. Often noted for his extraordinary ability to explain theoretical physics to students with engaging and lucid explanations, recordings and transcripts from his lectures in the 1960s still form the basis of leading physics education programs worldwide. Toward the end of his life, a BBC interviewer asked Mr. Feynman where he himself had learned to think as a physicist and how he viewed his own education. He recalled a particular experience from his childhood in which he was playing in the fields with other children after their fathers had taken each of them for walks in the woods (Zeiderman 2000):

The next day, Monday, we were playing in the fields and this boy said to me, "See that bird standing on the stump there? What's the name of it?"

I said, "I haven't got the slightest idea".

He said, "It's a brown-throated thrush. Your father doesn't teach you much about science."

I smiled to myself, because my father had already taught me that [the name] doesn't tell me anything about the bird. He taught me "See that bird? It's a brown-throated thrush, but in Germany it's called a Halsenflugel, and in Chinese they call it a chung ling and even if you know all those names for it, you still know nothing about the bird – you only know something about people; what they call that bird. Now that thrush sings, and teaches its young to fly, and flies so many miles away during the summer across the country, and nobody knows how it finds its way", and so forth. There is a difference between the name of the thing and what goes on. (Feynman 1999, 4)

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Later in his life he was asked to serve on a textbook committee to determine which books were suitable for use in the greater Los Angeles school district:

What finally clinched it, and made me ultimately resign, was that the following year we were going to discuss science books. I thought maybe the science would be different, so I looked at a few of them. The same thing happened: something would look good at first and then turn out to be horrifying. For example, there was a book that started out with four pictures: first there was a windup toy; then there was an automobile; then there was a boy riding a bicycle; then there was something else. And underneath each picture it said, "What makes it go?"

I thought, "I know what it is: They're going to talk about mechanics, how the springs work inside the toy; about chemistry, how the engine of the automobile works; and biology, about how the muscles work." It was the kind of thing my father would have talked about: "What makes it go? Everything goes because the sun is shining." And then we would have fun discussing it:

"No, the toy goes because the spring is wound up," I would say. "How did the spring get wound up?" he would ask.

"I wound it up."

"And how did you get moving?"

"From eating."

"And food grows only because the sun is shining. So it's because the sun is shining that all these things are moving." That would get the concept across that motion is simply the *transformation* of the sun's power.

I turned the page. The answer was, for the wind-up toy, "Energy makes it go." And for the boy on the bicycle, "Energy makes it go." For everything, "*Energy* makes it go." Now that doesn't *mean* anything. Suppose it's "Wakalixes". That's the general principle: "Wakalixes makes it go." There's no knowledge coming in. The child doesn't learn anything; it's just a *word!*

What they should have done is to look at the wind-up toy, see that there are springs inside, learn about springs, learn about wheels, and never mind "energy". Later on, when the children know something about how the toy actually works, they can discuss the more general principles of energy. It's also not even true that "energy makes it go", because if it stops, you could say, "energy makes it stop" just as well. What they're talking about is concentrated energy being transformed into more dilute forms, which is a very subtle aspect of energy. Energy is neither increased nor decreased in these examples; it's just changed from one form to another. And when the things stop, the energy is changed into heat, into general chaos. But that's the way all the books were: They said things that were useless, mixed-up, ambiguous, confusing, and partially incorrect. How anybody can learn science from these books, I don't know, because it's not science. (Feynman 1985, 297–298)

Education today is under attack from many directions. In one thread, critics similar to what Feynman argued in the past say that we teach only superficial elements, failing to present the true complexities necessary for a rich understanding of any subject matter: Science needs to explain how things work, not just their labels. History needs to teach students how to analyze causal relations, not just names and dates. Foreign language students need to be able to communicate comfortably and naturally in a foreign culture, not simply describe grammar rules. All disciplines need to teach how to work as teams and to create new solutions, not how to regurgitate answers.

In another thread, observers lament how poorly engaged students today are with learning materials. Many blame the rise of video games and other digital media that youth today are engulfed in for making it impossible to design educational materials

that can “compete” for students’ attention (see Hartmann 1999). In the early 1990s, many curricular designers saw an opportunity to migrate textbook exercises to a video game format in a series of “edutainment” titles in order to recapture attention among youth. These poorly conceived games, however, failed to increase youth engagement, and the “edutainment” software market on the whole is largely struggling except for games targeting the youngest audiences (Harvey 1995).

It is only by meaningfully considering these two threads together that we can address either concern. We could easily imagine an edutainment title designed to drill children on the names of different species of birds, then play an animation sequence as a reward for correct answers; this would undoubtedly suffer the same fate as earlier edutainment titles of combining the educational value of a bad video game with the entertainment value of a bad lecture (Jenkins 2002). Instead, we should not begin by either viewing games as entertaining, but lacking any cognitive merit, or acquiring knowledge as being an inherently unpleasant experience that requires a superficial delivery mechanism to make it palatable. Rather, we should look closely at the ways in which games can already naturally facilitate problem solving and deep thinking, and the ways in which acquiring new knowledge can be stimulating and enjoyable (see Wolf, Chap. 35). As starting points, we feel some of the most promising work to date has been in the field of using simulations in classrooms. While, strictly speaking, simulations are not always inherently games, they often share many commonalities, and there are often numerous ways in which simulations can be developed into full-fledged games. Furthermore, there is already a rich tradition and body of literature supporting the use of simulations and modeling for educational purposes. By extending these, we find the harmony between learning and enjoyment often comes naturally.

When looking at the full possibilities for learning games, it is critical that we first put aside certain nongames: Virtual worlds (e.g., *Second Life* 2003) are not games, as there are no explicit goals or feedback – though virtual worlds may be used to create games by adding those elements.¹ Virtual worlds may also be simulations (e.g., a virtual world in which you are given different items to determine the speed at which they fall), but they are not inherently simulations or games and need to be approached with caution when using them to evaluate the use of learning games in education. Besides virtual worlds, we must also be careful to distinguish between many educational “games” found on the Internet that more closely resemble multiple-choice tests with rewards than a commercial video game. Games like *Biology Jeopardy* come to mind. In order to differentiate these entities from bona fide learning games, we need to make one clear distinction: Learning games are educational games in which the content/learning objectives are inextricably linked to the game play. That is, it is not possible to replace the content in the game with another content area, or doing so would entirely destroy the game. So, *Biology Jeopardy* is not

¹ See Thimm (Chap. 11) for a discussion if *SL* may more appropriately be defined as a game or as a virtual world.

a learning game in that you can just as easily swap in another set of questions in some other content area. Similarly, many edutainment titles (e.g., where you shoot the equation with the right sum out of the sky) are not learning games. That does not mean that these games cannot be useful for teaching; they just are not a very interesting research topic. The only learning leverage that this form of games (sometimes referred to as “chocolate covered broccoli” because it involves merely coating the unpalatable content with a tasty coating) offers is motivation. It may indeed be more motivating to shoot math problems out of the sky than to do them on paper, but that does not offer much new to the realm of learning theory. Increased motivation yields more time on task and better scores (at least in the short term – long term learning implications are less clear).

Viewed in this light, we can begin to see the discrepancies between the promises of learning games, espoused by theorists, versus the lackluster results seen in educational gaming deployments to date. While theorists point to the potential for bona fide learning games to convey deep principles of subject matter in the way Feynman describes, extremely few bona fide learning games actually exist. Instead, much of the evaluation of the field centers on nongames promoting exactly the form of education Feynman despised and students find dull. The simple solution to this would be to say “learning game designers are just lazy and need to build better games.” The truth of the matter, however, is that designing meaningful learning games is an extremely difficult task. While we are beginning to see the emergence of high-quality learning games and slowly coming to an understanding of the principles necessary to build them (Klopfer et al. 2009a), this is still largely uncharted territory with many challenges and often requiring considerable budgets to tackle correctly.

Rather than looking for how we can extend previous efforts at edutainment to address their shortcomings, we advocate that one approach is building upon the rich tradition of using simulation games in schools. As simulations model domain specific concepts, they naturally exclude superficial educational approaches that reward memorization of factual concepts with play. While researchers and educators have already demonstrated rich and powerful learning within games such as *Sim City* (Starr 1994), *Civilization* (Squire et al. 2008), and *The Sims* (Sanford et al. 2006), we believe that explicit focus on aligning the strengths of simulation games with educational structures can yield even deeper learning experiences across a wider range of disciplines. At the end of the chapter, we introduce *StarLogo TNG*, a free, ready-to-use simulation construction environment with curriculum plans suitable for ecology, biology, physics, computer programming, math, and other subjects.

The Role of Simulations in the Curriculum

The first question to ask when thinking through the possibilities for games in education is “what do we actually want to teach?” Edutainment and Drill and Kill titles generally focused on memorizing facts or more simple curricular goals, as this allowed a simple recycling of the same game system across numerous disciplines

with simple content changes. However, it did not lead to rich learning in any particular subject. In thinking about the influence of games and simulations on science learning, I [Dr. Klopfer] reflected on my own experience and training as a graduate student in a biology program. Often, when I speak with science teachers, they are shocked to learn that my work was almost entirely theoretical with little bearing on what is taught at the high school level. But in fact, while there are supporting references to “real” biological systems, most of the work is entirely theoretical and primarily derived from computer simulations. The fact that simulations have revolutionized modern science (Nature 2006) and support not only confirmatory explanations but also predictions and new discoveries is not a part of the experience of most science teachers or their students. So perhaps, first and foremost, simulations are critical for the science curriculum because simulations are critical to science. Teaching science without simulations is perhaps more fundamentally unsound than teaching biology without microscopes or chemistry without chemicals. Teachers and students must understand the science of simulations to have an understanding of the modern nature of science, whether that be for practicing science or simply making good decisions about science-based issues on a daily basis.

For researchers and practitioners finding themselves fighting an uphill battle with skeptic school administrators to bring video games into the classroom, beginning with simulations can provide a clear and relatively undisputed argument for their incorporation into the curriculum. At the same time, the jump from simulation to creating true learning game experiences is relatively small and can be made with little challenge either within the simulation itself or through classroom games constructed around the simulation. In particular, we look at three pedagogical goals served by simulations applicable to a wide range of disciplines: process learning, complex systems, and simulation construction.

Process Learning

In education, computational modeling software and associated curricula including *StarLogo* (2008), *NetLogo* (1999), *Connected Chemistry* (2005), *Model-It, Biologica* (2000), and handheld participatory simulations (Colella et al. 2001; Gobert 2005; Klopfer et al. 2005; Steiff and Wilensky 2003; Soloway and Pryor 1997; Resnick 1994; Wilensky and Reisman 2006) have been created for school-age students to learn about and visualize systems. Agent-based programs like *StarLogo* (2008) and *NetLogo* (1999) reveal how simple rules for interaction ascribed to individual agents with varying traits can produce emergent population scale patterns such as flocking behavior in birds, slime mold aggregation, or ant colony organization. Wilensky and Reisman (2006) discuss how the graphical output of the dynamic predator-prey system being modeled enabled the student to not only visualize population patterns but also to hypothesize about the mechanisms giving rise to those patterns (e.g., environmental constraints on population growth). The authors point out that these mechanisms tend not to be well understood by students. In fact such mechanisms are

typically ignored in traditional school curricula that treat individual and system scale processes entirely discretely, without providing an opportunity to connect them.

There are a number of studies that show specific science learning results from simulations. For example, Meir et al. (2005) showed that a simulation about osmosis and diffusion was effective in teaching certain aspects of this concept when compared to a control. Similarly, another study (Perry et al. 2008) by the same group (with which we are affiliated) showed that an evolution simulation was more effective than text at remediating particular misconceptions, but notably not better than a video of an expert lecturer. The *Modeling Across the Curriculum* (MAC) project has done research on learning through simulations in several domains. The *Biologica* project (Buckley et al. 2006) showed significant gains in learning by most students through their genetics software. Notably, some classes actually declined in performance, indicating that the way that the teacher used the software, not just whether it is used or not, was an important influence on learning. Similarly, *Connected Chemistry* (Levy and Wilensky 2009) showed increased understanding, particularly of the connections across scale from micro to macro, through simulations in another MAC project. This connection from micro to macro shares some similarity with the osmosis simulations mentioned previously. Levy and Wilensky point to inspiration from other studies (e.g., Ardac and Akaygun 2004; Kozma 2000) that showed increased learning associated with simulations that explicitly make connections between different representations of the same system.

With respect to adoption by teachers, we know that the incorporation of technologically advanced curricular material into classrooms are met with many well-documented challenges, including teacher time constraints, teachers' understanding of technology, teacher confidence levels in terms of computer programming, access to technology, and the lack of supporting curricular materials (Fishman et al. 2004; Yoon and Klopfer 2006).

Complex Systems

Knowledge of how students develop an understanding of complex systems has recently gained momentum in learning science research (Hmelo et al. 2000; Jacobson and Wilensky 2006; Wilensky and Reisman 2006; Yoon 2008). A complex system can be defined as a system of interconnected parts that as a whole exhibits one or more properties not obvious from the properties of the individual parts (agents). Complex systems scientists and educational researchers speculate that students have a hard time understanding the mechanisms that drive the emergence of large-scale global phenomena from smaller scales of interacting agents (Chi 2000). The confusion about causality across scales is thought to be a primary source of misconceptions not only in the formal study of science but also in everyday life experiences (Wilensky and Resnick 1999). Explanations for how patterns emerge require integrating and matching explanations across scales. That is, patterns at certain scales are intentional, while those at other scales represent self-organization from the

interactions of agents at smaller scales. The way in which schools of fish move through the water and herds of ungulates roam across the savannah provide some of the most vivid examples of how individual actions lead to grand large-scale patterns. While local environmental conditions can impose hard limits on where species can live and thereby impose large distribution patterns, the interactions of individuals within and between species contributes substantially to pattern development, influencing biodiversity and even evolution (Levin 1999). While a coherent understanding of complex systems presently eludes most students (Jacobson 2001), the need for learning about complex systems is real, and the tools are available. Classroom-friendly agent-based modeling tools are readily available and have been tested in a number of disciplines, including biology (Klopfer 2003; Klopfer et al. 2009b), chemistry (Levy and Wilensky 2009), and physics (Klopfer and Scheintaub 2008).

In a recent paper, Goldstone and Wilensky (2008) argue that using simulations of complex systems can promote far transfer across systems of disparate subjects that share common complex systems principles. Students learning from simulations of complex systems “actively interpret” the simulation, and learn to understand systems by identifying these common principles. Transfer occurs not because students remember abstract formalisms, but rather because they can apply methods of interpreting events. They note that the transfer of understanding across systems can occur even when students do not explicitly note the underlying similarities between the systems. This is a compelling argument with large potential for transforming the way that science is taught and learned.

One interesting related note that Goldstone and Wilensky point out (citing Goldstone and Sakamoto 2003 and Scheiter et al. 2006) is that despite the intuitions of some designers, models of complex systems that are abstract and idealized promote learning better than models that are detailed and realistic. Work on simulations of complex systems has not been restricted to desktop computers; Participatory Simulations (e.g., Wilensky and Stroup 1999; Klopfer et al. 2005), the C5 architecture (Repenning and Ioannidou 2005), and Ubiquitous Games all use distributed architectures and mobile devices to engage students in social simulations, maximizing the benefit of social collaboration and adapting more flexibly to classroom realities.

Simulation Construction

From the student learning perspective, researchers suggest that construction, in addition to manipulation of simulations, may lead to more optimal learning outcomes (Papert 1980; Resnick 2002; Sherrell et al. 2005). For example, Kuch (2007) found that by providing students with a tool to create their own simulations and the skills to design models, students were able to augment their intuitions to develop testable hypothesis and scientific models. This is particularly relevant in the domain of complex systems, where programming activities that focus on simple behaviors can help students connect those behaviors to emergent system scale outcomes

(Goldstone and Wilensky 2008). Recent calls by national organizations indicate that efforts should be made to improve capacities in computer programming, including algorithmic thinking (Tucker et al. 2003) and model-based reasoning (NRC 2006), and acquiring, manipulating, and representing data as well as the engineering of computational tools that support those activities (NSF 2006).

From Theory to Practice: *StarLogo TNG*

In order to facilitate the process of students creating their own complex systems simulations and creating games that incorporate complex systems simulations, we designed a program called *StarLogo TNG*. This offers a framework for thinking about the combination of simulation development (engineering design) with simulation use (scientific method). The two cycles of design and investigation are connected by an intermediate area of “Test, Tinker, and Play.” One might design and build a simulation and then start to test it. As one tests the simulation, they enter a cycle of observation and data collection, followed by generation of questions. This in turn comes back to more testing or tinkering. These linked processes model the way that many simulations are developed, tested, and used, while promoting skills in both scientific methodology and engineering design. Other works on student-created models of complex systems have employed *NetLogo* and *AgentSheets*.

While one could simply use *StarLogo TNG* to recreate and visualize different simulations, its real power comes in its ability to naturally blur the lines between simulations and games. Besides all the components needed to build complex simulations, *Starlogo TNG* also includes a suite of tools for attaching different input controls, scoring mechanisms, objectives, and feedback to create game experiences out of simulations. By exploiting the many connections between simulations and games, we hope school activities constructed around *Starlogo TNG* can achieve many of the goals set out by learning game theorists, while simultaneously building upon the clear pedagogical rationale from using simulations to understand a given discipline, as well as the constructionist pedagogy advocating by Seymour Papert and others. By including game elements, however, kids are given freedom to experiment in ways not normally encouraged in a simulation, and challenged to understand the depth and manipulability of a system well enough to accomplish their goals. As an example, Klopfer et al. (2009b) outline an example classroom in which two teams of students are each working on designing their own virtual worlds. Both of them are researching the nature of fluid dynamics, tide flow, buoyancy, and other ocean concepts, then prioritizing which aspects should be modeled and which are superfluous. Both are researching weather systems to understand which variables to incorporate and how they will impact the overall system dynamics. But one is designing a simulation of warming seas to understand the impact on endangered animals, whereas the other is constructing a Jet Ski racing game to entertain their friends. While the former would have a much easier time gaining acceptance in a curriculum review committee, as some other chapters in this book demonstrate, the

latter has its own set of advantages for student engagement, imagination, and depth of exploration. By using environments that can fluidly move between these two worlds, we hope we can provide a more natural entry path for learning game adoption by schools and create more meaningful connections and transfer between game worlds and formal learning.

While the call for the usefulness of introducing simulations in schools is hardly new, or even of constructing video games for that matter, the technical proficiency required to do so has largely limited the possibilities to simplistic simulations that fail to captivate and excite students. Mostly, this challenge comes simply from how difficult it can be for nonprogrammers to learn how to create complex programs. In order to make even a simple program, beginners need to learn the precise usage, syntax, and ordering for a myriad of commands and control structures. Forgetting even a single semicolon could mean learners would never see their program succeed. In order to make programming more accessible to early learners, Seymour Papert and his colleagues created the *Logo* programming language. In *Logo*, learners were given a specialized learner language with an extremely simplified set of commands and syntax. For example, programming simple behavior for a game character could look like this (Begel and Klopfer 2004):

```
to run
  if pc = red
    [ rt 180 ]
  setenergy energy - 1
  eat
  if else (random 100) < 10
    [ die ]
    [ move ]
end
```

Yet, even this simplified language proved intimidating for novice learners. Some would simply write “if red,” without realizing that a conditional requires properties on either side of the equals sign (Begel and Klopfer 2004). Some would forget which commands needed to be bracketed and which ones did not. Others would simply forget the names of different commands needed to accomplish particular tasks. Any one of these possibilities or others would result in a complete failure of the program to run, rapidly frustrating students.

In *StarLogo TNG*, we instead give students an entirely new graphical mechanism for entering commands.

As illustrated (Fig. 38.1), students are given a series of puzzle pieces, each representing a particular programming command or property. Students construct the program by snapping together puzzle pieces. Anytime they forget the programming language, the system provides them with visual support. If students were to try to connect the “if” block to the “blue” block, they would observe that the triangle edged “blue” piece does not fit into the crescent shaped “if” hole, a fact which visually confirms that the two word types are incompatible. Similarly, if they tried to say “if = blue,” they would see the empty hole for “patch color,” requiring them to

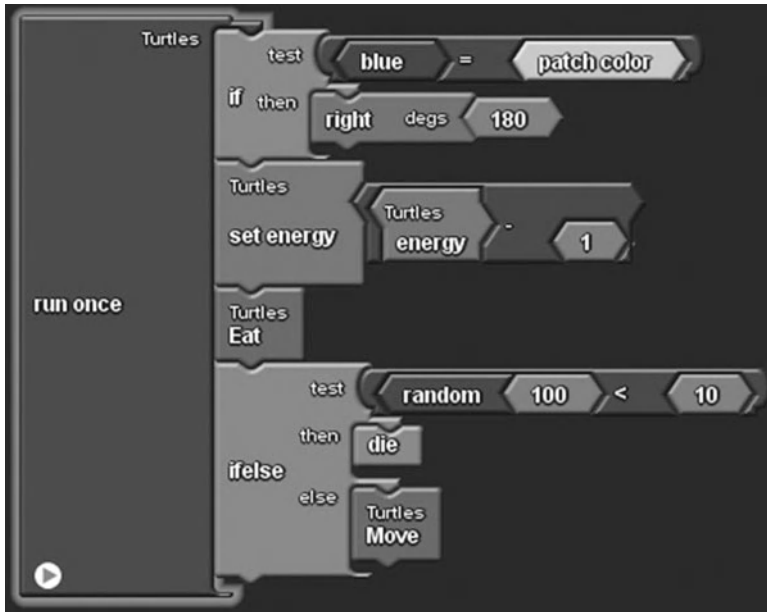


Fig. 38.1 Graphical programming with *StarLogo TNG* (Source: Authors' screenshot)

specify what needs to be compare with “blue.” If a student forgets which words are available to them, they can simply browse through catalogs of shapes filled with the specific connectors that they might need. In this way, what to an outside observer might look like nothing more than colorful animated bricks turns out to provide crucial feedback for users learning the system. The interface still allows the rapid construction of statements but also forces learners to think through all of the steps in that construction.

Using this, students can not only play games/watch simulation systems but understand and make changes to elements of a system, or program their own complex creations from scratch. Figure 38.2 shows an extract from an ecology unit where students learn about the nature of forest fires. Here, they play the role of Homer Simpson, trying to make informed decisions about which trees to cut down in order to best control a fire through their understanding of the simulation. Figure 38.3 shows *Runaway Bunny*, an action game in which players take the role of a rabbit trying to escape an oncoming forest fire based on their analysis and modifications of a fire simulation system.

Other example curriculum includes an epidemiology unit in which children construct their own games in the process of developing their understandings of how diseases spread.² Most participants in this unit tend to create games in which players

² <http://education.mit.edu/drupal/starlogo-tng/epidemic-tutorial>. Accessed 27 September 2010.

Fig. 38.2 Extract from an ecology unit (Source: Authors' screenshot)

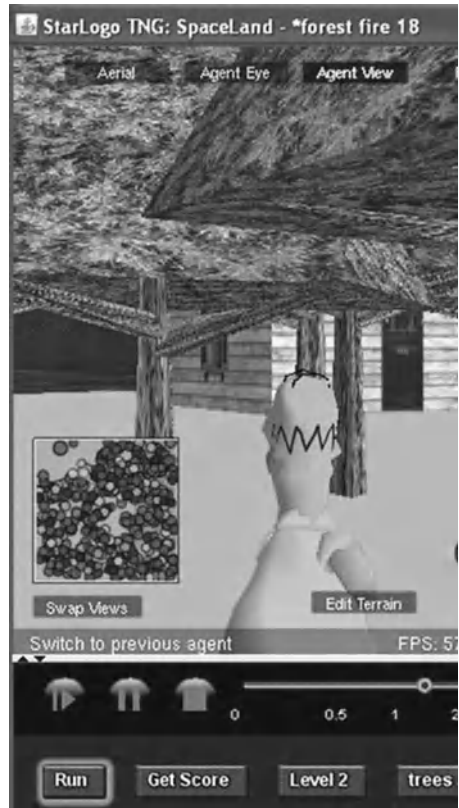


Fig. 38.3 *Runaway Bunny* – an action game created in the ecology unit (Source: Authors' screenshot)

have to avoid different diseases by understanding the different spreading mechanics and strategically avoiding contact. However, the system provides total programming flexibility for students to introduce any creative elements they imagine, such as zombies. In physics classes, students can easily construct games involving advanced simulations of how a projectile travels to a given target.³ Interestingly, students appear readily able to transfer knowledge between their traditional coursework and their virtual worlds (Klopfer and Scheintaub 2008).

In a junior physics class, students built swimmer-in-river simulations as part of a unit on vectors. The model has a swimmer with velocity, s , swimming at a given heading across a river of given width with current velocity, r . After building and playing with the simulation, students were assigned two-dimensional motion problems for homework. During a class discussion over the answer to a contested problem, one student went, unprompted, to the computer and opened his swimmer model. He plugged the variables of the problem into the code of the model and ran the model. As the swimmer reached the opposite shore, he exclaimed, "I told you I was right!" When asked in an interview why he chose to use the computer rather than mathematical analysis to prove his point, he said. "This way you could *see* I was right." While we do not have comparative data, in another physics class that used *StarLogo TNG*, 75% of the surveyed students agreed with the statement that the *StarLogo* unit was more difficult than other units, while 100% of the students felt the unit was more rewarding, demonstrating the motivating potential of programming through game design/development in the context of a physics class.

While examples like the one above are encouraging for underscoring the educational value of working with simulations, we should now be exploring all the ways in which we can further build upon such efforts to achieve the various promises of game-based learning. Within *StarLogo TNG*, we could easily modify such a simulation to give players different control of the swimmer, calculate scores based off different trajectories, include different bonuses and power ups that change the river conditions, challenge obstacles to work around, etc. This, in turn, allows a much wider range of students to enter the games as players and become familiar with the basic physics principles. It also provides an opportunity for the students themselves to start working with physics, programming, and design as they themselves may add these components. Over time, these players have the option to then go even deeper into the underlying mechanics by creating new games themselves based on their own understanding of systems – giving them an in-depth understanding of the concepts from every angle. In this way, learning games become not just a mechanism for funneling discrete content into kids minds, but rather a suite of experiences that can bring even students with zero exposure into the subject area and give them opportunities to work with all the concepts involved in recreating that phenomenon themselves.

³<http://education.mit.edu/drupal/starlogo-tng/physicscurriculum>. Accessed 27 September 2010.

To use Feynman's example, students in this case are no longer just memorizing that "energy makes it go," or how to define energy, or even where it is used. Rather, in a sense, they themselves are writing the textbook, authoring their representations of how energy operates, and putting it out there for the world to experience and provide peer feedback. Additionally, as students get used to authoring, distributing, and receiving feedback on their creations, we provide students with all the tools needed to continue their learning and exploration well beyond the duration of the class or the assigned content area, setting the stage for continued rich learning. In the same way in which we wish for students to reach a level of understanding deeper than "energy makes it go," we ourselves need to dig beyond understandings such as "games make it fun but less educational." Rather, we should look at "games" as a constellation of components (goals, feedback mechanisms, narratives, etc.) and social practices (experimentation, problem solving, etc.). By finding where each of these components already exist or are desired in our curricula, we can find opportunities to create learning games that are practical to build, rich in their learning, and accessible to classrooms.

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Chapter 39

School-Related Computer Game Pedagogy: Core Subjects and Tasks

Matthias Bopp

Introduction

As computer games or digital games (console games, PC games, mobile games and so forth) began to play a major role in the life of pupils, many academic studies concerning their actual and potential relation to school and classroom teaching were published and are now beginning to form a new field of research, which may be called *school-related computer game pedagogy*.

In the following, a proposal is presented for outlining the main tasks of this kind of research and how it can be systematised. The main objective is to facilitate the division of labour and cooperation between researchers in this field and counteract a fraying of the edges of the field itself. Such a fraying is a permanent problem within the science of education in general, as educational phenomena are ridden with prerequisites and it is easy to get lost in interesting border areas, especially when dealing with new and – for some researchers – ‘thrilling’ (see Tavinor 2009, 2) objects of research such as computer games. The danger of this fraying is ‘research’ as a kind of unprofessional eclecticism, and this damages the function of computer game pedagogy as a science and the reputation of media pedagogy as a whole. In addition, a clear concept of the core tasks of a school-related computer game pedagogy may also facilitate the cooperation between computer game pedagogy and the other disciplines within game studies as it divides research labour and makes clear what the core competences of this part of game studies are and where to look for potential fields of interdisciplinary research.

One way to develop such a concept of core tasks is to practise school-related computer game pedagogy as a *practice-oriented* form of science. This is a common pedagogical self-description (see Weniger 1975; Brezinka 1995) and leads to knowledge

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for pedagogical actors in the school system (mainly teachers, but also to a certain degree parents and designers of serious games), knowledge that leads to alternative action perspectives which are – as far as possible – scientifically justified. In a nutshell, such knowledge is produced by seeing school as a specifically organised field of pedagogical actions and relations mainly between professional teachers and pupils; teachers' actions are conceptualised as 'goal–mean–actions', meaning that they want to achieve certain goals (mainly changing the thoughts, feelings and behaviour of pupils) by applying certain means (requesting, explaining, demonstrating, telling pupils to do certain things such as playing a game in a certain way, etc.); pupils react to this in their own and sometimes unpredictable ways. School-related computer game pedagogy analyses these actions (goals and their legitimacy – means and their efficiency and side effects) and their proximate requirements and then suggests knowledge that can lead to alternative goal–mean–actions if teachers, parents and so on accept them.

It is important to stress that only proximate (direct, immediate) requirements (or causes) of pedagogical actions in schools are at the focus of school-related computer game pedagogy. Otherwise more or less the whole world would be its subject, as pedagogical actions have more or less endless preconditions: the political system as a main goal setter, the psychology of learning in general, biological phenomena of the brain, the history of the socialisation of teachers and pupils in respect to digital games and so on. If a school-related computer game pedagogy makes all these requirements its core subjects, the above-mentioned fraying of the edges of the field is inevitable. From the practical point of view of school practitioners, general knowledge, for example about socialisation by digital gaming, may be personally interesting, but it is no central part of their professional teaching expertise in a classroom.¹ Thus, in the context of this chapter, it is proposed to leave these areas to media sociology, media psychology and so forth and not to see them as core subjects of a school-related computer game pedagogy. Similar arguments can be given regarding the effect of games on *learning* with games in general. This is no core subject of a school-related computer game pedagogy – as opposed to learning that is *triggered* or inspired by *teaching* activities in a classroom context.

These baselines given, a school-related computer game pedagogy implies a combination of three tasks (description, criticism and instructional research) and three research objects (teaching and learning activities in classrooms, popular pedagogical discourses on digital games and the effects of digital gaming in leisure time on school performances). In detail:

1. School-related computer game pedagogy *describes* what is the case in its field of research. This comprises (a) the use of serious and/or entertaining games as learning means in classroom teaching and attempts to teach computer game competence in schools, (b) the coverage of 'computer games and school' in popular discourse (e.g. in the media, in pedagogical guides for teachers and parents) and in administrative curricula and (c) computer games in leisure time, as far as they are relevant for pupils' school behaviour and performance.

¹For partly different approaches, see Kringiel (Chap. 40) or Fromme (Chap. 41).

2. School-related computer game pedagogy not only describes but *criticises* the three areas mentioned above immanently and from the point of view of educational philosophy, meaning a philosophical and especially ethical reflection on learning goals and in a broader sense, what is called *Bildung* in the German tradition.
3. School-related computer game pedagogy conducts *instructional research*: it looks for methods/means, how computer games as learning media can be used in a better way in classrooms (the problem of classroom implementation) and how serious games should be designed to specifically match classroom needs.

These three main tasks of school-related computer game pedagogy are research-wise manifold interdependent. So it is, for example, possible to do instructional research on the design of a serious game about ecological systems. But is this helpful for teachers? It is only helpful if there is a corresponding need for such a game, which implies that current ecological education is not as good as it could be and that teachers are willing to change their current practice of teaching by learning how to implement a serious game in their teaching repertoire. To test these two assumptions is part of the descriptive and critical task. Thus, the three tasks of school-related computer game pedagogy are circularly linked.

But in spite of this mutual interdependency, description, criticism and instructional research utilise mostly different research methods (quantitative or qualitative empirical methods, discourse-hermeneutic methods, norm criticism, etc.). They should therefore be distinguished from a systematic perspective and also partially from a practical point of view. Thus, there should be specialists, for example, in the description of the usage and evaluation of serious games in classrooms, experts in the critical analysis of the learning goals of serious games from the perspective of school curricula or educational philosophy and so on.

In the following, the three core tasks of school-related computer game pedagogy are described in more detail.

Descriptive Task

Computer game pedagogy conducts a theory-based description of computer game-related activities in schools, of the popular discourses about ‘school and computer games’ and of the use of digital games in pupil’s leisure time as far as this may influence their school behaviour and performance.

Description of the Use of Computer Games in Schools

To be considered are all digital game-related activities of pupils and teachers in schools, as well as the practically relevant prerequisites and consequences/effects of these activities. Such activities come into view when one asks who (what kind of teachers, pupils, etc.) uses which digital games (e.g. serious games, entertainment

games or browser games) to achieve which pedagogical objectives (e.g. acquisition of media competence² in dealing with computer games, acquisition of school-specific knowledge) and in which context (e.g. type of school, regular classroom teaching, a project week at school). The prerequisites of such activities include, for example, certain attitudes and prejudices of teachers, parents and pupils towards computer games and the technical equipment of schools. The consequences/effects of these activities consist in particular of the impact of these activities on desired and undesired knowledge and skills of the players.

For the descriptive questions of computer game pedagogy, little empirical research is currently available. Theories most likely deal with the effects of computer games as a form of learning in general,³ but do not cover the reality of the usage of games in schools. For example, there is currently no empirical data at all on how many German teachers use digital games or in which subjects.

However, theoretically two main areas of research can be distinguished from a systematic point of view. One area, the media-didactic area (see Tulodziecki and Herzig 2004), includes pedagogical activity, which wants to encourage pupils to play certain games so that certain insights and skills are acquired. This way, computer games are used as pedagogical learning devices which have the same basic function as text books, documentaries or traditional educational games. An example of this is the use of *SimCity* (1989) or again certain historical strategy games in the context of the teaching of social science (for the long tradition of pedagogical discussion on this, see Dempsey et al. 1993). It can be expected that in the future, computer games will be used in courses which address youth-specific problematic life situations (e.g. growing up) and may encourage discussions related to these themes (see, e.g. the first level of *Dreamfall: The Longest Journey* 2004 and several levels of *Heavy Rain* 2010, which both present typical problems in modern families). Thus, this field of research will gain importance.

The other area of computer game-related practice, media education (see Spanhel 2006), includes teaching activity, which aims to encourage a competent use of computer games in general, similar to a competent handling of classic literature, film, the arts and so on. Currently violent games in general and shooter games in particular play a prominent role in this area, as socially undesirable influences are widely feared. Here, either a 'preservative' cause of action can be taken by cautious parents, children and youngsters against such games or simply keeping such games away from them. Or a competent use of computer games can be encouraged on the basis of a critical analysis of and reflection on concrete examples of digital games, as is common, for example when dealing with classic literature and advertising in schools.

²In German-speaking countries, media competence (*Medienkompetenz*) has become a popular concept to describe the objective of media education. Media competence is similar to what is referred to as 'media literacy' in the English language area – similar also with regard to the fact that the term is not used consistently (also see Fromme, Chap. 41).

³See the overview of Lee and Peng (2006, 36) and Egenfeldt-Nielsen (2006) of theories that describe computer game-specific learning processes.

The Description of the Coverage of Computer Games and School in Popular Pedagogical Discourses

A second object of the descriptive school-related computer game pedagogy is popular discourses and statements about computer games, as far as regards connection between computer games and school. These discourses include in particular the views of pedagogical practitioners (teachers, designers of computer games) on computer games but also the views of parents, journalists, educational politicians and representatives of other disciplines, who speak out about schools and computer games. These discourses are a major prerequisite of the attitudes and prejudice of teachers and parents regarding digital games. In order to explain and influence their behaviour, school-related computer game pedagogy must describe (and criticise, see below) these discourses.

Characteristics of Non-academic Pedagogical Discourses

How do these popular discourses differ from academic pedagogical knowledge about computer games? Regarding their origin, they are often the result of the reflection of personal practical experience. Producers of serious games, for example, publish ‘best case’ trials in which they describe their actions and translate them into suggestions and recommendations for the design of serious games in general (see Iuppa and Borst 2007), teachers report on a – from their point of view – successful use of educational games in the classroom (see Callies 2004), etc. From a linguistic point of view, such discourses do not necessarily aim for conceptual clarity and internal consistency or a systematic approach. Often, they do not distinguish clearly between descriptive and normative statements, and they use typically rhetorical methods to convince the reader of their perspective. Regarding their justifiability, they often refer to personal or professional experiences and consider the current state of scientific research only selectively.

At the same time, popular discourse about computer games seeks to set value standards respectively pedagogical norms of action, for example ‘playing shooter games in the afternoon damages the consolidation of knowledge acquired in school in the morning’, ‘computer games are the best form of learning for “digital natives” because of their power of fascination’ and so on. And they set values without anyone being aware of the difficulty of justifying such valuations.⁴

Such popular pedagogical discourses should not be disregarded in general on the score of their non-scientific nature. Instead, it is necessary to clearly distinguish

⁴An example of this attitude towards norms, for the non-acknowledgement of the educational scientific state of research and for an argumentation based on layman’s assumptions, is the popular pedagogical publications about computer games of the psychiatrist and neuroscientist Manfred Spitzer (see Spitzer 2005).

between ‘good’ and ‘bad’ guides, and this is the task of the critical school-related computer game pedagogy (see below; for the characteristics of ‘good’ pedagogical orientation knowledge, see Brezinka 1978, 270–271).

As already mentioned, such popular discourses are relevant for the descriptive task of school-related computer game pedagogy, because they are indirect prerequisites of pedagogical practice: as far as practitioners allow their activities to be influenced by ‘theories’ (and not just by personal experience), this happens probably primarily through such popular discourses and not by scientific educational knowledge (see Plath 1998; Terhart 2000). Anyone who wants to understand or explain pedagogical practice (and in particular the irrationalities in this practice), therefore, needs to analyse such popular discourse.

Thematic Emphasis of Popular Pedagogical Discourse Today

Substantively, popular pedagogical discourses on computer games and school have several focal points. They contain – often very enthusiastic – general statements about how ‘good’ (e.g. Johnson 2006) and ‘bad’ (see Spitzer 2005) digital games in general are for pupils.³ They make differentiated media-educational statements on entertaining (not serious) games and their influence on school performance and *Bildung*.⁵ They praise serious games and how they should be designed (see, e.g. Bergeron 2006; Prensky 2001). And there are proposals on the way and by which means certain teaching goals in dealing with digital games should be achieved. These range from lesson plans with the theme of ‘shooter games’ for teaching purposes at school (see Bopp 2004; Wiemken 2005) to legal action for the protection of minors.

Description of Computer Games in Leisure Time

The role of computer games in leisure time of pupils forms the third subject matter of the descriptive school-related computer game pedagogy. The major research area here covers the effects of entertainment-related games on pupil’s *school performance* and – to a certain degree – on more general traits like social competence and aggression as far as they may significantly influence pupil’s performance in school.⁶ By contrast, general effects of digital games on *Bildung*, socialisation and so on (see Mitgutsch, Chap. 36) are not core tasks of school-related computer game pedagogy.

⁵See for a current example the German “Federal Agency for Political Education” at <http://www.spielbar.de/neu/category/spielebeurteilungen/>. Accessed 12 October 2010.

⁶See the scientific educational overviews of informal learning by entertainment computer games by Fromme (2006) and in the journal *media+education* (3/2004); from a media-psychological perspective, also see Lee and Peng (2006); on the appropriation of socially desirable competences, see Gebel (2006).

Critical Task

The critical school-related computer game pedagogy does not describe what is going on (this would be its descriptive task), but *evaluates* what is being done or asserted.⁷ This covers (a) digital game-related activities of pupils and teachers, (b) popular and political discourses about computer games and their relations to school and (c) the use of computer games in pupil's leisure time as far as this affects their performance and behaviour in school.

The criteria for this critique are firstly taken from the actors in the school system themselves (school or political authorities, teachers, parents) which fix teaching goals and standards for their doing. Thus, it is a matter of immanent critique. The same goes for the criteria for the critique of popular discourses (logical coherence, clarity of concepts and so on). Secondly, criteria of critique are taken from the tradition of the philosophy of education, adapted to the area of digital gaming (e.g. in the German context of school pedagogy, this may include the works of Klafki 1991).

With regard to game-related activities in schools, it is questioned, for example, whether a utilised serious game actually achieves what teachers expect from them and/or whether there are more effective or more efficient methods to reach these objectives. Or it is evaluated whether or not teachers are up to date concerning their pedagogical knowledge about computer games. In this way, typically wrong stereotypes about games may be identified.

With regard to popular discourse, critical computer game pedagogy questions the justifiability of presented descriptive and normative claims. Such a questionable descriptive claim – often found in popular discourse – is Prensky's (2001) thesis that there is a new generation of 'digital natives' whose brains are 'rewired' by the use of digital media and therefore can hardly be reached anymore by the traditional teaching–learning methods, but best by serious gaming (see also Gee 2003; Johnson 2006, who applaud the beneficial effects of computer games in general). Conversely, there are widespread allegations of supposedly catastrophic negative impacts of computer games in the form of the so-called killer games debates (see Spitzer 2005; for a critical assessment of these claims, see Bopp 2006a, 2009).

While a criticism of popular descriptive claims about computer games can easily fall back on the methods and the state of research in the established social sciences, the question arises how pedagogy can criticise normative, respectively, prescriptive, claims on dealing with computer games and remain science at the same time. Aren't norms inherently subjective and therefore cannot be criticised scientifically?⁸

⁷See, for example, Berndt (2005), whose intention is 'to get rid of several prejudices' (Book description in the Educational Information System, a German pedagogic research library) that are brought against computer games.

⁸See on the educational scientific approach of pedagogical norms Brezinka (1978); on norm criticism from a social scientific, view Weber (2004).

Pedagogical norms can be scientifically criticised in the first place with reference to their being in 'touch with reality': it can be questioned whether the descriptive statements, which are circulating within a debate in support of certain norms, are valid. Take, for example, the claim that a broad-scale preservative pedagogical approach is necessary against 'killer games' (norm), because otherwise children will play shooter games constantly, which will make them addicted, physically ill and violent, and school results will suffer because of this (descriptive support of the norm). It then can be examined whether these allegations about games are consistent with the current empirical research on the proliferation and impact of computer games.⁹ Only if shooter games have indeed in certain age groups a certain degree of proliferation and certain negative consequences, does it make any sense to demand that they should be banned.

A further task of the critical computer game pedagogy then would be to examine whether the proposed pedagogical measures (e.g. prohibitions) effectively bring about the desired effects and have no adverse side effects (e.g. publicity effects). Summing up, when the correspondence of a pedagogical norm to reality is revised, then it is not the underlying values that are checked (e.g. 'school performance' is a quality that should be advanced). What is considered in fact is the assertion that conditions are present that make such a value or norm setting necessary (or possible).

But pedagogical demands may also be assessed in terms of how they relate to other recognised norms and demands in our society, whether they are derived, for example, from other generally accepted norms of a superior rank or are in conflict with these. Assuming that the frequent playing of certain realistic 'beat 'em ups' by certain pupils on average further increases their propensity for violence in school, and that widespread prohibitions on the possession of such games could actually prevent this, a balancing conflict arises between the objective of reducing the extent of violence in schools (by banning 'violent games') and the right of young people to entertain themselves in the way they prefer.

Traditionally, in educational science, such questions are dealt with in the form of education theories (e.g. Klafki 1991). This distinctive tradition of the questioning of the selection and the justifiability of learning and educational objectives is one of the main differences between educational science and a purely empirical, pedagogical psychology or media psychology which merely postulate descriptive assertions and recommendations about the means to achieve predetermined objectives without being able to assess these objectives themselves.

Last but not least, in order 'not to criticise what you do not understand', for all these critical endeavours, it is necessary to fall back on the results of the descriptive and sometimes *instructional task* of school-related computer games pedagogy, and this is described in the following.

⁹Regarding the effects of computer games, the critical computer game pedagogy can relate to the quantitative impact studies of the media psychology. A topical, extensive overview on the state of research is offered by Lee and Peng (2006).

Instructional Task

From the perspective of this chapter, in (quickly changing) modern societies, the pedagogical practice in general – and the instructional way of dealing with computer games in school in particular – is considered in constant need of reform. Therefore, it is reasonable to search for scientifically justifiable alternatives to this practice, so pedagogical practitioners can make their activities more effective or efficient. Therefore, the third core task of school-related computer game pedagogy is to provide an appropriate instructional research.

Distinction Between Descriptive and Instructional Research

Instructional research within school-related computer game pedagogy aims to formulate rules of action for the use of digital games (both serious games and entertaining games) in school contexts and the design of serious games for school-related learning. Such rules, however, (a) must not be based on personal experience (which is typical in popular discourse on the subject) but on the results of scientific application-oriented research and (b) must be useful for practitioners. Being useful means they must be easy to understand; the simplest form of such a rule is ‘If you want to achieve objective X, then use the means of approach Y in the situation Z!’ In addition, it must be easy for a person who is under the pressure to act (which is typical for classroom teaching), to determine whether situation Z in actual fact exists. And it must be possible to carry out the approach Y without too much effort. Typically, other types of instructional rules are not often accepted by school teachers.

From a systematic point of view, the question arises why such an instructional piece of research should not be seen as a subarea of descriptive computer game pedagogy. This has pragmatic research reasons: pure descriptive knowledge is often far more extensive than the knowledge that one needs to formulate instructional rules, and descriptive knowledge also often lacks precisely that knowledge that would be used for a pedagogical methodology (see Brezinka 1995, 31). That is why in science in general, the distinction between fundamental and application-oriented research has been established. The distinction between a descriptive and instructional task within school-related computer game pedagogy simply assumes this distinction.

This means that the application-orientated instructional researcher ‘will attempt to schematise his system as a black box: he will deal preferably with external variables (input and output), will regard all others as at best handy intervening variables with no ontological import, and will ignore the adjoining levels’ (Bunge 1967, 123–124). He also wants to know with which means (the manipulable input variables of a situation) instructional objectives (visible output variables) can be achieved in certain pedagogical situations. On the other hand, as a general rule, he does not want to know, for reasons of pragmatic research, *why* certain means have a desired effect.

The instructional recommendations are based – as is common in the social respectively human sciences – on probabilistic relationships via empirical causal relationships. The effects of such recommendations are usually not very strong – due to the complexity of pedagogical settings (a fact that is easily forgotten by the advocates of ‘digital game-based learning’). And, of course, the application and goal component of such rules/recommendations must be critically investigated (see above the section on the critical task of computer game pedagogy).

Several Instructional Research Questions

Substantively, instructional computer game pedagogy elaborates the following core issues: from the media-educational perspective, it examines how certain educational objectives regarding computer games used in the classroom can be achieved in the most effective and efficient way. Currently, this concerns in particular the teaching of media competence in dealing with violent computer games.

From the media-didactic perspective, the instructional task (a) raises the question which type of computer games is particularly well suited for achieving which learning objectives. For this purpose, McFarlane et al. (2002), for example, have presented in a field study a wide qualitative analysis on the use of entertainment-related computer games in English schools. The participating teachers assessed the expected learning results of the use of certain games and came to the conclusion that especially general skills could be stimulated through the use of digital entertainment games. Here, areas such as communication and planning skills, group decision making, negotiation, strategic thinking and management of data were mentioned, thus mostly skills that can also be stimulated by traditional games.¹⁰

The instructional computer game pedagogy questions (b) how appropriate digital games should be methodically integrated into the classroom. Concerning this, only single-case studies are known to the author, such as, for instance, the evaluation of the use of the digital learning game *Global Conflict: Palestine 2007* (see Buch and Egenfeldt-Nielsen 2006).

Computer game pedagogy questions (c) how serious games designed specifically for classroom teaching and home work should be instructionally designed. In this respect, it becomes part of the design-orientated media didactics (see Kerres 2005). Up till now, there lies a focal point of research. Related work can be traced back to the beginning of the 1980s, and authors frequently emphasise the motivational potential of digital games (see Malone 1981; Dempsey et al. 1993). This research is currently primarily focused on exploratory studies. Theoretically, these studies often refer to constructivist psychological learning theories (partially in a critical-affirmative way, see critically Terhart 2000).

¹⁰See also the study of Gebel (2006) on the competence-stimulating potential of digital entertainment games and the overview of the quantitative psychological impact research of learning games by Lee and Peng (2006).

Methodologically, attempts in this area often try to utilise the instructional design of entertaining computer games for the design of serious games. This dedication to analysing entertainment games is based on the following considerations: popular entertaining games (and not only ‘serious games’) stimulate complex learning processes. These learning processes do not happen by chance. In contrast, most levels of entertaining games (and not only tutorials) are already designed for the stimulation of learning processes needed to enjoy the game. They, for example, carefully sequence the appearance of new game play challenges in order not to ask too much of the player or too little (e.g. the introduction of new types of military units in *StarCraft II: Wings of Liberty* 2010). We can therefore presume an ‘instructional structure’ even with ‘pure’ entertainment games. However, this instructional structure is for the most part unnoticeable (‘stealth teaching’), in order not to jeopardise the game immersion. So it has first to be detected by careful analysis. An appropriate study of instructional methods in entertainment games can then give indirect hints for the design of digital educational games as well (see Bopp 2003, 2005, 2006b, 2007).

Currently, the design recommendations, which are produced by the instructional computer game pedagogy, are scarcely empirically tested. A review essay by Egenfeldt-Nielsen (2006) refers to approximately 30 current quantitative studies on the effectiveness of certain digital educational games, but makes the comment that, to begin with, there are no reliable comparisons especially with regard to the effectiveness of digital educational games and other teaching–learning forms.

When recapitulating the current state of the instructional research of school-based computer game pedagogy, it appears to be in a primarily preparatory and explorative stage at this moment. There are at present only overtures to methodologies based on quantitative comparisons of methods; related contributions often prove to be non-scientific proposals from practitioners after critical examination (e.g. Pivec et al. 2004). The result is, therefore, a picture similar to other areas of design of digital educational materials: there are a lot of (technical) developments on a small scale, but there is a lack of relevant evaluation (see Blömeke 2003).

Conclusion: On the Practical Relevance of the School-Related Computer Game Pedagogy

What does a practically oriented school-related computer game pedagogy offer to game studies in general and the school practitioner in particular?

For other game studies, the core competence of school-related computer game pedagogy consists of showing how gameplay, narration, level design, etc. of computer games are influenced by certain, often hidden teaching–learning structures in manifold ways.

For pedagogical practitioners, school-related computer game pedagogy offers scientifically based information on how to utilise computer games in the classroom, on how to deal with children’s computer games in relation to school performances and on how to design serious games that specifically focus on school-related learning.

It does this directly by carefully offering rules of behaviour and indirectly by criticising popular stereotypes about digital games as being false or at least scientifically baseless, fall short of the educational scientific problematising state of the art and therefore offer little or no useful guidance for their own pedagogical activities – knowing that you know little is a good first step to better knowledge.

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Chapter 40

Learning to Play: Video Game Literacy in the Classroom

Danny Kringsiel

Adolescents and Video Games

Arguably, the most obvious evidence of the substantial cultural relevance video games have gained during the past few decades is just how utterly superfluous it has become to introduce an article on video games by collecting evidence of their substantial cultural relevance. Games have outnumbered Hollywood's box office sales for years now – and everybody knows. Video games have become an integral part of the life worlds of children and adolescents all around the globe – and everyone knows about that, too. Still, what hardly anybody seems to know is just how to sensibly deal with the new educational challenges arising from digital games.

This chapter tries to outline what video game literacy is, why exactly it is needed, and how it can be enhanced by educational intervention. The text will start out with a description of prominent apprehensions in the public debate surrounding digital games and minors and certain prohibitive approaches in trying to deal with this new educational challenge. A model of video game literacy will be juxtaposed in opposition to these prohibitive approaches, and the dimension of video game understanding will be elaborated as an aspect particularly relevant in helping young gamers to become more self-determined users of video games. Subsequently, I will present a number of exemplary findings of a study on tools for fostering video game understanding and give an outlook on possibilities for fostering video game literacy in the classroom.¹

¹Fromme (Chap. 41) and Bopp (Chap. 39) have a similar objective but a different approach to the question of how computer games should (or could) be a picked up as a relevant theme in the classroom.

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The challenge most prominently discussed in public throughout the past few years has been the allegedly harmful educational influence of violent video games on minors. Tragic school shootings like the Erfurt school shooting in 2002, the Emsdetten school shooting in 2006, or the Winnenden shooting in 2009 have fueled the fear of possible negative effects video games might have on young players. Media coverage of the shootings postulating direct causal links between the killers' use of violent video games and their own violent behavior has added to this widespread fear. A recurring motif of the ongoing public debate on *Killerspiele* ("killer games") in Germany is the assumption that minors are being exposed to dubious educational influences while playing digital games – and, in the worst cases, are being taught by them how to become killers.

Along with the worries and recriminations, in Germany, more and more demands have been made for stricter legal measures against video game content deemed inappropriate or harmful. In the course of this debate, German legislature has opted to follow a primarily prohibitive approach in dealing with video game content which is being perceived as educationally problematic: in 2003, as a consequence of the school shooting that occurred in Erfurt on April 26, 2002, Germany's video game rating system executed by the *Unterhaltungssoftware Selbstkontrolle* (USK) underwent some drastic changes. Its age rating labels, which had previously served as mere recommendations to parents which games might or might not suit their child, were transformed into legally mandatory ratings prohibiting sales of video games to anyone younger than indicated by the respective label. Retailers not following these age restrictions can be fined penalty charges of up to € 50,000. Video games which have been refused an age rating, because they were deemed possibly harmful to minors by the USK, may be forbidden to be sold, and promoted publicly by the *Bundesprüfstelle für jugendgefährdende Medien* (BPjM).

In 2007, once again as a direct response to a school shooting, the German government decided to further tighten prohibitive measures against video games: Germany's family minister Ursula von der Leyen presented an emergency program which included the automatic prohibition of "extremely violence-dominated" games without any preceding test procedure. Along with a number of measures, it also included an expansion of the criteria leading to open sales and promotion bans through the BPjM, allowing for the prohibition of "games which reward the player for the explicitly visualized use of violence by letting him achieve further game levels" (BMFSFJ 2007, transl. by the author).

The most drastic prohibitive measure in Germany so far was a bill proposed by the state of Bavaria in 2007: it demanded the infliction of prison sentences of up to 1 year for anyone who distributes video games which include "cruel or inhuman acts of violence against humans or humanoid beings" (Freistaat Bayern 2007, 5, transl. by the author). Furthermore, it even called for a complete ban of production of violent video games (Freistaat Bayern 2007, 11). As of this writing, the bill has been shelved.

For a number of reasons, prohibitive measures such as these prove to be ineffective, even inadequate reactions to the assumed educational influence of games on

young players. First of all, because they fail to recognize the powerful role illegal channels play in the distribution of video games. CD and DVD burners allow for reproduction of game data without any loss in quality. And even though the gaming industry has put significant effort into improving copy protection systems, still online file sharing clients such as BitTorrent or eMule offer a wide selection of the newest games for illegal download, regardless of their respective age ratings or bans. And modchips or firmware modifications make it possible to play illegal copies even on game consoles. Due to these illegal distribution channels, legal prohibitive measures are bound to fail: in the German survey *JIM-Studie* in 2008, 82% of the male adolescent interviewees stated that they had played games which they had not been allowed to play according to their age ratings – although these ratings are legally binding in Germany (see Medienpädagogischer Forschungsverbund Südwest 2008, 42).

Secondly, prohibitive measures are bound to fail because they are limited to national legal spaces, while the video game industry and the internet are not. National bans of single games or even a general ban on the production of violent video games, as has recently been discussed in Germany, can only be of limited impact on the international gaming industry. In Germany, due to its strict legislation concerning video game violence, it has become quite common for game publishers to release slightly modified versions of their products, cutting out graphic acts of violence, replacing red blood with green blood, removing dead bodies, etc. Yet, online file sharing networks feature the original, international versions of these games, which can be conveniently downloaded to computers all around the world – including Germany.

In the third place, and probably most importantly, these prohibitive measures seem pedagogically inappropriate because they completely fail to incorporate the concept of *media literacy* and its goal to enable users of media to handle the new possibilities of information processing offered by the respective medium in a self-determined fashion (see Baacke 2004, 21). The project of media education leading to responsible, informed, and critical usage of a medium necessitates contact with this medium – which is the exact opposite of what prohibitive measures are trying to achieve.

Video Game Literacy

For the above reasons, much more than striving for further, stricter prohibition, it seems pedagogically advisable to help young gamers develop a specific media literacy – or *Medienkompetenz*, to use the term more current in Germany – for digital games. Unfortunately, until now, only little effort has been put into the promotion of video game-related media literacy in Germany. Neither the *Jugendschutzgesetz* (JuSchG) nor the *Jugendmedienschutz-Staatsvertrag* (JMStV), which together form the legal basis of media-related youth protection in Germany, addresses the term *Medienkompetenz* at all.

Also, even though German school curricula do generally acknowledge the importance of media literacy as a whole, none of them address the specific requirements and elements of a video-game-oriented media literacy, let alone offer any methodological hints on how to approach this topic. Consequently, video-game-related media education in Germany has been limited so far to a very few isolated (and mostly extracurricular) projects: the educational initiative “Creative Gaming” offers machinima and level editing workshops aimed at pupils, teachers, and parents. The out-of-school “Hardliner” project developed by Jens Wiemken tries to counterbalance virtual and nonvirtual experiences by translating virtual game situations into real-life games. And the “Spawnpoint” Institute at the University of Erfurt recently initiated a video game screenshot contest, encouraging gamers to deal with the staged virtual world in new and creative ways. Still, such projects remain exceptional cases until now. Especially in school education, the necessity of enhancing video-game-specific media literacy is still being widely overlooked. Still, the few educational pioneers attempting to approach this challenge are trying to find appropriate methods to foster this kind of literacy. And still, even the basic elements this new kind of literacy might consist of have not been pointed out. So what might the basic elements of such a video game-specific media literacy be then?

Dieter Baacke, who most prominently coined the term *Medienkompetenz* in Germany, distinguishes between four basic dimensions of media literacy: media criticism, media understanding, media use, and media production (see Baacke 2004, 24–25).

The first of these four dimensions, *media criticism*, refers to (a) acquiring meta-knowledge of the logic, goals, and strategies of the respective media system in its societal context; (b) being able to apply this knowledge to one’s own usage of the medium; and (c) being able to apply this knowledge in one’s ethical judgment of the medium.

The second dimension, *media understanding*, refers to (a) knowledge of the medium’s specific structures, genres, aesthetic principles, relevant production processes, and usage strategies as well as (b) the instrumental/technical skills which are necessary to operate the respective medium.

The third dimension of media literacy, *media use*, includes (a) the competence needed to make receptive use of the medium as well as (b) the competence necessary for interactive usage of the medium.

The fourth and last dimension, *media production*, refers to (a) contributing to the advancement of the medium while following its own inherent logic and conventions and (b) contributing to its advancement by expanding and transcending these conventions.

The underlying goal that unites all these four dimensions of media literacy, according to Baacke, is to “enable the user to make use of the new possibilities of information processing [offered by the respective medium, D.K.] in a self-determined fashion” (Baacke 2004, 21, transl. by the author).

Keeping in mind the widespread fears of harmful educational effects video games might have on minors that has been shaping the public debate on video games for

years, the educational relevance of fostering a game-specific kind of media literacy, a *video game literacy*, becomes obvious: the notion of digital games being particularly harmful in that they might teach children undesirable, even despicable things, for example, to kill (see Grossman and DeGaetano 1999), centers around the idea that minors are using video games in a heteronomous fashion, their opinions, attitudes, and actions being shaped by the video game, by the experiences it invokes and the ideas it conveys. Hence, trying to enable young gamers to make use of digital games in a more self-determined fashion – that is, fostering their video game literacy – should be of the uttermost importance when trying to deal with this problem, especially in the context of the shortcomings of the prohibitive approaches mentioned earlier.

So while the added value seems clear, still the question remains, which elements exactly this video game literacy would have to comprise. Firstly, all four said dimensions of media literacy may readily be applied to digital games as well as to more traditional media: the first dimension, *video game criticism*, includes the acquisition of metaknowledge concerning the logic, goals, and strategies of the medium of the video game as a whole in its societal context, for example, an understanding of the current financial crisis and its impact on the video game industry and video game design – with major studios trying to concentrate on sequels of triple-A titles and smaller studios switching to free-to-play, ad-financed browser games and social games.

The second dimension, *video game understanding*, comprises a knowledge of the genres, structures, and aesthetic conventions of digital games – for example, the way in which a certain virtual architecture can force the player to view an enemy through a low angle shot, thereby making the enemy appear bigger and more threatening to the player. Also, this dimension includes knowledge of the different jobs and work processes involved in the production of video games as well as knowledge of different usage strategies (e.g., e-sports, casual gaming, speedrunning, trickjumping, machinima). Also, game understanding involves the instrumental and technical skills necessary to make use of video games (e.g., setting up the game console, installing PC games).

The two subcategories of the third dimension, media use – the competences needed for the receptive and interactive usage of the medium – interweave when adapted to the video game, due to its ergodic character. The dimension of *video game use* comprises skills like learning how to interpret hints to the player like head movements of the avatar toward relevant objects, learning how to play games correctly in the sense of the respective game, or even learning how to find and use cheat codes, walkthroughs, or game trainers.

The fourth dimension, video game production, includes the skills necessary to create game content, that is, being able to create concept sketches, use level editors, learn how to shoot machinima movies, write scripts, etc. Due to the technically complex nature of video games, this dimension proves particularly challenging and will usually demand severe didactic reduction by sticking to low-threshold tools when working with young learners.

However, simply applying these elements of media literacy to the new medium does not suffice for the foundation of video game literacy. As Jenkins et al. have

argued (see Jenkins et al. 2006, 19–55), the video game – being part of a new interactive, participatory media culture – calls for further expansion of the classic concept of media literacy. Jenkins et al. name 11 additional elements of a new media literacy that reflect these participatory aspects:

- *Play*: The capacity to experiment with one’s surroundings as a form of problem-solving
- *Simulation*: The ability to interpret and reconstruct dynamic models of real world processes
- *Performance*: The ability to adopt alternative identities for the purpose of improvisation and discovery
- *Appropriation*: The ability to meaningfully sample and remix media content
- *Multitasking*: The ability to scan one’s environment and shift focus onto salient details on an ad hoc basis
- *Distributed Cognition*: The ability to interact meaningfully with tools that expand our mental capacities
- *Collective Intelligence*: The ability to pool knowledge and compare notes with others toward a common goal
- *Judgment*: The ability to evaluate the reliability and credibility of different information sources
- *Transmedia Navigation*: The ability to deal with the flow of stories and information across multiple modalities
- *Networking*: The ability to search for, synthesize, and disseminate information
- *Negotiation*: The ability to travel across diverse communities, discerning and respecting multiple perspectives, and grasping and following alternative sets of norms

While the traditional multidimensional model of media literacy already displayed a high level of complexity, these additions further complicate the multitude of relevant subcompetencies.

Video Game Understanding

While certainly all of these dimensions are relevant for helping gamers learn how to deal with digital games in a more self-determined fashion, there is one dimension that seems particularly promising for strengthening children and youths to resist the supposed harmful educational effects of certain games: video game understanding, the second dimension of Baacke’s model. This dimension is particularly relevant because, not unlike other media, video games cannot simply induce certain feelings or experiences in the minds of their users but have to rely on certain tools, conventions, and clichés in order to orchestrate these feelings and experiences. A video game, for example, cannot simply directly evoke a feeling of suspense and tension in its players – it has to fall back on certain tools to try to convey this feeling: it may try to use scripted events to convey a sensation of time pressure – like calls for help

from a friend of the game's protagonist caught up in a firefight. It may steepen the game's learning curve during a certain segment of the game. Or it may alter the game's soundtrack, using dissonances, accelerating the tempo and increasing the dynamic peaks of the music to make the player feel more tense and anxious. Or it may decide on one of the countless other tools of game design.

One of the main goals of video game understanding is to clarify what these common design tools are and how they work. Video game understanding tries to foster the ability to play video games while being aware of the ways in which one is being played by them, thereby heightening the gamer's critical distance and improving his reflective skills. The goal of this is by no means to undermine the entertainment value of digital games in order to convince young gamers that more traditional media like books are culturally superior to this new medium. Quite the contrary, developing a deeper understanding of the medium's conventions, traditions, and tools allows its users to appreciate elaborate, original, and innovative use of these basic elements even more.

The game design elements of interest for fostering video game understanding comprise various dimensions of the digital game – which, due to its hybrid nature, incorporates elements from art, theater, film, music, photography, nondigital games, architecture, narrative, or didactics among many others.² Thus, developing video game understanding involves skills like being aware of the way in which a game creates suspense by using literary techniques such as foreshadowing, or the way in which its pacing is influenced by the length and frequency of its integrated cutscenes as well as by the camera movements in those cutscenes, or the way in which it enables the player to successfully overcome the game's challenges by arranging them following the didactic structure of a spiral curriculum.

Keeping the concerns of the ongoing public debate on video games and minors in mind, the concept of video game literacy can be linked to Jürgen Fritz's contemplations on the transfer processes taking place while playing digital games. Fritz decidedly opposes the notion of a direct transfer of behavioral scripts from game to gamer. He emphasizes the importance of the gamer's *framing competence*, which can intervene in and control transfer processes between game and gamer (see Fritz 1997, 233). According to Fritz, the player's framing competence is basically his ability to distinguish between the world of the game and the real world outside the game.

One of the positive effects of the critical occupation with design elements of digital games in the course of video game literacy education is that it can enhance the gamer's framing competence – simply because these design elements are *markers* of the game's artificiality. Understanding, for example, the way in which the design of a game's characters refers to certain dramatic archetypes that can be traced back to ancient Greek mythology, makes it obvious, for the literate gamer, that the game at hand is an artificial, at best artistic, construction in accordance with certain artistic traditions and clichés.

² In fact, the video game should not only be considered a hybrid medium, but a highly hybrid medium-game-hybrid, because many of its ludic features do not actually serve any medial communicative purposes at all.

The Foundation: Creating an Analytical Toolbox

The aim of my dissertation (Kringiel 2009) was to make use of analytical questions found in the field of game studies for the purposes of media education, thereby creating an analytical toolbox for the purpose of cultivating video game literacy. The study derived more than 200 analytical questions from the field of game studies and divided them into six partial perspectives: a ludological (game-centered), a cyberdramatic (theater-centered), a narrativist (literature-centered), an architectonic, and a learning-centered perspective as well as a perspective focused on means of film analysis. Emphasis was put on testing the manageability and efficiency of these analytical tools by putting them to detailed test during an extensive exemplary case analysis of the video game *Max Payne 2 (2003): The Fall of Max Payne*. Following this case study, interrelations between the findings of the six different analytical perspectives were examined.

The sample, *Max Payne 2 (2003)*, is a third-person shooter, which is embedded in a film-noirish setting. It puts the player in the role of the disillusioned, hard-boiled detective Max Payne, who gets caught up in the intrigues of a criminal secret society during his investigations on a murder case. The game was chosen for three main reasons. Firstly, because it is representative of the kind of games which are at the center of the public game debate's skepticism and fears – shooters which include repeated acts of virtual violence – secondly, because it is a well-known, even genre-defining mainstream title and not a completely atypical niche product; and thirdly, because it comprises and condenses a variety of characteristics of digital games: the fast-paced action typical of shooters, manipulations of the game-time reminiscent of turn-based strategy games and strong characters as well as a complex narrative which might usually rather be expected in the adventure or role-playing genres. This made it possible to concentrate on the extensive analysis of a single sample while still being able to consider different aspects of all the diverse things subsumed by the term “video game” today.

During the course of the analysis, the assembled set of tools proved to be sufficient to illuminate how the gameplay experience is being orchestrated by game design in various ways: the *ludological perspective*, for example, which concentrated on the examination of game genre, game rules, and ludic structure, showed how the game's interactive slow-motion feature, the “bullet-time,” contributes to a rush of movement by enabling the player to proceed through the game without having to retreat, take cover, or interrupt the flow of forward motion in any other way during combat – as players usually had to in shooter games previously. The ludological perspective also disclosed design flaws like the negative cybernetic feedback system (see Salen and Zimmerman 2004, 218–222) underlying the bullet-time. Since the player's supply of bullet-time is replenished much faster if he manages to line up single attacks against enemies to combos, the game is effectively made easier for better players, while offering no decrease of difficulty to players already having a hard time in these fights. Hereby, possible imbalances between the game's requirements and the player's abilities are intensified, hindering the experience of ludic flow. These and

many more ludological observations – from genre clichés revealing the ludic traditions within which the game is locating itself to the ways in which it accelerates and decelerates the ludic flow of time to create certain feelings – have revealed a multitude of tools that allow the player to understand how the game evokes specific ludic experiences.

The perspective of *film analysis* offered, among many other things, insights on how the visual design of the bullet time is rooted in stylistic elements of the *Matrix* movies as well as of John Woo's Hong Kong-action cinema. Comparing certain elements of the game's cinematic presentation, elements like slow-motion bullet dodging or work as direct cinematic quotations from the *Matrix* movie series, elucidating the game's stylistic roots. It also showed how the 360° arc shots during weapon reload animations in the game's many microcutscenes contribute to the player's feeling of immersion in the role of the central character by comparing their use in-game to their conventional function in movies as a means of visually isolating characters from their environment and focusing on their inner world, their thoughts and feelings. This analytical subdomain also included the examination of the game's soundtrack and the way it contributes to certain moods and perceptions – for example, by supporting the visual concentration on the main character's inner world mentioned above by dampening environment noises, highlighting bass frequencies, and making the avatar's heartbeat audible – an auditory experience similar to the one players encounter in their everyday lives when they try to cover their ears. Numerous further other findings of this analytical perspective have helped to uncover in great detail how the game adapts a great number of cinematic techniques to convey certain effects.³

Some of the aspects the *cyberdramatic analysis* helped to unveil were how changes in the protagonist's increasingly bruised outer appearance during the course of the game added to a sense of urgency and a feeling of being threatened. While the protagonist Max Payne starts out as a perfectly neat police officer, the further the game advances, the more bruised and ragged his appearance becomes, losing his neatly knotted tie and his police badge – two visual symbols of the domestication of both his unruly revengefulness and lack of moral footing – and gaining new features such as scars, bandages, and bleeding wounds, the more he allows himself to face his inner desires and fears. Also, this perspective showed how even very small gestures in the animation of the characters were used to subtly convey aspects of the complex relationships between them: the casual movement, for example, with which Max Payne pushes his partner, Detective Valerie Winterson, away after she has just saved him from being run over by a car at the beginning of the game, already alludes to a problematic relationship based on rejected love which, later in the game, becomes more obvious and the origin of a fatal conflict between these two characters. The most important way in which the cyberdramatic perspective contributes to video game understanding is the way in which its central questions help players understand how the game shapes the dramatic role they are given to play within the

³For a comparison of the *mise-en-scène* in films and in computer games also, see Veugen (Chap. 3).

game by certain, distinctly identifiable means. By becoming more aware of this role and its being an artificial construction, the players are given the choice to critically scrutinize their role.

By focusing on the story of *Max Payne 2* (2003), the *narrativist perspective* pointed out aspects like the problem of narrative redundancy of originally highly dramatic events – for example, acts of shooting, killing, dying – which, for ludic reasons, are constantly being repeated until they become almost meaningless (at least in narrative terms). It also points out how the game tries to conceal this narrative redundancy by superficial aesthetic means like the bullet time and accompanying 360° arc shots used during death animation sequences for certain enemy characters. Thereby, it helped to uncover one of *Max Payne 2*'s (2003) most severe design flaws: the discrepancies between its narrative and its ludic setting and the problems arising from this. Furthermore, the *narrativist perspective* showed in which ways the game creates a certain atmosphere by heavily drawing on the literary style of hard-boiled-fiction writers like Raymond Chandler. Thus, similarly to the way in which the perspective of film analysis did regarding the cinematic roots of the game, the *narrativist perspective* helps gamers to recognize markers for the game's not being mimicry of real-life situations but an artistic staging following distinctive artistic traditions.

The *architectonic analysis* helped to explain, for example, how the player's line of sight is influenced by the virtual architecture and how the game uses this to convey certain feelings: during the game's final battle, feelings of suspense and intimidation are evoked by the way in which the virtual architecture forces the player to view his final opponent from an extremely low-angle view, making the adversary appear huge. At the same time, the architecture creates an unsettling ludic disequilibrium in favor of the enemy character: it forces the player's avatar to move within a confined space, four aisles in a square around a glass dome, which does not offer any cover, thereby keeping the player constantly in motion to avoid enemy attacks. Meanwhile, the enemy hides behind a lifted platform below the roof of the room, protected by a safe metal fence. So while this architectural arrangement leaves the player exposed and tiny, it raises up his enemy and makes him practically invulnerable. Simultaneously, during this final fight, virtual architecture becomes a puzzle to be solved by the player – because the only way to beat his nemesis is to destabilize the platform he is standing on and to make it crash down by detaching a number of steel beams with some precise shots. Also, the *architectonic perspective* revealed how “nonactivated,” dummy-like game spaces like nonaccessible areas behind windows or fences are used to camouflage the spatial confinedness of the game – suggesting that there is a complex, organic world beyond the limitations of the strictly linear level architecture. While it may seem obvious to players with a low level of video game understanding that the virtual architecture was a mere copy of real-life architecture, the *architectonic analysis* shows a wide range of functional aspects of virtual architecture which illustrate how every element of the game cooperates to create a certain experience for its players.

The final *learning-centered view* helped to understand how the game works as a learning system and how it draws on certain didactic methods and tools to direct the player's actions and to motivate him to learn how to play the game “correctly” in the

way intended by its developers. The bullet-time, for example, manages to motivate the player to learn the rules of the game and successful playing strategies by rewarding him by emphasizing his power (e.g., through the enemies' death animations mentioned earlier), by replenishing his ludic resistibility (because the limited bullet-time supply of players who manage to defeat enemies very quickly and efficiently – thereby giving proof of their learning success – is replenished more quickly than that of less successful players), and by expanding his ludic capabilities (because successful players are rewarded with an enhanced bullet-time which slows down time even more). Also, this perspective makes it obvious that players only feel as if they manage to overcome the game's learning challenges all by themselves and relatively effortlessly because the game's didactic tools have been carefully concealed to give players a sense of empowerment. Through this learning-centered point of view, how many seemingly random game elements (such as recurring similar ludic challenges) have been orchestrated according to didactic principles (e.g., a rising spiral curriculum).

Conclusion and Outlook

As the preceding considerations and observations have illustrated, not only is it necessary to face the prohibitive emphasis of the current public debate concerning digital games and minors with constructive suggestions on how to enhance video game literacy but also that the field of game studies, in spite of its youth, already offers a multitude of tools to develop a critical understanding and self-determined use of digital games.

Of course, the exemplary analysis of *Max Payne 2* (2003), which could only be outlined roughly here, albeit having been tested in an extensive and detailed manner in the course of my dissertation, was only a first step, a preparatory work to lay the foundation for the practical educational project of teaching video game understanding. As outlined earlier, this is just one of the many relevant elements of video game literacy that will have to be considered – although one that is especially important in respect of the current debate about the possible harmful effects of indiscriminate use of video games by children and youths.

But of course, much remains to be done even for fostering this single aspect of video game literacy: the next necessary step is to find appropriate concepts for translating this analytical framework of video game understanding into specific classroom activities. In the course of my work teaching art and German language at various primary and comprehensive schools, I have been able to put a number of practical approaches to a first test.

Possibly the most obvious application of this analytical toolbox is as part of a unit on games journalism in language courses. Considering the high pricing of new video games, the rather humble income of its young players and the considerable amount of time which playing through a game demands from its player, the gaming subculture ascribes much importance to practices of criticism, such as game reviews

in specialized magazines. For most gamers, it seems perfectly normal to thoroughly inform themselves about any game they might be interested in playing beforehand – much more so than, say, soccer enthusiasts would likely feel inclined to search for reviews of a certain soccer field before going there to play. Thanks to this common practice, critical game analysis already has foreknowledge to draw from and build upon. In the context of a game journalism project, it is possible to quite naturally integrate the precise analysis of game design elements and the way in which they succeed or fail in triggering elements of the player’s gaming experience. Work results can easily be presented as a class journal, as user reviews within online game review sites or shopping websites, or even in collaboration with “real” gaming print magazines.

Also, it is possible to cover many relevant aspects of video game literacy in the art class: for instance, by examining and producing pixel art, which may easily be implemented even in primary school classes by working with graph paper, square post-it labels, or using *Microsoft Paint* (1985). This approach focuses on recognizing the pixel as one of the technically motivated markers of the artificiality of games which help support the framing competence of the user.

Moreover, it is possible to focus on aesthetically motivated markers of artificiality instead by elaborating design conventions of video game heroes or villains. This approach may use replay videos of play sessions as starting material for the students who worked out typical features in small workgroups. Based on this collection of design conventions, the students work out their own concept artworks of avatars or final villains for a game. Final artworks can conveniently be presented on fan-art-themed websites like www.deviantart.com, which features a “game development art” section. The subject offers direct relevance for possible future fields of work, and the students were provided with basic information on the gaming industry and its creative jobs.

Still, these primarily analytical approaches do not cover every aspect of what video games literacy is trying to achieve: as mentioned above, the main objective is to enable the user to make use of a video game in a self-determined fashion. This involves but also transcends analytical skills. Another important subarea is the empowerment of the user to actively produce content within the medium of the video game. In this context, “content” refers to not only configuring the preprogrammed “text” of the medium in an “ergodic” (Aarseth 1997, 1) way by playing the game but creating new virtual content to play with. This does not necessarily have to include skills in operating highly complex game editing software like Valve’s *Hammer Editor* (1996) or having to learn a programming language. The basic principles of level composition can be explored using very simple freeware editors like the popular flash-game *Line Rider* (2006). And even 3D games can easily be built using simple editing programs like Platinum Arts’ freeware game-maker *Sandbox* (2007). Also, I have successfully used the downloadable freeware demo-version of the game *Spore* (2008) to have students build avatars by making use of simple “primitives,” basic elements like eyes, claws, spikes, hands, etc., which can easily and quickly be assembled to make one’s own playable video game creature.

However, all of these approaches are to be considered mere outsets of further explorations into the depths of game design that school education inevitably will have to venture on in order to keep track of its students' new digital living environments. Obviously, there are games that just do not seem suitable for young players. But just as obviously, prohibition does not fix the problem. Not only will teachers that dare to follow the "digital natives" in their classroom to their home ground be able to help them become more mature in terms of video game literacy. Also, these open-minded teachers will learn a lot about the medium of the video game, its creative potential and its inventive subcultures, themselves and, finally, begin to understand its true cultural relevance.

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Chapter 41

Digital Games and Media Education in the Classroom: Exploring Concepts, Practices, and Constraints

Johannes Fromme

Introduction

Digital media increasingly penetrate all areas of everyday life. They fundamentally change the possibilities and social practices of communication and information. On one hand, new possibilities of communicative exchange and diffusion emerge, as well as new potentials for the acquisition of information and knowledge (Liewrouw and Livingstone 2006; Fromme 2005; Krotz 2007; Joinson et al. 2007). On the other hand, digital media transform the established mass media. Computer technologies and telecommunications present the key technologies for this media change. They spread across all areas of life, thus dissolving boundaries between the working, professional world and the recreational, entertainment world. Notebooks or Smartphones are examples of how digital media may be used in multiple contexts. One can actually say that nowadays, social participation significantly works through media and requires a competent use of media as well as a reflective approach to the fundamental mediality of our lives (Baacke 1997; Gapski 2001; Ito et al. 2009; Jenkins et al. 2006; Jörissen and Marotzki 2009).

The so far only roughly outlined process of mediatization (Barney 2006; Krotz 2007; Couldry 2008; Lundby 2009; Wimmer, Chap. 33) presents a big challenge (also) for the school system in several respects. Children and adolescents are nowadays used to being exposed to entertainment, but also information and knowledge, in an audiovisual – and in an increasingly interactive – format. This tendency has been intensified and supplemented through the technological development discussed

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as *Web 2.0* (O'Reilly 2005) facilitating an active participation in the processes of media production and media communication. It seems that there is an increasing gap between scholastic and media-related experiences of adolescents, also with regard to learning. Many young people develop several abilities and skills through their unbiased and direct use of new and old media, which often go beyond the elder generation's knowledge. However, the access to resources, abilities, and experiences required for an unlimited and self-determined involvement with the new media worlds (and with social and cultural everyday life as a whole) is not equally affordable for all adolescents. Furthermore, the question arises as to what extent critical reflective and orientated forms of (meta-) knowledge are being developed through the informal acquisition of media competence. In this respect, an increasing need for pedagogical and education policy actions has emerged.

Until well into the 1980s, there was a large consensus among society and also within the pedagogical context that modern media are more harmful than useful in the self-development of children and adolescents, and that the pedagogical task implies protecting against negative influences of media. In the meantime, the situation has changed. A media pedagogy has been established in many Western countries putting emphasis on appropriately preparing children and youth (as well as adults) to cope with the various challenges of an increasingly media-oriented daily life. This way, *Medienkompetenz* (media competence) has become a commonly known and used buzzword in both the pedagogical and the political fields within German-speaking countries, marking a turn away from conservative pedagogical assumptions (Baacke 1997). A similar situation exists in the English-speaking area with the concept of media literacy (e.g., Buckingham 2003; Livingstone 2004; Burn and Durran 2007). Without any doubt, this development can be considered as positive, even though it results in some new issues, e.g.:

- Integrating terms such as media competence (Gapski 2001; Groeben and Hurrelmann 2002) and media literacy (Buckingham 2005; Kellner and Share 2005; Jenkins et al. 2006) in political, economic, technical, or other contexts often coincides with an instrumental reduction of underlying scientific concepts.
- Setting competence or literacy as a goal for media education induces a focus on the (measurable) *results* of learning and teaching processes.¹ Hence, *Bildung* as a *process* of transforming relations to the self and the world that can be qualitatively reconstructed is lost sight of (Fromme and Jörissen 2010).
- It is beyond dispute that media competence and media literacy are not only conveyed pedagogically but are also acquired informally and randomly by means of direct contact with the media (Fromme et al. 2010; Gee 2007). However, not much is

¹We are aware of this outlook through programs like the "Program for International Student Assessment" (PISA) of the Organisation for Economic Co-operation and Development (OECD). Similar attempts to measure and empirically check different levels of competence like PISA can meanwhile be found for media competence as well (e.g., Hobbs and Frost 2003; Gapski 2001; Arke and Primack 2009; Treumann et al. 2009).

known about which experiences and processes contribute in which way to the acquisition of media competence (Otto and Kutscher 2004; Treumann et al. 2009).

- The promotion of both media competence and media education have been increasingly noted and recognized as important tasks in the pedagogical and political area, but a sustainable integration of media pedagogy at universities, schools, and other educational institutions is still completely out of the question.²

The study illustrated in this paper can be allocated to the latter issue. It was commissioned by the Media Authority of North Rhine-Westphalia and conducted at the Otto-von-Guericke University in Magdeburg from March 2009 to February 2010. As well as the author, Jens Wiemken (freelance media educator) and Marco Fileccia (teacher at a High School) contributed to this project. We were supported by the students Marten Fütterer, Florian Kiefer, and Tim Kirchner. Computer games and virtual (game) worlds are the center of attention in this study. The new media have developed into a popular and self-evident element of the media ensemble in which young people have been growing up during the past 15–20 years. This project aims at exploring, documenting, and evaluating suitable practices, methods, and materials for using and discussing computer games and virtual worlds in school. The leading perspective does *not* describe how to use computer games as a learning aid in terms of game-based learning (Prensky 2001). It rather deals with making them part and subject of reflection in the classroom. However, in educational practice, this distinction between media-didactic uses and media-pedagogic analyses does not seem to be as relevant as has initially been assumed.

Approach

The methodological steps taken to work on the question were partly predetermined by the project definition, and partly determined by the project team. The methodological portfolio comprises the following elements:

- Taking our own knowledge in the area of digital game studies as a basis as well as literature reviews of relevant handbooks, introductions, and conference proceedings (e.g., Wolf and Perron 2003; Copier and Raessens 2003; Raessens and Goldstein 2005; Vorderer and Bryant 2006; Rutter and Bryce 2006; Carr et al. 2007; de Castell and Jenson 2007; Kaminski and Lorber 2008; Mäyrä 2008), we elaborated relevant areas of research and issues dealing with computer games and virtual worlds. The goal consisted of putting together relevant content for

²In 2009, leading organizations in media pedagogy in Germany took this lack of sustainability as an opportunity to pass a manifest on media pedagogy asking political decision makers to overcome the phase of isolated projects and measurements and firmly anchor media education into all areas of education (see http://www.keine-bildung-ohne-medien.de/?page_id=63, accessed 12 June 2011).

teachers as some sort of core knowledge to which they could refer back to during their media pedagogic work.

- Analyzing the new Core Curricula (abbreviation CC used in this paper) for schools of the German Federal *Land* North Rhine-Westphalia was also one of the initial requirements. Therefore, it was expected to assess whether any basic linking themes exist for addressing computer games in special subjects and, if they exist, what substantial questions do they pose.
- Expert interviews were conducted with teachers and students in order to gain insight into previous media educational practice as well as the institutional possibilities and limits. Persons characterized by a certain open-mindedness toward new media were chosen intentionally as experts. From our point of view, speaking with interviewees who were skeptical toward media and about a possible increase of commitment in schools within media pedagogy would not have been very fruitful.
- As a next step, significant research was carried out to identify didactic materials and practical concepts addressing computer games for teaching (subject-related). The research was comprised of a literature analysis in the German-speaking areas (concentrating on pedagogical journals for school teachers) and Internet search for materials and documents available online focusing on the German-speaking areas. If there were any indications on additional materials (e.g., project reports, multimedia CDs and the like) during our Internet search, we tried to obtain those as well and to include them in the subsequent analysis.
- In addition, we performed targeted Internet research for English-speaking areas. First, projects and documents known through experts and insiders were taken as a basis. Our research was extended using common search engines. Materials and documents identified within the scope of our research have been categorized according to subject-specific and methodical/didactical aspects and documented on specifically developed worksheets.
- Afterward, the collected documents and materials were assessed using a rather complex procedure and different criteria. Based on that assessment, the so-called *Best-Practice-Compass* was set up including a total of 91 recommended materials sorted by subjects, topics, and also type of school or age.³
- For the duration of the project, a focus group was brought together consisting of key players experienced in media pedagogy working in the school sector, further education, and in the academic field. We discussed individual steps and interim results with the focus group during meetings and held a future workshop in the last third of the project term in which we developed three teaching units dealing with computer games in the classroom as examples.

In the table provided below, the goals and spectrum of tasks of the study are set out in relation to the methods used (Table 41.1).

³The *Best-Practice-Compass* for computer games in the classroom was edited by the Media Authority of North Rhine-Westphalia as a manual for teachers and is available online for download: http://lfmpublikationen.lfm-nrw.de/catalog/downloadproducts/BestPracticeKompass-Computerspiele_Web.pdf (accessed 12 June 2011).

Table 41.1 Goals and methods of the study

Project-related goals and tasks	Methodical procedure
Core knowledge compilation for teachers	Review of the latest discourse and research
Presenting linking themes in the core curricula of the <i>Land</i> North Rhine-Westphalia	Analysis of samples of core curricula
Compilation and assessment of methodic didactic teaching materials	Literature search (journals) Internet search (German web pages) Internet search (English web pages) Future workshop
Evaluation of previous and future media pedagogy practice, possibilities, and limits	Expert interviews Future workshop Focus group

Core Knowledge for Teachers

A fundamental challenge for media education in school is the fact that the majority of teachers possess a relatively small amount of expert knowledge in the field of media from their academic training. One reason for this is that their academic training often took place 20 or more years ago (see Medienpädagogischer Forschungsverbund Südwest – MPFS 2003, 50)⁴ and that, as of today in Germany, media pedagogy and media didactics have only been established in the academic teacher training syllabi of a select few educational training programs (Herzig 2007). Though teachers do have media equipment (including new, digital media) in their private lives, they utilize them in a manner significantly different from their students. Playing computer games, for instance, is a less common form of computer use among teachers. Only 6% of the teachers actually using computers play digital games on the computer several times per week, whereas almost three quarters of the teachers (72%) have no experience with computer games (MPFS 2003, 33) at all.⁵ In this respect, one cannot assume that teachers gained experience through their own use of media that would enable them to deal with computer-game-related topics in class in a well-founded and competent manner. Beyond academic training and informal education, there is still the possibility of further education. Reviewing offers of respective organizations and institutions, one gains the impression that media education has become a relevant topic in further education for teachers. So far, however, computer games do not belong to the core topics. Besides, one of the still unsolved problems related to further education is that the groups presumably needing further training (most) do not represent a majority of the participants in further training. Significant for our research is the finding that elderly persons

⁴The MPFS is a Research Association for media pedagogy in South-West Germany. They regularly provide data on adolescents' use of various media based on representative surveys for Germany.

⁵To my knowledge, later figures after 2003 are not available. Even though the number of teachers experienced in computer games may have risen in the meantime, there is still a major discrepancy between teachers' and students' media experiences.

participate less in further education than younger ones (see TNS Infratest Social Research 2008).

In light of the problems outlined above, our project included the task of identifying and compiling relevant questions and existing knowledge regarding computer games and virtual worlds for interested teachers to refer back to for core knowledge. In a certain sense, this task is paradoxical. There is the need for such basic information and skills, but living in a modern, knowledge-based society characterized by high dynamics in producing knowledge and cultural heterogeneity makes the concept of a canon defining the educational content, which represents the indispensable and fixed fundament of a culture, no longer feasible (e.g., Lyotard 1984; Meder 1987; Giroux and Simon 1989; also see Zagal, Chap. 42).⁶ For our analysis concerning relevant core knowledge for teachers in the area of computer games, this means that our compilation cannot be considered as a (binding) knowledge canon but as basis for information and material that teachers can refer back to depending on their own focus.

The areas of information and knowledge currently available and relevant from our point of view have been divided into ten main questions. Within the array of these questions, one can select and work on examples to a large extent and supplement them by means of other sources. For the core knowledge, topical and systematic questions are distinguished. Topical questions are the ones arising from public discussions on computer games:

1. *What is the importance and effect of violence in computer games?* Computer games between fascination and risk
2. *What does excessive playing mean?* Frequent gamers between immersion and addiction
3. *What is the role of advertisement in computer games?* Legal and pedagogical challenges due to changing advertising strategies and new forms of collecting private information

As many prejudices prevail in public discourse, teachers should be able to recognize incorrect information, half-truth statements, and rhetorical tricks and take a stand on the basis of their relevant expert knowledge. This way, they can take educational leverage and contribute, if need be, to the objectification of public discussions often manipulated by emotions.⁷ Considering our interviews with the students, it also seems to be reasonable to consider such current topics as core knowledge for teachers. In the opinion of the students, most teachers still have prejudices toward digital games. However, in this context, they point out that a cognitive approach to the topic

⁶In the light of the diminishing consensus on educational contents for educational systems, learning and educational goals have been increasingly formulated as competencies in the meantime. They are expressed with regard to specific contents, but have been developed to apply to different topics and to be interdisciplinary to some extent. The CC in North Rhine-Westphalia are a remarkable example for such reorientation within the German education system.

⁷For an example, see Henry Jenkins' attempt to debunk eight myths about video games: <http://www.pbs.org/kcts/videogamerevolution/impact/myths.html> (accessed 12 June 2011).

is not sufficient to overcome prejudices. For them, it is instead more important to have their own experience with those games, as “there is a totally different effect on the person playing than on the one standing aside and just seeing blood splashing or something like that” (group interview, lines 335–337, translated by the author). So from a student’s point of view, this means that knowledge should not only be based on information but also on personal experience and practice.

The systematic questions refer back to existing scientific discussions and research on computer games. The attempt has been made to address central topics, reflected for instance in international handbooks (e.g., Raessens and Goldstein 2005; Vorderer and Bryant 2006), introductions (e.g., Rutter and Bryce 2006; Mäyrä 2008), and conference proceedings (e.g., Copier and Raessens 2003; de Castell and Jenson 2007; also see <http://www.digra.org/dl>). The intention is not to have a complete picture but rather to provide an understanding of the complexity of computer games as a technical, aesthetical, social, economic, as well as cultural phenomenon and provide certain guidance by means of systematic analysis of the field. In order to provide insights into relevant topics of professional discourse, information concerning the following questions has been added to the core knowledge for teachers:

4. *Who is playing what?* Information on users and forms/patterns of use of computer games
5. *What is a computer game?* Definition, analysis, categorization, and aesthetics of the item
6. *What kind of importance do computer games have in the social and cultural context?* Legal regulations, public discourse and historical development
7. *What is the importance of computer games in economics?* Sale figures, business models, jobs, and product cycles
8. *How does the relationship between player and games develop?* Gameplay between immersion and distance, involvement and identification, and flow and calculation
9. *What types of practice develop in youth culture concerning computer games?* Fan culture, virtual groups and networks, online communities, and participatory media cultures
10. *How and what can one learn from playing computer games?* In-game learning, tutorials, serious games, hidden curricula, and promoting informal competencies

At this point, it is not possible to give a closer introduction to the assembled topics and suggestions concerning the ten questions in our project (see Fileccia et al. 2010). Our leading thought was not only to present factual knowledge but to offer a combination of outlining the problem, subject-related information on singular aspects, additional supportive literature, and Internet sources and to present different positions where applicable to this topic and through this stimulate a personal critical analysis and orientation. Attempting to discuss computer games as a relevant subject in the classroom within the context of our questions, we consider it important to maintain a preferably interested and accepting attitude (in regard to the daily media usage by adolescents), refraining from hasty judgments and interventions among the teachers (see Fromme et al. 2000, 228–240).

Linking Themes in the Core Curricula

In the Federal Republic of Germany, the responsibilities for educational matters and culture lie mainly within the responsibilities of the individual *Länder*. A joint and transregional decision-making process on educational policies takes place at the *Kultusministerkonferenz* (German conference of the ministers of cultural affairs; German abbreviation KMK). Their task (among others) is to ensure the comparability of school certificates and degrees, to work toward attainment of quality standards in schools and vocational and academic trainings, and to promote the collaboration of educational and scientific institutions.⁸ In the school sector, the KMK was mainly involved in developing national educational standards. At a national level, educational standards currently exist:

- For primary schools (4th grade) for the subjects German and mathematics
- For the *Hauptschulabschluss* (German first certificate of secondary education, 9th grade) for the subjects German, mathematics and the first foreign language (English/French)
- For the *Mittleren Schulabschluss* (German general certificate of secondary education, 10th grade) for the subjects German, mathematics, the first foreign language (English/French), biology, chemistry, and physics

Developing educational standards for the *gymnasiale Oberstufe* (German upper secondary level) in the subjects of German, mathematics, English, French, biology, chemistry, and physics was agreed upon in October 2007. They are currently still being elaborated upon.⁹ These certificate-related educational standards shall function as a common standard for quality development as well as quality control in schools within every *Land* of the Federal Republic of Germany. The standards set by the KMK are considered by means of newly designed teaching curricula on the level of the *Länder* and are being continuously concretized. This process, however, has not yet been completed.

Meanwhile Core Curricula exist for a number of subjects and types of school in North Rhine-Westphalia. Core Curricula specify the essential results of educational work in classes in a binding manner. For this reason, one can also speak of guidelines focusing on competencies in classes.¹⁰ Apart from standardized quality assurance and quality development, the Ministry of School Education of North Rhine-Westphalia emphasizes that the CC facilitate a greater pedagogical and professional flexibility at each school through focusing on essential subject-related content and competencies.¹¹

⁸See <http://www.kmk.org/wir-ueber-uns/aufgaben-der-kmk.html> (accessed 12 June 2011).

⁹See <http://www.kmk.org/bildung-schule/qualitaetssicherung-in-schulen/bildungsstandards/ueberblick.html> (accessed 12 June 2011).

¹⁰See <http://www.standardsicherung.schulministerium.nrw.de/lehrplaene/kernlehrplaene-sek-i/einfuehrung/> (accessed 12 June 2011).

¹¹See <http://www.standardsicherung.schulministerium.nrw.de/lehrplaene/kernlehrplaene-sek-i/einfuehrung/> (accessed 12 June 2011).

One of the project tasks was to review the recent CC of the *Land* North Rhine-Westphalia with regard to any indication of reflective use of computer games in special subjects.¹² This implied checking whether the CC could be connected to the areas of compiled core knowledge on computer games.

In comparison to previous curricula, the CC are different because they incorporate phenomena from the students' daily lives more explicitly. Since media form an important part of their daily life and leisure time, we were looking for keywords related to the ten topics of our core knowledge within the CC during the first step of analysis. This kind of search is relatively problem-free because the core curricula are also available in a digital format. The number of findings was supposed to serve as a first indicator for the topics actually mentioned explicitly in the CC and their specific importance.

In total, 17 keywords were searched for. In the first instance, the results show that there are hardly any direct linking themes for addressing the topic computer games and virtual worlds in special subjects. The word computer game(s) is mentioned in the CC for the subject German only, though this applies to all types of school.¹³ Other keywords that address aspects of the ten questions and go beyond the narrow topic of computer games (e.g., copyright, advertisement, addiction, hero) appear only very occasionally in the CC. In contrast, the search for more general or broader terms (e.g., game, media, leisure time, information) leads to a relatively high number of hits, but do not always prove to be significantly connected upon closer consideration of the findings.¹⁴

From this initial, primarily quantitative view one can already deduce a relevant interim result that was confirmed by further examination. A higher hit count for the keywords indicates a more general semantic reference to our topic. This presents an opportunity, but also a problem. The CC, with their reference to students' everyday topics, open the chance to integrate media topics in special subjects. After all, a search in the CC for the word media itself produced 30 hits. This is an encouraging finding for our research question. The problem is that the points of reference are mostly vague and undefined and that the word media, when mentioned in the CC, refers mainly to the traditional media like newspapers and television. Assuming that the teachers are primarily going to use the explicit topics of the CC as reference for their subjects, one cannot expect that studying the CC inspires them to deepen their knowledge of computer games or other digital media.

The next steps for analysis included a closer look at the context in which the keywords were used and an attempt to establish points of reference to our topic of

¹²Due to the high number of existing curricula (40 CC for 19 different subjects and four different types of school in total), an analysis of samples was agreed upon.

¹³The respective passage basically says that students should learn to distinguish between reality and virtual worlds in the media, such as TV series and computer games (see, e.g., http://www.standardsicherung.schulministerium.nrw.de/lehrplaene/upload/lehrplaene_download/gesamtschule/g_s_deutsch.pdf, accessed 12 June 2011).

¹⁴The word information, for instance, can be found 72 times in the Core Curriculum for English at the comprehensive school alone but there is apparently no direct association to new information technologies or even computer games.

computer games for those passages in the CC relating to the students' media-related daily life in general. Additionally, we conducted more detailed qualitative analyses for three selected CC, namely, for the subjects German, politics, and biology. The exemplary analyses cannot be explained in detail at this moment. I will confine myself to a summary assessment of our results.

In terms of the references to the topic computer games, these can be found or established in some subjects more easily than in others. For instance, language classes in particular (also foreign language teaching) offer the possibility of integrating media-pedagogy topics, partially because their aim is to competently use different texts, types of texts, and media formats. In the same way, subjects like art and music offer good references because their contents play an important role in computer games as well. However, creative solutions are needed for natural sciences and mathematics in order to find topics that can be realized by means of computer games (e.g., reconstructing mathematical algorithms in strategy games). On the contrary, subjects dealing with societal, social, and ethico-moral matters (e.g., politics/economics, social studies, ethics, and religion) are very suitable for using and working on current topics and public discourse by means of (digital) media.

Direct references to digital media still remain rare in the new curricula, but there are starting points for the use of media-related topics and for integrating different questions related to media pedagogy. There is also the fact that the promotion of media competence has now been established as a relevant task item in schools (especially, in the general, introductory passages) in contrast to former curricula. Through our focus group and expert interviews, however, we have been informed that teachers have neither noticed any concrete references to media pedagogy nor become aware of the stronger establishment of media education in the CC, let alone used them for teaching. Many teachers are not familiar with the new curricula. Among teachers a critical attitude toward the CC seems to be prevailing, because the new curricula are primarily associated with more standardization and testing. It might be that teachers and decision-makers at local schools feel that they have not been properly involved in the development and implementation of the new curricula. Investigating the causes of such attitudes may be worth further study.

Showing content-specific linking themes in the curricula can be considered as a necessary but not as a sufficient condition for integrating media-pedagogy topics in special subjects like mathematics, biology, or arts. One of the remaining problems or challenges still is the methodological and didactical realization. A challenge in computer games is that the given timeframe of a class sets narrow limits to an activity and experience orientated approach of computer games (see Jenson et al., Chap. 37; Klopfer and Purushotma, Chap. 38). For example, if computer games like *Age of Empires III*, *Anno 1602*, or *Civilization III* are to be analyzed or even compared in terms of their illustration of history, the usual class timeframe of 45 min seems hardly sufficient to do so. As seen in our research, this seems to be more appropriate in the context of project-based work, from both a time and required work perspective.

Material Research

The search for didactic material and practical concepts with subject-specific designs on the topic computer games for teaching represents the third step after identifying relevant contents and defining possible curricular references. It aims at demonstrating ways and strategies for establishing the topic of computer games in schools.

The search for materials related to the use and consideration of the topic of computer games in teaching was divided into three work packages. Two of them were limited to the German-speaking areas and the other was expanded to the English-speaking international area. In the German-speaking area, a literature search limited to magazines concerning media and school pedagogy over the last 10 years was done on the one hand and an Internet search on the other. The international search was limited to the English-speaking area for pragmatic reasons and primarily took the Internet as a basis. All types of search indicated some sort of snowball effect, i.e., usually there were references to other projects or materials among our findings. For this reason, we had to bring the search to an end at a certain point due to time constraints before actually getting the impression of having this field completely analyzed and captured. The documents found were assessed in different respects to their content, categorized and documented in a standardized form. Among others, the following details were recorded on our data sheets for each document:

- Source of information, Author
- Short description of the aims, objectives, and methods
- Relation to the core knowledge areas (ten questions)
- Typification
 - A: Concrete teaching materials
 - B: Teaching concepts
 - C: General thoughts and statements for addressing the topic computer games in the classroom
- Evaluation with regard to inclusion to the *Best-Practice-Compass*

Hereinafter, a brief glimpse of the results of our research is provided.

German-Language Journals

In total, 48 journals for teachers were included in the examination covering all issues from 1999 to 2009. Performing a keyword search within the registers and a journal database, we identified relevant articles, localized the journals in university libraries within reach, and made copies of the corresponding articles there – some articles are available online as well. Altogether, 75 articles on the theme of computer games in the classroom were compiled. The majority of those were published between 1999 and 2003, thus in the first years of our evaluation period. Most of the

articles are printed in two special editions on the topic of computer games of the German journal *Computer + Unterricht* (Computers and teaching), putting the considerably high number at first sight in a very different perspective. Apart from computer-science-related journals, only very few articles exist.

With regard to the content, there is a significant trend toward two key aspects: articles dealing with the question what one can learn from playing computer games and articles dealing with the importance of computer games within society. Cultural practices of players and fans do not play a role at all. Given the fact that the majority of articles were published in computer-science-related, it is astonishing that the articles refer to such a wide range of subjects. Particularly often, they address the topic of computer games in subjects such as politics and economics, social sciences, and languages. On the other hand, it is especially remarkable that the documents remain mostly on the general level of substantial or legitimate consideration of the topic of computer games in schools (type C within our classification), whereas differentiated didactic concepts (type B) or direct didactic/methodic teaching materials (type A) can hardly be found.

German-Language Web Pages

The Internet research took place from October to December 2009 using *Google* on the one hand and internal search engines of the publishing houses *Cornelsen* and *School_Scout.de* on the other. The *Google* search already had 6,790 hits when requesting a combination of *+Computerspiel +Unterrichtseinheit* (computer games and teaching units). Ultimately, 109 relevant, but completely heterogeneous, materials were found and documented during our investigation. They were provided by teachers, publishing houses, and different organizations and institutions. In comparison to the articles in the journals, these documents are significantly more practical (quite a lot of documents classified as type A). However, one can hardly find any explicit reference to the curricula, thus leaving the curricular localization to the teacher's responsibility.

These materials could be allocated to the areas of our core knowledge without any issues as well. Most of the materials are available for the topics "What is the importance and effect of violence in computer games?" (37), "What is a computer game?" (37), and "How does the relationship between player and games develop?" (32). The topic "What is the role of advertisement in computer games?" however, is not regarded in any of the materials.

Apparently, the authors aimed to address a large field of use, as the majority of materials had no focus on specific types of school. Instead, they adopted a more wholesale approach in order to be suitable or applicable to different types of schools. If a certain type of school is named, it mainly refers to German upper secondary education. In that way, materials may be directed to more "educationally advantaged" rather than "educationally deprived" children and adolescents, even though the need for media education at schools should be addressed vice versa. Looking at

the subjects, German and ethics/politics are predominant. Occasionally, materials have been designed for art, religion, and physical education. However, we could not find any materials related to natural sciences subjects.

Practical relevance was an important criterion for inclusion in the *Best-Practice-Compass*. As mentioned, such relevance exists for many of the materials found during our research. Nevertheless, there are work materials belonging to Type A that cannot be recommended. These are, e.g., materials which provide a rather unilateral view in their contents and do not meet the complexity of current research and discussion.¹⁵ Such materials have been found mainly on the topic of computer games and violence. Aside from the fact that these materials do not meet the requirements of modern teaching, students are probably not very eager to use them as they will quickly notice that they are being pushed in a certain direction.

English-Language Web Pages

The search for English-language didactic materials and concepts with practical implementation comprised an inspection of projects (and looking up the related cross-references) already known prior to that study through personal and professional contacts,¹⁶ and a search for keywords by means of the *Google* search engine. During the investigational period, 81 individual concepts were documented. Only three of those incorporate concrete didactic teaching materials thus meeting the requirement for being classified as type A. The majority of documents (61) were classified as draft papers (thus Type B).

It is especially remarkable that computer games are utilized much more as a teaching aid in terms of game-based learning in these documents than in the German materials. During our Internet search in the English-speaking field, we found more documents related to media didactics than to media pedagogy (37 vs. 23). One example here is the project “Replaying History: Learning World History through playing Civilization III” by Kurt Squire: within its framework, two concrete teaching concepts were developed¹⁷:

1. “The Global Age – World History from 1450–1770” consists of ten teaching units of 50 min each for students from grades 6 to 12.
2. “The Birth of Civilizations” consists of six teaching units of 50 min each for students from grades 5 to 8.

¹⁵Further evaluation criteria for the inclusion into the *Best-Practice-Compass* are, among others, the students’ active participation, activity orientation, promotion of reflection, completeness of materials (e.g., methodological/didactic comment, work materials, schedule and so on), realization, and effectiveness of proof.

¹⁶These include projects developed by the MIT in Boston (see Klopfer et al. 2009) or the FutureLab in Bristol (see Williamson 2009; Egenfeldt-Nielsen 2005).

¹⁷Online available at <http://website.education.wisc.edu/kdsquire/REPLAYING%20HISTORY.doc> (accessed 12 June 2011).

Taking our distinction between media didactics and media pedagogy as a basis, we have to allocate this teaching concept to the first area. This distinction, however, does not seem to play an important role in the respective concepts and discourse (Hutchison 2007; MacFarlane et al. 2001). Transitions are rather smooth. In the end, in teaching units like “Replaying History,” one can hardly avoid a more extensive analysis of computer games required for teaching subject-related knowledge (here: history). Moreover, subject-related materials and concepts for the (didactic) use of computer games may be more convincing to some teachers in order to teach certain subject-specific contents in a motivational manner than materials and concepts related to the reflection on media without any obvious connection to their subject-specific teaching and learning goals. Keeping this in mind, we included some documents in the *Best-Practice-Compass* which pursue a media-didactic approach but seem to be closely adapted to media-pedagogic goals.

Conclusion

In this chapter, the project steps and results of the study “Digital games as a topic for reflection in the classroom” could be presented and discussed in extracts only. I explained how we tried to structure core knowledge on computer games that does not claim to be canonical but nonetheless offers some orientation to teachers. Moreover, the core curricula for North Rhine-Westphalia were taken as an example to illustrate the possibilities and limits of finding appropriate linking themes for the reflective use of computer games within the new, competency-oriented curricula. Finally, an overview of the results of our research was provided which included the search for concepts and teaching materials, the documentation and evaluation of these in terms of inclusion in the *Best-Practice-Compass*. The study reveals an ambivalent picture of the possibilities of using computer games in a media-educational sense. This picture is also supported by our expert interviews which I could not explain in detail here (see Fileccia et al. 2010). With that said, a few tasks can be named in bullet point form in conclusion. These tasks need to be tackled if modern media education that incorporates the new digital media is to be established in schools in a sustainable manner:

- For educational uses of computer games, legal assurance should be increased so that games from the students’ everyday lives not approved for their age, yet played by children and adolescents, could be addressed and analyzed in the classroom.
- The establishment and work of core teams constituted of teachers and other key players interested in using computer games in the classroom should be supported internally in schools (e.g., by the school administration) as well as externally (e.g., by institutions of the *Land*).
- The interdisciplinary incorporation of media pedagogy in the curricula should be elaborated more clearly and should be formulated in a way that takes dynamic and technical developments into account.

- Further education for teachers should consider the topic of computer games (and digital media) more systematically, in terms of promoting media-educational-related competencies among teachers (Blömeke 2000). A relevant task in this context also is to prepare teachers for more participatory and activity-oriented approaches to teaching (and learning). This also requires adequate training for those responsible for instructing such further education classes.
- In order to establish a modern media pedagogy in the educational area in a sustainable manner, future teachers should have adequate academic training at universities and training colleges.

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Chapter 42

Why a Game Canon for Game Studies Education Is Wrong

José P. Zagal

Introduction

Deciding what students should study is an important component of the design of any media literacy-related curriculum. Which films should we expect film students to watch and understand? Which are the fundamental books a literature student should read and know? The same questions can, and should, be asked for game studies education. What are the essential games students should know about? Which games should they be required to have played and understood? Which games should they be familiar with, understanding the role they played in the development of the medium, the influence they had, and the context in which they were created? What should this list of canonical games for video game education include?

A canon of video games for game studies education is an attractive idea. There are a variety of ways to explore the creation and establishment of a list of fundamental games students should play and understand. Should we choose games that were critically lauded? Do we choose games that are still sold and played today? How about selecting those games that were commercially successful? Or, do we pick games that influenced game design and broadened our understanding of the medium? The exemplars of a medium are powerful examples of its possibilities. After all, they showcase the medium at its best, perhaps illustrating “the right way” to do things and providing a yard stick against which we can compare all other games. They also provide a window into the past, hopefully allowing students to understand how current games have been shaped by their precursors and providing inspiration for future games. The International Game Developers Association’s (IGDA) curriculum framework, in fact, describes critical game studies as one of the core topics

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for a well-rounded games education. It notes the importance of “establishing and critiquing the canon of influential and/or important games” (IGDA 2008, n.p.). In popular culture, lists of “essential games” are also popular. Witness the variety of books written to highlight a variety of games, computer as well as others, deemed important or worthwhile of analysis (e.g., Schick 1991; Curran 2004; Stang et al. 2006; Lowder 2007).

As educators, the idea that we should carefully select a group of video games because they have been influential, critically lauded, or commercially successful is compelling. After all, one of our responsibilities as educators is to separate the wheat from the chaff and help our students develop skills and knowledge that they may make their own critical appraisals and judgments in the future. Perhaps we also hope that, in the future, they will create the games we can then add to the list of canonical games. These seem like good reasons for establishing a canon.

In this chapter, I argue that lists such as these can be counterproductive for games education.¹ Prior research on the challenges of games education together with current educational theory highlight potential risks associated with using an established games canon in games education. In the following sections I will outline these risks, describing them in the context of educational theory, before concluding with an argument for the use of simple, nontraditional, non-mass-market, noninfluential and, for the most part, unimportant video games in game studies education.

Canon

Canon, in a field or art, generally refers to a body of rules or principles generally established as valid and fundamental. A canonical list of video games would then constitute a collection of games that best represent those rules or principles. In other words, such a list would collect those games that are the best examples of what can be done in the medium.

Determining such a list is no easy task. Where do you start? How do you choose amongst all the games out there? Should we include highly influential non-video games? Many games should probably be excluded because they are “uninteresting, some are mediocre or tasteless, and some are simply so bad they are almost unplayable” (Stang et al. 2006, 8). However, which criteria should be used to decide what is mediocre and what is not? Perhaps then we should try to include as many games as possible. Comprehensive guides (e.g., Swan 1990; Fox 2006; Stang et al. 2006), unfortunately, are not. Not only are they outdated almost as soon as they are published, but they invariably omit games due to obscurity, lack of availability, or limitations of space.

¹For the problems and limitations of a canonical knowledge about computer games also see Fromme (Chap. 41).

There are as many ways of going about determining a canonical list as there are people playing games. Byron et al. (2006), in the introduction to their collection of the 50 best video games of all time, describe a few of the questions and problems they had to deal with: Should a canonical list include games that birthed genres or those that defined it? What about games whose sequels improved on their already excellent templates? Could the simple graphics and gameplay in old games really stand up to today's high expectations? They acknowledge that their answer to these questions is somewhat of a cheat. Determining an ultimate list of games is an exercise in futility. At some point you have to cut corners or make arbitrary decisions such as limiting the list to a certain number of games (10, 50, or 100?), picking a title when you actually intend to highlight the series it belongs to, or choosing a game because it is currently available commercially or fondly remembered.

The difficulties and challenges of determining a canonical list should not, however, prevent us from trying. There are plenty of reasons for wanting to pursue such an exercise, and much can be learned from lists made by others. For instance, we may be curious about the popular consensus regarding the best games. In 2007, British video game magazine *Edge* published a collection compiled from a master list of games submitted by its readers that was then whittled down and refined "through further processes of voting involving industry types and *Edge* writers from further afield" (Mott 2007, 3). Their main criteria for voting was that "the games must stand up to scrutiny today" (ibid., 3), thus hoping to eliminate from consideration games that, while historically important, may have been superseded or improved upon by later games. This was the third time this magazine published a list such as this. Comparing the 2007 list with those from earlier years provides insight on how trends and opinions can change over time.

Canonical lists can also help us catalog and understand the evolution of a medium by drawing attention to cultural artifacts that played pivotal roles in its history. Curran, for example, not only highlights games he deems noteworthy but also examines their influences and the impact they have had on newer games (Curran 2004). Similarly, in *Vintage Games*, Loguidice and Barton (2009) selected what they considered the most influential game of each genre and they proceeded to craft a narrative surrounding those games. Their narrative interweaves the games that preceded the ones highlighted with those that were later influenced by it. They also describe the influences on, and of the games industry, and how the selected game was a product of, or influenced the culture of the time in which it was released (Loguidice and Barton 2009). Lowder took a different approach. He used the "canonical list" not just as a way to catch up on the (hobby) games industry, but also as a means of introducing its readers to the game designers behind popular titles allowing them to share their enthusiasm for the medium and introduce new people to the titles they treasure (Lowder 2007).

In theory, these lists, in all of their varieties and purposes, should help support games education by encouraging debate, and getting people to think more deeply and more critically about the medium. However, what do we mean by games education?

Games Education and Games Literacy

Before examining the role that a canonical list of games can have in game education it is important to describe its role. What is video games education trying to achieve? One possible goal is to prepare students to work in the games industry providing them with the necessary knowledge and skills to develop and design new video games. Ideally, these graduates will challenge the industry as they enter it. We also hope they will challenge the medium, exploring its boundaries, pushing in new directions by creating genres and styles of games we have yet to imagine. Even then, the video game industry is broad and multidisciplinary in its practice hiring programmers, animators, designers, artists, writers, musicians, engineers, and more. Games education is similarly diverse, with programs approaching it from numerous angles and disciplines such as engineering, computer science, art, design, and others. Perhaps the only common denominator across all these programs and approaches is the need and desire for promoting what we could call “games literacy,” loosely understood as being able to analyze and play games critically. Helping students become games literate is perhaps the only goal shared across all of video game education (editor’s note: see Bopp, Chap. 39; Kringiel, Chap. 40). Does it make sense to speak of games literacy however?

The definition of literacy has long since moved beyond the ability to encode (write) and decode (read) written text at a level adequate for communication (Kirsch et al. 2002). As early as 1986, Spencer introduced the notion of “emergent literacies” in describing young children’s media-related play (Spencer 1986). Since then we have seen discussion around the notions of visual literacy (Moore and Dwyer 1994), television literacy (Buckingham 1993), computer literacy (Hoffman and Blake 2003), information literacy (Bruce 1997), and digital literacy among others (Gilster 1997). One of the arguments given for an extended view of literacy is that communication in different media, such as television, film, and video games, requires new forms of cultural and communicative competencies (Cope and Kalantzis 2000). If we are to make the argument for the need to think about video games in terms of literacy, we should consider the possibilities, limitations, and fundamental questions of games literacy (Buckingham and Burn 2007). For example, “games literacy” implies that “games can be analyzed in terms of a kind of language – that they make meaning in ways that are similar, at least in some respects, to written language. It also implies that there is a competency in using that language that is gradually acquired” (Buckingham and Burn 2007, 325).

Gee’s *What Video Games Have to Teach us About Learning and Literacy* argues that literacy, as a way of understanding and producing meaning, needs to be situated in the context of a semiotic domain. Gee defines semiotic domains as any set of practices that recruits one or more modalities (e.g., oral or written language, images, equations, symbols, sounds, gestures, artifacts) to communicate distinctive types of meanings (Gee 2003). If we take a sentence such as “The guard dribbled down the court,” and ask what it means to “read” it in the semiotic domain of basketball, at least two things are necessary: (1) the ability to decode the text, and (2) the ability to understand the specific meanings of each word in the sentence with respect to the

semiotic domain of basketball. So, in the case of the above sentence, it is important to recognize the letters and words in addition to understand that “dribble” does not mean “drool,” “court” does not have to do with legal proceedings, “guard” refers to a player in one of three standard basketball positions, “down the court” probably means that the player with the ball was moving toward his opponents’ side of the playing area, and so on. In addition to the need for understanding meanings in semiotic domains, literacy requires the ability to produce meanings, in particular to produce meanings that, while recognizable are seen as somehow novel or unpredictable (Gee 2003). From Gee’s perspective, literacy requires:

1. Ability to decode
2. Ability to understand meanings with respect to a semiotic domain
3. Ability to produce meanings with respect to a semiotic domain

So, by this definition, what does it mean to be games literate? Gee argues that video games are essentially a family of semiotic domains (Gee 2003). For simplicity, we can consider video games as a singular semiotic domain.² The ability to decode is analogous to the ability to access the “content.” For games, being able to decode is thus analogous to being able to play. Gee’s second element, understanding meanings with respect to a semiotic domain, becomes understanding meanings with respect to games, and the third, produce meanings with respect to a semiotic domain, can be expressed as the ability to make games. Thus, games literacy can be defined as:

1. Having the ability to play games
2. Having the ability to understand meanings with respect to games
3. Having the ability to make games

It is arguable that playing precludes understanding, which in turn precludes making. However each part of games literacy is related to, influences, and is influenced by the others. These interrelationships can be complicated, especially when we consider additional literacies. For instance, the ability to play a game can often encompass more than just knowledge of the rules, goals, and interface of a game; playing a game can include the ability to participate of the social and communicational practices of play. Steinkuehler’s analysis of the massively multiplayer online game *Lineage* shows how playing this game requires, among other things, knowing the specialized language used by the players and the social practices they engage in (Steinkuehler 2006).

With a definition for games literacy in hand, we can now examine it in the context of games education. We should explore whether or not incoming game education students have the necessary abilities:

1. Do students have the ability to play games?
2. Do students have the ability to understand meanings with respect to games?
3. Do students have the ability to make games?

²Gee’s argument for multiple semiotic domains is due the distinctiveness of different genres of video games.

In other words, are students already games literate? Or, more importantly, how can we characterize students' knowledge and abilities with respect to games literacy? We should attempt to better understand the abilities incoming students tend to have (or lack). What, if anything, do game students share in common in terms of their gaming literacy? What do they not know? How much and what exactly do they know about games? What game playing experience do they have? Which games have they played and from which genres?

There is little research that explores these questions. This is the foremost reason why we should be wary of canonical lists of games for games education. Working on these lists presupposes many things about students, what they know, what they do not know, and what their knowledge and abilities actually are. Consider the following assumptions about game students. Game education students:

- Are passionate about video games
- Spend a significant amount of time playing games
- Are familiar with modern (current) video games, but not so much with older ones, especially those for obsolete platforms
- Play lots of different games

In earlier work I showed how many of these assumptions are generally not, in fact, true (Zagal and Bruckman 2009). For instance, while learners may spend a significant amount of time playing games, it is quite common that their experience is limited in diversity. It is typical for students to have a specialized understanding of a particular game genre, like first-person shooters, but be completely ignorant, in terms of experience, of other genres like puzzle or sports games (Zagal and Bruckman 2009). This genre-specialized experience can extend beyond the current hardware platforms to include games on older platforms that may even predate them. Additionally, while students may be familiar with certain genres, not all students are familiar with the same genres (e.g., some students might prefer strategy games while others only play fighting games). We need a better understanding of what students know in order to better support them in their learning (e.g., Salen 2007; Zagal 2010). Since we, game educators, usually do not have a deep understanding of their student's prior personal experience with video games, using canonical lists can be risky because they obfuscate the assumptions we make. This can lead us to make decisions that may be detrimental to our students' education.

Role of Personal Experience

Literature in education and learning has highlighted the important role that prior experience can play in learning (Lave and Wenger 1991; Bransford et al. 2000; Kolodner and Guzdial 2000). In particular, it is important to establish personally meaningful connections with what is to be learned (Papert 1980). For example, the creation and design of games, considered personally meaningful to kids, has been explored as a productive means for learning computer programming (Kafai 1995;

Bruckman 2000). As game educators, this sounds like good news. After all, students generally enter game programs because of their prior experience and the personally meaningful connections they have to games. However, while students' extensive personal histories with video games can be an asset, they can also be counterproductive. For instance, students may find it harder to accept new ideas about games when their judgments are clouded by false assumptions about particular genres, titles, and even the era a game is from. Also, their experience can interfere with their ability to view and understand games as scholars or designers rather than as "gamers" or "fans" (Zagal and Bruckman 2009). Using a canonical list of games can exacerbate many of these issues.

A list of canonical games will undoubtedly contain games that will be familiar or well known to many (if not most) students. They are games that are often mentioned in the press, have been written about extensively, and are routinely referred to by industry professionals. It is likely, in fact, that many of these games will have been played by those students. Thus, it is also probable that students will have preconceived notions about these games or memories of their experiences playing, especially if they are fans. These experiences, usually strong and lasting ones, are hard to overcome.

Examining a game with a critical eye is challenging. It is doubly so when you are led toward a certain response. After all, how likely are you to question, push back, and examine the game design flaws of "canonical game X"? We want to encourage students to think for themselves, to question, and to critique, and using a list of games selected because they are "the best" just makes it harder for them. As in the case of personal biases and preconceived notions, this kind of cultural conditioning is also hard to overcome.

There are also social reasons to avoid popular, significant, or otherwise notable games. For instance, the aversion to "spoilers," surprises in a game's narrative or gameplay, means that it is socially problematic to discuss popular games in depth. People often do not want to know the ending or the surprises along the way because they harbor the hope of someday playing the game (even if they may never). Witness for example the controversy surrounding Wikipedia's decision to reveal the identity of the killer in Agatha Christie's 1952 murder mystery play *The Mousetrap* (Sims 2010; Various 2010).

While revealing spoilers may be seen as a minor issue, it is simply another example of how, in a classroom setting, discussion could be curtailed or self-censored by students and the instructor. Consider, for instance, a class discussion on *Shadow of the Colossus*. While this game was not a commercial success, it has received much critical acclaim. In a regular classroom, undoubtedly, there will be a few students who will have played it. The kinds of things they will be interested in discussing will be different to those of students who have never played or heard of it. If the instructor's goal is for the students to eventually play and understand the game, it would make little sense to discuss how the game's design leads the player to question and reflect on the heroics of their actions (Fortugno 2009). Future players would understandably not want to know, from the start, that they are playing the villain rather than the hero and that there is nothing they can do to change the ending.

If the players know that they don't really have control over the character, or the outcome is pre-ordained, they don't play in the scene the same way. They know they are simply going through the motions, and as a result, they can't feel that surprise or betrayal when their actions lead to undesirable or unexpected ends. (Fortugno 2009, 177)

Knowing the ending beforehand spoils the dramatic tension and suspense, thus diminishing the enjoyment and emotional impact of the game. In an educational setting, students should be able to explore and discuss games with as much freedom as necessary, while also having the opportunity to freely enjoy those masterpieces of the medium they may not have known or played.

Canonical Games in Games Education

Learning research has argued the importance of providing students with an authentic context for fostering learning. Authenticity can refer to any of the following: learning that is personally meaningful to the learner, learning that relates to the real-world outside school, learning that provides an opportunity to think in the modes of a particular discipline, and learning where the means of assessment reflect the learning process (Shaffer and Resnick 1999). Shaffer and Resnick note that in their "thick" view of authenticity each of these "kinds" of authentic learning are important, interdependent and mutually supporting (*ibid.*). In the context of deciding which games students should learn about, analyze, and play, we might infer that, especially for those students looking to work in the games industry, we should focus on those games that are most influential to game professionals. After all, as in any field, "professionals work within a mainstream culture that references important previous work. These form the critical jargon (e.g., 'this painting references Van Gogh's *Starry Night*') and the cultural context for new ideas" (McGuire and Chadwicke Jenkins 2008, 487). In this way, we would provide students with part of the critical language they will need in their professional lives.

However, there is a question of whether or not students will be able to get the same thing out of canonical games that a seasoned professional does. For instance, in science education, real-world science is often not accessible to students because authentic activities that are interesting to students are too open-ended and require content knowledge and scientific thinking that students do not have the supports to realize (Edelson 1998). In other words, a student may not be able to "get" the same knowledge and insights that a professional would when studying the same game. We know, for example, that expert chess and basketball players perceive game situations differently (e.g., Reingold et al. 2001; Didierjean and Marmèche 2005) and that these cognitive and perceptual differences also apply to designers. Expert designers, across a variety of disciplines, approach and solve problems differently than novices do (for an overview see Cross 2004). Even though we may consider a game an exemplar of its kind for, say, the elegance of its rules or the finely tuned balance of its gameplay, it is likely that students may have a hard time identifying such qualities.

Another way to think of this is to consider that the “best” games are not necessarily the best games for learning. Just because a game provides an excellent example of finely balanced competitive multiplayer, does not mean that it is a particularly good game for learning how to tell if a game is balanced or how to balance one. In the case of older games, there are further challenges in addition to issues of availability. Abbot describes some of the issues he has faced with students asked to play *Ultima IV*:

I resisted holding their hands because in the past I’ve found it useful to plop them down in Britannia and let them struggle. Figure out the systems, grok the mechanics, and go forth. *Ultima IV* may be a high mountain to climb for a 19-year-old *Call of Duty* player, but it’s well worth the effort.

At least that’s what I used to think. Now it seems to me we’re facing basic literacy issues. These eager players are willing to try something new, but in the case of a game like *Ultima IV*, the required skill-set and the basic assumptions the game makes are so foreign to them that the game has indeed become virtually unplayable.

And as much as I hate to say it – even after they learn to craft potions, speak to every villager, and take notes on what they say – It isn’t much fun for them. They want a radar in the corner of the screen. They want mission logs. They want fun combat. They want an in-game tutorial. They want a game that doesn’t feel like so much work.

I’m pretty sure I’ll continue to teach *Ultima IV*. The series is simply too foundational to overlook, and I can develop new teaching strategies. But I believe we’ve finally reached the point where the gap separating today’s generation of gamers from those of us who once drew maps on grid paper is nearly unbridgeable. These wonderful old games are still valuable, of course, and I don’t mean to suggest we should toss them in the dustbin.

But if we’re interested in preserving our history and teaching students about why these games matter, a “play this game and sink-or-swim” approach won’t work anymore. The question for me at this point is how to balance the process of learning and discovery I want them to have inside the game with their need for basic remedial help. (Abbott 2010, n.p.)

Abbot, rightly so, describes the issues he faces as a lack of literacy. His students simply do not know how to play *Ultima IV*.³

In Support of Unimportant, Noninfluential, and Simple Games

Arguably, all of the reasons I have presented so far against the use of canonical games for supporting games education are surmountable. My argument is not that by using such games we are irreparably damaging our students or that there is nothing to learn from the exemplars of our medium. Rather, I argue that there is a better way. We can avoid many of the challenges I have described (see Table 42.1) while also enjoying additional benefits. As game educators, we should rely more on simple, nontraditional, non-mass-market, noninfluential and, for the most part, unimportant video games in game studies education. These kinds of games, the vast majority of which are freely found on the web, provide us with opportunities we would be irresponsible to pass up.

³Abbot faced similar issues with students playing the original *Fallout* and its sequel *Fallout 2*.

Table 42.1 Summary of reasons against canonical lists

Reasons for avoiding canonical lists of games

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1. Canonical lists obfuscate assumptions we make about student's prior experience with video games
 2. Students' prior experience and preconceived notions of canonical games can interfere with understanding games as scholars or designers
 3. Cultural conditioning can limit depth of analysis and discussion (e.g., hard to find flaws in critically acclaimed game)
 4. Social inhibitions can curtail critical discussion (e.g., spoiler avoidance)
 5. "Best" games are not necessarily the best games for learning about games
 6. Students may lack skills to play older games
-

First, using a random assortment of simple and unremarkable games with nothing much in common helps us avoid a genre-based exploration of games. This kind of exploration (e.g., the best RPGs, the best shooters) tends to disguise the commonalities of design principles that are shared by all games. Starting from genres also tends to encourage a certain way of thinking in which games are already compartmentalized in static and distinct groups. We want our students to think and hopefully create games that are "outside the box," pushing their limits of understanding regarding what games are and can be.

Second, using unremarkable games can encourage students to question, push back, and think critically in productive ways. Unremarkable games are those that you can tear apart and really figure out. They will not be oppressed by the weight of popular opinion, historical sales figures, and critical adulation of canonical games. The cost of failure is also greatly reduced. It is okay not to fully understand how a game's gameplay is relevant when the game is not a famous best-seller that "everybody knows."

Third, simple games, especially freely available web games, tend to be more accessible and transparent to understanding. Many of these games tend to express or focus on a single idea that is easier to see, analyze, and discuss than is usually the case with large and complex titles. When Squire (successfully) used the popular and critically acclaimed *Civilization III* in the classroom, he found that "most students needed 6–7 h of gameplay to understand even the most basic game concepts" (Squire 2005, n.p.). The kinds of games I am suggesting would certainly require less than this. This means that you can encourage students to play a greater number (and diversity) of games. Most of these games are also usually short, which also increases the chance that students will complete them.

Fourth, studying unknown games provides students the opportunity to expand their knowledge and skills. Perhaps more importantly, it gives them the chance to connect these "unknown games" with their prior knowledge and experience. There is plenty written and said about famous games. From a student's perspective, it could be more productive to discuss the unknowns in terms of shedding light on other issues.

Fifth, and finally, using unremarkable and simple games can encourage students to assume a more active role in their education. Learning is, of course, not a passive activity.

Providing students with “ready-made” knowledge for them to consume robs them of the opportunity to engage more deeply and more actively in their learning. We should encourage our students to leverage their own knowledge and create their own lists. Which are the games that define them? Of the hundreds of games they played for class, which are the ones they think are most notable. Why did they choose the ones that they did and what kinds of experiences did they provide? Games education is fortunate. Most students already love games, play them in their free time, and have years of prior experience with the medium. This is an opportunity we should take advantage of. Providing students with selections of the best games for them to play and study is a disservice to them. Encouraging them to engage with the unknown, the simple, the unremarkable, and the nonfamous encourages them to think more deeply and to connect what they know with what they are learning.

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Index

A

- Aarseth, E., 36, 41, 51, 75, 76, 107, 118, 119, 155, 505
- Academic world, 2
- Achievement of competences, 470
- Ackermann, J., 20, 465
- Adams, D., 48, 125
- Adams, E.W., 53
- Adamus, T., 20, 477, 481–483
- Adaptation, 8, 48, 49, 64, 81, 88, 137–139, 238, 466, 572, 576, 580
- Adjectives, 155
- Adolescence, 235, 245, 327, 544, 545, 552, 553
- Adolescents, 14, 16, 20, 295–313, 317–319, 343–354, 358, 359, 364, 465, 466, 469–471, 475, 477, 478, 484–487, 544, 633–635, 647, 648, 651, 653, 658, 660
- Adventure, 47, 49–52, 54–56, 63, 64, 66, 67, 70, 99, 100, 148, 165, 188, 222, 238, 244, 310, 312, 320, 321, 376, 382, 389, 412, 428, 448, 451, 586, 640
- Advergame, 378, 382
- Advertising, 17, 66, 176, 359–361, 388, 622, 652
- Aesthetic, 2, 3, 7–9, 13, 33–35, 64, 75, 76, 78–80, 85, 94–96, 98, 102, 126, 131, 138, 140, 144, 145, 154, 249–253, 256, 258–261, 267, 269, 277, 366, 383, 396, 436, 494, 518, 573, 574, 636, 637, 642, 644, 653
- Age of Empires*, 80, 82, 83, 87, 88, 531, 656
- Age ratings, 143, 347, 353, 635
- All-rounder, 298, 309–312
- Altair, A., 155–156
- Alternate reality game, 166
- Altman, R., 50, 64
- Alva, M., 165
- Amann, R., 180–181, 186
- Analytical model, 21, 517, 519
- Anand, N., 374
- Anderson, D., 395
- Animation, 62, 70, 108, 156, 179, 221, 338, 378, 492, 493, 497, 499, 502, 504, 596, 605, 641–643
- Anne, Queen, 589, 590
- Anscombe, M., 42
- Apperley, T.H., 81
- Application, 101, 135, 137–138, 177, 181, 250, 268, 271, 274–276, 307, 346, 366, 531, 553, 627, 628, 643
- Appropriation, 4, 15, 18, 135–137, 139, 317, 318, 492, 510, 526, 527, 529, 530, 537, 594, 624, 638
- Arcangel, C., 167
- Aristotle, 49, 61, 62, 121
- Army of the Damned, 200
- Arsenault, D., 64
- Art, 6, 9, 85, 93–105, 116, 120, 122, 147, 151, 167, 197, 200–204, 227, 255, 358, 382, 454, 494, 501, 573, 630, 639, 643, 644, 656, 659, 666, 668
- Artificiality, 639, 644
- The Art of Persuasion, 200–204
- Assassin's Creed*, 51, 53–56
- Assemblages, 224–226
- Audience, 47, 49, 51, 56, 69, 108, 122, 157, 167, 169, 245, 359–361, 427, 482, 486, 493, 502–504, 530, 531, 533, 534, 575, 585, 586, 588–590, 598
- Augmented reality, 166

- Authentic input, 14, 279–291
 Authenticity, 281, 282, 289, 403, 421, 500, 672
 Author, 8–13, 16, 18, 19, 21, 23–26, 44, 70, 79, 80, 86, 87, 111, 126–128, 131–136, 140, 163–165, 178, 180, 185–187, 212, 243, 257, 260, 267, 306, 319, 334, 335, 363, 400, 401, 428, 465, 468, 493, 504, 518, 521, 534, 554, 628, 634, 636, 649, 653, 657
 Authorship, 20, 21, 363, 492–496, 499, 502–505
 Avatar, 12, 13, 41, 54, 55, 103, 112, 175, 178–180, 182–184, 186, 188, 194, 212–215, 219, 221, 222, 225, 226, 261, 269, 321, 333–339, 404, 405, 445, 462, 497–499, 501, 502, 520, 545–547, 551, 637, 641, 642
 Axline, V.M., 239
- B**
- Baacke, D., 297, 309, 636, 638
 Bach, 96
 Bachelard, G., 169
 Bacon, F., 577
 Bakhtin, M.M., 49, 158, 492, 493, 500
 Balkin, J.M., 175, 181
 Banister, J., 462
 Barlow, J.P., 162, 165, 169
 Barmanbek, B., 373, 383
 Barnes, S., 182
 Bart, 150
 Barthes, R., 155, 415, 416, 422
 Bartle, R.A., 12, 193
 Barton, M., 667
 Bataille, G., 152
 Bateson, G., 253, 571
 Battlegrounds, 411, 412, 414, 418, 420
 Baumgarten, 94
 Bayraktutan-Süctü, G., 17, 371
 Beck, J., 4
 Beige, 167
 Bennerstedt, U., 330, 332, 340
 Benoit Carbone, M., 111
 Beowulf, 147, 150
 Berg, K., 306
 Berndt, J., 625
 Best-practice, 650, 657, 659, 660
 Bezinka, 25
 Bidirectionality, 12, 210, 213, 214
 Bildung, 235, 245, 621, 624, 648, 649, 654
 Binark, M., 17, 371
 Biology, 604–607, 609, 654, 656
 Björk, S., 280
 Blackburn, S., 157
 Blake, C., 16–17, 279, 357
 Blazkovicz, W.B.J., 163
 Blumer, H., 252
 Boal, A., 166
 Body, 35, 40, 98, 145, 147, 150–153, 157, 158, 161, 174, 178, 179, 221, 235, 239, 268, 281, 288, 333, 359, 367, 418, 461, 535, 576, 578, 605, 666, 674
 Bogost, I., 573, 574
 Bolter, J.D., 119
 Bonfadelli, H., 306, 307
 Bopp, M., 24–25, 562, 619
 Border, 12, 42, 100, 209, 212–215, 619
 Borderwork, 545, 552
 Bordwell, D., 50, 53, 55
 Boundas, C., 225
 Boyd, D., 543
 Branding, 69, 532–535, 537
 Braten, S., 237, 242
 Brathwaite, B., 144, 152, 153
 Brentano, F., 42
 Brezinka, W., 625
 Bricolage, 397, 484, 562
 Brodbeck, F.C., 470
 Brown, E., 236
 Brunetière, 62
 Bryant, J., 346
 Bryce, J., 434, 435, 445
 Buck, G., 576–578
 Buckingham, D., 245
 Budget, 138, 153, 360, 375–377, 380–383
 Burkatzki, E., 15, 295
 Business model, 17, 176, 359, 360
 Butler, M., 229
 Byron, S., 667
 Byron, T., 143
- C**
- Caillois, R., 189, 241
 Cairns, P., 236
 Calleja, G., 234, 236, 242
Call of Duty, Modern Warfare 2, 220, 228
 Calvino, I., 122

- Camera, 8, 41, 54, 56, 57, 98, 148, 149, 152, 163, 166, 333, 498, 499, 639
 Camera obscura, 41
 Canon, 26, 592, 652, 665–675
 Canonical lists, 26, 667, 670, 674
 Carr, D., 18–19, 411, 415, 420
 Cartographic function, 84
 Case studies, 21, 23, 140, 330, 544, 546, 547, 550–552, 628
 Castañeda, H.-N., 42
 Castell, S., 420
 Casual games, 68, 295, 317, 343, 360, 425, 454
 Chandler, R., 642
 Charbitat, 163–165
 Chatting, 176, 180, 307, 401, 418, 546, 547, 560
Cheetahmen, 9, 107–116, 118–122
 Cherbak, F., 448
 Children, 3, 5, 16, 22, 24, 143, 198, 295, 313, 329, 343–354, 387, 427, 467, 472, 473, 529, 543, 545, 571, 585, 586, 588–590, 603–605, 612, 622, 626, 629, 633, 643, 647, 648, 658, 660, 668, 678
 Chisholm, R.M., 42
 Cinematographic, 8, 54, 57
 Circle of friends, 301, 302, 305, 309, 466
 Circuit of media culture, 528
 Clancy, T., 37, 44
 Clans, 4, 18, 19, 165, 321, 322, 324–325, 427, 432, 436, 446, 447, 459, 462, 466, 481, 487, 529, 536
 Clans and guilds, 4, 18, 324
 Clarke, J., 20, 483
 Classification, 8, 308, 385, 520, 658
 Classroom, 23, 25, 26, 552, 558, 566, 605, 607–610, 615, 619–623, 627–629, 633–645, 647–661, 671, 674
 Classroom activities, 643
 Cluster analysis, 309, 546, 548, 550
 Co-construction, 13, 236–240, 242, 245
 Code, 7, 55, 56, 75, 76, 79, 127, 150, 157, 193, 201, 227, 337, 378, 382, 387, 397, 511, 514–517, 544, 614
 Collaboration, 2, 239–242, 361, 367, 399, 420, 421, 494, 495, 498, 499, 501, 503, 547, 609, 644, 654
 Colossal Cave Adventure, The, 47, 50
 Colour, 53–57, 154
 Command&Conquer, 80
 Commercialization, 525–538
 Communication, 2, 4, 6, 10–12, 17–21, 119, 127–129, 136, 137, 162, 169, 174, 176, 178–180, 186, 188, 189, 209–216, 240, 249, 250, 252, 253, 297, 298, 308–311, 317, 321, 322, 324, 325, 327, 328, 330, 332, 333, 353, 366, 367, 387–389, 402, 405, 407, 427, 462, 465, 466, 470, 471, 473, 474, 479, 480, 485, 486, 492, 513, 520, 525–527, 529, 531, 533–535, 544, 551, 560, 564, 565, 628, 647, 648, 668
 Communities, 4, 18, 19, 165, 168–170, 174, 225, 325–327, 413–415, 425–428, 430, 431, 434, 436, 437, 446, 450, 462, 477–479, 485, 486, 491–493, 496, 499, 502–504, 515, 528, 529, 558, 563, 564, 566, 567, 638, 653
 Community of practice, 23, 563, 567
 Comparatist, 48, 52, 56
 Comparative, 8, 17, 47–57, 69, 78, 310, 319, 365, 614
 Competition, 15, 18, 20, 87, 89, 189, 195, 211, 321, 322, 344, 420, 421, 434, 446–448, 455, 467, 479–483, 485, 531, 536, 537, 560, 564, 565, 597, 600
 Competitive gaming, 438
 Composers, 102, 589, 591–593
 Computer game pedagogy, 24, 25, 619–630
 Computer gaming activities, 309
 Conan, 147
 Conflict, 11, 18, 19, 100, 102, 140, 174, 228, 254, 290, 341, 411–422, 478, 484, 529, 541, 626, 628
 Conley, T., 226
 Consalvo, M., 77, 149
 Constructivism, 13, 251, 252
 Contemplation, 39, 150, 639
 Content (of media), 48, 166, 528, 638
 Context (of use), 14–17, 313
 Contracts, 385
 Control, 8, 14, 54, 81, 82, 84, 85, 87–89, 99, 112, 134, 138, 140, 153, 155, 158, 167, 177, 214, 221, 236, 266, 267, 269, 274–276, 280, 282, 283, 287–289, 302–305, 309, 311, 337, 338, 345, 346, 350, 351, 354, 374, 387, 417, 421, 515, 522, 579, 608, 611, 612, 614, 639, 654, 672
 Convergence, 15, 20, 48, 181, 271, 317–319, 491, 492, 511, 512, 514, 528, 573, 575
 Convergence culture, 48, 492, 511, 512, 514, 575
 Conversation, 104, 127, 152, 153, 157, 179, 187, 188, 258, 332, 398, 401, 404, 427, 465, 544, 551–553
 Coordinate system, 268

- Coping with chaos, 240, 244
 Cops and robbers, 467, 468
 Copyright, 385, 388, 389, 455, 515, 655
 Core gamers, 300, 549
 Cosplay, 221, 225
 Counter-strike, 321, 322, 447, 450, 468, 472, 479–483, 513, 514, 531, 535, 537
 Crawford, C., 32, 51
 Crawford, G., 527
 Creative industry, 17, 371–389, 511
 Creative practice, 20, 396, 492, 509, 521
 Critical analysis, 219, 621, 622, 653
 Critical discourse analysis, 125
 Critical political economy, 378
 Critics, 41, 50, 63–65, 69, 155, 219, 221, 225, 230, 296, 433, 604
 Crossmedial communication, 179
 Cross-media reference, 520
Culpa Innata, 376, 381
 Cultural grammar, 9, 78–80
 Cultural product, 9, 80, 93, 373, 388, 510, 528
 Cultural studies, 2, 4–6, 127, 483
 Cultural values, 87, 128, 139, 140, 158
 Culture industry, 17, 372, 384
 Curran, S., 667
 Curricula, 26, 566, 587, 607, 608, 615, 620, 621, 636, 650, 651, 653–656, 658, 660
 Curricular, 586, 591, 597, 599, 605, 606, 608, 657, 658
 Curriculum framework, 665
 Cut-scene, 53–55, 126, 148–151, 156, 221, 334
Cybergypsies, 225
 Cyber pickup, 544
 Cyberspace, 10, 161–162, 270, 397
- D**
 Dahlskog, S., 16, 329
 Dalton, A., 455, 458, 459
 Dance, 10, 151, 157, 166, 197, 372, 421, 497, 551, 587, 596
Dance Dance Revolution, 10, 166, 587, 596
 Danto, A.C., 96
 Darkness within, 376
Dark Room Sex Game, 195, 196
 Dating practices, 23, 544, 546, 547, 552, 553
 Dating relationships, 545, 551
 Davies, J., 346
 Debord, G., 537
 de Castell, S., 24, 585
 Defining video games, 107–123, 128, 139, 219–220, 265–277, 633–645
- Definitions, 21, 51, 100, 112, 117, 119, 157, 258, 280, 416, 479, 487, 525
 DeLanda, M., 224
 Deleuze, G., 9, 13, 120, 223–226, 229
 Denotation, 38, 61
 Depiction of violence, 198, 296
 Derrida, J., 63, 65
 de Sade, M., 147
 Descartes, R., 40–42
 Design, 2, 39, 55, 64, 78, 102, 117, 129, 144, 151, 161, 176, 193, 211, 224, 243, 250, 267, 284, 297, 306, 321, 331, 366, 372, 383, 399, 412, 453, 499, 512, 547, 557–567, 572, 585, 600, 604, 621, 637, 665
 Design-based research, 24, 588
 Designer/player covenant, 197, 199, 202
 Design of serious games, 25, 623, 627, 629
 Desire, 119, 144–146, 148, 150, 151, 153, 157, 158, 177, 180, 212, 374, 440, 546, 597, 598, 668
 Developers, 5, 17, 51, 52, 69, 72, 199, 334, 341, 373, 374, 378, 380–383, 388, 389, 413, 433, 448, 451, 453, 512–516, 520, 567, 643, 665
 Development of group structures, 467
 Development process, 378–382, 384, 385
 Dewey, J., 575, 579
 Dialogic literary theory, 49, 573
 Diary, 17, 49, 361, 363–367
 Didactic material, 650, 657, 659
 Diegesis, 38
 Digital citizen, 178
 Digital ego, 178
 Digital game-based learning, 573, 574, 628
 Digital game industry, 17
 Digital Games Research Association (DiGRA), 2, 3, 525
 Digital game studies (DGS), 2, 7, 8, 10, 19, 521, 527, 649
 Digital hermeneutics, 8
 Digital media, 5, 8, 10, 25, 76, 84, 88, 161, 168–170, 281, 313, 514, 574, 586, 588, 600, 604, 625, 647, 651, 655, 656, 660, 661
 Digital natives, 623, 625, 645
 Digital ownership, 177
 Digital role playing games, 233–246
 Disciplinarity and game studies, 5
 Disciplines, 2, 5–7, 120, 168, 220, 357, 414, 481, 487, 504, 533, 574, 604, 606, 607, 609, 619, 623, 668, 672
 Discovery learning, 23, 546, 561, 562, 564, 567, 574

- Disoriented, 15, 298, 309, 311, 312
 Distribution, 61, 118, 299, 317, 322, 362, 372, 375–377, 383, 429, 484, 493, 504, 513, 526, 548, 609, 635
 Ditton, T., 236
 Djaouti, D., 51
 Dogruel, L., 16, 343
 Domestication, 244, 265, 530, 533, 641
 Doom, 32, 54, 122, 331, 375, 419, 493, 516
 Double-bind, 214, 215
 Douglas, N., 450, 454
 Douglas, Y., 289
 Dovey, J., 223
 Dreamfall, 622
 Droumeva, M., 24, 585
 Duchamp, M., 94, 96
 Ducheneaut, N., 412
Dune II, 82–84, 87
Dungeons & Dragons, 395, 560
 Dutton, N., 77
 Dyack, 52
- E**
 Ecological approach, 14, 250, 265–277
 Economy, 6, 13, 24, 80, 125–159, 182, 250, 279, 371–373, 385, 387, 389, 587
 Eco, U., 9, 113–114, 117
 Edge magazine, 667
 Education, 2, 20, 22, 24–26, 33, 35, 176, 181, 182, 245, 286, 298–300, 302–307, 309, 311, 345, 358, 367, 386, 399, 473, 492, 558, 571, 574, 585–587, 600, 603–607, 619, 621, 622, 624–626, 635, 636, 639, 647–661, 665–675
 Educational philosophy, 621
 Educational science(s), 6, 626
 Edutainment, 24, 204, 605, 606
 Effects (of playing video games), 11, 14, 574, 634
 Egenfeldt-Nielsen, S., 51, 622, 629
 Ego-shooter, 67, 104, 299, 310, 311
 Egoshooting, 219–230
 Ekstein, R., 238
Elder Scrolls IV: Oblivion, 198
 Electronic athletes, 480
 Elverdam, C., 51
 Empirical research, 13, 35–36, 44, 250, 255, 257–261, 279, 352, 483, 622, 626
 Engagement, 2, 19, 24, 39, 102, 162, 164, 175, 237, 266, 290, 322, 325, 327, 396, 397, 420, 466, 479, 482, 486, 509–511, 521, 550, 557, 587, 597, 599, 600, 605, 611
 Engine, 17, 228, 357, 373, 378, 381, 382, 515–517, 604, 659
 Engineering, 104, 193, 610, 668
 Entertainment value, 14, 280, 282, 288, 289, 605, 639
 Enunciation, 134
 Ergodicity, 81
 Erikson, E.H., 235
 Erkan Bayol, 378, 386
 Ermi, L., 209, 210, 254, 281
 Eskelinen, M., 76
 E-sport, 20, 436, 447, 477–487, 526, 532–537
 Ethics (in body of text), 193, 403, 407, 414, 416, 420, 656, 659
 Ethnography discrimination, 19, 332
 Everquest, 396, 431, 478, 563
 Excessive playing, 326, 454, 652
 Exemplification, 38
 Expansive learning, 562
 Experience, 2, 6, 11, 13, 14, 17, 21, 73, 76, 86, 94, 97, 107, 108, 113, 117, 138, 143, 162–164, 168, 175, 176, 210, 214, 221, 222, 239, 241, 245, 249, 252–259, 261, 268, 275, 279–284, 286–289, 296, 307, 312, 317, 324, 325, 330, 331, 333, 335, 336, 378, 380, 399, 401–405, 413–416, 418, 419, 421, 575, 579, 580, 603, 627, 674
 Experimentation, 235, 566, 600, 615
 Exploitation, 80–82, 143, 145, 151, 153, 158, 537
 Exploratory studies, 628
 Extended gameplay, 405
 Extension of the social network, 164, 215, 307
 Exterspecific information, 273, 274, 276
 Extraordinary rendition, 202
- F**
 Facebook, 188, 295, 376, 386, 457, 492, 497, 502
 Face-to-face communication, 179, 471, 520
 Fairness, 468, 475
 Falcão, T., 209, 234
 Fallout 3, 220, 514
 Favourite online games, 321
 Feeling of security in the family, 301, 305
 Feibel, T., 470
 Feige, D.M., 93, 116
 Feige, M., 9
 Female gamers, 18, 19, 321, 426, 428–432, 434, 435, 437–439, 443, 446–448, 454, 456–462, 530

Female gaming, 19, 20, 443–462
 Feminism, 430, 436
 Ferreira, E., 209, 234
 Feynman, 24, 603, 604, 606
 Feynman, R.P., 24, 603, 604, 606, 615
 Fiction, 48–50, 52, 99, 100, 112, 117, 146,
 151, 153, 178, 196–198, 200, 201, 207,
 227, 492, 514, 642
 Fictional world, 103, 104, 167, 168, 207
 Fields, D.A., 23, 543
 Fileccia, M., 649
 Filtering, 387
 First person, 3, 7, 12, 32, 36, 38, 40, 42, 43,
 48, 51, 63, 64, 89, 99, 100, 102, 103,
 105, 108, 131, 162, 219, 220, 228, 229,
 437, 454, 479, 481, 670
 First-person shooters (FPS), 32, 36, 38,
 40, 43–44, 51, 63, 64, 102, 108,
 162, 454, 481
 Fisher, S., 24, 585
 Flaggging, 200
 Flanders, N., 150
 Flash, 24, 153, 586, 587, 589, 596, 600, 644
 Florian, 324
 Flow, 48, 126, 134, 153, 158, 189, 211, 236,
 276, 280, 290, 296, 345, 346, 362, 367,
 404, 564, 566, 567, 596, 610, 638, 640,
 641, 653
 Floyd, D., 144
 Fluid media, 51
 Fold, 224, 226, 228
 Form (medial form), 35, 38, 42, 128
 Forum discussion, 19, 426, 428, 435, 438
 Foucault, M., 223, 224
 Fowler, A., 63
 Frames, 12, 154, 194, 195, 236, 576, 578, 580
 Framing competence, 639, 644
 Frances, 586
 Frasca, G., 221
 Freedom (of play), 33–34
 Freud, 157, 158
 Freud, S., 157, 158
 Friess, R., 13, 239, 249
 Fritz, J., 16, 296, 344–346, 349, 354, 639
 Frølund, L., 20–21, 491
 Fromme, J., 1, 25–26, 242, 243, 620, 624,
 647, 666
 Functions, 8, 20, 23, 73, 77, 79, 84, 93, 96,
 97, 131, 134, 135, 139, 179, 183, 220,
 238, 256, 281, 297, 307, 310, 318, 322,
 330, 334, 378, 484, 552
 Funktionslust, 470
 Further education, 650–652, 661
 Fütterer, M., 649

G

Gabriel, 536
Gabriel Knight, 53
 Gadamer, H.G., 577, 579
 Galloway, A.R., 36
 Game-based learning, 22, 250, 251,
 366, 573, 574, 576, 614, 628,
 649, 659
 Game console, 284, 332, 364, 637
 Game controller, 14, 283, 287
 Game cultures, 1–26, 223, 366, 479, 494,
 495, 504, 511, 526–530, 532,
 534, 535, 537–538
 Game dependency, 318, 326
 Game design, 2, 6, 12, 13, 26, 44, 64, 75,
 144, 154, 197, 207, 216, 224,
 243, 245, 250, 251, 254–257, 259–261,
 267, 270, 331, 562, 572–574, 614, 637,
 639, 640, 644, 645, 665, 671
 Game design as art form, 95, 98, 197
 Game device, 10, 14, 32, 53, 62, 78, 97, 101,
 104, 127, 139, 151, 152, 154, 158, 166,
 201, 205, 215, 276, 279–291, 359, 362,
 364, 451, 527, 609
 Game economy, 371
 Game host, 470, 471
 Game industry, 8, 17, 19, 21–23, 65–69,
 144, 181, 295, 360, 371–374, 379,
 382–390, 425, 443, 448, 453, 455,
 458, 511, 514, 515, 521, 530, 537, 635,
 637, 668
 Game phase, 465, 466, 471–472
 Game players, 195, 206, 371, 388, 417, 478,
 480, 481, 494, 543, 558
 Gamer, 1, 34, 50, 71, 108, 157, 180, 209,
 222, 258, 274, 283, 296, 317, 323,
 344, 371, 400, 420, 425, 443, 469,
 477, 491, 510, 526, 548, 558, 599, 621,
 633, 671
 Gamer communities, 9, 300, 326
 Gamer groups, 302, 303, 307, 309, 312, 318,
 319, 321, 322, 324–327
 Gamers, 157
 Game rules, 210, 332, 415, 418, 466, 473,
 518, 600, 640
 Games culture, 513–516, 536
 Games education, 26, 666–670, 672,
 673, 675
 Game shell, 590–593, 597
 Games literacy, 25, 644, 668–670
 Game space, 10, 18, 38, 41, 47, 76, 161–169,
 209, 236–242, 244, 246, 268–270, 331,
 335, 397–401, 403, 405, 407, 412, 416,
 434, 495, 642

- Game studies, 2–10, 16, 20, 26, 31, 36, 44,
 47, 57, 61–63, 65, 70, 73, 78, 93, 98,
 105, 115, 118, 154, 168, 195, 216,
 220–223, 233, 266, 268, 279, 280, 288,
 289, 357, 358, 360, 361, 366, 397, 412,
 413, 420, 446, 477, 504, 505, 525, 527,
 572–574, 577, 619, 629, 640, 643, 649,
 665–675
 Game studies as field, 268, 280, 397, 640, 643
 Game success, 558
 Game use, 7, 16, 17, 25, 56, 84, 181, 215, 279,
 297, 334, 343–346, 349, 354, 358, 359,
 361–367, 637, 642
 Gaming contexts, 17, 19, 212, 214, 405,
 425–438
 Gaming industry, 446, 450, 452, 453, 460,
 511–513, 528, 530, 531, 533,
 635, 644
 Gaming literacy, 330, 670
 Garnham, N., 17, 372, 373
 Gebel, C., 624, 628
 Gee, J.P., 16, 138, 330, 340, 494, 543, 567,
 573, 576, 580, 668, 669
 Geisler, M., 481
 Gender, 18–20, 61, 147, 148, 157, 194, 223,
 299, 300, 302, 304, 305, 307–309, 312,
 366, 415, 425–427, 430, 431, 433–438,
 443–462, 480, 529, 544, 545, 549, 550,
 552, 557
 Gender-offense, 458
 Gender play, 426, 545, 552
 Genette, G., 111, 113
 Genre, 8, 12, 17, 19, 33, 48–52, 54, 56, 57,
 61–73, 77, 78, 81, 84, 85, 88, 89, 102,
 103, 112, 113, 120, 129, 131, 147, 153,
 198, 213, 214, 220, 229, 239, 275, 308,
 309, 312, 347, 350, 358, 359, 362–364,
 374, 395, 401, 431, 432, 437, 455, 478,
 513, 550, 587, 640, 641, 667, 670, 674
 Geographical location, 378
 Gergen, K., 397
 Gesamtkunstwerk, 170
 Giang, M.T., 23, 176, 543
 Gibson, J.J., 13, 271, 272
 Gift exchange, 551
 Gigue, 596–597
 Gitlin, T., 195
 Glass ceiling, 433, 438
Global Conflict: Palestine, 628
 Goffman, E., 496
 Golding, P., 389
 Goldstone, R., 609
 Goodman, N., 38
 Gordon, I., 268
 Government, 140, 143, 202, 373, 385–389, 634
 Grace, W., 223
 Graphical layout, 14, 265–267, 271
 Graphics, 53, 55, 108, 117, 145, 148, 162,
 195, 198, 261, 265, 268, 270, 282, 310,
 381, 493, 566, 599, 667
 Greenberg, B.S., 363
 Greenfield, P., 544
 Greenspan, S.I., 237, 244
 Grendel, 150
 Griffith, D.W., 150
 Grodal, T., 254–256, 346
 Grounded theory, 428, 430
 Group leader, 473
 Guattari, F., 9, 120
 Guitar hero, 24, 511, 531, 587, 594
 Gulch, W., 19
 Günzel, S., 7–8, 31, 89, 99, 210, 266
 Gygax, G., 395
- H**
 Habitual gamers, 300, 301, 306–309, 312
 Hallward, P., 224
 Hancock, H., 491
 Hardware, 2, 16, 32, 34, 53–55, 57, 78, 279,
 312, 331, 349, 455, 481, 670
 Hargadon, A., 289
 Härig, D., 12, 162, 176, 209
 Hartmann, T., 347–349, 354, 445
 Hayat, N., 377, 382
 Heavy rain, 622
 Hefner, H., 152
 Hegel, G.W.F., 95, 97
 Heidegger, M., 95, 98
 Heitger, M., 242
 Hemminger, E., 18, 269, 325, 395
 Henderson, A., 332
 Henkel, G., 103
 Hepp, A., 527, 528
 Hesmondhalgh, D., 373, 386
 High level of media competencies, 312
 Historical fidelity, 589
Hitman: Blood Money, 221
 Hitzler, R., 485
 Hjelmslev, L., 113, 118
 Hollywood Production Code, 150, 157
 Holopainen, J., 280
 Holzkamp, K., 562
 Homunculus fallacy, 41
 Horrell, K.R., 432
 Huizinga, J., 33, 215
 Humanities, 2, 6, 357, 411, 412, 414–416, 491
 Hybrid space, 168

I

- ICT industry, 373
- Ideal type of commodity, 373, 389
- Identification, 11–13, 111, 166, 214, 219–222, 224, 230, 238, 240, 241, 344, 405, 462, 527, 528, 536–538, 653
- Identity, 4, 11–13, 18, 112, 161, 179, 219–230, 252, 296, 317, 327, 351, 397, 435, 484, 496, 528, 537, 543, 545, 573, 671
- Ijsselstein, W., 281
- Illegal copy, 385
- Illusion, 42, 120, 168, 270, 500
- Image/picture, 8, 10, 34, 36, 38–40, 43, 44, 53, 78, 82, 99, 110, 143–145, 152, 157, 161, 166, 178, 182, 210, 235, 237, 242, 268, 270, 271, 275, 276, 297, 298, 361, 432–434, 437, 446, 449, 454, 456–460, 465, 469, 475, 487, 494, 504, 533, 534, 536, 592, 668
- Immanence, 33–34, 224
- Immersion, 11–14, 39, 155, 157, 158, 162, 174–176, 215, 222, 224, 233–246, 254, 279–291, 400, 401, 404, 415, 479, 560, 564, 565, 629, 641, 652, 653
- Inclusion/exclusion, 426
- Independent game studios, 374
- In depth-interviews, 17, 373, 399
- Industrial structure, 17, 373, 378–382
- Industry, 8, 17, 19, 21, 23, 50, 51, 65–69, 72, 73, 144, 149, 181, 250, 295, 296, 358, 360, 366, 371–389, 425, 443, 446, 448, 449, 451–453, 458–460, 511, 512, 514, 521, 528–530, 532, 537, 574, 635, 637, 644, 667, 672
- Informal economy, 385
- Informational capitalism, 372, 374, 378
- Information pickup, 272–274
- In-game learning, 561, 566, 653
- Ingram, J., 494
- Input, 11, 14, 32, 70, 80, 166, 175, 179, 210, 255, 279–281, 519, 596, 597, 610, 627
- Inscription, 126, 163, 594–597, 599
- Insko, B.E., 286
- Instructional design, 23, 557–567, 586, 600, 629
- Instructional research, 25, 620, 621, 627–629
- Instructions, 19, 211, 341, 597, 599
- Intellectual rights, 385, 389
- Intensive gamers, 297, 299–309, 311, 312
- Intentionality, 42, 43
- Interaction, 4, 6, 12, 13, 16, 18, 20, 23, 34, 36, 38–41, 43, 44, 71, 73, 76, 100, 127, 129, 162, 163, 166, 175, 186–188, 194, 211–213, 224, 227, 234, 236–240, 243, 249–261, 265, 279, 281, 283, 289, 290, 296, 318, 329, 331–335, 398–400, 402, 403, 405–407, 420, 435, 445, 465–475, 485, 496, 510, 527, 535, 538, 543–553, 558, 560, 587, 592, 593, 607, 609
- Interaction analysis, 16, 332–334
- Interactivity, 3, 11, 14, 76, 100, 101, 175, 210, 222, 253–256, 280, 281, 312, 486, 525, 573, 588, 590, 600
- Interdisciplinarity, 5
- Interface, 8–10, 43, 75–89, 117, 131, 132, 137, 144, 151, 161, 166–168, 175, 176, 213, 249, 254, 281, 282, 286, 333, 335, 415, 416, 519, 612, 669
- Interface analysis, 8, 9, 75–89
- Intermediate area, 13, 233–246, 610
- International Game Developers Association (IGDA), 448, 665, 666
- Internet, 3, 8, 108, 109, 153, 175, 177, 181, 300, 301, 307, 310, 312, 317, 319, 327, 352, 364, 365, 372, 375, 383, 386, 387, 396, 416, 427, 434, 446, 481, 494, 544, 557, 605, 635, 650, 653, 657–659
- Internet cafe, 371, 372, 387
- Interpersonal communication, 174, 178, 247
- Interpretation, 9, 19, 42, 49, 56, 95–98, 104, 113, 114, 119, 125, 136, 140, 202, 221, 249, 252, 253, 255, 256, 259, 282, 297, 298, 307, 318, 338, 341, 371–389, 411–422, 446, 485, 510, 512, 515, 546, 565, 576, 578
- Intersubjective knowledge, 10, 126, 134
- Interviews, 14–17, 19, 22, 55, 152, 251, 258–261, 281, 289, 296–299, 301, 302, 310, 311, 318–322, 324, 326, 335, 362, 373, 374, 380, 381, 384, 388, 399, 400, 404, 406, 408, 415, 428, 435, 445, 447, 451, 458, 486, 495, 496, 499, 514, 520, 530, 532, 534, 536, 560, 566, 603, 614, 635, 640, 651–653, 656, 660
- Interviews (semi-structured), 17, 390
- Intrinsic motivation, 564
- Investors, 379, 385, 386, 388
- Invisible wall, 36
- Involvement, 75, 180, 182, 220, 236, 237, 239, 241, 252, 255, 257, 271, 277, 286–290, 366, 425, 428, 545, 549, 648, 653
- In-world-media, 183, 184

İstanbul Kıyamet Vakti (İKV), 382
 “It’s just a game,” 194–196, 201, 203,
 205–207

J

Jäger, S., 134
 Jam, N.G., 195
 Jansz, J., 467, 483
 Järvinen, A., 63
 Jay, M., 85
 Jenkins, H., 48, 483, 491, 492, 494, 504, 512,
 637, 652
 Jennett, C., 286
 Jensen, J.F., 53, 119
 Jenson, J., 24, 420, 585
 Jöckel, S., 16, 343
 Jonasson, K., 482
 Jordan, B., 332
 Joyce, J., 49
 Juul, J., 12, 16, 47, 100, 107, 116–118, 196,
 209, 330, 331, 525

K

Kabus 22, 375, 378, 383, 385
Kabus 22: Yıkım Günü, 378
 Kafai, Y.B., 23, 543, 547
 Kant, I., 41–42, 96
Kaptan-ı Derya Barbaros, 376
 Kaufman, A., 166
 Keilhauer, J., 15–16, 317
 Kelland, M., 494
 Kellner, D., 330
 Kennedy, H., 223
 Kent, S.L., 116
 Kerr, A., 372, 378, 382, 384, 389
 Kiefer, F., 649
 Killer game debate, 625
Killerspiel, 634
 King, G., 527
 King Louis XIV, 589, 596
 Kirchner, T., 649
 Klimmt, C., 16–17, 210, 240, 241, 254, 279,
 357, 445, 472
 Kline, S., 309, 529
 Klopfer, E., 24, 25, 587, 600, 603, 610
Knight Online, 371, 387
 Knowledge, 3, 57, 71, 77, 95, 122, 125–141,
 143, 182, 210, 223, 251, 268, 297, 330,
 347, 358, 372, 407, 418, 466, 479, 502,
 562, 571, 586, 604, 619, 636, 647, 666
 Knowledge of media system, 303, 306,
 307, 310

Kojima, H., 54
 Komando, 376
 Koster, R., 575
 Krämer, S., 127
 Kringiel, D., 25, 99, 620, 633
 Kristeva, J., 223
 Kröger, S., 15, 295
 Krzywinska, T., 10, 143, 527
 Kuch, B.B., 609
 Kücklich, J., 256
 Kunczik, M., 296
 Kurt, 324

L

Labor force, 84, 383–384
 Labyrinth, 36, 222
 Lack of media competence, 312
 LAN-gaming, 448
 Lanier, J., 174
 LAN-party, 434, 465–474
 Large scale study, 298, 412
 Lave, J., 23, 563
 Lazzaro, N., 565, 566
 Learning, 4, 32, 68, 134, 154, 182, 211, 235,
 268, 296, 318, 329, 351, 366, 378, 403,
 411, 467, 483, 494, 546, 558, 571, 585,
 603, 620, 633–645, 648, 668
 Learning situation, 333, 340, 341
 Leary, T., 161
 Lee, K.M., 268, 622, 624, 626
 Legal regulations, 344, 351–353, 384–389, 653
 Legislative regulations, 17, 373
Leisure Suit Larry, 145
 Leisure time, 175, 319, 388, 454, 620, 621,
 624, 625, 655
 Leon, 322, 324
 Levy, S.T., 608
 Licensing, 375–377, 382–383, 385
 Life simulation, 176, 181, 377
 Life-worlds of adolescents, 299
 Linderoth, J., 332
 Linguistic turn, 42
 Link, J., 10, 125, 134, 149
 Literacy, 13, 22, 25, 26, 245, 298, 311, 325,
 330, 483, 505, 575, 633–645, 648, 665,
 668–670, 673
 Live-action, 395, 405, 495
 Live-action RPGs, 396, 400, 404
 Living room, 166–170, 265
 Locomotion, 14, 266, 272–274, 276
 Log file analyses, 360
 Log files, 23, 360, 543, 545–547,
 552–554

- Logo, 446, 447, 451, 455, 457, 531, 536, 611
- Loguidice, B., 667
- Lombard, M., 236
- “Lonely fighters,” 305
- The Longest Journey*, 622
- Lord of the Rings Online*, 150, 396, 563
- Lowood, H.E., 494
- Lucas, G., 52
- Ludic epistemology, 24, 588, 600
- Ludic poiesis, 76
- Ludology, 33, 36, 99, 100, 117, 120, 573
- Ludus*, 139, 189
- Luhmann, N., 12, 209, 213
- Lyotard, J.-F., 10, 144, 154, 586, 587
- M**
- Maccoby, E.E., 468
- Mach, E., 43
- Machinima, 4, 18, 21, 108, 396, 491–505, 509, 511, 516, 517, 561, 636, 637
- Machinima communities, 4, 18, 493
- Machinima filmmaking aka 3D real-time, 491–505
- Macromanagement, 9, 81, 88
- Magic circle, 166, 168, 169, 195, 196, 199, 205, 206, 209, 211, 234, 402, 578, 580
- Mainstream media, 378, 383, 388
- Malaby, T.M., 525
- Manovich, L., 79
- Map, 54, 82–89, 373, 479, 521, 553, 562, 591, 592, 597, 599
- Marin, L., 113
- Marino, P., 494
- Market, 17, 52, 80, 82, 97, 108, 125–141, 147–149, 151, 156, 157, 177–179, 341, 360, 373–375, 379, 382–385, 388, 426, 452, 460, 512, 529, 531, 574, 605, 666, 673
- Marketing, 20, 63, 66, 69, 72, 73, 166, 177, 373, 379, 383, 388, 427, 443–462, 510, 529–531, 536
- Market research, 360
- Martens, D., 180–181, 186
- Martens, L., 467, 483
- Masculinity, 147, 309
- Massively multi-player online role-playing games (MMOs), 12, 193–207, 295, 317, 318, 329, 371, 395, 403, 412, 434, 557, 566, 669
- Materiality, 126, 134, 167, 252, 256
- Mäyrä, F., 209, 210, 254, 281, 527
- McFarlane, A., 628
- McHoul, A., 223
- McLuhan, M., 4, 586
- McMahan, A., 39
- Mead, G.H., 252
- Meaning, 3, 33, 52, 64, 75, 96, 126, 144, 168, 195, 212, 224, 239, 249–261, 265, 289, 331, 351, 372, 399, 419, 428, 447, 481, 492, 509, 526, 545, 577, 603–615, 620, 668
- Meaning construction, 3, 239, 249–261
- Mechner, J., 52
- Media appropriation, 317
- Media choice, 16, 343–354
- Media competence, 15, 22, 25, 297–299, 306, 308, 309, 312, 622, 628, 648, 649, 656
- Media competence model, 297, 309
- Media competencies, 297, 298, 305–307
- Media convergence, 15, 20, 181, 317, 318, 491, 492
- Media criticism, 636
- Media culture, 2–4, 21, 125–127, 140, 141, 249, 509, 511, 516, 522, 527–530, 538
- Media ecology, 21, 491, 492, 495, 496, 500, 502, 505
- Media franchises, 502, 503
- Media literacy, 22, 25, 298, 311, 325, 483, 575, 622, 635–638, 648, 665
- Mediality, 3, 6, 7, 31–44, 99, 127, 135, 647
- Media pedagogical research, 317
- Media perception, 250–253, 255–257
- Media performances, 460
- Media production, 504, 528, 636, 648
- Media representation, 532–535
- Media theory, 8, 277, 573
- Mediation, 16, 35, 36, 44, 343, 350, 352–354, 415
- Mediatization, 21, 22, 525–538, 647
- Media understanding, 636
- Media use, 6, 11, 15, 22, 25, 259, 297–299, 306, 309, 310, 344, 352, 359, 363, 636, 637
- Medienkompetenz*, 622, 635, 636, 648
- Medium, 2–4, 6, 7, 10, 12, 13, 16, 21, 22, 24, 26, 31–35, 39, 40, 44, 47–57, 75, 76, 113, 114, 117, 125, 127, 134, 137, 139, 140, 143, 154, 197, 239, 260, 261, 268, 269, 277, 290, 296, 300, 340, 344, 357–359, 367, 396, 467, 494, 509, 511, 516, 520, 525–526, 576, 586, 589, 590, 600, 635–637, 639, 644, 665–668, 672, 673, 675
- Meir, E., 608

- Meister, D.M., 15, 295, 296
 Meldgaard, B.L., 13–14, 265
 Membrane, 169, 213–215
 Merged gameplay, 18, 405–407
 Message, 127, 128, 134, 179, 198, 210, 211, 228, 535
 Messinger, P.R., 175
Metal Gear, 54
 Methodological issues, 345, 361–366
 Methodology, 8, 15, 193, 197, 284–286, 363, 366, 367, 413–416, 422, 496, 538, 553, 610, 627
 Methods, 5–7, 14, 15, 24, 25, 77, 135, 140, 162, 182, 238, 246, 279, 281, 297–299, 308, 318, 331, 332, 361–363, 365, 366, 373, 399–400, 414, 520, 521, 525, 528, 529, 545–547, 553, 562, 566, 609, 621, 623, 625, 629, 636, 642, 649–651, 657
 Metz, C., 85
 Meyer-Drawe, K., 578
 Meyrowitz, 169
 Michael, 322
 Micromanagement, 81, 82
 Middleware, 382
 Mindspace, 161–163
 Mini-games, 153, 586, 589–591, 593, 596, 597, 599
 Minsky, M., 39
 Mise-en-scene, 8, 48, 53–57, 641
 Missomelius, P., 79
 Mitchell, A., 574
 Mitgutsch, K., 23–24, 241, 244, 566, 571, 587
 Mittell, J., 64
 MMO design, 196–199
 Mod, 21, 513, 514, 516–521
 Modding, 4, 18, 21, 358, 384, 509–522, 526, 528, 537
 Modelling, 567
 Modes of perception, 249, 251, 268, 269, 274
 Mogel, H., 470, 472
 Monitoring, 15, 81, 85, 88, 138–139, 317, 318, 413, 416, 429
 Mood management, 310, 312, 346, 347, 349, 351
 Mor, Y., 573
 Motivation, 23, 56, 173, 182, 245, 251, 252, 286–288, 296, 310, 312, 345, 366, 378, 382, 411, 467, 469, 475, 515, 516, 520, 564, 572, 606
 Motivational mechanisms, 23, 557–567
 Motivation potential, 469, 475
Mount and Blade, 376, 386
The Mousetrap, 671
 Movement, 14, 40, 43, 55, 98, 145, 155, 156, 183, 214, 226, 228, 243, 252, 269, 270, 274, 280, 281, 283, 398, 450, 493, 551, 553, 579, 591, 597, 637, 639–641
 Movie, 32, 39, 40, 48, 52, 54, 65–69, 95, 98–100, 150, 151, 162, 178, 215, 249, 258, 260, 261, 334, 385, 396, 453, 493, 494, 497, 501, 502, 511, 517, 637, 641
 Mukherjee, S., 12–13, 219
 Müller-Lietzkow, J., 15, 295
 Multi-modal, 496, 575, 586, 600
 Multiplayer, 2, 12, 18, 20, 51, 194, 211, 239, 242, 260, 282, 295, 317, 363, 673
 Multi-player-games, 23, 212, 242, 296, 322, 323, 344, 411–422, 467, 479, 482, 545, 552
 Multiplayer online role-playing-games (MMORPG), 194, 317, 321, 326, 371, 375, 382, 386, 387, 395–407, 412, 413, 478, 479, 511, 557, 558, 563–565, 567
 Multiple consciousness, 221
 Multiplicity, 6, 224, 225, 229, 398
 Multi-User Dungeons (MUDs), 397, 558
 Multivariate analysis, 298
 Muluk, B., 374
 Murdock, G., 389
 Murray, J.H., 167, 168, 221, 222
 Musical notation, 594
 Mustafa, 384
 Mutual help, 472
 Mystiques, 145
- N**
 Narrative perception, 249–251, 254
 Narratology, 99, 100, 120, 573
 Navigation, 78, 82, 84–88, 131, 267, 271, 273, 276, 638
 Neitzel, B., 63, 75, 290
 Nette Hayat, 377, 382
 Newman, J., 221
 New media, 1, 3–5, 9, 22, 25, 48, 79, 267, 310, 317, 406, 481, 484, 638, 648, 649
 New media literacy, 638
 New media studies, 3, 4
 Nicknames, 481
 Nietzsche, F., 223
 Nitsche, M., 10–11, 54, 161, 269
Nodame Cantabile, 594
 Nohr, R.F., 10, 77, 125, 128
 Non-essentialistic, 9,

- Norm, 63, 127, 139, 195, 198, 308, 330, 339, 525, 599, 621, 625, 626
- Notes, 75–89, 98, 126, 149, 329, 561, 567, 590, 594, 597, 638, 666, 673
- Noveck, B.S., 175, 181
- Nudity, 150
- O**
- Oakley, A., 168, 169
- Observation, 8, 17, 19, 20, 63, 184, 283, 332, 340, 360, 363, 364, 399, 400, 413, 416, 526, 528, 530, 536, 610
- Occupational careers, 17, 373
- Oerter, R., 253
- Ohler, P., 14, 279
- Oliver, M., 415
- Online (gaming) communities, 19, 327, 414, 415, 426, 492, 496, 499, 503, 558, 653
- Online-ethnography, 19, 446, 496
- Online flirting, 547
- Online game, 4, 14, 15, 18, 20, 72, 221, 250, 295, 307, 317–327, 329, 371, 385, 387, 399, 405, 407, 415, 421, 422, 431, 434, 435, 494, 514, 526, 527, 535, 538, 543, 545, 553, 557, 644, 669
- Online game preferences, 320–322
- Online survey, 318, 325
- Oppl, C., 445
- Orchestra, 585, 586, 588, 589, 593–594, 598, 599
- Organizational hierarchy, 17, 373
- Osu!Tatakae!Ouendan!*, 594
- P**
- Paidia, 139, 189
- Palmgreen, P., 344
- Panofsky, E., 85
- Papert, S., 562, 610, 611
- Parental mediation, 16, 343, 350, 352–354
- Park, J.H., 79
- Participation pattern, 544, 545, 552
- Participatory, 76, 149, 167, 193, 492, 504, 512, 526, 587, 588, 596, 600, 607, 609, 638, 653, 661
- Paul, 324
- Pearce, C., 478
- Pedagogy/instruction, 18, 22, 24, 25, 49, 130, 186, 296, 334, 335, 345, 353, 411–422, 562, 566, 574, 575, 577, 599, 610, 619–630, 648–651, 656, 657, 659–661
- Pen and paper, 395, 396, 400, 404, 405, 512
- Peng, W., 268, 622, 624, 626
- Pen, J.M.L., 183, 185
- Pen, L., 11
- Perception, 3, 4, 6, 13, 14, 20, 42, 79, 86–89, 94, 118, 157, 168, 210, 212, 216, 220, 223, 249–260, 265–277, 281, 318, 344, 345, 362, 373, 388, 399, 400, 458, 480, 530–532, 536, 563, 641
- Perceptual meaning construction, 256
- Performance, 25, 96, 98, 100, 102, 111, 166–169, 214, 288, 308, 335, 395, 403, 413, 450, 455, 460, 462, 473, 494, 526, 530, 573, 589, 608, 620, 621, 624–626, 629, 638
- Peripheral gamers, 548
- Pestalozzi, 22
- Peterson, R.A., 374
- Philosophy, 6, 9, 40–42, 44, 85, 93, 94, 96, 97, 105, 113, 130, 223–224, 402, 496, 621, 625
- Philosophy of education, 625
- Photo, 152, 446, 447, 450, 454, 455, 458, 462
- Physics, 147, 155, 295, 451, 603, 606, 609, 614, 654
- Piaget, J., 253
- Pietschmann, D., 14, 162, 176, 236, 279, 286
- Pink Games, 452, 453
- Piracy, 385
- Play, 4, 31, 48, 61–73, 76, 94, 108, 128, 143, 162, 174, 194, 210, 221, 233–246, 249, 265–277, 282, 296, 317, 329, 343, 357, 371, 396, 411, 425, 443, 465–475, 477–487, 498, 518, 525, 543, 557, 571, 586, 605, 619, 633–645, 651, 665
- Playbour, 515
- Player
- participation, 546–548, 553
 - profiles, 546, 548–550
- Player-analyst (in body of text and notes), 412, 414–416, 422
- Player's repertoire (The), 329–341
- Play-testing, 24, 586, 597–600
- Pleasure, 11, 130, 147, 152, 154, 157, 158, 182, 195, 245, 252, 253, 412–416, 447, 460, 462, 466, 470, 475, 587, 596, 597, 599
- Plugging in, 222, 224, 225, 470
- Point of view/Point of action, 8, 15, 48, 49, 52, 76, 85, 87, 89, 96, 111, 128, 137, 168, 210, 215, 233, 243, 253, 254, 266, 269–270, 276, 288, 334, 480–483, 492, 511, 534, 572, 620–622, 627, 643, 650, 652, 653
- Political activism, 11, 183

Poole, S., 51, 269, 597
 Popular culture, 3–5, 149, 156, 158, 366, 492, 666
 Popular discourse, 61, 62, 420, 623–625, 627
 Pornography, 146, 183
 Portals, 19, 312, 349, 446–450, 460–462, 495
 Porter, C.E., 175
 Postigo, H., 515
 Post, J., 120–121
 Potente, F., 443
 Prange, K., 571
 Preference, 305, 308, 309, 312, 321, 352, 353, 407, 412
 Prensky, M., 573, 574, 625
 Presence, 10, 11, 39–40, 114, 121, 126, 144, 145, 147, 149, 151, 166, 168, 170, 175, 177, 181–183, 252, 270, 275, 280–284, 286–289, 309, 401, 415, 419, 467, 473, 564–567
 Primal gameplay, 405
 Prior experience, 349, 670, 671, 674, 675
 Problematic experiences, 15, 319, 325–327
 Problem-based learning, 23, 562–563
 Procedural space generation, 163
 Production costs, 381
 Production process, 372, 374, 379, 381, 388, 636
 Production relations, 372
 Professional gaming, 456
 Programming, 24, 162, 211, 362, 382, 415–517, 531, 606, 608–612, 614, 644, 670
 Promotional capitalism, 373, 388
 Prop, 42, 55, 272
 Propriospic information, 273, 274, 276, 277
 Psychoanalytic theory, 236
 Psychosocial moratorium, 235–238, 240–242, 244
 Public authority, 25, 386
 Publisher, 2, 373, 378, 382, 383, 389, 443, 454, 515, 531
 Publishing, 17, 112, 114, 115, 367, 375–378, 382–384, 446, 535, 658
 Puig, M., 49
 Pupil, 621, 624, 625
 Purcell, E., 586
 Purcell, H., 589
 Purushotma, R., 24, 25, 587, 600, 603
 Pusu, 375, 378, 379, 382–384
 Pygmalion, 150

Q

Quake, 55, 56, 99, 331, 430, 453, 481, 493, 494

R

Rabelais, F., 122
 Raczkowski, F., 8, 61, 78, 112, 129
 Rambusch, J., 483
 Rastier, F., 111–113
 Real-time strategy games (RTS), 9, 75–89, 481
 Real world, 10, 14, 16, 18, 33, 39, 53, 155, 170, 177–184, 188, 193, 194, 198, 205, 207, 210, 214, 240, 280–284, 286, 287, 289, 307, 345, 346, 401, 403, 415, 520, 544, 565, 581, 638, 639, 672
 Recreational activities, 301, 303, 307, 312
 Recursive learning, 571–581
 Reference, 3, 34, 42, 108, 110, 118, 120, 126, 138, 154, 158, 170, 186, 210, 212, 216, 225, 252–255, 257–259, 261, 307, 362, 437, 483, 519, 520, 527, 535, 536, 578, 586, 626, 655, 658
 Referential meaning construction, 256
 Reflection, 12, 40, 212, 237, 240, 242–243, 245, 251, 253, 259, 340, 405, 418, 527, 580, 621–623, 649, 659, 660
 Regulation, 16, 19, 88, 129, 134, 137, 138, 143, 148–150, 346, 350, 351, 353–387, 420, 528, 529, 537
 Reinecke, L., 445
 Reisman, K., 607
 Relational meaning construction, 256
 Relationship exploration, 101, 161, 544, 553, 565, 575
 Relationship play, 23, 543–553
 Relationship solicitation, 550, 551
 Re-learning, 238, 240–242, 245, 341, 580
 Remix, 120, 491–505, 511, 517, 638
 Representation, 19, 21, 41, 76, 84, 87, 89, 117, 134, 144–151, 166, 194, 205, 252, 260, 261, 267, 269, 270, 275, 330, 402, 405, 407, 434, 446, 493, 528, 530, 532–535, 537, 547, 575, 586
 Research landscape, 296
 Research method, 5, 6, 373, 621
 Resnick, M., 672
 Rheingold, H., 161
 Rhetoric, 143–145, 147, 150, 152, 153, 157–159, 187, 432
 Ridder, C.M., 306
 Riotgrrrrl, 450
Roadside Picnic, 227
Rock Band, 166, 168, 594
 Rodin, A., 96

- Role-playing, 12, 13, 39, 51, 55, 63, 103, 108, 158, 169, 188, 193, 194, 225, 233–246, 311, 312, 317–321, 371, 395, 396, 405–407, 412, 445, 478, 479, 495, 498, 499, 503, 512, 557, 558, 560, 565, 640
- Role playing game (RPG), 12, 13, 39, 55, 63, 103, 158, 169, 188, 193, 194, 225, 233–246, 311, 312, 317–321, 371, 395, 412, 445, 478, 495, 503, 512, 526, 557–560
- Romantic partner, 544
- Rousseau, J.J., 22, 223
- Rowling, J.K., 197
- Ruffino, P., 9–10, 107
- Rutter, J., 434, 435, 445, 527
- Ryan, M.-L., 254
- Ryan, R., 565, 566
- S**
- Sacks, H., 187
- Saint-Exupery, A., 244
- Sakamoto, 609
- Salen, K., 221, 224
- Sanchez, P., 532
- Savaşan Sahin*, 376
- Savaşım, 374, 377
- Savill-Smith, C., 574
- Saving Silverlake, 205
- Schäfer, S., 10
- Schema, 283, 288–290, 341
- Schema theory, 283, 288, 289
- Schenk-Danzinger, L., 473
- Scheuerl, H., 253
- Schiller, F., 33, 34
- Schlütz, D., 344–346
- Schöneberger, B., 443
- School
 - shooting, 3, 450, 634
 - system, 26, 574, 578, 620, 625, 647
- Schott, G.R., 18, 269, 325, 395, 432
- Schuhart, R., 227, 228
- Schulze, G., 347
- Schulz-Hardt, S., 470
- Science, 2, 6, 11, 23, 24, 50, 52, 112, 178, 197, 212, 226, 227, 296, 308, 332, 357, 366, 367, 372, 416, 514, 545, 547, 552, 573, 603, 604, 607–609, 619, 622, 625–627, 658, 668, 672
- Scopic regime, 9, 75–89
- Searle, K.A., 23, 543
- Secondary gameplay, 405
- Second Life* (SL), 11, 21, 108, 110, 164, 173–175, 177–179, 181–183, 186, 188, 398, 420, 458, 491, 494, 498, 605
- Self-determination theory, 564
- Self-report, 361, 362, 553
- Semiotics, 38, 118–121, 496, 573
- Sensomotoric immersion, 280–284, 287–289
- Serious game, 25, 93, 255, 261, 296, 341, 505, 558, 620, 623–629, 653
- Setting, 8, 16, 18, 34, 53–56, 89, 108, 112, 118, 126, 137, 138, 163, 183, 196, 200, 202, 206, 234, 236–240, 243, 297, 334, 358, 397, 399, 407, 458, 468–470, 473, 494, 500, 510, 518, 563, 566, 575, 577, 581, 585–586, 615, 626, 628, 637, 640, 642, 648, 671, 672
- Sex sim, 150, 151, 153
- Shadow of the Colossus*, 244, 671
- Shaffer, D.W., 672
- Shakespeare, 195
- Shanker, S.G., 237, 244
- Shankly, B., 207
- Shared experience, 20, 401, 466, 472–475
- Sherlock Holmes: The Awakened*, 220
- Shooter, 3, 7, 12, 32, 36, 38, 40, 43–44, 51, 52, 55, 63, 64, 67, 80, 89, 99, 100, 102–104, 108, 112, 131, 148, 162, 188, 213, 219, 229, 230, 275, 299, 308, 310–312, 320–322, 343, 351, 428, 437, 443–462, 465, 479, 481, 535, 622–624, 626, 640, 670, 674
- Sicart, M., 193
- Sign/semiotics, 38, 119–121, 496, 573
- Sim City*, 32, 100, 129, 329, 606, 622
- Simon, B., 467
- Simulation, 3, 11, 24, 32–36, 38, 40, 43, 51, 72, 77, 80, 100, 108, 129–131, 134, 138, 176, 181, 209, 210, 267, 270–272, 276, 282, 283, 289, 310, 312, 320, 321, 377, 567, 575, 603–615
- Simulation games, 24, 32, 321, 606
- Singer, M., 286, 290
- Situative computer preferences, 307–308
- Sjöblom, B., 330, 332
- Skepticism, 3, 40, 386, 640
- Smith, J., 165
- Sociability, 3, 40, 387, 640
- Social appreciation, 326, 327
- Social desirability, 362, 364, 365
- Social hierarchies, 325
- Social integration, 301–305, 309, 312

- Social interaction, 16, 20, 23, 127, 180, 236, 252, 296, 331, 332, 398, 445, 465–475, 496, 499, 543–553
- Socialisation, 620, 624
- Social networks, 1, 295, 312, 462, 492, 496, 555
- Social place, 169, 170, 212
- Social relationships, 15, 319, 323–325, 327, 478, 483, 565
- Social sciences, 2, 6, 33, 35, 357, 411, 412, 414, 491, 511, 525, 658
- Society, 1–4, 10, 11, 21, 63, 77, 80, 125, 126, 128, 135, 139, 140, 143, 161, 169, 173–189, 235, 367, 372, 373, 397, 425, 427, 435, 438, 465, 475, 483, 484, 486, 525–538, 626, 640, 648, 652, 658
- Software, 2, 7, 16, 17, 21, 32, 34, 108, 118, 138, 162, 176, 177, 279, 310, 312, 331, 360, 364, 365, 372, 382, 383, 385, 396, 415, 420, 453, 467, 492–494, 510, 511, 514–517, 526, 529, 567, 605, 607, 608, 634, 644
- Software development kit (SDK), 515
- Soja, E., 398, 400, 406
- Solipsism, 42
- Solving problems, 138, 261, 472, 562, 574, 638
- Sontag, S., 146
- Sotamaa, O., 515, 517, 520
- Sovereign Symphony*, 375, 376, 385, 389
- Space, 4, 32, 47, 70, 76, 99, 127, 161, 176, 209, 224, 233, 252, 266–269, 284, 325, 330, 378, 395–407, 412, 431, 458, 484, 494, 526, 543, 578, 599, 635, 666
- Space of possibility, 224
- Space War*, 47, 50, 516
- Spatial representation, 89
- Spatial turn, 163, 168
- Spellcaster, 377
- Spitzer, M., 623
- Spoiler, 671, 674
- Staff, 373, 380, 384, 427, 448, 534, 535
- S.T.A.L.K.E.R.: Clear Sky*, 220
- S.T.A.L.K.E.R.: Shadow of Chernobyl*, 12, 219
- StarCraft*, 80, 88, 481, 531, 566
- StarCraft II: Wings of Liberty*, 629
- StarLogo TNG*, 24, 606, 610–615
- Star Wars: Galaxies*, 199
- Stealth teaching, 566, 629
- Steinkuehler, C., 669
- Stephenson, K., 13
- Stephenson-Mittlböck, K., 233
- Stephenson, N., 162
- Sterne, L., 167
- Steuer, J., 39
- Stevenson, N., 178
- Story Worlds, 516, 519
- Strategy, 16, 51, 66, 202, 237, 312, 335, 339, 340, 352, 353, 360, 375–377, 379, 383, 414, 416, 418, 422, 447, 474, 536, 561, 566, 599
- Strategy game, 39, 47, 51, 52, 63, 67, 75–89, 100, 125–141, 310, 320, 321, 325, 444, 474, 481, 513, 517, 622, 640, 656, 670
- Strelok, 226–230
- Structural analysis, 416
- Strugatsky, B., 227
- Subject, 2, 3, 5, 12, 25, 26, 42, 50, 65, 89, 96–98, 119, 120, 125, 127, 128, 134, 135, 137, 139, 158, 175, 203, 210, 219–230, 241, 242, 266, 271, 276, 277, 284, 299, 313, 336, 384, 386, 414, 427–429, 465, 479, 521, 533, 577, 586, 588, 604, 606, 607, 614, 620, 624, 627, 644, 649, 650, 653–655, 657, 660
- Subjectivity, 12, 40, 42–43, 127, 135, 219–230, 237, 242
- Subrahmanyam, K., 544
- Suits, B., 416
- Surrender ... Not!, 204
- Survey, 2, 15, 17, 24, 155, 297–299, 305, 308, 318, 324–326, 358–365, 399, 460, 478, 480, 483, 495, 563, 564, 635
- Sutherland, I.E., 78
- Sveningsson, M., 19, 425, 480
- Swalwell, M., 167
- Sweden, 430, 433, 466
- Syberia, 53
- Symbol, 234, 237, 374, 401, 458, 468
- Symbol formation, 234, 240, 242, 244, 245
- Symbolic interactionism, 13, 250–253
- Symbolism, 403
- Synthetic worlds, 181
- System Wonders 6*, 377
- T**
- Tafelkids: The Quest for Arundo Donax*, 24, 586
- Tafelmusik Baroque Orchestra, 585
- Tarkovsky, A., 227
- Tax, 379, 384, 385, 388
- Taylor, L., 76, 222
- Taylor, N., 24, 585
- Taylor, T.L., 329, 398, 420, 432, 478, 479
- Teacher, 25, 437, 558, 563, 598, 608, 649, 651, 658

- Teaching, 23, 25, 26, 136, 182, 250, 558, 562, 566, 585, 606–608, 619–622, 624, 625, 627–629, 643, 648, 650, 651, 654, 656–661, 673
- Teams, 19, 21, 322, 361, 367, 384, 411, 412, 414, 417, 419, 420, 447, 450, 454, 460, 461, 471, 472, 481, 515, 517, 520, 521, 531, 534, 536, 560, 604, 610, 660
- Technical knowledge, 475
- Techno cities, 379, 388
- Technology, 2–6, 8, 13, 17, 22, 31, 51, 79, 134, 136, 143, 150, 167, 223, 250, 265, 269, 270, 279–281, 284, 357, 372, 373, 381, 382, 397, 398, 426, 430, 432, 468–470, 519, 595, 608
- Telemetric system, 359
- Teleological meaning construction, 256
- Teleportation, 178
- Terms, 3, 5, 8, 12, 14, 16, 31, 34, 38, 40, 47, 48, 51, 52, 63, 64, 66, 68, 70, 72, 73, 79, 81, 88, 93, 94, 100, 118, 127, 131, 134, 136, 143–145, 148, 149, 151–155, 167, 175, 181, 194, 206, 211, 220, 223, 225, 226, 230, 252–254, 256, 261, 266, 267, 269, 271, 272, 274, 275, 279–281, 283, 287, 289, 290, 298, 307, 313, 318, 320, 357, 382, 395, 415, 416, 418, 420, 425, 492, 501–503, 510, 517, 525–530, 547, 557, 586, 589, 608, 626, 642, 645, 648, 649, 655, 656, 659–661, 668, 670, 674
- Territory, 82, 84–88, 443, 553, 606
- Text, 31, 32, 34, 49, 50, 56, 62, 63, 65, 66, 70, 75, 76, 99, 100, 111–116, 118, 119, 125, 128, 137, 154, 162, 167, 178, 179, 200, 210, 212, 256, 290, 299, 306, 330, 389, 397, 412, 415–417, 421, 422, 451, 492, 504, 547, 558, 590, 600, 608, 622, 633, 644, 668, 669
- Text-chat (communicating by), 178
- Textual analysis, 19, 414–416, 421, 422
- Thiborg, J., 482
- Thief, 52
- Thimm, C., 11, 164, 173
- Third space, 18, 398–400, 406
- Thompson, K., 50, 53, 55
- Thorne, P., 545, 552
- Thrower, N.J.W., 84
- Time, 1, 31, 50, 62, 75, 94, 108, 127, 148, 164, 174, 193, 211, 223, 234, 251, 265, 279, 296, 318, 329, 348, 358, 374, 397, 412, 429, 444, 465, 479, 493, 509, 529, 543, 557, 579, 587, 606, 620, 638, 651, 667
- Timeline, 53, 589, 594
- Todorov, T., 63
- Tolkien, J.R.R., 52, 517
- Tomb Raider*, 529
- Tormenting the Softknuckles, 204
- Torture, 201–204, 206
- Tournaments, 447, 450, 455, 460, 462, 466, 481, 482, 486, 487, 530, 532, 533
- Traditional children's play, 473
- Transfer model, 16, 344–346, 349, 354
- Transitional object, 234, 235, 237, 238
- Transitional phenomenon, 234
- Transmedia storytelling, 48
- Trevarthen, C., 237
- Truax, B., 595, 596
- Turing, A., 32
- Turkey, 17, 371–389
- Turkish game industry, 373, 381, 383, 386
- Turkle, S., 397
- Tween flirting, 552
- Tweens, 544–546, 553
- Tyler, 147
- Typology, 15, 18, 100, 175, 260–261, 298, 299, 312, 517–519
- Typology of gaming experiences, 260–261
- U**
- Ultima IV*, 673
- Umaykut Online*, 376, 385
- Unger, A., 1, 21, 509
- Universal machine (Turing), 32
- Unremarkable games, 674
- User created content (UCC), 513
- User-driven innovation, 494, 503
- User-generated content, 177, 561, 563
- User interface, 8, 76, 78, 79, 82, 88, 333
- User-practice in online role-playing, 406
- Uses-and-gratification (UGA), 16, 297, 298, 307, 344–345
- Uzunlar, C., 378, 382, 383
- V**
- Valtin, G., 14, 279
- Value chain, 17, 371–389
- Value orientation, 304, 308
- van Baren, J., 281
- Vanguard: Saga of Heroes*, 205
- Vanishing point, 43
- Vaporware, 120
- Verbal interaction, 186–188
- Verbs, 152–155

- Veugen, C., 8, 47, 78, 99, 112, 129, 266, 641
 Video game analysis, 9, 81
 Video game culture, 343–354
 Video game literacy, 25, 633–645
 Video game theory, 107–123, 573
 Villota, N., 183
 Violence, 19, 140, 143, 149, 158, 174, 183,
 188, 198, 245, 296, 297, 308–309, 311,
 358, 385, 419, 420, 446, 449, 454, 467,
 468, 525, 528, 533, 535, 626, 634, 635,
 640, 652, 658, 659
 Violence affinity, 308–309
 Violent film genres, 305, 308, 312
 Virtual currency, 177
 Virtual economy, 182
 Virtual goods, 176, 177
 Virtual heroines, 461
 Virtual puppeteering, 494
 Virtual-real-distinction, 327
 Virtual reality, 39, 162, 174–177, 281, 282, 467
 Virtual sale, 182
 Virtual society, 11, 169, 173–189
 Virtual space, 10, 11, 18, 39, 43, 84, 85,
 88, 164, 167, 177, 178, 181, 234,
 397, 398, 400, 405–407, 545
 Virtual world, 10, 11, 18, 23, 41, 162–165,
 167–169, 173–189, 194, 196, 198, 213,
 215, 242, 301, 307, 327, 343, 345, 346,
 383, 396–399, 406, 420, 477, 478, 494,
 495, 502, 543–554, 605, 610, 614,
 636, 649, 652, 655
 Virtue ethics, 193
 Visibility, 40, 434, 438, 445
 Vision
 ambient, 274–276
 ambulatory, 274, 276
 Visual control, 266, 267, 274–276
 Visualization, 78, 295
 Visual kinesthesia, 274–276
 Visual perception, 13, 88, 265–268, 271
 Vivaldi, 588, 589, 598
 Vogelgesang, W., 466
 Voice chat, 178, 179, 402, 496
 Voice in games. *See* Notes
- W**
 Wade, M., 4
 Wagner, M., 170, 480, 482
 Waldenfels, B., 578
 Warcraft, 12, 23, 36, 72, 80, 88, 127, 147, 150,
 198–200, 202, 261, 284, 321–323, 396,
 397, 399, 411, 412, 414, 417, 420, 428,
 444, 459, 477–483, 557–567
 Warcraft III, 82, 473, 481, 531, 566
 Warhol, A., 94, 167
 Warsong Gulch, 19, 411–422
 Watzlawick, P., 179, 212
 Weber, M., 625
 Weibel, P., 270, 271, 275
 Weitz, M., 100
 Wenger, E., 23, 563
 Weniger, E., 25
 Wertheim, M., 161
 Whyville, 23, 543–553
 Wiemer, S., 8–9, 75, 129
 Wiemken, J., 636, 649
 Wilensky, U., 607–609
 Williams, D., 413
 Willis, B., 147
 Wimmer, J., 21–22, 525, 526
 Winnicott, D.W., 13, 233–235,
 238, 239
 Winterson, V., 641
 Wirman, H., 156
 Witkowsky, E., 482
 Witmer, B., 286, 290
 Witte, E.H., 473
 Wittgenstein, L., 9, 42, 43, 95,
 100, 101
 Witting, T., 299
 Witzmann, H., 280
 Wolak, J., 544
 Wolfenstein 3D, 54, 102, 162, 163, 165
 Wolf, K.D., 23, 557, 565, 566
 Wolf, M.J.P., 31–32, 41, 51, 64, 269
 Wolling, J., 299
 Work, 1, 32, 49, 63, 76, 93, 108, 125,
 144, 163, 175, 194, 223, 238, 259,
 267, 290, 301, 319, 331, 353, 372,
 397, 414, 427, 450, 465, 478, 492,
 514, 525, 543, 558, 575, 588, 603,
 625, 637, 647, 668
 Work phase, 471
 World Cyber Games (WCG), 21, 480, 482,
 525–538
 World of Warcraft, 12, 23, 36, 72, 80, 88, 127,
 147, 150, 198–200, 202, 261, 284,
 321–323, 396, 397, 399, 411, 412, 414,
 417, 420, 428, 444, 459, 477–483,
 557–567
 World of Warcraft: Wrath of the Lich King,
 12, 198
- Y**
 Yavuz, A., 384
 Yavuz, M., 371

Yee, N., 318, 478, 479,
565, 566
Youth culture, 297, 301, 306, 309, 357,
383, 653
Youth research, 2, 483, 485
Youth scene, 20, 485–487
YouTube, 9, 108, 111, 114, 148, 449,
458, 492–495, 497, 498,
500–505, 511

Z

Zagal, J.P., 26, 665
Zaremba, J., 19–20, 420, 443, 469, 480
Zenn's Bidding, 200
Zimmerman, E., 221, 224
Zimmermann, O., 93
Zipfel, A., 296
ZooTycoon 2 (Endangered Species,
Dino Crisis, Marine Mania), 130