OLLI SOTAMAA

The Player's Game

Towards Understanding Player Production Among Computer Game Cultures

ACADEMIC DISSERTATION
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Summary

This dissertation presents a cultural approach to player production. The contribution of my work to the current scholarship on players is to broaden the understanding of the relation between play and other forms of game cultural productivity. The dissertation suggests that as the manifestations of gaming hobby break out of "magic circle of play", the productive activities of players become central to our understanding of games and gaming.

While game studies have so far been pretty good in identifying the structural elements of game systems and the different motivations of players, they have mostly not touched the larger social structures and industrial systems that ultimately shape both the games that are offered to players and the ways they are played. Whilst we know quite a lot about how the rules can be used to guide and constrict players activities, the "rules" that direct player production are scarcely investigated. This dissertation provides an approach to how these regulations and byelaws could be studied.

Instead of sticking to the game world boundaries the dissertation turns the focus to the larger dynamics of game culture and examines the opportunities and constraints provided by the current game industry paradigms. The underlying interest is in outlining games as profoundly co-produced entities which can be only understood if both the contributions of developers and other industry bodies and the investments of players are taken into account.

The dissertation consists of six articles and a lengthy overview section. The introductory chapters provide theoretical and historical background for the approach. The articles introduce practical case studies and apply, discuss and develop further the starting points. While various dimensions of player production are elaborated in the introductory chapters, the articles focus mostly on the players' productive practices that result in new game elements (game modifications) and the ones that exploit the game software to produce entirely new digital objects (machinima).

The dissertation is committed to a particular notion of the nature of play. I argue that segregating the sphere of play from "ordinary life", "utility" and "productivity" runs the risk of hiding the similarities and interesting connections between play and the related realms. Rather than happening in a given "magic circle", the space for play needs to be negotiated. I have in the thesis examined how these negotiations spread beyond the borders of the game as games are increasingly integrated into our daily lives. Secondly the study suggests that also the boundaries between 'players' and 'producers' are by definition blurred and actively negotiated. I further argue in favour of conceptualizing player production as a network of activities. The composition and dynamics of this network are guided by forms of gaming capital.

Finally, the dissertation seriously questions the tendency of studying media consumption and production in separation. As the media practices are becoming increasingly participatory and co-operative, it is difficult to argue for keeping these domains of research apart from each other. Player production highlights how digital media products are increasingly also tools that allow media consumers not only to personalize their experiences but also to share and circulate their productions. This furthermore underlines the need to abandon the dichotomous and stabile either-or models and the demand for holistic studies of the emerging media culture. While the industry bodies take part in shaping the emerging player cultural formations, it is at the same time increasingly difficult to understand game industry without taking players into account. In this respect, game cultures originate in various sites, often defined both by resistance, exploitation and mutually beneficial relations.

List of publications

In the sequence in which they appear in this dissertation, the articles were originally published as follows:

1. Sotamaa, Olli (2005) “Creative User-centred Design Practices: Lessons from Game Cultures”, in L. Haddon et al. (eds.) *Everyday Innovators: Researching The Role of Users in Shaping ICTs*. Springer Verlag, London, 104-116. (With kind permission of Springer Science and Business Media)

2. Sotamaa, Olli (forthcoming) “When The Game is Not Enough: Mapping The Agency in Computer Game Modder Culture”, *Games & Culture*. (With kind permission of Sage Publications)

3. Sotamaa, Olli (2007) “On modder labour, commodification of play, and mod competitions”, *First Monday*, 12:9 (September 2007). Available: http://www.firstmonday.org/issues/issue12_9/sotamaa/

4. Sotamaa, Olli (2007) “Let Me Take You to The Movies: Productive Players, Commodification, and Transformative Play”, *Convergence*, 13:4 (October 2007), 383-401. (With kind permission of Sage Publications)

5. Sotamaa, Olli (2007) “Perceptions of Player in Game Design Literature”, in A. Baba (ed.) *Situated Play: Proceedings of the Third International Conference of DiGRA*. University of Tokyo, Tokyo, 456-465.

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Preface

This book examines the different roles and sites associated with player production within digital games. Initially the project started from my interest on computer game modding. The research process has, however, opened up a variety of practices and phenomena that have captured my critical attention and provided ground for larger theorizations. On a more personal level, this book reflects the changing environments in which the dissertation has been completed. In the beginning of the project, from the year 2003 to 2005, I was not able to focus on the dissertation full-time. Partly for this reason I started the project with writing individual articles. At the time the scholarly contributions on player production were relatively rare[1] and therefore I had an urgent need to write down the early thoughts and get to share them with others. It was, however, clear from the very beginning that in a young and constantly moving field one faces trade-offs: while it is exciting to be one of the first ones to examine particular phenomena, at the same time one has to accept that some of the results may become obsolete in a few years. Even then, the contribution of my work is not limited a documentary value. While the general view of the field may still be a bit blurry in the earliest articles, many central ideas and theoretical aspirations of the work originate from that period. Later on, as I received dedicated funding for the PhD, I could turn my focus on constructing the "big picture" and more carefully positioning the readings.

All in all, circumstances can be blamed only for minor issues. The decisions behind the structure of the dissertation are conscious. As the articles have been completed in different phases of the process, they necessarily reveal the development of my thoughts. While a carefully polished monograph would most probably hide the earlier "layers" of thought, the structure followed here makes the process more visible and transparent. It is clear that I would now rephrase some of the arguments or at least be more careful with the claims. Nevertheless, including the "raw" materials and ideas to the dissertation hopefully allows my readers to better follow the reasoning between the different perspectives. Besides, the decision can be seen to produce an optimistic undertone to the dissertation as the reader can closely follow the increasing enlightenment of the PhD candidate.

The research process has followed a particular kind of hermeneutic circle. The articles have arisen from the larger interest on the subject. At the same time, they have further shaped and sharpened the focuses of the entire work. As the introductory chapters intend both to produce grounding for the articles and to conclude the central results of them, a slightly schizophrenic feeling has not always

[1] As the literature list at the end of the book indicates, a notable part of the sources of this work were not published once I started the project.

been completely avoided. In this regard I invite my readers to personalizable experience: it does not matter too much whether one starts from the chapters or from the articles. They are anyways best understood in relation to each other.

While writing this book certainly required some solitary periods the thesis would not have been finalized without the help and support of several people. First and foremost, I wish to thank my supervisors Mikko Lehtonen and Frans Mäyrä not only for their guidance but also for their friendship and wit that has made the academic world more accessible. Mikko's teaching and writings inspired me in the first place to think about an academic career. Furthermore, the Media Culture PhD seminar headed by Mikko was vital for my thinking especially in the early phases of this work. Frans, for his part, has with his example convinced me of the importance and value of studying games. I am grateful to Frans also for the Hypermedia Lab game studies seminar that has during the years allowed me to test many of the ideas presented in this thesis.

In this connection I want to acknowledge professor Aarre Heino's role in the early phases of my studies. Aarre's passion for "digital humanism" not only inspired me to acquire my first email account but also encouraged to seek new theoretical grounds. Aki Järvinen has witnessed my journey from those early days to the very present. His support as a fellow student, an esteemed colleague, a dear friend and a skillful player has been invaluable.

I wish to thank the official reviewers of my dissertation, professors Mia Consalvo and Mark Deuze, for their insightful critique that helped me to develop the manuscript to its final shape. I am also most indebted to professor Aphra Kerr. Much to my delight she agreed to become my esteemed opponent.

During the year 2006 I enjoyed the hospitality of IT University of Copenhagen as a visiting researcher. I am grateful to Lisbeth Klastrup who in the first place made it possible for me to join the distinguished research team. I also want to thank TL Taylor for acting as my unofficial supervisor during the time and Espen Aarseth for hosting the work-in-progress seminar that importantly set standards for my work.

Hypermedia Lab (lately INFIM) at the University of Tampere has provided a lively, collegial and caring working environment. I consider myself extremely lucky as I have been able to work with so many wise and kind people during the past ten years (you know who you are!).

Dozens of people have during the years commented my papers in the Media Culture PhD seminar. I am grateful to all of you. I also want to thank Anu Koivunen who at one point was responsible for the seminar and unselfishly offered her help when it was needed. A special word of thanks goes to Janne Rovio who took the time to check the language of the dissertation. Furthermore, the post-seminars of Humppila School have been a priceless venue for sharing ideas and meeting the most charming, quick-witted and amusing people (once again, you know who you are).

I have received financial support for my studies from the Finnish Cultural Foundation (Pirkanmaa Regional fund), the University of Tampere and Nordforsk,

the Nordic Research Board. City of Tampere has supported the publication of the thesis. In addition, I wish to thank the Academy of Finland for funding “Morphome” project and Tekes, The Finnish Funding Agency for Technology and Innovation for financing both “Super” and “Games as Services” projects. These projects have allowed me to learn from and co-operate with several bright scholars and offered many practical lessons about the nature of interdisciplinary research.

I also want to express my gratitude to my parents Kaarina ja Matti and my sister Outi. With you three I first learned both to play and to argue.

Above all, I am grateful to my wife and best friend Jenni whose passion for research and life keeps on inspiring me. Thank you for playing your games with me.

Juhannuskylä, Tampere, March 2009

Olli Sotamaa

Chapter 1: Introduction

The recent decade has witnessed a steadily expanding academic interest on digital games. This should be no surprise, as console and computer games have during this period both gained increasing significance in the everyday lives of millions of people and become one of the most rapidly expanding sectors of cultural industries. As will be further discussed in the chapter 3 of this dissertation, the study of games precedes digital games. Until recently, the research on games has, however, been mostly pursued by scattered individuals who have been able to fit games to their personal research agendas. Therefore, it is fair to say that the critical mass of researchers and the serious attempts to work towards an academic discipline have only emerged in recent years. While most of the game scholars of today are still 'immigrants' or 'refugees' from various different disciplines and the importance of interdisciplinary approaches is constantly repeated, some demarcation lines are without doubt already drawn.[2]

In a general level, at least two different research foci can be identified within game studies. Some scholars have their primary focus on games as "themselves", as texts and systems, whereas others accentuate the importance of understanding the players and the activity of gaming. (Williams & Smith 2007, 7.) Theoretically speaking, it is possible to look at games as particularly structured artefacts and to ignore the fact that they are played. Vice versa, if the argument about players' capability of negotiating and changing the game rules is taken into extreme, the structures of the game begin to appear relatively unimportant. (Juul 2005, 11.) I suggest that my dissertation can have a contribution both to the contemporary understanding of games "as such" and to the study of players. Further, while the game-focused approaches and the player-centred studies are often described in dichotomous terms, the "cultural" approach applied in my work indicates that the two fields are often profoundly interconnected and somewhat overlapping. In addition, these loose groups are far from uniform but both include studies with very different footings, objectives and methodologies.

Understanding the cultural construction of games requires close inspection of players and the meanings and practices they associate with playing. "Player studies" accentuate the significance of players as experiencing, configuring and co-productive actors. Close connection with players is needed if we as researchers want to learn more about the meanings players attach to play gestures and strategies, the social dynamics, the networked communities and the productive inclinations around

[2] For the sake of clarity, a terminological note is in place here. In the following 'game research' is used as a general term to describe the whole spectrum of games-related studies. By 'game studies' I refer to the group of conceptualizations that emphasize the understanding of the specific characteristics of games.

digital games (Lowood 2005). At the same time, it is important to recall that "player studies" is far from a homogenous field. For example the basic understanding of the relation between player and the game can vary significantly between studies. Ermi and Mäyrä (2005, 16) argue that "the essence of a game is rooted in its interactive nature, and there is no game without a player". On the contrary, Aarseth (2007, 130) voices the opinion that "players cannot exist with out a game they are players *of*". While both of these claims make sense in the particular contexts they are written, they visibly embody very different understandings of the player. The contribution of my work to the current scholarship on players is to broaden the understanding of the relation between play and other forms of game cultural productivity. The dissertation suggests that as the manifestations of gaming hobby break out of "magic circle of play", the productive activities of players become central to our understanding of play.

While digital games can and should be understood based on emergent player cultures, games are at the same time carefully designed and industrially produced artefacts. The systemic and structuralist approaches on games have often been referred to as 'ludology', coined from the latin term "ludus" (play). Ludologists call for approaches that acknowledge the unique characteristics of games, especially the rules and other formal elements (Frasca 1999). Ludological starting points have often been installed openly in opposition to approaches that apply the theories of narrative and drama to games. In fact, the relation between narrative and game, or rather, between narratology and ludology has spawned some of the most heated debates within the young field of game studies (see Frasca 2003b, Copier 2003, Pearce 2005). While the most radical juxtapositions have at least partly had a polemical purpose, the debate has clearly highlighted the need for games-specific methods. It is also worth noticing, that rather than associating ludology with any particular method, it may be better understood as an attitude towards the study of games. Therefore, instead of sticking with the singular form, it may be wise to talk about ludologies, which can in some aspects significantly differ from each other. (Järvinen 2008, 25.) While ludologies have been good in identifying the structural elements of game systems, they have mostly not touched the larger social structures and industrial systems that ultimately shape both the games that are offered to players and the ways they are played. Whilst we know quite a lot about how the rules can be used to guide and constrict players activities, the "rules" that direct player production are scarcely studied. This dissertation attempts to take a few steps into that direction.

Theoretical background

The emerging field of game studies is not the only source of theoretical inspiration for my work. The study at hand is as well indebted to concepts and theories

developed among cultural and media studies. While these traditions have their connections, game researchers and cultural studies scholars may still hold relatively different expectations when they pick up this dissertation. As Sicart (2006, 10) wisely points out, linking game studies with more established traditions is not entirely without its risks. Once speaking to two different audiences, even though partly overlapping, the speaker runs a risk of ending up in no-man's land. I am, however, willing to take a chance and propose some directions for "cultural game studies". While game studies can work as innovator for cultural studies and bring fresh issues to the research agenda (Nieborg & Hermes 2008), the tradition of cultural studies helps to connect the study of games to the recent developments in cultural and social theory. All in all, what the dissertation at hand aims to offer is an alternative view on the player's realm. Instead of sticking to the game world boundaries I turn the focus to the larger dynamics of game culture and examine the opportunities and constraints provided by the current game industry paradigms.[3]

Among cultural and media studies 'play' has until recently been mostly employed in a metaphorical sense, to generally refer to users' engagement with media (for more see Kücklich 2004, Kerr 2006, 32). Both Fiske (1987) and Silverstone (1999) discuss the media as sites for play and production of meanings and identities as profoundly playful activities. The intention of my work is to go beyond the metaphorical approach and concretely examine how players of digital games navigate in the current complex media environment. My research is up to a point inspired by ethnographic approaches that meticulously examine the everyday accounts of players. Such methods as the life-history approach introduced by Hawisher and Selfe (2007) clearly indicate how important the profound contextualization of individual playings is, once we want to understand the details of individuals playing behaviour. They also importantly remind that experiences and activities associated with playing do not develop in a vacuum. Playing games may not actually be so different from the other human activities. Playing is not the only "regulated activity" but many everyday transactions include inducements to behave in particular ways. Sometimes these proposals succeed in determining what happens, other times not. Similarly, as players often follow the delineated paths set by designers, they may also seek to exercise control and find alternative solutions that fit their circumstances. (Schott 2007, 134.)

There is no easy way to define to what extent the game industry can be said to have power over the players. Fundamentally, the question of the industry power is very old, but for digital games, it is more topical than we might think. Especially, as the relations between those who produce games and those who play them are getting increasingly diverse. Many players are mostly happy to defer productive control to

[3] As the name of the dissertation already suggests, the primary focus of my work has from the beginning been in investigating players and game cultures. I guess I have really understood the prevalence of the game industry only in the later phases of the work. Therefore, no dedicated industry ethnography is included while it probably would have improved the depth of my analysis. The dissertation process has, however, convinced me to move on towards a more multi-layered study of the game industry.

the industry. Then again, the ones interested in deploying their productivity, can find very different ways of using it. (Kerr et al. 2006, 65.) Regardless of player's motivations and skills the gaming experiences are to a certain extent shaped by the industry that promotes particular ways of understanding the player agency while consciously constraining others. Thus, rather than merely celebrating player's exceptional achievements, the focus should be turned to the "dynamic push-pull of the industry and player" (Consalvo 2007, 2). These processes need to be closely examined before any claims about the salience of player production can be made.

As any current study on players, this dissertation is connected to the larger developments in media culture, and in particular to the transformation of consumer. The participatory potentials enabled by the networked PC and game developers' player-supportive strategies have revealed the powers invested in player's productive capabilities. This development is part of a larger phenomenon, namely the convergence of cultures of media production and consumption. The transformation is not simply technology-driven but shaped by the ways people embrace the technologies and find uses for them in their everyday lives. Almost three decades ago futurologist Alvin Toffler coined the term 'prosumer' to denote the people who no longer content to a role as a passive market for mass production (Toffler 1981, 275-299). Lately, the figure of prosumer has been inspirational to scholars in highlighting how the use of new media includes both consumptive and productive elements. Lister et al. (2003, 30-34) point out that as the computer-based production technologies and processes have emerged, the skills needed in media production have become more generally dispersed in the population. Building on Toffler's term they suggest that the approachable 'prosumer technologies' help to overcome the rigid separation between what is acceptable for public distribution and what is appropriate "only" for domestic exhibitions. It is safe to say, that as a result of this development the number of people who get large audiences to their creations has significantly increased. This, however, neither guarantees automatic empowerment nor means that every user of new media is automatically engaged in media production (Kücklich 2005).

Another term that has often been used to describe the changes in the recent media environment is that of 'participatory culture'. The term was initially coined to explain the setting in which media fans and other consumers were invited to participate in production and circulation of media content (Jenkins 1992). The idea of participatory culture contrasts with the notion of having separate roles dedicated for media producers and consumers. Instead of seeing consumers as passive spectators, they are seen as participants who actively interact with other involved actors. The autonomy and power of consumers should not, however, be overestimated as not all participants are equal. Some consumers possess greater abilities than others and it is still for the most part up to corporations to decide the forms of participation. (Jenkins 2006b, 3.) Despite the recent rhetoric about "the media getting more democratic", it is important to recall that many of the shifts are not driven by a mission to empower the public, but by sheer economic calculations

(ibid., 243). Examining the conditions that determine players' productive activities can simultaneously uncover some central game industry dynamics. As Mia Consalvo (2007, 2) has argued:

> [P]layer agency is central to understanding games as well as the development of the wider game industry. Yet additionally it is crucial to keep in mind how power moves along those pathways [---].

So, the game cultural developments that are studied in this dissertation are connected to wider social processes. At the same time, the special characteristics of digital games require particular attention. While some similarities between player's activities and, say, citizen journalism, open source development or other DIY cultures can be sketched, the production I am interested is distinctively game cultural. Productive practices are mostly inspired and motivated by meanings and materials that arise from playing games. Further, player-created playable content like game modifications can have a significant influence on the experiences of masses of players.

The field of digital games can be divided to particular segments, based on the different variables ranging from market characteristics and revenue models to the production process. While console games segment is at the moment the most significant in terms of market share, my primary focus is on PC games. The market share may be smaller in the PC front, but the development tools are more accessible. Contrary to the mostly closed console environment, PC games are more often based on common standards, open architectures and non-proprietary technologies. (Kerr 2006, 54-58.) As a result, the relatively open PC environment offers significantly more opportunities to players interested in studying, experimenting and playing with the game software. Laurie N. Taylor (Taylor 2007, 233-234), who has suggested that game scholars should pay more attention to the impacts of particular platforms, identifies interesting differences between gaming conventions, depending on whether games are played on consoles or computer. Cheating is significantly easier on PCs, as cheat codes and hacks are easily downloaded from the Internet and installed to the hard drive of the computer system. For console games, cheats normally necessitate installment and configuration of additional peripherals (mod chips). The same applies to game modifications, as PC games are meant to be modifiable for corrections. Traditionally, computer players are accustomed to downloading patches to update games. Until recently, easy updates or modifiable content have been very rare in the console environment as the game code is sealed in the game cartridge or disc. The emergence of hard drives and networking options has significantly opened the possibilities, but it is fair to say that still at the time of writing the forms of player production are only taking their first steps in the console environment. In addition, PC games offer an interesting starting point for studying the role of games in the everyday life of gamers as the platform is not limited for playing. The same hardware is used for working, studying, communicating with friends and for the various game cultural activities like collecting and sharing information and contributing to the gamer community projects.

The very content of digital games or the ways how the content is experienced can be altered by using pre-programmed cheat codes, by installing content created by other players or by modifying the underlying code itself. Developments of this kind call into question the established theories that concern the relation of media texts, their production and consumption. Even though some existing theories among cultural and media studies can serve as starting points, one will face considerable theoretical and methodological challenges on the way. (Kerr 2006, 38, Dovey & Kennedy 2006, 2-3.)

The dissertation applies and rethinks various theoretical traditions to advance its arguments. In this regard, my objectives are not limited to identifying the different forms and conditions of player production. I find it at least as important to lay theoretical foundations to a larger understanding of games that takes player's productive activities into consideration. Historically speaking, modifying games is obviously not limited to digital games. The history of player-modified rules and elements is probably as long as the history of games itself. As already various children's games indicate, playing with the rules is often as important as playing by the rules (Hughes 2005). In the case of such early digital games as *Spacewar!* (1962) design, play and modifying are mostly inseparable as the game is constantly re-modified during both development and play. Hence, player productivity as a phenomenon may not necessitate any of the recent technologies, but the digital media technologies can arguably open up new possibilities for player creativity. The mapping of these possibilities continues throughout the study.

The aims of study

This dissertation is committed to a particular notion of the nature of play. Instead of seeing play as pure waste of time and energy, I consider playing digital games to be productive in various visible and concrete ways. Often play does not end when the PC or console is switched off, as players keep on thinking of the game world events and planning their forthcoming moves. Therefore, the productivity of players can be seen to extend beyond the boundaries of the game and spawn diverse manifestations within the surrounding game culture. I suggest that understanding this production is crucial to our understanding of games in general.

The research problem arises from the tension between the motivations and activities of players and the processes and calculations of the game industry. I am particularly interested in the different roles and sites associated with player production. Who are in a position to define player production and how this power is used? In the case studies the research problem is further operationalized into three interconnected sets of questions. My first focus is on player cultures: What are the different forms of player production and what are the motivations behind them? How are they positioned and what is their significance in relation to playing and

games in general? Secondly, I explore the game industry perspectives on player production: What are the benefits of player production to the game industry? What are the concrete strategies used in supporting, controlling and delineating the sphere of player production? Thirdly, I approach my data with questions related to game design: What are the player models that dominate the design of games? How players and player productivity figure in game design?[4]

As the questions show, the primary focus of this work is not in playing per se but rather in player production. Depending on the perspective, player production can cover a variety of activities. Since playing can be seen to be an integral element of games, any active engagement with the rules is arguably productive. Therefore, no easy dualism between non-productive and productive player activities should be drawn. While various dimension of this phenomenon would require extensive elaboration, in this dissertation I limit my interest into particular modes of player production. Of my primary interest are the players' productive practices that result in new game elements (for example game modifications) and the ones that exploit the game software to produce entirely new digital objects (for example machinima). This decision is made to expose the particular characteristics of player production. Altogether, player production must be understood against the backdrop of the diverse concurrent perceptions of player. The background, modes and conditions of player production will be further elaborated in the chapter 6.

Juul (2005) suggests that a good definition of a game should cover: "(1) the system set up by the rules of the game, (2) the relation between the game and the player of the game, and (3) the relation between the playing of the game and the rest of the world" (Juul 2005, 28). Of the three appointed areas, my primary focus is on the last one, the relation between playing and the surrounding world. It is, however, obvious that the issues are interrelated and therefore the first two will also figure prominently in particular stages of my study. While it is out of my focus to study in detail how players negotiate and bend the rules in relation to the game systems, the player-produced texts and other digital artefacts that co-operative play or cheating both generate and require are very relevant for my study. Drawing clear-cut boundaries between these ludic activities would then run the risk of oversimplifying the role of player production for game cultures. Consequently, my primary aim is not to produce an extensive typology of the forms of player production or a systematic framework for understanding the conditions of these activities. Instead, my objective is to describe some of the ways in which player production calls into question the ways of understanding digital games both as culture and as business. The underlying interest is really in outlining games as profoundly co-produced entities which can be only understood if both the contributions of developers and other industry bodies and the investments of players are taken into account. Given the circumstances, I have decided to work up from the particular to the general and draw attention to the larger shifts by focusing on case studies that highlight the different aspects of player production.

[4] The research materials and methods will be further elaborated in chapter 2.

In a larger scale, the development of new media technologies has opened possibilities for consumers interested in filtering, shaping and producing media content. At the same time, cultural industries are characterized by consolidation, a small number of companies dominating the market. There are some concerns whether current theorizations are capable of describing the both sets of changes, let alone their interconnected impacts on each other (Jenkins 2006b, 18). While sketching the overall picture of changes in the current media environment goes beyond the objectives of this research, I am interested in mapping the specific shifts the relation between player and the industry has recently witnessed. At the same time, these changes have their connections to the larger changes that take place in the current understanding of media consumers, labour relations and the distribution of media work.

While digital games and the ludic practices surrounding them arguably constitute a specific field with its own logic, games are often claimed to have predictive capabilities outside their immediate orbit.[5] Over the course of writing this study, the forms of player productivity have taken steps from the margins of game culture to the mainstream spotlight. This is especially visible in the increasing industrial nurturing of player production. Although the pirate industry still reminds us of the semi-clandestine origins, player production is these days often celebrated as a model example of the mutually beneficial active relationship between consumers and the industry. Before one applies the results of this dissertation and joins the celebrations, it is useful to remember that the players described, observed and interviewed in this study are mostly early adopters. With certain exceptions they are white males with unrestricted access to gaming technologies and the required skills to master them. In this respect, and following Jenkins (2006b, 23) here, it is probably wise to assume that as the access and participation to these cultures gets broader, the practices will not stay the same.[6] However, at the present, these pioneers and early adopters can be argued to constitute the best chance to examine the changes in the forms of consumption and production. Under the circumstances, the case study approach may not provide basis for 'statistical generalization', but the aim is, rather, to expand and generalize theories. This 'analytical generalization' takes previous theories as a template with which the empirical results are compared. (Yin 2003.) The methodological challenges of the work consisting of several case studies and multiple viewpoints will be discussed in detail in the chapter 2. In the following I move on to explicate the structure of the dissertation.

[5] For example the famous futurologist Ray Kurzweil suggested in his Game Developers Conference keynote (February 2008) that anyone interested in the future of mankind should keep an eye on the development of videogames. For more, see: http://blog.wired.com/games/2008/02/ray-kurzweil-lo.html

[6] As some of the forms of player production are characteristically masculine the role of gender would require more attention. As the data for the articles is not collected with particularly this perspective in mind the contribution of this work is limited to occasional remarks. In this respect, the gender issue definitely calls for a study of its own. For existing gender-specific analyses of modding scenes see Wirman 2008 and Sihvonen 2009.

The structure of research

This dissertation consists of six articles and a lengthy introductory section. The first section, chapters 1 to 7, aim to clarify the objectives and larger contexts of the articles included in the dissertation. The chapters also discuss and define the central concepts and theories and conclude the findings and results of the study. The contents and central themes of the individual articles will be further discussed in the articles section (Appendix). The foci of the chapters are described in the following chapter outline.

The first chapter has shed light on the background and the premises of the study. I have also tried to position the dissertation and its contributions in relation to previous scholarly work on games. In addition, the introductory chapter outlines the central research questions of the study. In the second chapter I move on to discuss the methodological challenges of the study. The value and importance of multi-sited methodologies are critically examined. Further, the methodological importance of playing and participating the gaming communities is discussed. Also the contributions of my work to the emerging field of game design research are evaluated. In the end of the chapter the different research materials and the diverse starting points behind the individual articles are elaborated.

The objective of the chapter 3 is to provide some historical background for the theoretical approach developed in the dissertation. The classic theories of play presented by Huizinga and Caillois are introduced and critically examined. The classic theories consider play to construct 'a magic circle', an autonomous sphere detached from ordinary life, and accentuate the 'unproductive' nature of play. I argue in favour of a more flexible understanding of play as a space negotiated between the players and the producers of the game. In contrast to the classic theories I also suggest that the productive characteristics of play are central to our understanding of games as a phenomenon. Altogether, instead of considering the realm of games in antagonism to everyday life and utility, the chapter goes on to propose that it is exactly the relations and interconnectness of these spheres that should be studied.

In chapter 4 I move on to outline an understanding of culture that does justice to digital games and the productive elements of play. My notion is influenced by the cultural studies understanding of culture as the production of symbolic meanings. While play shares similarities with other meaning making activities, gaming is not only about decoding of messages. To understand and experience games as systems they need to played. At the same time, the specificity of digital games should be considered as they are used as combinations of hardware and software. As sharing the meanings and practices is central to games, game cultures are further theorized as communal modes of practice. In this respect, games can become powerful 'symbolic centers' that define players' everyday activities also outside the "virtual" worlds. While I have a reason to accentuate the productive investments of the players, the cultural place and significance of games is also highly dependant on the

processes and cultures of design, production and distribution. Thereby, the chapter suggests that the different phases of the production of ludic meanings and pleasures should not be studied in isolation from each other, but they should rather be seen as an interlinked network of activities. In the end of the chapter I sketch a preliminary agenda for the multi-perspectival cultural study of games.

Chapter 5 outlines my notion on 'player'. First of all, the previous uses of the term and other related alternatives are discussed. After that I consider the different player models within game studies and discuss the benefits and challenges of the "active player model". From there I move on to elaborate the twofold nature of player, as an actor that is both operating under the authority of the game rules and at the same time capable of performing actions that go beyond the rules. In addition, the relationship between the immediate moments dedicated for playing and other activities motivated by games is elaborated. The chapter is concluded with a discussion of 'gaming capital' as a potential concept for bringing together the different player activities.

The sixth chapter of the dissertation turns the focus on player production. While the industrial production of media texts and practices of media audiences have traditionally been studied separately, I argue that in the case of digital games the domains are intimately tied to each other. I examine the theorizations of production from Marx to post-fordist approaches to demonstrate the value of consumers' productive practices. The theories of fandom and subcultures are examined to show how the scholarship on active media consumers has moved from accentuating the industrial incorporation of "authentic" cultures to more open-ended and less dichotomic models. I also take a closer look on games and consider the overlapping between play and design. Players' ability to play with the medium questions not only the relation between designer and player but also our understanding of the game itself. As the forms of player production highlight, digital games are not only a medium but at the same time a tool. To conclude the chapter I argue in favour of conceptualizing player production as a network of activities. The composition and dynamics of this network is guided by forms of gaming capital.

The last chapter concludes the central findings and elaborates the theoretical contributions of the study. Chapter 7 also discusses the potential future directions for critical inquiry.

Chapter 2: Methodological Considerations

As one of the central arguments of my work suggests, playing involves a variety of both consumptive and productive elements. The same seems to apply to the forms of scholarship and theory making. Every dissertation writer is both a consumer and producer of theory. Not unlike many other books, my dissertation is put together out of excerpts, ideas and arguments found from many places.[7] The unique character of this work is constructed through reading, referring, applying, rewriting, challenging and combining existing texts. In his game studies textbook Frans Mäyrä points out the similarities between scholarship and gameplaying.

> Players are drawn into games because of their challenges, and playing involves creating, testing and revising strategies as well as the skills necessary for progressing in the game. Academic study can captivate in the same way, and largely for same reasons: it requires facing challenges by setting up hypotheses, forming research questions and strategies, and then revising them, as even the most promising directions can lead into blind alleys. And even the occasional discovery or breakthrough usually opens up doors into new directions and new challenges. (Mäyrä 2008a, 3)

Just like a player of a game, a PhD candidate faces several constraints in completing the required tasks. The process of producing a dissertation is subjected to time constraints that are installed by funding bodies, publishing deadlines, teaching appointments and other related matters. Beyond these pragmatic reasons, institutional and disciplinary constraints can be seen to shape the path. In this respect, games scholarship is, however, far from playing a ready-made game.

The young field of game studies is currently trying to establish its place among other disciplines, and at the same time, a multitude of young scholars are seeking their place in the field of game studies. As many things in the field are still in the making, a lot of work is needed in developing systematic structures for the new ideas to blossom. In this regard, the work of a scholar resembles that of a game designer. (Ibid., 4.) As much as you try to balance and polish your work, your players – the members of the academic community – will most probably not only play by the rules you establish. They will drive the wedge in your argumentation, exploit and apply your work in ways you never anticipated, and if you are lucky, build innovative modifications on it. In this respect, the significance of the work at hand can only be seen afterwards as it is woven to the intertextual fabric of game scholarship.

[7] Not surprisingly, also this very idea is borrowed from other writers. For more about the interplay between consumption and production in constructing scholarly works, see Hills 2005 and Lehtonen 2000, 149.

As any player knows, some games have a power to make you repeatedly come back to them. The replay value or 'replayability' of games is tightly connected to their capability of offering new experiences and insights even after a several play sessions. To my experience, books seem to work much alike. During the research process I have repeatedly returned to particular texts and almost every time found new inspirations and reasons for academic soul-searching. One thing that seems to be common to the objects of my fascination is that they openly bring different theories and methodologies to a collision course. Instead of producing uniform and rigorously demarcated approaches they highlight the potentials of multi-cited and multiperspectival standpoints. I will in this chapter discuss the interdisciplinary premiss of my work. The value and importance of multi-sited methodologies are examined. Further, the methodological importance of playing and participating the gaming communities is discussed. Also the contributions of my work to the emerging field of gamed design studies are evaluated. In the end of the chapter the different research materials and the diverse starting points behind the individual articles are elaborated.

Interdisciplinary approach on games

There is a good reason to argue that most of the scholarly works on games are more or less interdisciplinary. Not only is the history of game studies relatively short and fragmentary but also the disciplinary status of the field is still under negotiation. Therefore, much of the current work is necessarily dependant on findings and approaches rooted in other academic fields. (Mäyrä 2008b.) Some scholars are keen to prove that the proponents of an individual and demarcated discipline are in conflict with preserving the interdisciplinarity of game studies (Bryce and Rutter, 2006, 10-11). To me these accusations sound somewhat artificial as there clearly is no individual, institution or school of though that could determine the future of games research. As will be soon discussed in detail, I agree with Lammes (2007, 25) who suggests that "an approach that takes the uniqueness of games as its starting point can still look for methodological allies in other disciplines". All in all, I find it difficult to see future game studies as a monolithic assemblage. Rather, I suggest game studies may well adopt a role somewhat similar to cultural studies. The field of cultural studies has always carried a multiplicity of different threads of endeavour, consciously emphasizing the plural form 'studies'. Besides being taught as a major subject in many universities all over the world, cultural studies has been and is an inspiration for scholars from a variety of disciplinary backgrounds. The exchange between approaches has not only had an influence on the more established disciplines but also fortified the self-image of cultural studies. Personally I see no fundamental problems in borrowing terms and methods from other academic fields as far as they are 'recalibrated' for the study of games and accompanied by a close

understanding of games as both systems and cultures. I tend to agree with Frans Mäyrä (2008b) who suggests that strengthening the disciplinary image of game studies may somewhat paradoxically be the best way to preserve its interdisciplinarity. Defining the many centres and margins of the field more precisely can help game scholars to enter the collaborative research efforts more in their own terms.

I cannot say that it was self-evident from the day one that my dissertation will become such an interdisciplinary work as it ended to be. The need for multiple perspectives and various methods has rather arisen bit by bit along the emergence and transformation of my key arguments. To take an example, my research interest on hobbyist-made modifications of commercial PC games (mods) has gone through several iterations during the process. My very first account on modding was fuelled by playing a number of mods and analysing the thematic and structural elements of them. Most of the results of this phase[8] did not end in this dissertation but they importantly led the way for my forthcoming decisions. The analysis of the structural elements revealed that the motivations and skills behind the different mod projects were significantly varied. My initial approach could, however, tell annoyingly little about these issues and therefore I decided to complement the data with some interviews with modders. Discussions with modders significantly deepened my understanding of the everyday modder activities including the forms of communication and co-operation between modders. At the same time the interviews showed how many activities were constrained and directed by the institutional matters and led me to consider the industrial aspects of the whole modding phenomenon. It is inevitable that the analysis of the developer strategies and concrete forms of industrial support and control required once again significant redefinitions in my approach. In addition, smaller fine-tunings of research questions and methods have taken a place before, during and after the more radical shifts. So, while I may not have made the decision in favour of interdisciplinary before I started the actual process, the aspiration to understand the different sides of the phenomenon very soon forced me to construct a particular collection of theories and methods.

According to Saukko (2003, 33), the methodological project of cultural studies has been traditionally organized around a tripartite focus on 1) discources or texts, 2) lived experiences and 3) the social context. Now if we take a look at the research foci emerging within game studies, a remarkably similar structure can be identified. In his game studies textbook Mäyrä (2008a, 2-3) suggests that the focus of game studies can be divided to 1) study of games, 2) study of players and 3) study of the contexts of the previous two. Mäyrä further emphasizes how the three spheres of inquiry are mutually interacting and complementary. While the different focuses may not always be easy to separate in the research practice, the challenge here is, as

[8] The results of this study and some of my early starting points are reported in the following paper: "Computer Game Modding, Intermediality and Participatory Culture", a paper presented in New Media? New Theories? New Methods?, University of Århus, DK, 1.-5.12.2003.

my modding example already shows, that the focus areas refer to different methodological approaches. The aims of the approaches are, however, not always easily combined. Coupling, for example, the ambition to understand the 'real' processes and structures of the contemporary global economics with such approaches that emphasize the new ethnographic insistence of multiple 'realities' would obviously require some serious considerations. Acknowledging the existence of multiple realities also raises the question of what constitutes 'good' or 'valid' research. (Saukko 2003, 15.) Therefore the methodological scheme followed and constructed in my research requires some further elaboration.

Matt Hills (2005) has paid attention to how theorizations he calls 'see-saw models' seem to carry a significant appeal among cultural studies scholars. Hills mentions Hall's encoding/decoding model (1980) and de Certeau's strategies/tactics dynamic (1984) as classic examples of theorizations that have aspects of this see-saw quality. What is typical of these models is that they offer "cultural theorists a way of keeping celebration and critique of readings in the air, without definitely tipping to the ground on either side" (Hills 2005, 64). Honestly speaking, some of the phases of my theoretical journey from fan and player studies to political economy and design studies and back and beyond have borne a similarity to these schemes. The longer the research process has proceeded, the clearer it has become that the dynamic between players, games and the game industry, however, requires more multifaceted approaches. In the recent methodological discussions scholars from various fields have noticed how the cultural research often spills over traditionally adopted disciplinary and conceptual borders and shatters the idea of easily definable research objects. The boundaries between culture and, say, economy or technology are becoming blurred:

> Thus, the sociologists' youth subcultures or the anthropologists' villages no longer appear isolatable locales but more like nodes in networks traversed and shaped by flows of transnational media, money, people, things and images. (Saukko 2003, 6)

As a result, juxtapositions or classic thesis-antithesis-synthesis dynamics have made room for circular models, continuums and network theories. In this respect, the methodological models can be seen to reflect the changes in the objects of research. The accelerated circulation of goods and labour seem to attract circular models to explain them (Johnson 1986, Kline et al. 2003). Likewise, if the central organizational model of current forms of production is argued to be a network, it may be that the critical inquiry into these forms needs to apply a networked structure (Benkler 2006). In any case, no a priori relationships between artefacts, activities and social arrangements should be specified but the measuring of relevant connections needs to be case-specific.

Traditionally the techniques of combining different methods and materials have often been discussed under the term 'triangulation'. Normally the aim of triangulation is to see whether different methods corroborate one another and thereby to acquire a more accurate and truthful picture of the research object. As Saukko (2003, 23-24) points out, the positivist origins of triangulation do not fit

very well with the cultural studies approaches that instead of seeking for 'the truth' rather aim to problematize any simple notion of 'truth'. As the reality does not hold still but looks different at different times and from different angles, different methodological approaches may not only complement and enrich each other but they may as well run into contradictions. Therefore, instead of trying to come up with one enlightened view on matters, the dialogical and multi-cited approaches, Saukko (ibid., 32) further outlines, rather aim to capture and appreciate the multidimensionality of particular problematics. One of the objectives of multiperspectival theory is to establish creative tension between different perspectives.

The combinations of approaches described as 'montage' (Saukko) or 'bricolage of theories' (Hills 2005, see also Fornäs 1995, 9) acknowledge the multiple perspectives but at the same time object to unrestricted pluralism. As important as it is to point out that any given phenomenon changes when one looks at it from different perspectives, it is at least as important to locate the phenomenon within the wider social context and point out the connections between what is studied and other social processes and locations (Saukko 2003, 195). For my work, this contextualization is carried out by connecting the particular research subjects both to the current characteristics of game culture and to larger social theory. The structure of dissertation, consisting of several interconnected articles, has allowed me to concretely explore how the phenomena transform when the research approach is changed.

The following two sub-chapters discuss the interconnected activities of play and design. They are not only central themes of the dissertation but also possess some methodological significance.

Research and Play

So, no one theoretical perspective can provide an all-embracing model for understanding game cultural phenomena. In practice, any research process is full of choices between point of views, approaches and methods and no research can encompass all perspectives at once. To catch at least something of the multidimensional cultural phenomena, it is crucial to move between different theoretical positions. Game cultural activities pose particular methodological challenges for a research as they are often connected to a range of semi-clandestine practices and forms of tacit knowledge only available for the members of certain subculture. Therefore, examining game culture only from afar runs the risk of missing crucial practices and contexts of ludic meaning making. As, Johan Fornäs (1995, 16) points, "[i]t is only when one has managed to understand a text, a subculture or a discourse by entering into its symbolic webs of meaning that one can develop an effective criticism of them".

Jumping to the networks of players is not entirely without risks. Traditionally good research practice has acknowledged the importance of critical distance to the research objects. Ethnographers, for example, are often warned of 'going native' or adopting too profoundly the cultural values of their informants. At worst, this is suggested to lead to losing one's critical edge as a cultural commentator. The same concern applies up to a point to the cartographers of virtual universes. At the same time, unnecessary dichotomies should be avoided. It is probably at least as important not to overstate the differences between the world of players and other known worlds. (Hine 2000, 54-58.) This applies not only to the distinctions between "the real" and "the virtual" but also to such constructs as "players' world" and "the academic realm". Within fan studies the contested relation between academics and fans has been widely discussed. Matt Hills (2002, 1-21) argues that while the differences between fans and academics have often been overstated, bringing these identities together is not without its problems. While being a fan may be crucial for understanding the dedication and practices central to fan cultures, our academic identities are simultaneously expected to conform to institutional expectations. Hence, the manifestations of game enthusiasm I am inclined to convey in this dissertation are obviously very different from those I express, say, in a gaming session with friends. Institutional constraints guide me to use a specific academic language and to follow a particular line of argumentation. In this process some aspects of fandom are highlighted while others are faded out. Thus, the pleasures and pains of playing do not necessarily fit very well with the imagined subjectivity of the esteemed and rational academic. At the same time, because games as systems are integrally dependent on the player's activities, it is somewhat necessary for a games scholar to engage in play.

Information on games can arguably be acquired in various ways. Both talking to those who design games and observing those who play them can provide insights to a range of game cultural phenomena. Some research questions, however, necessitate playing. In many cases scholars are liable to dramatic misunderstandings, if they lack the personal experience of the game (Aarseth 2003). In other occasions, as in studying the social interactions between online gamers, data gathering is practically impossible without extensive playing (Siitonen 2007). Lammes (2007), to my mind rightly, argues that an approach that wants both to include playing as a methodology and to do justice to games as culture, needs to have *reflexivity* and *situatedness* in its heart. An approach of this kind leaves behind the homogenous and objective notion of the researcher and encourages avoiding universal knowledge claims. Reflexivity refers to one's position as a researcher and in the context of my work especially to the awareness of being simultaneously an observer and a participant. Situatedness emphasizes the local embeddedness of any agent. As all playings are situated, so are all our scholarly efforts to understand them. As will be further discussed in chapter 4, I wholeheartedly support the idea of understanding game culture as communal and situated modes of practice.

What it comes to the research at hand, in addition to interviewing, observing, reading reviews and reports, scouring the Internet forums and analysing all kinds of traces of gaming, I have tried to play. Some periods have involved more playing than others and some playing sessions have been more analytical than others. Given the research topic, I have also downloaded all kinds of player-created content, tested a variety of add-ons and played extensively quite a few modifications. It would, for example, be almost impossible to understand how modifications change the game structures and experience without extensively testing and playing them. Also the hours spent on consulting the FAQs and message boards in order to run the unfinished and buggy hobbyist-made software has undoubtedly been enlightening in learning about the everyday of player production. To familiarize myself with some of the tools players use for their productions, I have also designed skins and levels and shot and edited machinima movies. While these phases of research process do not always explicitly figure in the published articles, playing and experimenting have often had a crucial role in understanding the nuances of some particular phenomena. Consequently, they have also had an effect on the final formulations of the research questions. In the following I move on to discuss the contribution of my work to the understanding of game design.

Towards critical game design research

Design research can be seen as a collection of methods and approaches focused on understanding and improving the processes and results of design. Lunenfeld (2003, 11) distinguishes design research into three key modes. *Research into design* aims to provide wider understanding of the results and processes of design and includes for example the historical and aesthetic studies of art and design. *Research through design* utilizes the forms and processes of design as a method for producing new knowledge on design. Finally, *research for design* refers to the line of research that aims to create objects and systems that can benefit the very process of design. While the results of my work are mostly visible in the research into design, the articles included in this dissertation (especially articles 5 and 6) can also be seen to contribute to the other two fields of design research.

Both professional game designers and design theorists seem to agree that while particular players cannot be directly designed, the design of games is very much about orchestrating and manipulating the player's experience. Salen and Zimmerman (2004, 168) suggest that game design is a 'second-order design problem'. What they mean by this is that game designers create experiences, but this happens only indirectly. It is not possible to directly design the behaviour of players. What game designers can design, is the rules of the game system that give rise to particular behaviours. While it is often not possible to anticipate exactly how the rules will play out, players and playings are in any case significantly shaped by the

design. By accepting to play, players consent to the constraints posed by the rules. While players may decide to break or change some of the rules they still mostly operate in an environment determined by the designers. In this respect, the dialogue of game design and play follows more general patterns discussed widely within science and technology studies:

> Designers construct not only a product, but attempt to embed within it particular forms of use and, by extension, particular users. Actual users then engage in an ongoing act of negotiation with devices and systems, often reinscribing and remaking them. (Taylor 2006b)

Thus, as game designers approach the process of creation, they - just like any other designers - are always already working with a formulation of the user. This model of the "imagined player" can have a significant impact on what is deemed to be possible, desirable and legitimate in the space designed for players. (Ibid.)

Game designers regularly refer to the 'possibility space' of the game. For example Will Wright, the designer of *SimCity* series, *The Sims* and *Spore*, suggests that "games cultivate - and exploit - possibility space better than any other medium" (Wright 2006). The possibility space of a game consists of the choices and actions that are made possible for the players. The width of the possibility space can be deliberately limited by the design. Narrowing down the player choices makes it easier to control and anticipate player activities. At the same time, the development in player abilities and strategies will most probably be minimal. (Järvinen 2008, 84.) While some games include predefined sequences and require particular achievements from the player to proceed, others with less-strictly defined possibility space leave more room for improvisation and unexpected strategies.[9]

I suggest that it could be fruitful *to extend the idea of possibility space from mere playing to all forms of player production*. The expectations of players can be significantly shaped by the industry already before they grab the controller for the first time. Thereby, the 'imagined player' does not only figure in the design of the game. For example the imagined players of game advertising have had a significant role in educating the potential players of digital games during the decades (Young 2007). The idea of possibility space may, however, be even more apt in describing the post-launch phase of the digital games. Persistent worlds, modifiability and in general the reliance on player production increases the investments in maintaining and expanding the game world and nurturing the community. The ways of encouraging, supporting, monitoring and controlling the production of player-created content are used to delineate the possibility space associated with the different forms of player production. As further discussed in articles 3 and 4, channelling the out-game player behaviour has become very significant in seeking success within game industry. Thus, while the relation between game rules and player behaviour surely needs more investigation, it would be at least as important

[9] The idea of possibility space is connected to the often used continuum between ludus (controlled play) to paidia (spontaneous play). These categories, originally introduced by Roger Caillois (1961) will be further elaborated in the following chapters.

to improve our understanding of the connections between the industry-defined "rules" for player production and the actual forms the productive cultures take. Mostly the research on these topics is still in its infancy.

The last decade has arguable produced a relatively broad range of literature on designing games. The current game design literature ranges from technically oriented process descriptions and practical how-to-books to more holistic and conceptual inquiries that discuss the different game design approaches in the wider context of design. Although some game design books occasionally reflect the starting points or ethical implications of design, the central focus is on understanding and teaching the basic elements of games and the processes of design. In this respect, I argue that there is a need for critical game design research. This line of research does not stop in asking how we can produce better games or how the game design processes can be made more effective. Rather, critical game design research can examine both the rationale behind individual design choices and the underlying logic of design methods. The meta-design approaches of this kind can provide knowledge on the potential biases and shortcomings that characterize the current forms of game design.

The contribution of my dissertation to the critical game design research is twofold. First of all, my work directs the meta-design approach to the role of players and player production in game design. I examine, for example, the different perceptions of player and the concrete practices of cultivating the player labour. While the analyses of game industry often lay their foundation on theorizations of cultural industries or political economy of media, they can at the same time have important contributions to study of design. For example Mäyrä (2008a, 162) suggests that both "the studies into the cultures of game design" and the "detailed analyses or critiques of the operations within the game industry" can be regarded as design research. Secondly, my thesis works to extend the conception of what can and need to be designed. Just like the game world challenges, designed to produce pleasure in players, need to be fine-tuned, designing the 'conditions' of player production require pre-planning, monitoring, testing and balancing. The after-launch factors need to be carefully considered already during the initial development process. In many cases the so called 'live team' will continue the work of the original development team potentially years after the launch of the game (Mulligan & Patrovsky 2003, 222-228). At the same time, playing-oriented activities regularly cross the traditional boundaries of the game and spread over the Internet. In this respect, the design of games is no more limited to developing the playable systems but the whole environment in which playing takes place is increasingly designed.

Research materials

While multi- and interdisciplinary approaches aim to provide more nuanced answers to more complex questions, interdisciplinarity can at the same time have some restrictive consequences. It is clear that a games dissertation that draws from several academic disciplines and schools of thought can in many cases only scratch the surface (Järvinen 2008, 17). Given the limited time and space reserved for a dissertation, it is possible to cover only a small part of the related discussions that have defined the emergence of different disciplines during the decades. Therefore, one needs to make sure that a couple of things are taken into account. First of all, it is crucial to avoid naïve balancing acts. There are many reasons why particular theories may not fit together well. Therefore the themes, around which a common research agenda is organized, need to be carefully explored. Secondly, it is against the good research practice to only introduce theorizations that support your particular arguments. I have tried to avoid this 'cherry-picking' by covering the historical contexts of the approaches that are applied, by discussing the critique posed against them and by introducing some of the limitations of the theories. I have also discussed the place of this study and its theoretical foundations within the field of game studies and outlined the potentials of some alternative approaches. In this respect, it is important to explain why some particular things are included in the dissertation while other aspects get left out. Therefore, I will turn to the actual research materials.

As the research questions already show, the initiative of my work is distinguished into three interconnected themes. First of all I study the different forms of player production, the motivations and histories behind them and their significance among players. Secondly, I explore the game industry views on player productivity. This includes the concrete strategies of nurturing and circumscribing the player activities. Thirdly, I study the different perceptions on player and player production within game design. I further propose some novel ways of approaching and including players and their productivity in the game design processes. It is clear that the research methods need to be in line with the questions one seeks to explore. Different questions also indicate different research materials. Traditionally different materials are collected to complement each other. In some cases the research materials can, however, also fruitfully challenge and question the previous materials. In this respect, I am further interested in seeing how the phenomena studied may change when the methodological lens is changed.

It is clear that once particular research subjects and viewpoints are selected to be included, many others are left out. For my dissertation this has been a continuous process. Once I started the dissertation I sometimes found it difficult to come up with relevant literature. During the process the situation has changed. Even though I can still point notable holes and gaps in the literature on player production or player-centred design, many important contributions have been made during the recent couple of years. This has largely freed me from the extensive mapping tasks I

originally included in the research outline. Instead, I have been able to focus on case studies that may not produce a general view of the field but provide a much more in-depth view on the studied phenomena. Arguably the results of my approach appear to be somewhat fragmentary or 'impressionistic'. This is, however, in line with the idea of having several different 'truths' and 'realities' revealed and produced by different research methods. The relatively loose structure has allowed me quickly to follow the implications of previous articles. In the following I will shortly introduce the research materials examined in the articles and the rationale behind choosing them.

Article number 1 is not built on research material collected solely for this purpose. As one of the original aims of the book chapter is to give an overview of the game studies perspectives to wider design audience, short example cases are preferred over larger case studies. So, rather than evaluating any particular cases, the first article focuses on introducing some of the central theoretical starting points that are further elaborated in the later contributions.

The second article examines the motivations and practices of people who make computer game modifications. The data is collected from the modding scene around the shooter-game Operation Flashpoint (OFP). There is more than one reason for choosing OFP modder community as the subject of study. First of all, in the very early stages I figured out that email interviews would be a fitting and inexpensive method to reach the global modder community. As I was not entirely sure how the email interviews would work out, I needed to have a backup plan. I was at the time aware of an active OFP mod group from Finland and figured that I could at least consult them if my primary method would fail. Secondly, the game is developed by a relatively small Chech studio called Bohemia Interactive (BI). Focusing on one single title has enabled BI development team to support emerging mod culture in such ways the game industry giants tied to tight schedules can seldom afford. Eventually, I received answers from 29 modders in total. The participants were all male, represented thirteen different nationalities, and their ages varied from 15 to 40 (average age 23). Alongside with the interviews I examined quite a few hobbyist websites and discussion fora dedicated for OFP modding. The interviews provided a look to the everyday of modders and illustrated the diversity of backgrounds and attitudes within the modders of a single game.

The third article is also indebted to the modder interviews. The article arises from the observation that the motivations, practices and schedules of modders are to some extent influenced by the developers and publisher strategies. To investigate the player labour that is increasingly harnessed as a source of revenue I focus on mod competitions that to my mind form an area of experimentation where the potentials of free modder labour are tested. The competitions that are examined in the article differ in size, ranging from the hobbyist-organized competitions to the $1 Million Make Something Unreal Contest organized by Epic Games and Intel. In terms of theory, the article investigates in general the blurring boundaries between leisure and labour and in particular the merging of play and work.

The fourth article introduces an analysis of a single game. The game chosen for this purpose is *The Movies* (2005) developed by the Lionhead Studios. As the forms of player production have so far been mostly analysed in connection to MMOs or FPS games, I wanted to test how a single player simulation game both follows and challenges earlier theorizations. The article does not include a detailed textual analysis of the game. Instead, the game is used to introduce the characteristics of games as a cultural industry. The research material is not limited to the game itself, but also the accompanying movie-making editor and the internet fora are examined. The various materials are required to introduce the different aspects of player productivity. The article also includes two mini-cases, Alex Chan's short movie *The French Democracy* and Chrysler in The Movies Virtual Film Competition. The cases highlight the industrial forms of controlling the productivity of players.

Article number 5 moves on to examine the role of players in game design. While information on the topic can be acquired in various ways, the focus of the article is on the recent game design books. The central reason for the literature-centred approach is the lack of earlier scholarly discussion on the topic. As I could not build on earlier theorizations, the article begins with a mapping of the current situation. In this respect, the game design literature provides a multifaceted source of accumulated knowledge. The books are mainly based on practical experience and therefore provide an interesting spectrum of tested design approaches. In addition, the game design literature can be more influential than we recognize at the first glance. They are not only read by critical game designers, but also used in teaching the fundamentals of game design to the upcoming generations of game industry professionals. The more detailed discussion of the requirements that determined the "canon" of literature can be found from the article.

The last one of the articles follows a relatively experimental approach on collecting data. The research data consists of materials the participants of the study produced with the self-documentation sets. This diverse material is supplemented with interview data. The self-documentation set included several different tasks designed to encourage participants to reflect on their relation to games and gaming from various and sometimes unexpected viewpoints. As the approach was relatively laborious and time consuming and the intention was not to produce statistical generalizations or abstract player types, the number of participants was intentionally limited to twelve (12). All participants were Finnish, half of them male, half female. Ages ranged from 8 to 71 years. The sample included individual informants, couples and a family with children. The participants also differed with respect to their relation to gaming: some of the participants were very active players, others played every now and then and some hardly played at all. The material produced by the experiment is quite extensive and the length of the conference article allowed me to cover only a relatively small part of it.

As the research materials indicate, the individual articles are relatively autonomous and not intended to be directly comparable. Rather, they aim to highlight the different sides of the player productivity. The multiple perspectives

produce a relatively heterogeneous collection of data. At the same time, the divergent research materials necessitate multiple methods and theoretical starting points. Therefore, before we move to the articles I need to specify the theoretical influences and ambitions of the dissertation. Chapters 3 to 6 discuss the central concepts and further clarify the contributions of my work.

Chapter 3: From The Roots Up

In his book *Media Work* Mark Deuze (2007b, 232) argues that game development is currently "fastforwarding through a history of professionalization that took an industry such as journalism more than a century". This fast paced transformation has its consequences. As the *IGDA Quality of Life Survey* suggests, the endemic long hours are counterbalanced by very high marketplace failure rate. While work in game industry can arguably be highly stimulating and rewarding, high-profile studio closures are announced almost every month. (IGDA 2004.) Curiously, interesting parallels can be found between the game industry and the recent development of academic game studies.

The bewildering pace of game industry poses serious challenges to scholars investigating the products and practices of game development. As any scholar of 'contemporary culture', game researchers must apply a multifaceted array of viewpoints and methods in order to make sense of the constantly changing world. The objectives of culturally oriented research involve reducing and explaining the "messy" complexities that making and playing games consist of. By demystifying the historical, ideological, and economic roots of the complicated networks composed of people and technologies, researchers can produce vital orientation. On the other hand, cultural scholars are obliged to ask difficult questions, problematize stereotypes and hegemonic interpretations, deconstruct totalizations, and tolerate incompletenesses and contradictory explanations. (Fornäs 1998, 28.) The late boom of academic game studies is also characterized by pace. Sometimes it feels like almost every year the field witnesses one or more fundamental turn, and paradigm changes are claimed to happen even before the previous approaches are critically evaluated. Only a few years after the "Year One of Computer Game Studies" (Aarseth 2001) the field is argued to reach a new phase characterized by increasing maturity (Williams and Smith 2007, 8).

It would, however, be highly problematic to assume that game research is an entirely recent field. In their seminal compilation, *The Study of Games* (1971), Elliott M. Avedon and Brian Sutton-Smith extensively discuss the modern contributions to game research. The articles and bibliographies included in the volume show that rich achievements in game scholarship originate already in the 19th and the early 20th century. Probably the most well-known contributions include E.B.Tylor's essays on the history of games and Stewart Culin's detailed investigations of the American Indian games and the African game Mancala. The highly multidisciplinary anthology of Avedon and Sutton-Smith brings together contributions from anthropology, psychology, pedagogics and game theory, to mention but a few stances. In this regard, the current emergence of game studies appears not to be an outright starting point but more of a new phase in the study of

games.[10] Nevertheless, while contemporary digital games share important similarities with earlier games they at the same time introduce entirely new questions to the scholarly discussions. According to Bryce and Rutter (2006), academic interest in digital games dates back to the early 1980s. Arguably such early contributions from that time as Sudnow's *Pilgrim in the Microworld* (1984) or Skirrow's "Hellivision: An Analysis of Video Games" (1986) still have a lot to offer to contemporary scholars. The primary focus of the work at hand is, however, not in the history of games or in the development of game scholarship. Even so, it is of my interest to consider how the findings of earlier game researcher generations can contribute to the study of current digital games.

The objective of this chapter is to provide some historical background for the theoretical approach introduced in the following chapters. The chapter is dedicated to the analysis of the classic theories of play presented by Johan Huizinga (1950) and Roger Caillois (1961). The critiques of Ehrman (1968) and Anchor (1978) have a central role in my analysis. Considering their merits in uncovering the motivations and problems of the classic texts I find it curious that they are rarely referenced in contemporary discussions. I will first take a look at the classic definitions of play and after that I move to a more detailed analysis of the issues of 'magic circle' and 'unproductiveness'. The recent critical stances on 'magic circle' are also discussed as far as they can contribute to my approach. The analysis will lead to the conclusion, that instead of considering the realm of games in antagonism to everyday life and utility, it is rather the relations and interconnectness of these spheres that should be studied.

The classic definitions of play

The two classic books that are probably impossible to bypass in any dissertation on games are Johan Huizinga's *Homo Ludens* (1950) and Roger Caillois's *Man, Play, and Games* (1961)[11]. As discussed above, earlier important scholarly entries on play and games exist but still it is difficult to overestimate the influence these two works have had on the recent boom of game studies. One explanation to the popularity of Huizinga and Caillois and a few other theorists of analogue games is that their work can offer a much-needed framework and prehistory for ludological approaches (Copier 2005). Furthermore, it has been argued that the easy applicability of the theories have earned them a sort of pop icon status among game studies (Pargman and Jakobsson 2006, 16). Whatever the case, despite the well-grounded critique these texts have received during the decades they still seem to inspire new

[10] In his review of *The Study of Games* Jesper Juul goes on to claim that the current interest in games may actually be the third wave of game studies, the early contributions representing the first one and the second wave ascribed to the book of Avedon and Sutton-Smith. (Juul 2001)

[11] The original Dutch edition of *Homo Ludens* was published in 1938. Caillois's *Les jeux et les hommes* came out first time in 1958.

generations of scholars interested in the significance, value and different forms of games and playing. I will in the following briefly introduce the central arguments of these seminal texts and then focus on a couple of issues I find particularly important in the context of my study.

Huizinga was a Dutch cultural historian probably most well-known for his book *The Autumn of the Middle Ages*, an analysis of late Middle Ages as a period of fading and decadence. Huizinga may not have been the first to discover the value of play in explaining human civilization but *Homo Ludens: A Study of the Play Element in Culture* is most probably the first work in which the roles and expressions of play in the different spheres of human culture are examined in this scale. *Homo Ludens* is best described as a morphology of play. It is neither a simple history of play nor a study of play among other human activities. (Anchor 1978, 77-78.) Instead, Huizinga's focus is on analyzing the significance and manifestations of play in a variety of fields ranging from law and war to poetry, art and philosophy. Huizinga argues that the spirit of playful competition is older than culture itself and that in its early phases civilization is actually played (Huizinga 1950, 173). Thus, the "higher forms of culture" originate in noble play. And even in developed societies these spheres suffer as play declines. Since Huizinga's style is essayistic and sometimes ambiguous it is not entirely clear what Huizinga means by this. In order to shed a light to Huizinga's musings a couple of definitions are needed.

Huizinga starts his book by discussing the nature and value of play. Different characteristics of play are considered and after a few pages Huizinga (1950, 13) offers the following often cited definition of play:

> Summing up the formal characteristics of play we might call it a free activity standing quite consciously outside "ordinary" life as being "not serious", but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means.

There are several issues in this definition that need further attention. First of all, Huizinga suggests that play is a free activity. What this means in the first place is that play is carried out for its own sake and the underlying motive of play is the very experience of playing.

In accentuating the freedom of play Huizinga comes very close to the tradition of idealist philosophy in which play is regarded as a fundamental aesthetic category and beauty and freedom lie in the heart of all play (Lauteren 2007, 3)[12]. In

[12] Lauteren points out that even though Huizinga never references philosopher Friedrich Schiller, he is an important source of inspiration for Huizinga's theory. The readers of Huizinga may find the following famous passage from Schiller curiously familiar: "Man shall *only play* with Beauty, and he shall play *only with Beauty*. [--] Man plays only when he is in the full sense of the word a man, and *he is only wholly Man when he is playing*" (Schiller 2004, 80). Anchor (1978) further argues that besides Schiller's formulation, Huizinga's theory is also in tune with Plato's view of play.

Huizinga's definition the freedom of play is also closely linked with the idea of a dedicated playground, a separated time and space reserved for play. In the words of Huizinga (1950, 10):

> The arena, the card-table, the magic circle, the temple, the stage, the screen, the tennis court, the court of justice, etc., are all in form and function play-grounds, i.e. forbidden spots, isolated, hedged round, hallowed, within which special rules obtain. All are temporary worlds within the ordinary world, dedicated to the performance of an act apart.

Recently this notion of play governing an arena of its own that is separate from ordinary life is in most cases discussed under the term "magic circle". Although magic circle is only one of the examples in the quoted passage, it has in the recent years become one of the key terms of game studies. I will examine the contemporary notions associated with magic circle a little later. Before that remaining aspects of the definition need still a little more attention. Huizinga's formulation of play being "not serious" is more complex that one might think at a first glance. In an earlier passage Huizinga (ibid., 5) argues the following:

> To our way of thinking, play is the direct opposite of seriousness. At first sight this opposition seems as irreducible to other categories as the play-concept itself. Examined more closely, however, the contrast between play and seriousness proves to be neither conclusive nor fixed.

Hence, Huizinga clearly undermines the dichotomy of play and seriousness but does not explicate the relation in detail. As both Ehrmann (1968) and Anchor (1978) highlight, Huizinga at the same time insists that play does not exclude seriousness and repeatedly maintains them as two separate categories. Another feature related to seriousness is the gratuitousness of play. According to *Homo Ludens*, play does not acknowledge any material interest or utilitarian and profit-oriented activities. Thus, play gets its specific meaning not only in connection to "ordinary world" and "seriousness" but also in a dichotomous relation to "work". This observation is highly significant in context of my study, and the complicated relation between play and work will be further discussed through the chapters and in the articles. Finally, Huizinga suggests that play tends to promote formation of "social groupings". While social groupings may not be a universal aspect of games, social relations and communities around gaming are an important aspect of my study. A more detailed discussion of social dimensions of play and gaming communities is presented in the chapters 5 and 6.

At this point it should be obvious that Huizinga's definition is somewhat ambiguous and possibly even contradictory. In this connection, one should, however, understand Huizinga's larger approach. In an article titled "The Aesthetic Element in Historical Thought" Huizinga considers the study of history to be more an art than a science. According to Huizinga, both history and art are good in forming images and treating their subject matter in its individuality while they may not be equally competent in formulating abstract laws and general classifications. (Anchor 1978, 66-67.) Hence, as a cultural historian Huizinga's primary aim is not

to give an exact definition of play but his focus is more in describing the representations of play and explaining the different manifestations of play.

In his *Man, Play, and Games* (1961) French philosopher Roger Caillois takes Huizinga's theses as a starting point, contests some of them and develops others further. Caillois was a versatile intellectual whose work drew from sociology, anthropology and literary criticism. He openly admits Huizinga's ground-breaking achievements but questions the very definition quoted above. According to Caillois Huizinga's definition is at the same time too broad and too narrow. The definition is too broad insofar as it fails to delineate the sphere of play. Huizinga's discussion of the relations between play and the domains of "sacred" and "institutional" is no doubt insightful but the sharp distinction between play and the other domains is never drawn. Because of this Caillois argues that *Homo Ludens* is not actually a study of games but rather "an inquiry into the creative quality of the play principle in the domain of culture" (Caillois 1961, 4). Further, the definition is too narrow since Huizinga focuses almost solely on only one characteristic of play, namely the competitive aspect. (Caillois 1961, 3-5, Ehrmann 1968, 31.)

To solve the first inconsistency in Huizinga's approach – the definition being too broad – Caillois introduces a definition according to which play is an activity characterized by the following six qualities: free, separate, uncertain, unproductive, governed by rules and make-believe (Caillois 1961, 9-10). The second problem – being too narrow – is answered by introducing the four basic categories of play, namely *agôn* (competition), *alea* (chance), *mimicry* (simulation) and *ilinx* (vertigo) (ibid., 12-26). These categories are subject to a further classification, a continuum ranging from *ludus* (controlled play) to *paidia* (spontaneous play) (ibid., 27-35).

With his definition and classification Caillois points out some aspects neglected by Huizinga. His approach, however, can be argued to be even too categorical in believing that a classification could confine the sphere of play. Despite these differences it seems that Caillois and Huizinga share a tendency to define play in opposition to a variety of aspects of human life. (Ehrman 1968, 32-33.) A closer look to the definitions indicates that some important similarities can be identified between the theorists. First of all, play is characterized as free. If Huizinga in this connection emphasizes how play is carried out for its own sake, Caillois accentuates the voluntary and non-obligatory nature of play. Caillois's notion of free play also includes the aspect of uncertainty, meaning that games have variable outcomes that cannot be predefined. Both scholars agree that the freedom of play exists within the limits set by the rules of play. Further, as Caillois's formulation of "separate" and Huizinga's "magic circle" suggest, play is circumscribed to a particular space and time. In Caillois's reading this separateness is closely linked to the aspect of make-believe, the awareness of a second reality associated with the play behaviour.

In the context of my study the most interesting aspect of Caillois's definition is the way he characterizes play as *unproductive*. According to Caillois, play as an activity is "creating neither goods, nor wealth, nor new elements of any kind; and, except for the exchange of property among the players, ending in a situation

identical to that prevailing at the beginning of the game" (Caillois 1961, 10). Hence, to Caillois play is primarily "pure waste" and at the end of the game nothing has been harvested, manufactured or created. Property may be exchanged but no commodities or capital are accrued. (ibid., 5-6).

The critique of Huizinga and Caillois

Now that I have briefly explicated the notions of play both Huizinga and Caillois present in their seminal books, I will move on to examine some of the critiques and further developments they have received among game studies. Sometimes the concepts coined in the classic texts have been uncritically applied to the contemporary games. In other cases the formulations have been superficially criticized without connecting them to the particular historical contexts of the texts. In my analysis I will focus on three topics that are crucial to my work and are further discussed in the following chapters. First of all, I will investigate the recent attempts to define what a game is, and the role of the classic texts in these efforts. Secondly, I will take a look at the discussions concerning the concept of magic circle. Thirdly, I will shed a light on the issue of productivity associated with play.

At this phase it is time to pay attention to a particular conceptual issue, namely the relation of *play* and *game*. Both Huizinga and Caillois discuss a variety of games but their primary focus is in understanding the essence of play, not in demarcating games from other phenomena. Huizinga refuses to examine play in isolation of culture, and Caillois's classification of games includes among other things spectacles, carnivals and theatre. Salen and Zimmerman (2004) pay attention to the complex relation between the two terms and argue that play can be understood both as bigger and smaller than game. First of all, if we take a look at all the activities that can be called play, only some of them seem to actually constitute something that could be thought as a game. Framed this way, game becomes a subset of play. From another perspective game can be understood to contain play. In this sense play is only one component of play and therefore a subset of game. In a general note, it is largely agreed that play should be understood as mostly free-form activity, whereas game is more rule-based. Due to the many uses of the words alternative interpretations of the relationship between the terms are, however, possible. Furthermore, any distinction between play and game is dependent on the language used. Already Huizinga is aware of this in arguing that all peoples play remarkably alike but their conceptions of play manifested in language differ widely (Huizinga 1950, 28). As Juul (2005, 28-29) notes, the relation of the terms is not entirely balanced in English language since 'play' can operate both as a noun and a verb, whereas 'game' is mostly used as a noun as visible in the expression "one plays a game". Many languages, including for example Spanish (*juego*), and German (*Spiel*) do not recognize a clear distinction between play and game. Others, like

Scandinavian languages, make an even clearer distinction between the terms. In Swedish language both *lek* (play) and *spil* (game) have dedicated verbs reserved for them (*at leka en lek – at spela et spel*). The same applies to Finnish words *leikki* and *peli* (*leikkiä leikki – pelata peli*). As a result, when writing about games in Finnish, games and play are easily separated from the outset. One should remember, that this is not the case when Huizinga writes about *spel* in Dutch or when Caillois uses *jeux* in French, as these languages make no such clear distinction.

Both Salen and Zimmerman (2004) and Juul (2005) approach the issue of defining games by listing several definitions by previous writers. Both investigate the classic definitions of play discussed above in their analysis. With their key concept 'meaningful play' Salen and Zimmerman (2004, 75-76) pay homage to Huizinga's notion that in play there is always something "at play". As will be shortly discussed, they also widely consider and apply the idea of magic circle. In constructing their definitions both Juul and Salen and Zimmerman point out the inclusive generality of the approaches of Huizinga and Caillois. Some of the components of the classic definitions address not so much games but more the effects of play. In other cases it is easy to think of empirical examples where games question, are in conflict, or go beyond the defined features.

The contested issues I'm primarily interested are the aspects of voluntariness, separateness, and unproductivity. Juul (2005, 33-36) argues that human motivation is too complex to be explained with the distinction between voluntary and unvoluntary and therefore the claim that games are voluntary is fundamentally anything but unclear. Besides, it is not rare that some players may be reluctant to participate, but still agree to play under social pressure if for example one more player is needed to start a game. Juul also points out the similarity between the notions of games being separate and unproductive. According to him they both address the interactions between the game activity and the rest of the world and thereby they cannot operate as boundaries but are rather fuzzy fields under constant negotiation. Juul mentions long-lasting games like chess played by mail and Internet-based strategy games as well as live action role-playing games as examples of games that transgress the boundary of game and daily life. Further, the aspect of unproductivity can be questioned by the facts that gaming forms a huge industry and it is perfectly possible to earn one's living playing games. I will in the following further contemplate the separatedness of games in relation to the term magic circle and also shortly come back to the issue of (un)productivity.

The term "magic circle", picked up from Huizinga's work, has received a lot of attention within recent game studies. This is strongly linked to the re-introduction of the term by Salen and Zimmerman (2004, 95). They use the idea of magic circle to emphasize the importance of a distinct boundary between games and ordinary life. According to Salen & Zimmerman, magic circle is a special place in time and space created by a game. In other words, to play a game means entering a magic circle, or alternatively creating one. Not only is the idea of magic circle tempting. It also seems to make intuitive sense. In one level, play is exactly about fantasizing,

building alternative worlds and surpassing expectations. At the same time, already Huizinga was aware that in many forms of play the spatial and temporal boundaries can become loose or even non-existent. As discussed before, it is entirely possible to think of situations where games overlap with daily life and muddle or transgress the boundary between the game and rest of the world. Salen and Zimmerman take children's play with dolls as an example of play behaviour where the border between playing and not-playing is permeable and difficult to draw.

Within the recent debates magic circle has been discussed in various connections. Both serious games (Rodriguez 2006) and so called pervasive games (Montola 2005) contest and re-draw the traditional boundaries of game. Copier (2005) argues that the current use of magic circle among game studies is highly problematic. She is clearly unsatisfied with the way the magic circle becomes to be represented as "utopian" magical wonderland. Instead, and to my mind correctly, she argues that there is no given space for play but this space is constructed in negotiation between player(s) and the producer(s) of the game and also between the players themselves. Pargman and Jakobsson (2006) argue that the problems of applying magic circle as an analytical tool become especially clear when researchers have actual empirical material at hand. Their study suggests that for avid gamers playing digital games becomes a routine and mundane activity that includes little or no magical elements. The writers also suggest that the idea of magic circle is linked to game studies' tendency to examine gaming situation in isolation, as a singular event. Here it is in place to revisit Ehrmann's forty year old critique again. As I have tried to show Huizinga and Caillois define play based on, in relation to, or in opposition to so-called reality. Ehrmann (1968, 32) claims that both writers never seriously consider "reality" but instead take it as given. If the nature of reality needs no discussion then play remains necessarily in a secondary position and "reality" serves as its yardstick. Ehrmann (ibid., 37) argues strongly against the notion of play as transposition, or an ennobled representation of "reality". He rather suggests that play cannot and shouldn't be defined by isolating it on the basis of its relationship to an a priori reality and culture (ibid., 55).

If the spatio-temporal boundaries of play have proved to be tricky they are not the only aspects of "separatedness" that require attention[13]. Both Huizinga and Caillois want to preserve play from the "contamination" of economic influences. As previously discussed, Caillois defines play as "unproductive" while Huizinga sees play as an activity entirely lacking in material interest and in utility. The economic aspect of play is linked with the other characteristics of "detachment". Ehrmann claims that if play is detached from ordinary life, it is necessarily also detached from its (economic) contingencies. He goes on to suggest that even if play is understood

[13] I focus here on the economic and productive dimensions. However, a closer look at the issue of seriousness also indicates that Huizinga's conception of the relationship between play and reality is unsound. As mentioned earlier, Huizinga insists that play does not exclude seriousness and at the same time is equally insistent on maintaining play and seriousness as separate categories. As a result of this ambiguity, Huizinga's theory offers no criterion for judging where play actually ends and seriousness begins. (Anchor 1978, 87.)

as pure expenditure, it nevertheless consumes something. This can be only time and energy but sometimes also considerable property is consumed. For Huizinga and Caillois, this consuming stays in the sphere of play. Consuming, however, indicates that something is at the same time produced. Therefore, Ehrmann goes on to suggest the following:

> [T]hey fail to see that the interior occupied by play can only be defined by and with the exterior of the world, and inversely that play viewed as an exterior is only comprehensible by and with the interior of the world; that together they participate in the same economy. (Ehrman 1968, 42)

The arguments elaborated above convincingly indicate that play cannot be isolated as an activity without consequences. The idea of games being unproductive is highly dubious if productivity is not limited to production of physical goods. If games do not produce anything how can we explain that so many people earn their living by designing, playing, studying and writing of games? Further, it becomes increasingly difficult to argue that such online worlds as *Eve Online* or *World of Warcraft* are unproductive as they at the same time give birth to significant economies. At this point I am inclined to agree that the disavowal of material gain from play is related to Huizinga's ideological agenda (Salen and Zimmerman 2004, 75). This is more clearly visible in Huizinga's discussion of the perversion and decadence of play. Huizinga had in his earlier work discovered the importance and decline of play as a formative force in medieval culture. In *In The Shadow of Tomorrow*, that was published just two years prior to *Homo Ludens*, Huizinga proceeded to compare the events of 1930s Europe to the earlier crisis of Western civilization. For Huizinga, the elements that made the situation uniquely dangerous included not only the myths of national and racial superiority, the rise of social conformity and the threat of irresponsible mass action but also the perversion of play. The far-reaching contamination of play and serious activity became to represent a symptom of the crisis of contemporary Western civilization. In the last chapter of *Homo Ludens* Huizinga returns to the same theme, namely the decadence of play element in modern times. According to Anchor's analysis (1978, 77, 83) this decadence of play is evident to Huizinga in the development in which the serious business of life – be it politics, war, or economics – degenerate into pseudo-play, and play loses its spontaneity and detachment.

One of the examples of the decadence is the commercialization and professionalization of sport.[14] One can only imagine what Huizinga would say about today's industrialized and highly commoditized sphere of play. However, the bitter claims of Huizinga open an important historical dimension to the discussion. It seems to suggest that the relation of play and seriousness and therefore the nature of play is not invariable but can change over time. From a historical perspective, the

[14] Both Caillois and Huizinga make a clear distinction between professional athletes and amateurs. Huizinga also observes the change in such card games as bridge where the emergence of game manuals, instructors and professional trainers has generated a slide toward seriousness. (Ehrmann 1968, 47.)

antithetical relation of leisure and work is typical to the industrial phase of society. The emergence of "leisure time" is closely linked to the idea that recreational periods increase worker's productivity. Lauteren (2007, 4-6) argues that the social dynamics of the 18th and 19th centuries have importantly participated in the development as a result of which play and games are commonly seen in antagonism to work and the seriousness of daily life. According to Lauteren such social changes as capitalist industrialization, the rise of the middle class, the spread of protestant work ethics have importantly influenced the practices of popular culture in general and the practices of playing in particular. It would, however, be foolish to think that the boundaries of play are entirely an invention of the industrial era. In any case, the way the temporal, spatial, social and economic boundaries are strictly enforced is highly influenced by the social dynamics of the industrial era.

Discussion

As I begin to conclude my remarks there are several points that need to be made. First of all it is important to understand how the current theorization of games is largely influenced by such classic texts as *Homo Ludens* and *Man, Play, and Games*. Various concepts, most notably the idea of magic circle, have been inherited from these "canonical" texts. In addition, many basic assumptions have been adopted from the works of Huizinga and Caillois even though they are not always referenced to. As discussed, the classic formulations cannot, however, be understood in their entirety without connecting them to the cultural contexts of their time of writing. Furthermore, stripping them from their original subject matter and the context of the time of writing runs a risk of producing blind spots in our analysis. In a closer analysis some of the traits Huizinga claims to be invariable qualities of play prove to be closely linked to the historical development of social values and therefore open to constant transformation. (Lauteren 2007.) This observation suggests that any study of games should critically examine its core concepts in relation to the historical and disciplinary developments and evaluate the results in relation to the contemporary social theory. I will try my best to follow this guideline in the following chapters.

As I have tried to show, the concept of magic circle is problematic for several reasons. Constructing the sphere of play in clear-cut antagonism to "ordinary life", "seriousness" and "utility" hides the similarities between these phenomena and play and can result in a very limited approach. I would rather argue that the space for play is negotiated between the players and the producers of the game. These negotiations are influenced by the shifts in cultural values and social dynamics that are subject to both long-term historical transformations and faster transitions related to current popular cultural trends and life style choices. The closely related issue of play and work is also highly relevant since there seems to be a growing number of

game cultural phenomena that actively blur boundaries between these categories. Following Taylor (2006a), it is important to ask whether "the framework in which work is about suffering and play about its relief" can really help us in understanding the variety of gaming practices and the pleasures associated with them. A too simple formulation of this relation can limit our understanding of the elements of gaming experience and what ultimately constitutes a game.

The commitment of Huizinga and Caillois to the separatedness and detachment of play results in accentuating the "unproductive" nature of play. According to Pearce (2006), this axiomatic assumption is shared by a majority of game taxonomies in recent years. She further claims that the notion of play not being productive is predominant in popular media and also often heard among within game developers. In a stark contradiction, Pearce suggests that play should instead be studied as an act of production. The particular productive character of play is increasingly visible as more and more players engage in productive activities in and around play. Furthermore, the variety of player-created content evidences how players are capable and motivated to produce their own entertainment experiences. In this regard, the productive characteristics are increasingly central to our understanding of games and play. I will in the following chapters and articles further elaborate the blurred boundaries between play and work and media consumption and production. Both the forms of and motivations behind player productivity and the transformations the game industry faces in its attempts to enable players to take part in the production of games are examined in detail.

The following chapters introduce and critically examine the central concepts of the study. They continue many of the discussions started in this chapter and try to provide new perspectives on the issues discussed already by the classic writers. First of all, I will focus on the relation of game and culture and the issue of "game culture".

Chapter 4: Game Culture Demystified

The recent developments in the fields of game studies and new media theory indicate that even though it can be advisable and worthwhile to apply existing theories to digital games, they at the same time challenge researchers to adjust and update their concepts and theoretical resources (Giddings & Kennedy 2006, Cover 2004). In this chapter I will discuss the complex concept of game culture. My focus is, however, not limited to identifying a useful definition but I am at the same time interested in discussing the different possibilities that are available for scholars to approach and examine the field of game culture.

As mentioned in the earlier chapter, both Huizinga and Callois discuss the relation of play and culture. Their notion of culture is, however, highly problematic. First of all, culture for them is mostly a fixed and stable category, never really called into question by play. Secondly, the meanings Huizinga and Caillois associate with the word "culture" are very particular. Culture designates the diverse forms that human society takes and hence is mostly synonymic with "civilization". This notion also refers to the trajectory of a history of mankind as a relatively unproblematic progression leading necessarily to the "superior" civilized stages. (Ehrmann 1968, 48-49.) Thirdly, the late modern boom of commodified and mediatized popular culture has significantly repositioned and questioned the borderlines of "high" and "low" culture. It seems clear to me, that a fresh conception that takes into account the particular characteristics of current games is needed. Therefore, what I try to do in the following is to outline an understanding of culture that does justice to digital games.

Considering the numerous meanings attached to the words 'game' and 'culture', one has to be humble in approaching the issue of game culture. The definitions of game were already shortly discussed in the earlier chapter and here I will continue the search for a cultural definition of games. Before that I will, however, take a look at the concept of culture. On a general note, it is hard to find a more debated concept and it is beyond my objectives to deliver an extensive summary of all the traditions and disciplines involved in these debates. My notion of culture is influenced by the concepts and methods developed within cultural studies. Within this tradition popular culture is understood as a site of negotiation in which the meanings attached to such objects as digital games are created in a dialogue between the related actors. An approach of this kind fits my objectives well, as my primary intention is not to construct an extensive definition, but to examine how the concept of culture can help in understanding the sphere of play in general and the current gaming scenes in particular.

Defining 'culture'

It is practically impossible for a cultural studies scholar interested in the concept of 'culture' to bypass Raymond Williams's enquiry of the term. In fact, Williams's definitions have in the past couple of decades become a regular starting point for a significant number of studies concerned with the cultural dimensions of a variety of phenomena (Hills 2005, 11-14). According to Williams's much cited formulation from *Keywords* (1976), "[c]ulture is one of the two or three most complicated words in the English language" (Williams 1976, 87). The intricate historical development of the term is partly responsible for the complexity. The uses of 'culture' have further diverged from each other as the word and other words derived from it have become central concepts of several distinct disciplines and incompatible systems of thought. In a very general level, culture can be understood as 1) a general process of intellectual, spiritual and aesthetic development, 2) a particular way of life and 3) the works and practices of intellectual and especially artistic activity (ibid., 90). These interpretations of the term include both the common sense understanding of "Culture" with capital C (as high culture) and the more anthropological conception that perceives culture very broadly as a whole way of life. In an earlier essay Williams argues that whereas some writers use 'culture' in this broad anthropological meaning and others reserve the word for the arts and learning, one should actually stick with both meanings and acknowledge the significance of their conjunction (Williams 2001).

Hills (2005) further suggests, that if we follow Williams's insistence on taking the both meanings into account, a third way of considering culture has to be outlined. This approach depicts culture as everyday practices that are temporally and spatially bounded and through which individual and collective identities are constructed. Culture is no more seen as an organic whole but it becomes a fragmented field of power relations. In other words, culture appears as communal modes of practice, as a series of identities and competing norms. Some of the identities can be elitist and nurture the traditional idea of culture as art, while others follow very different values. As Hills points out:

> Defined in this way, culture is any social production of a communal identity and value system, whether this is the communally recognised identity and value system of artist, or the identities and values of, say, football fans. (Hills 2005, 15)

This conception of culture comes close to the one developed by the pioneers of cultural studies in the studies of youth subcultures. In context of digital games it poses two crucial questions that I will shortly discuss in relation to the concept of game culture and then come back in the following chapters. First of all, I will examine the usefulness of the concept of subculture in explaining the practices of the players of digital games. Secondly, I am interested in the questions of power, and especially in seeing to what extent the industrial production of games delimits

the boundaries of game culture and to what extent the playing field is open for player's definitions.

Williams's notion of culture as something that belongs to everyone, rather than being limited to cultivated elites, has been highly influential among cultural studies. The very title of Williams's early essay "Culture is Ordinary"[15] has become something of a theoretical catchphrase. Williams's writings have also participated in launching new academic uses of the word, as 'culture' is these days frequently added as a suffix to adjectival prefix (for example Japanese culture or digital culture) or substantival prefix (for example Internet culture or game culture). (Hills 2005, 14.) The broadening of the term highlights how culture has recently become to describe "the production of symbolic meanings as well as material production and processes of development" (Crawford & Rutter 2006, 148). In case of digital games, this means that one should take into account both the potentially conflicting meanings players attach to individual games and the industrial cultures that shape the products that end up in the market. Although culture is increasingly professionally produced as the emergence of cultural industries, game industry included, shows, it still should not be seen as something "out there" we just passively absorb. Instead, culture – and for that matter game culture – is also about people learning, manufacturing and practising within their social networks (ibid., 149). In conclusion, one of the distinctive steps, that cultural studies is responsible for, is the extending of our understanding of culture to cover areas and practices not usually labelled as culture (Hills 2005, 15). I will in the following discuss the benefits and the requirements the cultural studies approach can offer for the study of games.

In his study on the forms of participation among game culture, Raessens (2005, 374-375) identifies two important breaks the tradition of cultural studies is responsible for. The first one is the break from the traditional definition of culture, discussed above. As a result, digital games have among other "lower" and more popular forms of culture been accepted to be a worthwhile object of study. Further, as discussed, cultural studies has also paid attention to the everyday cultural practices that fall outside the high/low dichotomy. This will be of importance as I later on examine the relation of playing and other related everyday practices. The second break, Raessens points out, is the way cultural studies resists the idea of an audience as a passive object defined by the surrounding expressions of culture. Instead, cultural texts are considered to be open for different interpretations depending on social, cultural, and other contexts. The polysemy of media texts, the theory of "active audience" and the forms of agency available for players of digital games will be further discussed in this and the following chapters. In the following subchapter I move on to seek an understanding of game that will suit the purposes of my study.

[15] The article was first published in 1958. The copy referenced in my work was published in 2001.

Defining 'game'

The terms of play and game were already discussed in the previous chapter. The preliminary understanding of the relation between them suggested that when compared to the more free-form activity of play, games can be seen as systems characterized by rules. Both Juul (2005) and Salen & Zimmermann (2004) extensively discuss the different definitions of 'game' and notice that definitions can describe very different aspects of games. Some focus on the game as such, some describe the act of playing the game, and others discuss the consequences of playing. Juul carefully breaks down the previous definitions, collects the central structural elements and introduces a following definition:

> A game is a rule-based system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels emotionally attached to outcome, and the consequences of the activity are negotiable. (Juul 2005, 36)[16]

This barebones description helps us to clarify the borders between what is a game and what is not and it also provides a way of describing the differences between a game and another. Even though Juul's systemic explication is one of the most well-though definitions among the young field of game studies it still leaves very much open in connection to the culture of games. Juul's formulation defines very well, how games work as formal systems. It also offers insights to the relation between the player and the game. The relation of the game and the rest of the world, however, gets a short shrift. It is clear that Juul's choice is intentional and it does not decrease the value of the definition as such. Since the relation of the game and the larger cultural formations is central to my study, it is, however, not enough the state that the real-life consequences of games are negotiable. In order to go beyond the study of games as an abstract form and come to grips with the cultural dimensions I will in the following draw a short parallel from film studies.

In his classic study film theorist Gerald Mast (1974, 379-384) differentiates between often synonymously used terms film, cinema and movie. According to Mast 'film' is primarily the material on which a moving picture is recorded.[17] The term 'cinema' derives originally from Lumière brothers' machine called Cinématographe. 'Cinema', then, refers to the unique way the cinematic process uses the film material. 'A movie', for its part, is a specific kind of Cinématographe recording. A movie usually fullfills a conventionalized length, is marketed and manufactured within commercial structure and serves a specific audience function. A somewhat similar argument can be made in connection to digital games. First of

[16] Thus, according to Juul, the central elements of a game are: 1) rules, 2) variable, quantifiable outcome, 3) valorization of outcome, 4) player effort, 5) player attached to outcome, and 6) negotiable consequences (Juul 2005, 36-54).

[17] The role and significance of 'film' has obviously witnessed considerable changes wit the emergence of digital technologies. This, however, just highlights how new media challenge scholars for new definitions and fresh theorization.

all, contemporary games are artefacts that consist lines of code and can be seen as an offspring of programming. Digital games require computing power and memory, interfaces with consistent input and output methods and they also increasingly build on digital networks that connect devices together. These connections of software and hardware and different uses and practices attached to them form from one perspective the basic elements of digital games. Secondly, and following Juul's definition here, game as an object can be seen to be an abstract mathematical artefact that consists of a list of rules. Further, as an activity a game can be understood to be a dynamic system that changes its state according to the rules implemented by players, computers or natural laws (Juul 2005, 43-45). Thirdly, it can be argued that games are something that is sold to consumers as commodities, is normally expected to be fun, and form a multi-billion dollar industry. This notion is consciously based on the popular understanding of digital games and instead of trying to give any ontological definition it focuses on describing the characteristics of gaming mainstream. What is notable in this division is that even though the three dimensions can be differentiated they do not normally have name tags of their own but are all referred to as 'game'. Therefore it is of significant importance for the cultural study of games to take into account all these three dimensions.[18]

An understanding of games that is able to take into consideration the different dimensions discussed above needs to address the different actors that take part into the processes within which the meanings attached to games are negotiated. An early starting point for an approach of this kind is offered by the model of signifying practices Stuart Hall proposes in his seminal essay "Encoding/Decoding" (1980). According to Hall media texts are both encoded to stand for particular meanings and decoded in various ways by their readers/viewers. Encoding is influenced by the organizational conditions and practices of production, technological infrastructure and the conceptions of potential audiences. Decodings do not necessarily equate to encodings but audiences can produce different interpretations ranging from hegemonic readings that somewhat reproduce the preferred reading to negotiated and oppositional readings that question or reject the dominant code and produce alternative interpretations of the media text. If we now take a look at games, we can see that very similar practices can be identified in the workings of game industry and players. Game industry has successfully imported and adopted processes familiar from other branches of media industry. A games-specific genre system helps both developers to identify different market segments and consumers to identify the games similar to their prior favourites. Further, game sequels and licensed games exploit contents and meanings that are already familiar to consumers. At the same time, it is explicit that playing requires various acts of decoding. In order to make sense of the game interface and to master the controls

[18] Somewhat similarly, Konzack (2002) differentiates no fewer than seven layers of the computer game: hardware, program code, functionality, game play, meaning, referentiality and socio-culture. While Konzack, to my mind rightly, highlights the need for multiangled research of games, the method described is to some extent lacking in social and economic dimensions.

the player has to actively decode the structures the game is made of. Each game genre has characteristics of its own and understanding the operational and representational traditions is in itself a significant source of pleasure for gamers. (Giddings & Kennedy 2006, 138.)

Although Hall himself has later openly admitted that the model was not intended to be a grand model to last for decades, it has been very influential in opening up new questions and mapping new terrains among cultural studies (Hall 1994, 255). Later on, many theorists have emphasized that all media consumption consists of active interpretations based on knowledge of the particular codes media use. In this connection, it is pretty clear that playing games involves productive actions on many different levels. An event of playing a game requires active interpretation and can provide somewhat similar pleasures as other screen media. At the same time, significant differences can be identified. Much has been written for example about the comparison between the film viewer's identification with protagonist and the ways players identify with the avatar. The general argument is that the identification of player is stronger or at least different because the player controls avatars motions, actions and decisions. Further, the way games require sustained work from players is not typically associated with viewing of mainstream cinema. (King and Krzywinska 2002, Kennedy and Giddings 2007.) Even though this basic approach can be useful in identifying the particularity of gaming experience it is at the same time very clear that overly simplistic oppositions between 'active' and 'passive' do not have much use in understanding the differences between game-playing and other forms of media consumption. A more detailed study of players and their particularity as media consumers has to, however, still wait a few more pages. At this phase it should be enough to note that as systems, games are inherently dependent on player participation: players do not only read or watch games but they rather explore, configure and add content to them. The successful manipulation of computer hardware and software in gaming situations requires complex sensomotoric and kinaesthetic abilities. Further, players actively produce a variety of different games-oriented media texts and artefacts. Thus, even though playing a digital game necessitates acts of decoding, *gaming is obviously not only about decoding of messages.*

From this, at least two new challenges for the cultural study of games can be identified. First of all, it can be argued that the particularity of games is based on the way they invite players to create meanings through playful actions (Mäyrä 2008a, 19). As discussed, various media texts can at least metaphorically be seen as sites of play. Playfulness has also been argued to characterize all digital media (Danet 2001). In case of games, however, play is an inherent part of the process: in other words *to understand and experience games they need to be played*. In this sense playing games poses radically different challenges when compared to other media-related meaning making activities.

Secondly, as mentioned, digital games consist of a complex assemblage of media technologies. Therefore, games are not only played but at the same time *as*

combinations of hardware and software they are used. (Giddings & Kennedy 2006, 131.) As any technologies, games both enable and exclude certain uses. This can happen at the level of software when the structures of game limit the possibilities available for player. Further, in relation to hardware, playing not only requires particular abilities like familiarity with control schemas from gamers but also necessitates access to variety of platforms like in cases when a particular game is released only to one of the competing game consoles.

Now that the meanings of the terms have been contemplated separately it is time to bring them together and pose the question about game culture. I try to take into account the challenges and approaches identified in the previous subchapters.

Game + culture = game culture?

The concept of game culture has in the recent years appeared in many different connections. Common to the various uses is that a little work is done to construct a definition. More often than not game culture is taken as given, as common knowledge. Rather than patrolling what really should count as game culture, I will in the following try identify the central approaches in which the combination of game and culture has appeared in recent studies on games.

Boellstorff (2006, 30-31) argues that most discussions of culture among game studies employ a relatively narrow definition of culture in which the symbolic and semiotic aspects are emphasized. While the structuralistic inquiries that focus on meaning making in terms of schemas and cognitive maps have arguably been influential, the approaches of game culture are not limited to this. Some game scholars and designers have argued that it makes sense to talk about games being culture because of their high artistic quality (Crawford 1984, Jenkins 2005). The proponents of this view highlight the creative potentials of the emerging medium. They attack the traditional notion of games as idle and trivial entertainment and provocatively propose that games should now be seen as a field of *high culture*. At the same time there seems to be wide agreement that games have become a central field of global *popular culture*. Not only has the turnover of game industry challenged those of other cultural industries, but also the influences of digital games are visible on a variety of fields. Further, it has been claimed that once players take the potentials of digital games to their hands they are creating something that can be seen as a contemporary form of *folk culture* (Schleiner 1999, Jenkins 2006b). Finally, there are initiatives that highlight the importance of studying *the local, national and global game cultures* (BBC 2005, Mäyrä 2006).

If we now recall the understanding of culture as communal modes of practice, it is clear that some of the descriptions of game culture come closer to this conception than others. As mentioned, the understanding of culture as "collective subjectivity" comes close to the viewpoints of the pioneers of subcultural theory (Hills 2005, 15).

I'm referring here to the work that originated among British cultural studies scholars in the 1970's (see for example Hall and Jefferson (eds.) 1976 and Hebdige 1979). These discussions of subculture focus on urban working-class youth cultures and the ways members of these subcultures position themselves in relation to the values of the larger culture. According to these accounts rebellion and oppositional stances on "mainstream culture" are often expressed through a distinctive and symbolic use of style. The clear benefit of applying the idea of subculture to games is that it enables us to activate the plural form of "game cultures" and discuss the similarities and differences between game fans. Members of game subcultures can share the same language, rituals, artefacts, memorabilia and meet at shared spaces from online forums to LAN parties and conventions (Mäyrä 2008a, 25-26). In other words, games can become powerful 'symbolic centers' that define a variety of players' everyday activities. While the classic theories of subculture often position youth cultures and media in stark opposition, Thornton (1996) suggests that various media and businesses are integral to the authentication of cultural practices. This observation is very relevant to the theories of game culture, as the development of player's cultural formations is closely tied to the development of the game industry.

The central problem with the subcultural definition among games is that it is increasingly unconvincing to argue that games are a marginal form of culture. As some of the recent studies show, over half of the population of some western countries is involved with digital gaming (Kallio et al. 2007, ESA 2007). Hence, digital gaming has grown too big to be treated solely as a subculture. Instead, it can well be argued that several different subcultures exist within the larger game culture. Often these cultural formations are constructed around particular game genres. Practices, values, social groupings and everyday contexts of first-person shooter players differ significantly from, say, the players of dance games. A preliminary understanding of these game subcultures suggests, that players tend to form cultures within which the behaviour is connected to the characteristics of particular games but can only partly be explained based on them. Although the manifestations of game subcultures may differ significantly, some common mechanisms among different specified communities need to be identified. One example is the idea of gaming capital, a shared social currency that can be applied to a variety of game cultural phenomena. Gaming capital will be further discussed in the following chapter on players.

A notion on game culture that emphasizes the subcultural dimension may lead into a perception that game culture is entirely about players and their practices. Hence, it is relatively common to use the term of game culture almost synonymously with 'player culture' to refer primarily to the experiences and practices of game players (Yates & Littleton 1999, Newman 2004, Mäyrä 2008a). Even though I wholeheartedly agree that the study of players' interpretations, actions and communities is crucial, this is probably not enough for the cultural study of games. As already discussed, from the cultural studies perspective, games become a site of continual cultural production and negotiation of meaning. The

focus is on the systems for producing meaning and especially those systems and media of representation which give messages and artifacts their cultural significance. From this perspective the study of games considers the different contexts in which games have meaning placed on them. (Crawford & Rutter 2006, 162.) In other words, it is not only the player's cultures that shape games but it is at least equally important to examine the influence of different industrial cultures of design, production and distribution.

So far it can be said, that games are complex cultural artefacts which get their value, position, and meaning through both production and consumption. They are influenced by particular design ideologies and cultures of production. Marketing departments, advertising agencies and game magazines actively persuade players not only to buy certain games but also to interpret them in particular ways. At the same time games are on various levels shaped by the use of the players, by the very fact that they are played. This productive engagement of players with games generates emergent practices, social networks and whole new forms of culture. Thus, games should not be understood only as cultural artifacts but also as emergent cultures (Steinkuehler 2006). Therefore, in order to study the significant 'moments' in the "career" of a game it is not enough to study the phases separately but the focus has to be turned to the interdependencies of different phases.

Towards a cultural study of games

Thus, little by little it has become evident that in order to understand the practices and cultures of players, it is crucial at the same time to study the doings of game industry and practices of game design since they have a significant influence on the conditions in which players exercise their agency. Therefore, if many of the starting points of this study are influenced by the so called "cultural turn", my approach at the same time seeks inspiration from the more subtle "industrial turn" that has gradually taken place among scholars of popular media. Arguably, the emphasis of cultural studies has often been on texts, audiences and identity formation and compared to this matters of industry have played a relatively marginal role. Recently with the emergence of cultural economy, critical production studies and creative industry studies this has started to change. (Lotz, Tinic & Havens 2006.) Among game studies the design of games has been a relatively popular research subject. Critical political economy approaches have, however, had a minimal effect on the study of games, recent accounts like Kline et al. (2003) and Kerr (2006) being the notable exceptions.

Once games are seen as something that neither developers nor players can be solely responsible for, a need for more profound understanding of the roles and relations between the various actors among game cultures becomes obvious. (Morris 2004, Taylor 2006a.) Along these lines, Eileen R. Meehan has suggested that the

approaches of fan ethnography and political economy may have a significant contribution to offer to each other. Meehan (2000, 72) argues that:

> [u]nderstanding both subcultural practices and industrial contexts serves to balance optimism and pessimism by identifying sites where people exercise their agency in the cultural sphere as well as identifying the economic structures that limit such exercises.

While audience studies and political economy of media have traditionally been separated from each other, the emergence of user-created content has once again forced scholars to seek ways of bringing these approaches together (Hartley 2008). It has also been suggested, that it is especially in the field of game studies that the productive use of political economy can bring new perspectives to the contemporary cultural inquiry (Nieborg & Hermes 2008). Even though it is not difficult to see that both approaches have useful things to say, so far a little indication can be found as to how the combination might actually be done in practice.

One starting point for linking multiple perspectives and diverse objects of study can be found from the writings of media scholar Douglas Kellner. He suggests for cultural studies to develop a "multiperspectival approach" that takes into account 1) the production and political economy of culture; 2) textual analysis and critique of its artefacts; and 3) study of audience reception and the uses of media/cultural products (Kellner 1997, 25). Kellner further emphasizes that textual analysis and audience reception studies should utilise a multiplicity of perspectives and critical methods and that the results need to be interpreted and contextualized within critical social theory (Kellner 1995, Kellner 1997).[19] Kellner's approach resembles the different circular models of culture discussed among cultural studies. Richard Johnson (1986) introduces a model that represents a circuit of production, circulation and consumption of cultural objects. Production, texts, readings and lived cultures represent the different 'moments' in the circuit, depend upon the others and are indispensable to the others. Johnson, however, reminds that the separation is done in order to avoid determinism and is mainly analytical in nature. He further argues that actually production should be treated as a feature of each moment. Texts and cultural moments can be "productive" or in other words, have a capacity to produce. Here we can once again see the influence of Hall's encoding/decoding model. Readings, or in our case 'playings', should be treated as processes of production where the product becomes a raw material of new meanings.

In their study of the multiple meanings attached to Sony Walkman du Gay et al. (1997) introduce a similar but updated model. They suggest that any examination of cultural text or artifact should pass the circuit that consists of the processes of

[19] In his book *Gamework* (2004) Ken S. McAllister develops a games-specific model based on Kellner's approach. McAllister's method is, however, primarily rhetorical and therefore limited to the needs of my study.

representation, identity, production, consumption and regulation.[20] Applied to the study of games this means that one should consider what the game represents and how, what are the social identities associated with it, how it is produced and consumed and what are the mechanisms that regulate both the distribution and the use of the game. Building partly on du Gay's and his colleagues' model Kline et al. (2003) visualize the relationship between game developers and players in terms of circuits. Their approach is, however, not limited to the circuit of culture but they develop a "three circuit model" where cultural dimension is supplemented with the circuits of technology and marketing. Thereby, the model of Kline & al. allows us to consider people who play games both as players, consumers and users and the industrial production of games from the perspectives of design, programming and marketing. While the circular models are surely useful in overcoming more linear models and in mapping the research field, they tend to draw distinctions between processes that overlap and are mutually interconnected (Kerr 2006, 6-7). Considerable caution has to be exercised here since as mentioned various game cultural activities are understood to actively blur the boundaries between production and consumption, design and play.

To bridge the inter-dependent perspectives of rapidly evolving technologies, game industry strategies and experiences and activities of individual player I will briefly consider the offerings of science and technology studies (STS) for the study of games. This tradition asks how new technologies are shaped by social, cultural, political and economic values and what kind of effects these technologies in turn have on mechanisms and practices of culture and society. Applying this perspective on digital games helps us to see that both producing and playing games are processes in which the relations of humans and technologies are negotiated in different contexts (Kerr 2006, 5-6). To better understand the complexities of new media and their associated contexts Lievrouw and Livingstone (2006) outline a three-part framework. They (ibid., 2) suggest that information and communication technologies consist of:

> the *artefacts or devices* used to communicate or convey information; the *activities and practices* in which people engage to communicate or share information; and the *social arrangements or organizational forms* that develop around those devices and practices.

This model challenges the traditional media studies division between production, text and audiences. It does not specify any a priori relationship between the processes but emphasizes the dynamic nature of these links and interdependencies. As the model can be applied to basically any technologies, it is crucial to probe the particular aspects of games in relation to other related formations. It is important to ask, how the particular configurations of artefacts, practices and social arrangements associated with activities like mod making differ from those that characterize other active media audiences or, say, software hobbyists and open source cultures.

[20] The book is supposed to demonstrate 'good practice' in cultural studies. It, however, curiously lacks any empirical investigation of the practices of personal-stereo users. (Bull 2000.)

If we now consider the various arguments presented in this chapter, a preliminary agenda for the cultural study of games can be sketched. Through tracing the similarities with player behaviour among non-digital games and with other forms of media consumption the particularity and newness of digital games can be more adequately defined. The close examination of any games related phenomena should take into account the perspectives of play, usage and consumption. The research of players should also cover 1) the variety of devices and applications used for gaming, for production of games related materials and for communicating and organizing the gaming situations with fellow gamers, 2) the variety of everyday practices associated with playing and other games-related activities, 3) the social arrangements from communities and networks between gamers to players' relationships with other actors like game designers and retailers. Further, these approaches should be supplemented with in-depth studies of the game industry working cultures that can significantly shape the different layers of game culture. From the perspective of my work, special attention should be paid to the initiatives and competences that support movement between fixed producer-consumer categories.

Discussion

Rather than ask what counts as game culture and what does not, the account introduced here has been sympathetic to the variety of approaches how games attach to and become culture. As a starting point the broad field of cultural studies allows the researcher to combine and mix different methodological approaches. As Crawford & Rutter argue: "Unlike many areas of research, taking a cultural studies approach to understanding digital games does not mean that top-down and bottom-up approaches are incompatible" (Crawford & Rutter 2006, 162).This is essential in teasing out the complexities that characterize the contemporary game culture.

In conclusion it can be said that several different ways of defining game culture can be identified among the recent research on games. As the meanings of the term 'culture' are highly debated, it is not probable that the diversity will be dispelled in the near future. In this study, I am inclined to follow a notion of culture that highlights the centrality of the communal modes of practice. For digital games, this means that different game (sub)cultures can be identified inside the singular 'game culture'. The members of these cultures construct common meanings and practices that are often connected to particular spatio-temporal settings. Various game industry practices ranging from particular design choices to practical strategies for supporting player communities often take intimately part into the formation of player networks and their practices. As we will see later on in the chapter on player production, such genre-dependant subcultures as the FPS culture have developed in a close dialogue between the developers and the players of the game.

What it comes to the research on game culture, situated multiperspectival approaches are necessary. Both recent cultural studies approaches and the development in science and technology studies suggest that in case of digital games both design and play are profoundly shaped by different social, cultural, political and economic values. In turn they can have significant effects on the central mechanisms of culture and society. In this light, the different phases of the production of ludic meanings and pleasures should not be studied in isolation from each other, but they should rather be seen as an interlinked network of activities.

Chapter 5: The Quest for The Player

So far I have discussed the different ways of understanding games and the cultures that surround them. Players have been mentioned in various connections but so far they have mostly remained in the margins of the study. In this chapter players are brought to the centre stage and different perceptions of player are examined. Thus, what is a player, anyway? At the first glance this question may sound trivial. Everyone has sometimes played a game and therefore has some sort of experience of being a player. A common-sensical understanding of player as anyone who, at any given time, is playing a game is, however, all too simple. At any given time there are real people playing, discussing, buying or preparing for different kinds of games. The concept of the player is, however, not an innocent description of these actions but a particular social construction. This is of importance, as the different conceptualizations of player can arguably embody important implications for research (Smith 2006).

The issue of player requires analytical attention also because the popular considerations of digital games often pose a very stereotypical notion of player. Not only is it commonplace to consider gaming as a solitary activity but, more than this, also as isolating one. (Newman 2004, 145-146). Digital games form a favourable object for the continuum of public moral panics directed to new cultural and communications technologies. As discussed in the previous chapter games have their important specificities when compared to any other media. At the same time the utopias and dystopias associated with digital games have much in common with the ones evoked by earlier media technologies (Miller 2006).

This chapter begins with a brief discussion on the different uses of the concepts “player” and “gamer”. After that I consider the different views on player within game studies and position my work in relation to these notions. From there I move on to elaborate an approach that takes into account the twofold nature of player, as an actor that is both operating under the authority of the game rules and at the same time capable of performing actions that go beyond the rules. It is further argued that in order to fully appreciate the different dimensions of digital gaming, a researcher needs to analyse not only how people play but also how the materials that arise from playing digital games are used among players. The chapter is concluded with a discussion of gaming capital as a potential concept for bringing together the different player activities.

What is a player, anyway?

As Mäyrä (2006) points out, even though there are continual claims saying that almost everyone plays games in our late modern information society, a little reliable statistical information exists to prove these allegations. Individual studies looking into the uses of digital games and meanings associated to them can be identified, but for example national surveys producing comparable data on player demographics are rare. The most quoted player statistics come from Electronic Software Association (ESA), a U.S. industry organization, which publishes its survey results annually.[21] Even though ESA's reports can be a useful point of entry to the subject they include several problems from the academic viewpoint. Not much is told about the research methodology and therefore it is impossible to know how the concept of "player" is defined in the study. (Mäyrä 2006, 11.) At the same time, the rare academic surveys that focus on playing digital games are mostly limited to exploring the playing habits of children and teenagers. In short, these studies show that although many people in the western world have an access to digital games, not everyone plays and when compared to other media activities the frequency and duration reserved for playing are on average not remarkably high. (Kerr 2006, 108-110.)

Before we move on to examine the different academic positions on player, a terminological note is in place. As discussed in the previous chapters the concepts of play and game and the relation between them has been debated by various authorities. For some reason, the concept of 'player' and its relation to 'gamer' has not been discussed with similar enthusiasm. Initially, following the separation of play and game, one could assume player to be the active subject of play and gamer to be her counterpart involved with games. This takes us back to the distinction between *paidia* and *ludus* originally introduced by Caillois (1961, 12-13). As discussed earlier, Caillois categorizes games to *agôn*, *alea*, *mimicry* and *illinx*. Caillois is aware that these designations do not, however, explain the whole universe of games. Games can further be placed on a continuum between two poles. At one extreme free uncontrolled play, characterized by improvisation, turbulence and "frolicsome and impulsive exuberance" dominates. This "uncontrolled fantasy" is what Caillois calls *paidia*. At the other end, play is characterized by a growing tendency to bind players with different kinds of conventions and an increased amount of effort, patience and skill required from players. For Caillois, this latter component is *ludus*.

In his critical examination Gonzalo Frasca (1999) preserves Caillois's terminology but gives the nouns a slightly different meaning. In Frasca's (ibid.) words:

[21] The latest report by ESA includes e.g. the following results: Sixty-seven percent of American heads of households play computer and video games. The average game player is 35 years old and has been playing games for 12 years. Forty percent of all players are women. (ESA 2007)

> Paidea [SIC] is "Prodigality of physical or mental activity which has no immediate useful objective, nor defined objective, and whose only reason to be is based in the pleasure experimented by the player". Ludus is a particular kind of paidea, defined as an "activity organized under a system of rules that defines a victory or a defeat, a gain or a loss."

As much as this division is about the design and rules of the activity it is also about the attitude the player adopts. Digital games can support both of these approaches. *Ludus* games provide a closed product that can be explored within the pre-defined set of rules. By contrast, open-ended *paidia* games also have rules but they do not define a winner/loser or a clear-cut end condition. (Frasca 2003b, 229-230.) In his quest for more precise terminology for game studies Perron (2003, 242-254) suggests that it might be useful to apply this duality to the actors engaged in games. His approach differentiates between the *paidia player*, the *ludus gamer*, and the *ludus gameplayer*. 'Players' follow the schema of free play, and find their pleasures in exploring and improvising.[22] 'Gamers', characterized by the ludic spirit, go for challenge, attempt to go through every single section of the game and strive for optimal score. Finally, 'gameplayers' are not primarily interested in playing the game, but they want to test the limits of the game and freely play *with* the game. Hence, gameplayers set challenges for themselves and literally make their own game of the game.[23] I share Perron's concern about the lack of critical vocabulary. Nevertheless, the division introduced is problematic since it is in conflict with the everyday use of the words. Therefore I fear that following Perron's unorthodox use of the common terms would run the risk of needlessly complicating the analysis. In any case, Perron's division importantly shows that the requirements games pose to players have a significant effect on the player behaviour. At the same time, digital game players are not, however, entirely powerless or guaranteed to obey the rules but they can decide to use the game for purposes that suit their objectives.

Another way to distinguish between 'player' and 'gamer' is to take a look at the general definitions of the words. The dictionary entry of 'player' reveals various meanings attached to the word. Besides being "a person who plays a game", 'player' can refer to different human actors such as a musician, a theater actor, or someone "actively involved especially in a competitive field or process" (for example: a key player in politics). In addition to this, 'player' can also refer to a device that reproduces recorded material (as video images or music).[24] In this regard, the meaning of 'gamer'[25] is much narrower as it refers to 1) a player who is game

[22] Perron reminds that the digital game players he describes are quite far from the anarchistic side associated with *paidia*. 'Players' are not entirely free to make anything they want, but the player has to make decisions within the regulated structure of the game. These decisions can, however, be highly improvised since the player does not play to win or to get a better score

[23] It is not the easiest of tasks to conclude Perron's approach in short since his examples do not come only from digital games but primarily from interactive movies.

[24] Meriam Webster's Online Dictionary, http://www.merriam-webster.com/dictionary/player

[25] Meriam Webster's Online Dictionary, http://www.merriam-webster.com/dictionary/gamer

(especially: an athlete who relishes competition) and 2) a person who plays games (especially: a person who regularly plays computer or video games).[26]

In this connection, it is useful to point out, that the digital game industry mostly prefers 'gamer'. Gamers are often further distinguished into "hardcore" and "casual" segments that imply the nature and the intensity of player experience. The term has a strong association with the hardcore (male) gamers who spend considerable amounts of time and money on games. Due to this connotation there are a lot of people who play games but would never call themselves 'gamers'. (Kerr 2006, 112.) From this perspective 'a gamer' is no more anyone engaged in game playing but gamers are characterized by their active interest towards games.[27]

To conclude the discussion between 'player' and 'gamer', it is safe to say that no universal definition and therefore no unambiguous divisions exist. In this work the word 'player' is used as a general term that in the first place refers to an actor engaged in ludic activities with any kinds of games. 'Gamer' is preferred when the avid players and gaming hobbyists are examined. Whereas 'player' can refer to abstract functions required by the game text, 'gamer' is more dedicated to the actual practices performed by the people who play games.

Different models of the player

Various different viewpoints on player can be identified among game research literature. In his overview of different player models Jonas Heide Smith (2006, 23-24) outlines four different categories: the susceptible player model, the selective player model, the active player model, and the rational player model. The *susceptible player* model is based on the idea that the player's post-gaming behaviour is influenced by the game. Depending on the approach, the influences are believed to be dependant on the perceived game content or the reward model (violent audiovisual content in itself or rewarding the violent actions). According to the *selective player* model, players actively select particular games to fulfil their personal needs. Hence, this model focuses on the pre-play selection, not so much on the actual player behaviour. The *active player* model portrays the player actively

[26] Once again one should remember that the difference is also up to language. The German 'Spieler/Spielerin' is very similar to English language 'player' as it can refer not only to game players, musicians and actors but also to audio and video players. Both 'Spieler/Spielerin' and the French 'joueur/joueuse' can also connote 'gambler'. The Spanish 'jugador' can be used both in connection to free play and competitive games. The Swedish 'spelare' (gamer) derived from 'spel' (game) is the general term used for playing games while 'lekare' (player) is mostly used when referring to musicians (interestingly very similar to 'spelman'). In Finnish the seldom used term 'leikkijä' (player) refers directly to the one engaged in the act of play while 'pelaaja' (gamer) is the general term used for all game players.

[27] There is, however, not a wide consensus of the use of the term. For example the BBC survey *Gamers in the UK: Digital Play, Digital Lifestyles* (2005) somewhat confusingly defined 'gamer' as "someone who had played a game on a mobile, handheld, console, PC, Interenet or interactive TV at least once in the 6 months".

engaged with the game. From this perspective the analyses often focus on the player actions that are not prescribed or predicted by the game designers. The *rational player* model sees players as goal-directed entities that employ skills and strategies in the attempt to succeed in a game. As some of the four theories (3 and 4) mostly discuss the play behaviour and others (1 and 2) focus on the pre- or post-game actions they are not all mutually exclusive.

The player models described above have their origins in earlier theoretical discussions among media studies and other disciplines. The susceptible player model is based on the tradition of effects research which relies on the idea that media texts have the power to persuade and alter the behaviour of their audiences. The selective player model reflects the ideas presented within the uses-and-gratifications paradigm (UG for short). UG replaces the question of media effects with an interest on what people actually do with media. Theoretically UG is not a single approach but a collection of viewpoints and methods developed from the mid 20th century onwards. The active player model is connected to another turn within media studies, namely the increasing influence of British cultural studies. Cultural studies tradition argues that the meanings originate in the negotiation between the media text and the receiver. If signs (and therefore texts) can have multiple meanings, as semiotics suggests, then the "active audiences" can produce non-anticipated and potentially subversive readings. The final theoretical perspective, Smith calls the rational player model, can be most clearly identified in a lot of game design literature. In addition, it has some obvious connections to the economic game theory.

Some of the articles included in this dissertation seek inspiration from the theoretical notion of active audience and discuss further the connection between this approach and the empirical studies of player productivity. In this regard, it is not unfair to say that my study takes the active player model as a starting point. At the same time there are reservations that have to be made. Therefore, we need to take a look into the history and critique of active audience theory.

One starting point for the conceptualization of active media audience is the polysemic nature of media texts, an idea borrowed from semiotics. As discussed in the previous chapter, Hall (1980) argued that although the traditional media production is willing to control the meanings embedded in the media texts, media audiences exercise a certain freedom in their decodings. Once the texts are understood as open and non-reducible to singular and fixed meanings, the audiences and the interpretive process make their way to the research agenda. John Fiske, one of the central proponents of active audience theory, suggested that the value of Hall's theory lies precisely in this shift towards the reader as the site of meaning (Fiske 1987, 63). He also emphasized the freedom of audiences and suggested that media texts form only a starting point for the actual readings. In connection to television Fiske introduced the idea of "producerly texts" that stimulate viewers to create different meanings based on their social allegiances and to connect the texts to their daily life (Fiske 1991, 184). Fiske (ibid., 49-69) further argued that popular

pleasures (opposed to hegemonic ones) can be categorized to two main types – those of evasion and those of productivity. The first type is based on evasion from the prevailing and hegemonic meanings and the underlying social control. The productive pleasures arise from the production of meanings that represent the non-hegemonic cultures and identities.

Fiske's formulations soon received stark critique within the media scholars. I will in the following just highlight the central arguments of this discussion and then move on to discuss the role and influence of active audience theory to the study of games. Initially, the freedom of audiences may not be as wide as Fiske proposed. For example Morley (1992) agrees that media texts are not objects with one real meaning, but even so there are signifying practices within the text that promote certain meanings. By emphasizing the audience autonomy "the new reception studies" challenged the simple-minded effects models. However, according to Morley (1992, 26), they at the same time run the risk of denying any media influences and sliding into postmodern pluralism. From this perspective, the valorization of audience pleasure is suggested to lead into a cultural relativism that is readily subsumable within neo-liberal or conservative ideology of sovereign consumer pluralism. Although the critique is well-founded, it is necessary to notice that Fiske is not suggesting that media is only about the pleasures of the audiences and subversive readings. The focus on the audience is more of a result of delimiting the object of study. It may be true, that Fiske is overemphasizing the scale of the pleasures derived from the productive meaning making. At the same time he, however, proves that even though productive pleasures may be marginal, they obviously exist. (Pietilä 1997, 330-331.) A bit different critique has been proposed from the perspective of critical political economy of the media. The political economy approach argues that audience research pays too little attention to social, political and institutional activities and structures which generate the mediated ideologies and shape the productive processes. Garnham (2000), for example, considers it important not to confuse any audience activity with critical engagement and accentuates that an active audience does not necessarily equal a powerful or resistant audience. Altogether, Gray (1999, 25) has proposed that the most extreme version of the active audience appears somewhat rarely and is therefore more of a myth. Gray argues that instead of celebrating the freedoms of the audience, many of the writers closely associated with the notion of active audience actually spend a lot of energy in exploring the circumstances and conditions in which the active readings take place.

Interestingly, the active audience theory has relatively seldom been explicitly linked with gameplay in the recent theorizing of games (Consalvo 2005, 8). Whatever the reason for this, the indirect influences of active audience tradition are, however, visible as the active player model is very popular among game scholars. In his overview, Smith (2006) comes into conclusion that game researchers often adopt a notion on player that accentuates active, innovative and even subversive play behaviour. At the same time Smith suggests that most players play simply to win

and most of the time follow the structures and storylines created be designers. Therefore, the subversive and creative play styles are argued to be statistically relatively marginal. This observation obviously invites some self-critical rethinking for anyone studying the participatory and productive dimensions of playing. Following Aarseth (2007, 131) we can ask, if the active player perspective is after all prone to misguided and romantic celebration of game cultural fringe phenomena.

In the first place it is useful to remember that meaning production is always an active process, regardless of whether readers resist the meanings proposed by the text or not (Lehtonen 2000, 134). In this regard, avid gamers, their engagement in play and other player activities need not to be examined only in terms of resistance or "semiotic guerilla warfare". Further, as the critique of political economy proposed, the examination of players should take into account the social and industrial factors that shape the conditions in which players exercise their agency. Therefore, the study of player activities and pleasures associated with them has to be linked with a critical look to the industries that attempt to structure the player populations. As Smith (2006, 33) agrees there should be nothing wrong in limiting the object of study to particular aspects of video game play, as long as one acknowledges the potential relevance of other perspectives. Even though the transgressive elements of play may be quantitatively relatively marginal, that doesn't mean they should not appear on the research agenda. Rather, just the opposite, as Aarseth concludes:

> I would here like to argue that innovative, subversive and transgressive play, while perhaps statistically unrepresentative, is nevertheless a crucial aspect of, and the key to understanding all kinds of play and game culture; and therefore one that deserves the (critical) attention we can give it. (2007, 131)

Aarseth's point here is that the unexpected events and exceptional moves are the ones that are remembered. Therefore they are not incidental to gaming, but a central part of the player's experience, and as such an important object of study (ibid, 133). It is as well worth noticing that the impact of player production is not limited to players who deliberately turn their gaming hobby into a productive activity. While the number of people involved in, say, modding digital games is relatively limited, individual mods can be downloaded and played by hundreds of thousands or even millions of players.

Still one more point has to be made in regard to the different player models. Smith (2006, 23) himself admits that the four models are limited to the relationship between games and behaviour and therefore they do not encompass such positions as 'the player as co-producer'. As my interest is not limited to the immediate game instances and play behaviour, the understanding of player developed in this work goes beyond the categorization. In the following I move on to discuss the different forms and levels of identifiable player activities. The focus is in the relation of the players' in-game activities and other game-related activities that shape player's understanding of the games they play. This investigation should take us towards the

theorization of player that takes widely into account the different productive activities involved in playing games and turning game playing into a hobby.

The configurative player

The earlier theorizations of media consumption can help us in understanding digital games, but only up to certain degree. Because of the dynamic nature of digital games players' effort becomes an integral feature of any game. This is obviously not typical of only digital games, but all kinds of games. The computing power, however, opens a few important new possibilities. Computer can uphold and compute the rules, and the memory capacity allows computers to store and restore different game states. This gives games much flexibility and frees players from having to enforce the rules. The non-physical nature of games also produces new functions for player effort. (Juul 2005, 48, 52-54.) Many scholars have found the concept of simulation useful in explaining the dynamic nature of digital games (see for example Aarseth 2004, Järvinen 2003). Frasca (2001) defines simulation as an "act of modeling a system A by a less complex system B, which retains some of A's original behaviour". Basic simulations have existed long before computers but modern computers have provided the level of technical sophistication required for complex simulations. While complex simulations are used in various functions, from weather forecasts to military training, digital games form a popular and visible genre of them. From the perspective of meaning making processes, a basic understanding of the relation between simulation and representation is crucial. As Frasca argues, simulation does not only represent objects and systems, but it also models their behaviours. Whereas a representation, like a painting of a city, can provide many characteristics of the city, a simulation like *SimCity* also behaves like a city. Importantly, the simulation also allows and facilitates player experimentation.

For Espen Aarseth, digital games, like any cybertexts[28], are characterized by the non-trivial effort required from the player to work through them.[29] Aarseth (1997, 64-65) points out, that texts can have several different user funtions. Whereas the central user function of literature or film is interpretative, the description of games requires additional functions (Eskelinen 2001). The *interpretative function* is obviously present also in case of games. In addition, game players are required to perform *explorative functions*, as in deciding which path to take, and *configurative*

[28] In his 1997 book *Cybertext: Perspectives on Ergodic Literature* Espen Aarseth argues that cybertext is not a particular form of text but a perspective on all forms of textuality. The concept turns the attention to forms of ergodic literature characterized by the nontrivial effort required from the reader to traverse the text. Even though the book's concrete contribution to the study of games is relatively limited, it is widely considered to be one of the most influential "pre-ludological" texts.
[29] It is worth remembering that the games Aarseth discusses in *Cybertext* (1997) are limited to text-based adventure games.

functions, as in choosing and creating parts of the game. In a later article Aarseth describes the particularity of games in a following fashion:

> Games are both object and process; they can't be read as texts or listened to as music, they must be played. Playing is integral, not coincidental like the appreciative reader or listener. The creative involvement is a necessary ingredient in the uses of games. The complex nature of simulations is such that a result can't be predicted beforehand; it can vary greatly depending on the player's luck, skill and creativity. (Aarseth 2001)

Aarseth's idea of configuration has further inspired other scholars. It has been argued that the configurative practices include reaching goals by traversing, negotiating, and otherwise overcoming a series of obstacles and gaps (Eskelinen 2004, 38). According to Moulthrop, games appeal precisely because they are configurative, "offering the chance to manipulate complex systems within continuous loops of intervention, observation and response" (Moulthrop 2004, 63).

The theorization of configurative player who manipulates complex simulations is not dependant on actual players but relies on an idea of "implied player", an abstract role consisting of the expectations posed by the game. The player is seen mostly as a function required for the game to "exercise its effect" (Aarseth 2007, 132). This notion of player is obviously far from the one discussed by game culture scholars focused on observing and analysing actual flesh-and-blood players. Aarseth (ibid., 130-131) argues that there is a potential conflict between the humanist and the social sciences conception of the player. The tension between these viewpoints is partly caused by the fact that object of study in these approaches is not the same. For a humanist, interested primarily on understanding the game as an aesthetic object, the player is merely a function of a game. For the ethnographic player-observer, the focus is on actual, historical players. Thereby, since games arguably are both social and aesthetic phenomena, Aarseth calls for a theory of the player that combines these two perspectives.

Although arising from very different background and working on a somewhat different level, Aarseth's suggestion shares traits with the multiperspectival approaches discussed earlier. Even if the focus of research is turned into the processes and contexts that shape the playing of games, text-centred approaches that help us to understand the expectations the game poses to the player (the implied player) can prove to be useful. Outlining an implied player is also important in identifying the ways actual players transgress and go beyond the expectations. Further, a textual study of the implied player could have interesting contributions to the study of the "imagined player", meaning the formulation of the player during the design process. It is argued that the formulations of the player that designers hold in the early phases of game design can play a powerful role in what identities are inscribed within the finalized product. Therefore, game designers construct not only an artefact, but they at the same time promote particular forms of play, and as a consequence, particular players. (Taylor 2006b.) Comparing the 'imagined player' formulated in the design phase and the 'implied player' constructed by the finalized game could improve our understanding of the process and influence of the game

design. I won't go any further to this direction here, but later on, article number 5 will shed light on the different perceptions of player within the game design field. In the following I will continue to discuss the relation between the player and the game and consider the twofold nature of player as someone who at the same time plays and is played.

Player as played

In his famous book *Understanding Media* Marshall McLuhan argues that: "[a] game is a machine that can get into action only if the players consent to become puppets for a time" (McLuhan 2001, 259). Initially, this description seems to portray relatively well the way the rules of the game limit the possible player actions. McLuhan himself does not, however, explain or develop further the idea but mostly leaves it to his readers to clarify the significance of this statement. This is typical of McLuhan's essayistic and often ambiguous book, more famous for such powerful slogans as "The Medium is The Message" and "Global Village", than for meticulous development of theory.[30] The reason why McLuhan's observation requires some more attention is that it at the same time appears to make intuitive sense and be in contradiction with the notion of the active player. When the player engages in a gaming session, she at the same time accepts the limits and the possibilities of the game and the fact that they shape her gaming experience. Instead, a player who refuses to follow the rules of the game and let's say refuses to shoot the enemies in a standard shooting game can expect the game to end relatively soon. Aarseth's (2007, 130) reading of Gadamer takes this stance even further: the very attraction of a game is argued to be based on the game's ability to master players. Aarseth also importantly points out that a player, who subjects herself to the rules and structures of the game, is no longer a complete free subject able to decide what to do next. Hence, if, as discussed earlier, the operation of a game is dependant on player actions, the player is at the same time notably defined by the game.

The interdependent relation between the game and the player is also noted by other scholars:

> The game signals its dependence on the player as (except during cut scenes) the avatar will not move without some action on the part of the player. Significantly though, it must be emphasized that the capabilities, the limits and the possibilities coded into our avatars also determine the range and form of our activities [---]. (Dovey & Kennedy 2006, 109)

It can be argued, that for the duration of the game the player and the game become inseparable and can be understood only in relation to each other. This "cybernetic"

[30] In this connection, it is important to notice, that even though McLuhan was highly interested in the possibilities offered by new technologies and considered games a media of interpersonal communication, he, however, was not talking about digital games.

understanding of the gaming situation suggests that neither of them is outside each other but they become part of the same loop. As discussed earlier, digital games require players to perform skilful operations in order to master the interface and the challenges posed by the game. At the same time, the game as a complex computer-based system is capable of giving meaningful responses to player's actions and as a result participates in producing a particular kind of player. (Dovey & Kennedy 2006, 108-113.)

So, the player is up to some degree forced to behave within the rules that govern the possible actions in the game. This does not, however, mean that players are entirely subordinate to the game or always play by the rules (Sicart 2006, 108). Many games, especially those that support the forms of *paidia*, invite players to explore, invent and improvise. Added to this, players are capable of utilizing unpredictable strategies, exploiting the possible flaws and inconsistencies in the game, and even defining their own rules and side games in order to entertain themselves (Newman 2004, 28). This twofold nature, on the one hand acting under the authority of the restrictive game rules and on the other hand capable of performing actions that go beyond the rules or even playing with the rules, is essential to our understanding of the player. In a very general level, most scholarship on games would probably agree with this idea. As the different player models show, when it, however, comes to the degree of freedom ascribed to players, the notions begin to diverge.

The dual character of player reminds us of the twofold meaning of the term 'subject' as both an agent and someone placed under authority. In his seminal article Althusser (1971) pointed out that the central function of ideology is to enable people to experience themselves as autonomous, complete and free individuals. However, it is not primarily about forcing an ideology upon its supporters but more about ideology making particular identities appear more natural and obvious than others. Lehtonen's (2000, 145-146) reading of Althusser emphasizes that we cannot actually get beyond ideology. Since the human consciousness is always pre-constructed, the freedom of subject is necessarily limited. Lehtonen also advises us to be cautious in reading Althusser. A simplified reading of Althusser can lead us to think that we all automatically become subjects, while resistance and change are not possible. That is obviously not the case, but what Althusser's critique can give us, is an important reminder of the limitations of players' contributions.

Althusser's take on ideology also reminds us of the fact that the player-subject is not limited to the immediate gameplay. As discussed, the dual understanding of player as both a subservient to the structures of the game and as an agent capable of producing new interpretations and operation models works well to explain the player actions inside the game world. A similar dual relation can be found on the macro level of game culture where the tension is produced between players as game cultural actors and the game industry's operations that aim to delineate and control the players' activities. From this perspective we begin to see, that the player actively engaged with the game and the petty producer using the game to examine her

creativity may not be as far from each other as we may think. I will come back to this issue in the following chapter when the interdependent relation of player productivity and game industry practices is discussed. Before that I will move on to discuss the different ways games become shared and joint experiences. Whereas the examination has so far mostly focused on the relation between the player and the game, the following review sheds light on the significance of other players and the games-related activities that happen outside the immediate gaming situation.

Shared meanings, shared playgrounds

Lately, a lot of studies have examined the social aspects of digital games and showed that the different forms of communication and co-operation are central to the player's experience (Wright, Boria & Breidenbach 2002, Castronova 2005, Taylor 2006a). Especially the online worlds from MUDs to modern MMOs have spawned a variety of social formations: friendships arise and are maintained, players form clans and guilds and whole economies are constructed around the player activities. Based on these findings it is difficult to maintain the idea of players as solitary and isolated creatures. Instead, it is possible to identify a variety of different types of social interaction among digital games. This is obviously nothing new. The nature of play has always been social and the vast majority of traditional games require more than one player to function. In fact, it is possible to argue that single-player games, a form of gaming often associated with digital games, are more of an aberration in the history of games (Koster 2006). Then again, digital gaming has never been solely about single-player games. Already such early digital games as *Spacewar!* and *Pong* were designed for more than one player. Furthermore, the sociability of games is not entirely reliant on the design choices. It is not rare that single-player games are played by more than one person. Games may be played in turns, or the challenges can be tackled in a team. Sharing responsibilities is not uncommon as the controlling player can be accompanied with another taking care of specific tasks like map-reading, observing the environment or problem-solving. (Newman 2004, 152.)

As mentioned, utilizing the computing power and memory capacity provided by computers helps designers to produce new kinds of gaming experiences. The on-going development of different gaming-related technologies is, however, not limited to creating all-encompassing simulations or ever more photorealistic graphics. These days most of the computers are connected to other computers over the Internet. This allows players to inhabit shared game worlds and jointly construct their experiences. Further, players use the Internet to discuss their experiences, share ideas, mingle and download and upload game-elements amongst each other. Connectivity also allows the gaming hobby to extend beyond the moments and sites dedicated to play. Various activities associated with physical sporting events,

ranging from post-game discussion and argument, game lore and gossip to formation of teams, leagues and tournaments, similarly surround network gaming (Kline et al. 2003, 186). Thus, connectivity offers players a chance to create forms of sociability (communities, networks) and new ways of expressing and sharing their gaming hobby.

Many scholars agree that our understanding of digital games should not be limited to the act and moment of play itself (Newman 2004, Pargman & Jakobsson 2006). In other words, strict focus on the moments of play would significantly impoverish our understanding of players. Miguel Sicart (2006) provides an excellent portrayal of the interrelationship between the immediate gameplay moments and the periods between and outside them:

> [W]hen I started playing World of Warcraft I created the subject that plays this game, faithful to the experience it provides. That subject plays WoW within those parameters that make the game an event that creates a subjectivity [--], but I also reflect upon my gameplay and interact with the community, thinking the situation according to the game. [--] When participating in the WoW community discussions I am also being a subject true to the event of the game, even though I am not immersed in the actual gameplay of the game. The player-subject is not limited to the game experience once it is created: the player-subject operates as a relevant subjectivity in every situation in which the subject can be successfully faithful to the game. The game as actuality, the experience of the game, is larger than the mere gameplay sessions: the game is every situation in which the subject that is created is operational. (Sicart 2006, 120-121)

Sicart's example indicates that to fully appreciate the dimensions of digital gaming, one needs to analyse not only how people play but also how the materials that arise from playing digital games are used among players.

All this brings me back to the issue of magic circle. As discussed in chapter 3, Huizinga suggested that the game rules construct a bounded space that protects play from the "contamination" of the everyday. As also mentioned earlier, several recent issues among game cultures seem to challenge the rigid separation between games and everyday life. Such phenomena as professional gaming and real-money trading of virtual game characters suggest that "sometimes our 'virtual spaces' leak over into our 'real' worlds" (Taylor 2006a, 151). Games can be said to follow people around, as players are known to constantly shift their attention between playing, surfing the web, answering the instant messages, watching television and other current activities (Consalvo 2007, 190, Pargman & Jakobsson 2006, 19-20). In other words, in the lives of avid players digital games are becoming such an ordinary and mundane part of everyday activities that the magical qualities still often associated with play are rarely experienced. While magic circle may be a useful tool for understanding some aspects of gaming, the concept should not mislead us to oversimplify the messy relations between the spheres of real and virtual and game and nongame (Taylor 2006a, 152). At the same time, it would probably be too radical to claim that the circle around games is completely destroyed. Games give room for experimentation and allow players to do things that they would otherwise

not dare to or that may be forbidden or entirely impossible in the "real" world. Further, depending on the game the consequences and rewards for actions can either be very similar to "real world" results or in other cases very different from them. Thus, even though playing is increasingly tightly integrated to our everyday lives, the rules and rewards games set up still form a boundary of some sort (Consalvo 2007, 190). This boundary, negotiated every time a game is played, does not necessarily include any magical elements. In the other end, players often continue activities motivated by games outside the immediate moments dedicated for playing. Game fandom embodies an interesting example of such activities.

As discussed earlier, avid gamers share various characteristics with fans of other popular cultural phenomena. It is typical for fans to share and trade knowledge about their common interest. In case of digital games this sharing of information has a particular role. Be it the location of a specific key, the secret behind a specially effective move, or a particular tactical insight, these pieces of information can become crucial to players' success and therefore immensely valuable. Learning from more experienced players and trading knowledge on particular strategies is typical to a variety of games and obviously not only to digital games. The ways of sharing the information are, however, arguably more varied than before. Game fans produce FAQs (Frequently Asked Questions), hint sheets and 'walkthroughs' that guide the player by outlining the solutions to the challenges posed by the game. (Newman 2004, 157-158.) These detailed documents are uploaded to the fansites and shared via bulletin boards. Also video capture software and video sharing sites are increasingly used in producing and distributing this vital information. Walkthroughs highlight the importance of game hobbyists and fans in the larger scale. While it is obvious that not all fan activities are representative of the mainstream gaming habits, they can reveal interesting bits about the types of engagement players have with digital games. Moreover, although not every player engages in the production of fan materials they can still find many uses for other players' productions. (Newman & Oram 2006, 80-81.) Player-produced walkthroughs can have concrete influences on the gameplay experience as they can help players who are stuck in particular level or want to find all the secret treasures. In case of fan art and fan fiction, players who have no skills or inclination to participate in the production of these texts can still form an active audience for other players' creations and in this way find inspiration for their personal experiences.

Discussion

To conclude some of the findings of this chapter and to make sense to the diversity of player-subjectivities I will turn to the concept of 'gaming capital'. Mia Consalvo, who has studied a broad range of player behaviour, has introduced this useful concept "to capture how being a member of game culture is about more than playing

games or even playing them well" (Consalvo 2007, 18). 'Gaming capital' is a reworking from Bourdieu's 'cultural capital'. Cultural capital refers to knowledge that confers social status and is accumulated through upbringing and education. Bourdieu's original schema moves away from rigid categorizations and linear models of the social structure. Applying Bourdieu's schema to the terrain of gaming results in gaming capital, that is basically about being knowledgeable and having opinions about games-related things and sharing this information with others interested in games. Gaming capital is dynamic by definition and therefore it can be applied to a variety of games and game cultural phenomena that tend to change over time. One of the reasons why Consalvo (ibid., 3-4) comes up with 'gaming capital' is that she finds the term subculture too narrow to explain game players' activities. She argues that while individual games or game genres can spawn formations that are suggestive of subcultures with shared symbols and tastes, games as a whole are too broad to be considered this way.

Although I basically agree with Consalvo's argument on the limited scope of 'subculture', I would not leave the term completely aside. As play is not detached from other fields of culture and entertainment, consumption of digital games is often tied to a larger assemblage of thematic and stylistic choices. It is not uncommon that an active player of, say, sci-fi themed games is inclined to also consume science fiction novels and movies. Similarly, more often than not a sport game enthusiast is at the same time an active Sunday league player or an active consumer of on-site and mediated sports. As the examples indicate, the methods of gaining gaming capital may not always be immediately tied to playing digital games and may vary between different "gaming subcultures". Therefore I suggest that Sarah Thornton's conceptions of 'subcultural capital' have an important contribution to our understanding of gaming capital. Thornton (1996, 10-14) argues that subcultural capital is coded in the ways that it confers status only in the eyes of the beholder who is initiated into the particular subculture. In this respect, subcultural capital is embodied in the form of being "in the know". Subcultural capital is further characterized as extra-curricular, as knowledge that cannot be learned at school. The relation between subcultural capital and economic capital is relatively complex. While subcultural capital may not convert to economic capital with ease, the members of the subculture and related cultural industries can find various ways of benefiting financially of the "hipness" and being "in the know". To my mind Thornton's descriptions seem to fit quite well to the sphere of gaming. From this perspective 'gaming capital' consist of different forms of "inside knowledge" that seem not to have value or significance outside game culture but can still in special occasions be turned into monetary value. Thornton's contribution also indicates that the status of gaming capital is necessarily connected to the changing trends of gaming and what is considered to be in and out of fashion at any given time.

In the context of my work I need to highlight two different dimensions of gaming capital. First of all, the concept offers a way to examine the different player activities together. The ways of gaining this flexible currency are not limited to

playing games but the games-related productive activities that are appreciated in the player's social circle can as well become sources of gaming capital. As there are several ways of accumulating gaming capital, easy dichotomies and typologies should be avoided. Labelling some activities as more active, resistant or productive than others tends to impose different player types that force diverse patterns of behaviour into constrained categories. I suggest that game culture should rather be mapped as a network of connected activities. One player can at the same time be involved in several activities ranging from actively following the game launches to adopting strategies that exploit particular weaknesses in games and from reflecting one's gaming experiences in a personal blog to participating a project that builds a game modification. If an individual aggregates a variety of games-related activities in her everyday life she can be expected to be high in gaming capital. Surely some activities can be considered more capital-intensive than others but the values of actions are prone to change over time.

The second issue connected to gaming capital leads us to consider the relation between players and the game industry. The interest on gaming capital is not limited to players' realm but various commercial bodies have interests in packaging and selling the different elements of game culture. Strategy guides signify a visible example of this progress. In the 1980's many gaming magazines published game news, hints and strategy guides that were faithfully studied by player populations. Along with the spread of the Internet, players started to produce game tips, cheat guides and walkthroughs and spaces of their own to distribute and discuss the pieces of gaming capital. Today, corporations are colonizing these spaces, commodifying the results of players' work and selling it back to them. For example game guides, which originate in early 1990's player-made hint books, are officially licensed by game publishers and form an economically significant business. (Consalvo 2007, 184.) What these development seem to suggest is that the dynamics of game culture are under constant negotiation. Players' ideas of the nature and the ownership of the spaces dedicated for play may differ significantly from those proposed by game designers and marketing departments. The flows of gaming capital are decided within the complex networks consisting of different kinds of players and game hobbyists and a variety of industry partners. In the following chapter these dynamics are further discussed, the central focus being in player production.

Chapter 6: The Question of Player Production

So far I have relatively widely observed the different levels of player actions from meaning making practices integral to understanding any media texts to more games-specific forms of participation. In this chapter I will sketch some theoretical starting points for understanding player production that on the one hand is rooted in play and player's cultural practices and on the other hand is opening new opportunities for industrial enterprises.[31] The different meanings associated with the term 'production' and its blurring with 'consumption' are examined. It is argued that player production can be transformed into a games-specific mode of immaterial labour. Some examples are drawn from the history of games to prove how playing and designing games have always been closely connected. Mods, short for game modifications, are further examined to identify the specific characteristics of player production associated with digital games.

In his analysis of games as participatory media culture Raessens (2005) makes a distinction between three domains of participation: *interpretation, reconfiguration and construction*. I find the distinction useful since it can be used to connect this chapter to the earlier ones. In connection to game culture (Chapter 4), I discussed the polysemic nature of media texts and different strategies available to players in constructing meanings for and from these texts. From Hall's theorization of the interplay between encoding and decoding the chapter moved on to examine the multiperspectival approaches capable of explaining the inter-dependant development of grass-roots initiatives and global game industry strategies. In any case, it was clear that while decoding is integral to gaming the activities of player are under no circumstances limited to interpreting the meaning of the text. In the chapter on players (Chapter 5) the notions of "explorative" and "configurative" user functions were discussed to explain players' abilities to control and manipulate the game world. In Raessen's terms, this player work needed to actualize the potentials build into the game is called reconfiguration. Finally, the category of construction equals the addition of new game elements. This can mean both the making of completely new games and the development of modifications of existing games with the help of the editing tools. This constructive element of player behaviour will be further discussed in this chapter. My understanding of the forms and boundaries of

[31] In some cases, like in updating a games-related website or composing music to a small-scale indie game, people who are not actively involved in gaming, may donate their productive labour to a games-related purpose. Strictly speaking, examples like this may not qualify as *player* production. As these examples are, however, relatively marginal, they do not seriously question my conceptual choice.

this activity, however, differs slightly from the one presented by Raessens and therefore a brief elaboration of 'player productivity' is in place.

Initially, every level of player behaviour can include productive elements. It is useful to recall Fiske's notions of "producerly texts" that stimulate media users to connect the texts to their daily lives and arouse "productive pleasures". In relation to digital games one could, following Raessens's formulation, distinguish between interpretative production, reconfigurative production and constructive production. The interpretative and reconfigurative aspects are necessary and always-present components of the game experience, whereas construction is less common. However, as gaming becomes more central in the everyday life of a gamer, the importance of constructive aspects tends to increase. As discussed, the engagement with the game does not finish once the game session ends but the players keep on thinking about the fictional worlds afterwards. Some players take their dedication further and expand their experience by contributing to the player communities and by constructing games-related content (Burn 2006). The player-produced documents, art pieces, recordings, objects and software are then openly circulated and actively discussed not only by the people who produce this content, but also by large populations of players who sustain their engagement with the games by downloading these products of other players work.

It seems that the forms of player production are tightly interconnected and sometimes not so easy to distinguish from each other. Alternative readings of the game world events or characters may result in forms of fanfiction that question, transform or replace some elements of the fictional world. For example a slash machinima film may create an intimate relationship between two characters of same sex who may not be romantically connected in the first place. Alternatively, a player-made modification to a shooter game may replace the fast-paced skirmish with a more unhurried tactical variation. Another example could be the walkthroughs or cheats written by a few expert players and used by many other players to succeed in the game. Thus, the levels of production are interconnected and seem to inspire each other. Therefore, instead of considering the different forms as clear-cut categories, it may be useful to consider player production more as a continuum or a network of activities. In the lives of players these activities appear as situated combinations that can accumulate gaming capital. To my understanding, gaming capital is gained not only by being a skilful player, but recognition can as well be earned from the creative projects that result in customized game content or artistic games-related works.

It can be argued that players' activities constitute a form of labour that to a large extent generate the very game experience and the game content. To illustrate the diversity of productive practices, Arvidsson and Sandvik (2007, 101) suggest that players put their social and affective energies to work 1) as performers of gameplay, 2) as participants in clans or communities and 3) as co-designers and co-developers. While the previous chapters have touched the first two activities, this chapter encompasses the forms of production that result in new game elements and the

related production that exploits the game software to produce entirely new digital objects. Additionally, I am interested in the distribution and circulation of the results of this co-constructive production. This allows me to discuss these specific forms in relation to other forms of player production and the forms of industrial production. Both Raessens's 'construction' and 'co-developers' of Arvidsson and Sandvik come relative close to my formulation but they leave the software side of things mostly undiscussed. As already discussed in chapter 4, digital games consist of software and as programmed structures they allow particular kinds of uses. In this regard games are not necessarily limited to playing, but they can also be used as tools. Therefore, the characteristics of games as software and the significance of engine-driven design paradigm are further examined. Before all this I will, however, shortly consider the meanings associated with the general term 'production'.

Understanding production

The phenomena I have described above are often discussed under such titles as 'user-created content' or 'user innovation' (for example see von Hippel 2005). The basic problem with these terms is that connecting 'creativity' and 'innovation' with the digital media users has been immensely popular within the recent marketing discourses. As part of the social media marketing jargon the terms have become particularly slippery and open for diverse interpretations. As I have tried to show in the previous chapter players have particular characteristics as media consumers. Therefore I here prefer 'player' over user, consumer or any other related word. Further, as my intention is to highlight the role of player in the current environment in which media consumption has taken visibly productive modes I have chosen to talk about 'player production'.[32] Choosing 'production' is supposed to represent a step away from the hype. At the same time it is obvious that every word comes with an ideological baggage.

In the Introductory chapter to *Media Production* (2006, 1) David Hesmondhalgh at first proposes that, basically, we are all producers. Nearly everyone is regularly involved in the production of symbols: words, sounds and images that stand for other things. At the same time, during the past decades symbol production has become increasingly dominated by the media. Hesmondhalgh argues that one of the core features of the mediated world is the asymmetry between professional media makers and their audiences. Every day immense global audiences consume cultural products made by a relatively small number of people. According to this logic, most of the people may be symbol makers, but very few of us are media producers. Thus, the book on 'media production', even though admitting that production is basically not foreign to anyone, concentrates solely on examining different approaches on

[32] This does not mean that the other terms are entirely without use. 'Player production' underlines the process, whereas 'player-created content' refers to the results of production.

media industry and media professionals. This example nicely highlights the tendency of media and communication studies to study consumption and production in separation.[33] Consumption is mostly studied by focusing on media audiences and their practices, whereas production is in most cases associated with the media industry and seen as a privilege of media professionals (Deuze 2007a, 244). It is, however, increasingly difficult to argue for keeping these domains of research apart from each other. Actually, it was already Marx who emphasized that production and consumption are inherently tied to each other.

Karl Marx's most in-depth discussion of the relations of production and consumption is included in the 1857 Introduction to the notebooks, posthumously published as *Grundrisse*. For Marx (1973, 90-94) the connection between production and consumption is a profound and complicated subject. He distinguishes three different identities between the processes. First of all, there is the relation of *immediate identity*. Production immediately includes consumption as it consumes both natural resources and the means of production. Consumption, on the other hand, is immediately production: for example while consuming food the human being at the same time produces her own body. Secondly, the processes of production and consumption are *mutually dependant*. They mediate each other and the one appears as a means for the other. Production is responsible for the material or the object that is consumed. Respectively, consumption creates the need for new production and therefore can be seen as a presupposition to production. Finally, added to this, Marx argues that there is an *internal connection* between production and consumption. This means that each of the processes creates the other in completing itself. Production produces consumption by creating the specific manner of consumption. On the other side, only consumption concludes the product as a product and therefore also the producer as producer.

In the same connection Marx (ibid., 85) argues that there is no production in general. On the contrary, forms of production are specific to time and conditions. While, as Marx observes, all epochs of production have certain common traits, it is crucial to investigate the forms of production in connection to the particular historical context.[34] While Marx is mostly interested in the modern bourgeois production, it is obvious that the forms of production examined in this dissertation have developed in somewhat different circumstances. As a phenomenon, player production is tied to the specific developments in the industry of digital game. At the same time, the contemporary forms of player production should be understood in relation to the larger societal developments of information economy and network society.

[33] Symptomatically, Open University published a separate book on media consumption (Marie Gillespie (ed.) *Media Audiences*, 2005) in the same four book series.

[34] According to Marx our mode of understanding must change along time to fit the contemporary social world. Hardt and Negri (2006) then argue that to follow Marx's method we have to depart from Marx's theories, as far as they are bound to such modes of production and capitalist society that have changed during the past 150 years.

Hardt and Negri who have employed Marx's ideas on method claim that the contemporary economy is defined by a dominance of *immaterial production*. The current informationization of production does not change the fact that labour is a fundamental source of value in capitalist production. The quality and nature of labour, however, is bound to change. Hardt and Negri (2000, 289-293) distinguish between three types of *immaterial labour* that characterize the information economy. The first is associated with the industrial production and shows how the incorporation of communication technologies transforms the production process. The constant and immediate communication between production, planning and the market can lead to a situation where the commodity is not produced until the consumer has already chosen and purchased it. Secondly, the writers discuss the labour of analytic and symbolic tasks visible especially in the service sectors where production normally results in no material and durable good. In case of services, production is entirely based on the continual exchange of information and knowledges. Finally, a third type of labour, affective labour, focuses on the production and manipulation of affect. In brief, immaterial labour should be understood as labour "that produces immaterial products such as information, knowledges, ideas, images, relationships, and affects" (Hardt & Negri 2006, 65). The global game industry, focused on controlling the flows of information and ideas, facilitating relationships, producing images and illusions and manipulating affects, is an exemplar of a business in which the achievements of immaterial labour become visible.

If we contemplate the consequences of the passage from industrial to informational economy, the *decentralization of production* is one of the most visible transformations. In the informational economy the management of communication networks becomes essential conditions for production. It is *the network* that takes assembly line's place as the central organizational model of production. Not surprisingly, information networks have a crucial role in this process of releasing production from territorial constraints. (Hardt & Negri 2000, 294-295.) A manifestation of this decentralization process can be found in the ways game industry is effectively outsourcing some of its tasks. While the headquarters of central publishing companies remain in the main markets, namely USA, Japan and Europe, the development studios are much more dispersed around the world. Moreover, the major players have widely outsourced the manufacturing of software and hardware to the factories mostly located in developing economies. One obvious motivation for these concrete changes in the practice of game production is the desire to benefit from more flexible and detailed specialization of production. At the same time, it is clear that a lot of outsourcing is driven by attempts to take advantage from cheaper labour and lower labour control. (Kerr 2006, 77.)

The shift towards more flexible organization of production and more mobile labour units is often labelled as a change from Fordist to post-Fordist production. Post-fordism is characterized not only by flexible production but also by segmented and customized consumption. Many commentators agree on the central role of the

computer and the information networks in this shift. For Kline et al. (2003, 64) post-Fordism represents three different shifts in the society. First of all, mass-production is replaced with flexible small-scale production structures. Secondly, mass market is broken down into segmented niche markets. Thirdly, in the area of government, post-Fordism is characterized by a shift from welfare state to privatization and deregulation. Kline et al. (ibid. 75-76) go on to propose that digital games are right at home in this high-technology capitalism. They describe digital games as the ideal commodity of post-Fordism that embodies the central forces of this new regime of accumulation.

Kline et al. (ibid., 198-201) further argue that the management of the post-Fordist workforce involved in the creative high-technology industries requires new means of control. In regard to the game industry, employees are seduced to accept extended working hours and repetitive unglamorous coding tasks as an unquestioned part of the industry everyday. This is made possible by creating an alluring image of the game industry as a business in which "work is play". In other words, the game industry works actively to make the employment within the industry seem like a chance to get paid for fun. Kline et al. also rightly observe that the reverse side of this "work as play ethic" is the increased significance of players in the development of games. The marketing apparatus collects detailed data on customers and feeds it back to into the design and marketing of new games (ibid. 57). Further, game industry is increasingly capable of incorporating the player activities into the development of games.

As Hardt & Negri (2000, 293) observe, one of the consequences of the deterritorialization of production is that labour is placed in a weakened bargaining position. Therefore network production can accommodate various old forms of labour from freelance work and home work to part-time labour and piecework. In this new climate the strategy of involving large numbers of consumers and letting them accomplish tasks for companies over the Internet is gaining popularity in the variety of industries. Crowdsourcing, a witty variant of outsourcing, is one of the recent terms coined to designate the phenomenon. The term indicates that in order to decrease the labour costs smart companies may not have to look to developing countries but some of the tasks can be transferred to hobbyists, part-timers and dabblers (Howe 2006). Different manifestations of crowdsourcing are widely visible in the strategies of game industry. For example playtesting is a crucial and labour-intensive phase of game design. Some developers may have permanent testers but often the testers are recruited from the pool of active players. These player-testers, hired temporarily as occasion demands, constitute an interesting form of part-time workforce that balances between being a player and an employee. Another strategy to benefit from player's investments is to facilitate players with tools that allow them to create and distribute their game-related contributions. With the editors, recently often bundled with the retail title, players can design levels and other game-elements of their own and these player-designed game pieces can significantly transform the whole gaming experience. More generally, this diverse group of

people consisting of avid players, player tribes and clans, game bloggers, modders, hobbyists programmers and indie game makers constitutes a large pool of potential future employees. (Kline et al. 2003, 202-204.)

The cooperation between the people who make media and those who use it is of course not something entirely new. In historical perspective, many great "producers" of art were almost entirely dependant on rich patrons and a crew of assistants. Citizen participation and audiences have a notable role also in the development of journalism and television. Yet it can be argued that the blurring of boundaries between making and using media, and the results of this process, have lately been more visible in the media environment than ever before. (Deuze 2007a, 245.) The networked media environment, in which meaning making and sharing mediated experiences is becoming increasingly collaborative, forces us to once again rethink the assumptions concerning the relation between media production and consumption. Mark Deuze, who has studied professionals in different creative industries, suggests that in this situation "it becomes crucial to understand the roles of the producer and the consumer as (to some extent) interchangeable and (at the very least) interdependent" (ibid, 250). As we will see in the following, a look into the history of games indicates that design has for long gone hand in hand with playing.

The relation of play and design

Game designers Andrew Rollins and Ernst Adams (2003, xxi) begin their book on game design by suggesting that every game player is a potential game designer. They argue that players do not hesitate to change the rules of existing games in order to make them more enjoyable. According to these recognized figures, the player actions involving thinking, negotiating and modifying the rules should be considered a form of design. Without doubt there is a long way from a simple change of rules to a development of entirely new game. What this notice, however, certainly highlights is *the overlapping between play and design*. Salen and Zimmerman make a similar observation. Following Huizinga, they argue that in games there is typically something 'at play'. What they mean by this is that games allow exploring and stretching and are in this sense well-suited for player's modifications. Salen and Zimmerman continue:

> Because a game by its very nature has room for the movement of free play, it is always possible for players to drive a wedge into a system, bending and transforming it into a new shape. (Salen & Zimmerman 2004, 565)

Thus, what connects subtle rule changes and player-made total conversions is that players consciously decide to play *with* the rules and the structure of the game. In the following I will focus on two important points in this discussion. First of all, I will take a look at the relation of play and design and consider the boundaries

between these two connected activities. Secondly, I will examine the interconnectness of playing and player production.

The history of such classic non-digital games like chess, backgammon or ludo shows us that these games have existed in several different variations during the centuries. David Parlett (1999, 277), who has studied the history of board games, argues that chess should not be considered 'a game' but rather a large family of games. National variants include for example Chaturanga (Indian chess), Xiang-qi (Chinese) and Shogi (Japanese). The names of the chess pieces we know today were designed in the medieval Europe and can be seen to reflect the feudal social hierarchy of the time (ibid., 302). In this light the game of chess, the western culture recognizes, is just one historical variant designed to satisfy the European taste. Parlett further refers to the legion of deliberately invented chess variants and implies that basically anyone can invent a chess variant (ibid. 278). Despite this, the designers of chess and other classic board games are mostly unknown. The games have for long been in the public domain – communally played, adjusted and redesigned (ibid. 345). This differs somewhat radically from the current state of affairs in which most of the popularly played digital games are designed by professional developers and credited to named corporations.

Today, most of the games produced, both non-digital and digital, are rather proprietary than communal. According to Parlett (ibid.), proprietary games first appeared in the eighteenth century. The major board-game companies like Parker Brothers, probably most well-known for *Monopoly*, typically arose as offshoots from other industries during the nineteenth century. This development made it possible for an individual to gain living from producing games. Certainly it still took a long time for games to become a respectable industry, but the professionalization of game design and game publishing in any case highlighted more clearly than before the difference between those who make games and the ones who play them. The very first digital games came from the publicly funded laboratories and were mostly hobby projects of scientists and students who had access to the early computers. The early landmarks often mentioned in the histories of the field include *Tennis for Two* (1958) by William A. Higginbotham and *Spacewar!* (1962) by Steve Russell and his friends. Both of these early games were used to demonstrate and exhibit the potentials of electronics and computers. The early digital games can be seen as playful diversions from work and the economic potential of these curiosities was rarely conceived (Kerr 2006, 7). It did not, however, take long for digital games to go commercial. The markets for both coin-operated arcade games and home videogames developed quickly during the 1970's. Along this development, games were not only professionally designed but also consumed as commodities.

So, as a result of the commercialization, professionalization and proprietarization of games, the design and playing of games are today perceived as clearly separate activities. One should, however, not take this separation as given. There are actually several issues that highlight that the sphere of design may be as difficult to delineate as the realm of play. The growing development team sizes make it difficult to name

who actually "designs" or "produces" the game. Even though the development team often includes both someone who holds the title of *Producer* and one or more *Game designers*, dozens of people with specialized skills – programmers, visual artists, quality assurance engineers and so on – contribute to the everyday design decisions (Fullerton et al. 2004, 318-334). A game designer is not only expected to be familiar with a wide variety of games but she should also be capable of organizing playtest sessions with different kinds of players throughout the production process. Playtesting and player-testers who work for the developer exemplify the importance of players and play during the design process. Furthermore, the maintenance period after the launch of the game extends the dialogue between designers and players beyond the design process.

Players and their activities are also an important source of inspiration for designers. In one sense game design is very much about challenging the player's intelligence and skills. In a long run players' increasing expectations force designers to make more challenging, complex and 'intelligent' games. In this respect, the designer is constantly engaged in a battle of wits with her players. (Pearce 2002, 24.) Easter eggs, special messages or features hidden to the game structure, form a visible manifestation of this exchange between designers and players.[35] Easter eggs both guide players' expectations and reward them with additional content, secret content or inside jokes. It is furthermore known that in many occasions the concrete design choices have been influenced by particular player activities. As is well known, the designers of *Doom* (1993), for example, got their inspiration for opening the game structure for player input from a player-made modification to their earlier game (Kushner 2003, 165-167).

The fact that digital games are complex software programs that consist of code makes possible particular modes of manipulation. Early computer games were important vehicles for learning about computers and programming. Often the source code of the game was given away to anyone who was interested and this allowed hobbyists to rewrite and experiment with the code. Activities of this kind, however, remained relatively marginal until the launch of the first affordable home computers that could both run gaming software and provide access to the game code. The early gaming magazines published articles that taught players how to manipulate the programmed structures in order to make the games operate differently. (Haddon 1988.) When the digital games were first commercialized, a single person, with a required knowledge on programming, could be responsible for the entire game. The whole game was possibly not more than a few kilobytes in total. Games of this size and complexity were relatively easily taken into pieces by players interested in the inner workings of the game. During the years, games have grown in size and

[35] Warren Robinett designed a hidden room to Atari's *Adventure* (1978) and included his name in flashing colours on the wall. This is often considered to be the very first games-related Easter egg. Consalvo (2007, 17-20) argues that Easter eggs had a significant role in the emergence of gaming capital and paratextual industries.

complexity, and more special knowledge and time is required from anyone interested in understanding the operations of the gaming software.

The increasing complexity of digital games raised the threshold for player manipulation. Some designers, who saw the potentials embedded in player's productive activities, began to intentionally open the structures of games for player participation. In this regard, both Manovich (2001) and Bogost (2006) highlight the pioneering position of the FPS game *Doom* and its developer id Software. The fast-paced demon kill-fest was revolutionary in more than one sense. First of all, *Doom* may not have been exactly the first first-person shooter but the game threw its players into the middle of multi-player mayhem never experienced before. Secondly the game introduced a clever distribution paradigm as id first launched a stripped-down free of charge version via the Internet, and as the reputation was built, a full retail version was published. Thirdly, and from my perspective most importantly, the very structure of the game code was designed with replaceable content in mind. The media files were separated from the main program and the files were left unencrypted. Id further encouraged players to explore and expand the game by releasing descriptions of the file formats. (Kushner 2003, 165-169.) Thereby, the game developer did not only create a captivating fictional world but also allowed players to contribute to the constitution of this world. Hobbyists no more competed only as players but also as creators (Herz 1997, 89-90). For many players, designing custom graphics, soundscapes and new levels or tweaking the configurations became as least as compelling as killing monsters. Lev Manovich describes the influence of *Doom* in the following way:

> [H]acking and adding to the game became an essential part of the game, with new levels widely available on the Internet for anyone to download. Here was a new cultural economy that transcended the usual relationship between producers and consumers [--]. (Manovich 2001, 245)

I will come back to the economic perspective of player production in a little while. Before that I will discuss one more related consequence of *Doom*.

As mentioned, the way *Doom* ushered in a new mode of production, was made possible by conscious restructuring of the game data. The centrepiece of the code that orchestrated the strategic dynamics of the game came to be called the *game engine*. While it is common knowledge among programmers that a code base written for an existing game can be used to create relatively similar new games, the modern game engines were born with FPS games, and especially *Doom*. Game engine refers to the core portions of the software code that control not only the physics and the visual representation of the game but also the central functions of the gameplay. (Bogost 2006, 55.) The tremendous success of *Doom* soon revealed that the results of the abstracting and extracting of game's core features could also be turned into a successful business. The game engine could crucially facilitate other developers in creating similar and derivative games. The later id games, especially *Quake* and *Quake II*, effectively turned this insight into business as the engines were licensed for dozens of published titles. (Ibid., 60.) Since then, engine development

has become an industry branch of its own. Engines are delivered with developer-friendly APIs (application programming interfaces) and plug-ins that enable non-programmers to import textures, 3D models and animations. During the past fifteen years, similar tools have been increasingly delivered to the players. (Ibid., 55-56) If the players of *Doom* were mostly left to design their own editors, players of current FPS games can expect to find a collection of editing tools bundled with the retail title or alternatively they can be downloaded from the developer website. One of the consequences of game engines is that, as they equip developers with a ready-made foundation they at the same time define the capabilities and limitations of the projects built on them. These features significantly influence the kind of discourse the works can create. (Ibid, 64). The same applies to the official modding tools available for players. While they give users the opportunity to be productive, the tools themselves serve to ensure quality and the distinguished feel of the game (Mactavish 2003).

In the following I will introduce some theoretical starting points relatively often used for a close examination of game cultures. I suggest that theories of fandom and fan production can help us to see more clearly the specific characteristics of player production.

Fandom, fan productivity and digital games

It is not surprising that fan theory has been inspirational for game scholars, as fandom has typically been associated with cultural forms denigrated by the dominant value system. It is easy to notice that avid gamers share characteristics with fans of other media. Consalvo lists several similarities between gamers and television fans ranging from the sophisticated understanding of the media text and its relations to other texts to creating websites and fan fiction (Consalvo 2003, 326-327). It is not, however, only the similarities and differences compared to fans of other media that are interesting in this connection, but one should as well notice, how the different genres of digital games generate particular kinds of productive player activities. At the same time, it is important to recall that the early fan theorists were mostly interested in television and movie fandom. Therefore, some critical revisions are in place before these theorizations can be applied to the current forms of digital gaming (Wirman 2007, 378-379).

Many characteristics have been used to define fans, but it is the forms of productivity that have been particularly central for the theorizations of fandom. In his often-cited article Fiske (1992, 37–39) distinguishes between three different types of productivity associated with fandom. *Semiotic productivity* concerns the meaning making when the reader engages the media text. Whereas semiotic production happens in the intrapersonal level, *enunciative productivity* is related to the expression of fandom in the interpersonal level. Typically, enunciative

productivity means talking about the object of fandom. Other manifestations of fandom can include stylistic elements like the choice of hairstyle, clothes or accessories that assert one's membership in a particular fan community. Fiske's third type, *textual productivity*, concerns the creation and circulation of fan-made textual materials that supplement or circumvent the original media texts. The expressions of textual productivity can include anything from fan magazines (fanzines), reviews, and analytical essays to fan fiction and other forms of fan art. Fiske further suggests, that while all media audiences engage in some degrees of semiotic productivity, textual productivity is mostly reserved to fan cultures (ibid., 30).

In his ethnographic study *Textual Poachers* (1992) Henry Jenkins, who studied under Fiske, discusses fan activities as 'participatory culture'. The term refers to a form of media consumption in which audiences take an especially active role in the circulation of media texts. Jenkins argues that Hall's encoding/decoding model implies a too fixed perception of popular meanings. Therefore he prefers a more ambiguous *poaching*. This term, borrowed from de Certeau, characterizes the relationship between fans and corporate producers of media texts as "an ongoing struggle for possession of the text and for control over its meanings" (Jenkins 1992, 24). Already Fiske (1991, 34-43) discusses the significance of de Certeau as a theorist of the everyday. Fiske's reading draws especially on de Certeau's disctinction between strategies and tactics. *Strategy* is associated with institutions and structures of power, whereas *tactic*, "the art of the weak", refers to the ways in which individuals use the space defined by strategies and make it their own (de Certeau 1984, 35-39). For fan studies, it is the media consumers who use tactics to resist and negotiate their space against the stronger strategies operated by media producers.

Comparing readers with *poachers* suggest that fan cultures draw their resources from commercial media culture while also reworking them to serve alternative purposes. Similarly Fiske argues that fan activities could be thought as *moonlighting* in the cultural sphere, representing "a form of cultural labor to fill the gaps left by legitimate culture" (Fiske 1992, 33). Fiske also notes that fans develop their own systems of distribution to circulate the results of their textual productivity. To emphasize how fans still work from existing commercial products, Fiske calls this system a *shadow cultural economy* (ibid., 30). Thus, the traditional fan theory suggests that fan cultural texts are mostly circulated inside the fan community. Furthermore, the fan-generated systems of distribution are understood to reject profit and therefore stand in stark contrast to the motivations of official cultural production (Jenkins 1992, 279-280). At the same time fan theory is aware of how fan culture is related to the commercial interests of the cultural industries. Although many fan activities intend to distance fan culture from the official culture, fans simultaneously form a special market that not only spends money on spin-off products but also provides much-needed feedback for the industrial actors. (Fiske 1992, 46-47.)

Several recent phenomena among digital game culture question the oppositional stances fostered by the classic theories of fandom. It is obvious that for example game modding is not simply about hegemonic media using culture to promote capitalistic values and players "heroically" resisting this corporate subordination. The motivations of modders are not limited to looking for kudos among other hobbyists but some of these hobbyists can have clear consumerist ambitions. On the other hand, modding has become an important source of innovation in the digital games industry: the work of modders can benefit developers in various different ways (Kücklich 2005, Postigo 2003). The reconfiguration of boundaries between avid players and commercial culture, this mutually beneficial relation poses, requires significant theoretical reconsiderations.

As discussed in the previous chapters, theories of fandom and subculture are helpful in opening the bigger picture and showing how gaming-related practices go beyond sheer playing.[36] As we begin to see, these theoretical traditions also have their limitations. The problems of the British subculture theory are related to its commitment to class distinctions. It can be argued that the explicitly political agenda of classic subculture studies has led to underemphasization of economic perspectives (Weinzierl & Muggleton 2003). Thornton (1996, 9, 117) argues that the early theorizations position subculture in opposition to the media. Media and commerce are mostly seen to incorporate, subsume, distort or dismantle the 'authentic' subcultures. Contrary to this Thornton suggests that media and other cultural industries importantly participate in constructing subcultures. Subcultures are not mysterious movements that grow by force of their own energy, but the operations of various media and businesses are integral to the authentication of subcultural practices.

As discussed, fan theory may note the commercial aspects of fandom but the focus has mostly been in market conditions and practices that block fans' access to the means of production (Jenkins 1992, 285). The classic fan theory, however, immediately runs into difficulty when discussing the development of once fan producers to semi-professional and professional producers and distributors. Banks (2003, 10), who has studied game fans who complement their favourite game with entirely new digital elements, argues:

> Jenkins is uneasy with the potential reconfiguration of boundaries between fandom and official, commercial, corporate culture. This emerging dynamic does not fit easily within much of his placing fandom in an oppositional stance towards commercial culture. It does not sit easily within the frameworks of Cultural Studies' often all too predictable political posturing. The fans are fraternizing with the enemy or even going commercial themselves, what is to be done!

[36] In this respect, subcultures and fandom are closely related. Both of them can be understood as cultural practices that are related to identity construction, style and taste among popular culture. However, some manifestations of fandom remain in underground and visibly sub-cultural, while others gravitate towards the centre of mainstream culture. (Nikunen 2005, 40-41.)

Banks admits that he is slightly overstating Jenkins's position but at the same time it is obvious the landscape of participatory culture has significantly moved within the past two decades.

The recent changes in the relations between media producers and consumers have obviously not gone unnoticed among scholars. It has been argued that subcultural studies have moved to a post-heroic phase in which the questions of politics and economy have to be reformulated in the multicultural and global contexts. Even though the proclamations of the death of resistant youth cultures are, to say the least, premature, the current post-subcultural theory is open to admit that subculture-related practices can consciously operate in favour of media, fashion and cultural industries. (Weinzierl & Muggleton 2003.) Jenkins (2006a, 11-12) has, for his part, suggested that different generations of fan scholars can be identified and it is important to understand the works of these generations in relation to the moments they are/were working. He suggests that even though in some respect outdated, the early accounts that mostly served as defences of fandom have been important as they have paved the way for so-called third generation fan scholars. This new generation is supposed to be able to write more openly and critically without the need to defend the fan community. This is not the only revision Jenkins has announced.

In his recent attempts to update the understanding of the participatory culture Jenkins (2002, 2003) has turned his interest to the intersection of active consumer practices and corporation-driven media convergence. He has accentuated the need for non-dichotomous models and called for a move beyond the either-or-logic of earlier traditions. Jenkins argues that scholars should take into consideration both how powerful conglomerates protect their own interests and how digital technologies are simultaneously facilitating media audiences with greater powers. In this respect, media consumers are neither totally autonomous nor totally vulnerable to the cultural industries. In *Convergence Culture* (2006b) Jenkins makes an ambitious argument about how the battle over convergence is currently refining the ways we understand popular culture. For him, convergence signifies not only a shift toward media content that flows across multiple platforms but also "more complex relations between top-down corporate media and bottom-up participatory culture" (ibid., 243). This means that some ideas that start with commercial media are adopted and appropriated by a range of different publics, whereas other ideas emerge from the media users and are pulled into the mainstream to gain profits for cultural industries (ibid., 257).

Different forms of player production indicate that Jenkins's large scale approach has some relevance to digital game culture as well. During the past decades the opinions of audience have been influenced and opened up by the active audience theory and the model of participatory culture developed within fan studies. The possibilities offered by digital media technologies have once again challenged the conceptualizations. It has been suggested that the influence of the digital games can be interpreted as a change from participatory culture to *co-creative media*. As Sue

Morris (2004) argues in her study of multiplayer FPS games, "neither developers nor players can be solely responsible for production of the final assemblage regarded as 'the game', it requires the input of both". In this respect, members of particular game subcultures have for years exercised powers only currently little by little available for the 'average' consumers of corporate media. Research-wise, the move beyond the mere celebration of fan productions presumes critical concepts and more specific distinctions between the forms of production (Dovey & Kennedy 2006, 123-125). What are then, the particular characteristics typical of game cultural productivity?

In her article on player production, Wirman (2007, 380-381) differentiates between instrumental productivity and expressive productivity. *Instrumental productivity* refers to texts and tools players produce to advance more effectively and improve their prospects to succeed in games. Examples of instrumental productivity include but are not limited to walkthroughs, strategy guides, maps, hint databases, cheat codes, and a variety of programmed addons that provide additional information for player during the play session. For Wirman, *expressive productivity* mostly concerns the forms of productivity traditionally associated with fandom. Examples range from fan fiction and other forms of fan art familiar to any media fans to more games-specific outputs like customized player models and 'skins' and machinima movies created while playing.[37] While this splitting is informative in identifying the different motivations of player production, the categories are clearly not mutually exclusive. Instead, it is easy to come up with examples that question the borders of the categories. How about a walkthrough written in poetic fashion or a skin designed to improve player's ability to hide in the dark corners of the playground? Another way to produce clarity to the gamut of productive player activities would be to identify the modes of production that seldom occur outside game culture. As it has been noted, many modes of player productivity have their predecessors in forms of earlier fan productivity. There are, however, some productive activities that are very particularly game cultural.

Most notably the games-specific forms of productivity are based on the possibilities provided by the game as software. Some of these feats, like mods or cheat codes, could not operate without the game. In these examples, the player-produced artefacts operate in the level of code and are seamlessly compatible with the original product. Other cases, like machinima films, could not exist without the game, as they are entirely produced with the gaming software. As discussed earlier, games differ from "traditional" media texts as they not only represent the different objects and systems but also model their behaviours. Players who redefine the uses of or rewrite parts of gaming software are able to capitalize upon these simulative functions. All this highlights once again the importance of understanding digital

[37] In an accompanying figure Wirman places mods, patches and forums in a section in which the circles representing the two different forms of production intersect. Somewhat confusingly she does not explicate the significance of the figure in the text. Wirman, however, seems to be aware of the limitations of her categorization, as she further discusses the forms of productivity in which games are used for purposes that are motivated from outside game culture.

games as co-productive processes, not as finished objects. As Manovich importantly argues, in case of new media it is often hard to establish the boundary between production tools and media objects (Manovich 2001, 258). Players' ability to play with the medium questions not only the relation between designer and player but also our understanding of the game itself. As the forms of player production highlight, digital games are not only a medium but at the same time a tool. Thus, games straight away question the theorizations of fan productivity that rely on idea of resistance. For example authorized modding becomes part of the intended use of the gaming software and can hardly be seen as resistive. However, as many artistic projects, that exploit commercial game engines, show, inviting players to modify the code does not remove the possibility of resistance. (Jones 2006, 266-267.) Thus, as discussed above, resistance rather becomes just one of the possible interpretations among a variety of motivations.

What is, however, clear is that understanding games as a means of production makes things like mods and machinima almost inevitable (ibid., 270). This leaves me with no other choice but to examine the background and the dynamics of the modding issue in detail. In the following I will move on to examine computer game modifications both as an example of the emergence of co-creative media and as a manifestation of gaming capital.

Mods and gaming capital

As discussed in relation to the post-Fordist ideology, the labour behind digital games consists not only of people with permanent jobs, but a multitude of freelancers, part-time and piecework labour and volunteers are involved. The inclusion of free consumer labour is currently common in a variety of industries, but the particular strategies of involvement and the forms of consumer production vary. The most games-specific forms of co-creation are made possible by an engine-driven programming paradigm that supports easy adding of customized content. Many PC games already include a collection of editing tools, easy-to-use guides and free samples. The industry benefits from the alterations and additions made by players as they can crucially extend the popularity of a game both in scale and in duration. At the same time, players who tinker with the editing tools and create custom content for their favourite games can be seen to extend and expand their playing experience. As the new content is actively distributed via the Internet for free, the effect of player-made alterations is not limited to the people involved in these projects. Instead, popular custom content can shape the gaming experience of very large player populations.

The games-related player-produced content comes in many forms but a phenomenon that probably most visibly highlights the different dimensions of co-creative media is the developing of PC game modifications, often known as

modding. The results of modding are known as 'mods', short for 'modify' or 'modification'. Two constantly mentioned highlights in the history of this intriguing form of player production are *Doom* and *Counter-Strike* (1999). While *Doom* represents the origins of the PC modding as we know it, *Counter-Strike* is an example of how a project that started as a modification can become a commercial success. *Counter-Strike*, originally a modification to the first-person shooter *Half-Life* (1998) was commercialized by the game developer Valve. As a stand-alone product available both for PC and Xbox, *Counter-Strike* soon became the most popular multi-player game played online. Although the game industry has not been able to reproduce the success of *Counter-Strike*, individual developers have created other successful strategies around player-made modifications. The diverse motivations behind mod making and the characteristics of mod culture will be further discussed in the articles 2 and 3. Before that, to come to grips with what exactly constitutes modding within digital games, a few issues need our attention.

First of all, the terms 'modification' and 'mod' are used in various, sometimes conflicting ways. They are not primarily academic terms but actively used and defined by players, mod makers and the gaming press. Even the rare academic accounts on modifications suggest very different uses for the words. Laukkanen (2005, 4) describes modding as a "participatory practice where game fans modify and extend officially released game titles with their own creations". Here 'modification' becomes a general term for various forms of player-created content from individual objects, skins and sound effects to so called total conversions that modify several different elements of the game and can produce entirely distinctive gaming experiences. Somewhat differently Postigo (2007) has chosen to use the general term add-on to refer to "software packages created by fan-programmers". For Postigo mods signify a particular type of add-on. Maps and skins are used as examples of other add-on groups.

Secondly, tracking the origins of game modifications can start from more than one point.[38] Initially, it is safe to say that the urge to mofidy games predates digital games. As discussed above, it is characteristic to games as systems that they have room for free play. They invite players to explore, to stretch the boundaries and – when necessary or fun – to change the themes and the rules of the game. When it comes to digital games, the exact origins are arguably difficult to pin down. What is known is that already the very first computer games were actively modified among the first generation hackers. The early hackers, mostly university researchers and students, were keen on explore the possibilities of the room-sized minicomputers. Existing code bases were openly exploited in designing new applications. One of the most significant early hacks was *Spacewar!* (1962), arguably the first full-scale computer game. The game was not only based on innovative reuse of code but also extensively modified around the university campuses. (Levy 2001, 50-69.) The practice of modifying games could, however, not spread outside university campuses before the access to computers with required capabilities became more

[38] For a more extensive take on the evolution of modding, see Laukkanen 2005, 7-13.

widespread. The next shift had to wait until the late 1970s and early 80s and the emergence of affordable and relatively easy-to-use home computers like Apple II and Commodore 64. These machines were importantly capable of running increasingly complex games and at the same time allowed player-driven reprogramming. This period gave birth both to the demoscene[39] and first commercially available game development kits and editors[40]. All this happened well before the emergence of current modding culture, often associated with the advent of *Doom*. It would probably be too confusing to expand the term 'modding' to include all the possible ways of altering the game. Nonetheless, the historical examples importantly remind us that while the current forms of modifying games have their specificities, the development of the basic motivations behind these activities has been a long-term process.

Thirdly, the understanding of what constitutes a 'mod' can significantly differ between game genres. Traditionally FPS games have pioneered the scene and also had a significant impact on the descriptions of the modding phenomenon. Laukkanen (2005, 30) suggests that the custom content procuced by *Half-Life* modders can be classified into following categories: "maps, textures, prefabs, map models, skins, character models, weapon models, sprites, sounds, and code modifications". The most well-known form of FPS modifications, the total conversion, can combine most or all of these types of content. In the same study, the content players produce to the life simulator game *The Sims* is suggested to fall into the following categories: "skins, head and body meshes, walls and floors, objects, hacked objects and houses/lots" (ibid., 74). So basically, both games allow players to personalize the game characters and to install various new game world objects. *The Sims*, however, completely lacks the possibilities of modifying the interface elements or the actual reprogramming options. Role-playing games pose a further challenge as the forms of custom content work with a relatively different logic. In case of *Neverwinter Nights* (2002) players are challenged to create entire adventures. While third party tools can be used to add individual objects, the emphasis is on scenarios created with the bundled Aurora toolset. The results of player production are mostly distributed as 'modules' that can include full-scale role-playing campaigns. In case of MMOs, like *World of Warcraft*, it does not make sense to allow players to create custom objects, as they would immediately endanger the complex game world economics. Therefore, most of the WoW mods focus on altering the interface, and especially on visualizing game-related information that can be crucial in succeeding in the game but is not easily available for gamers in the original version of the game. While, say, 'map modifications' introduce completely

[39] The demo phenomenon began from crack screens and intros attached to software circulated among players and developed into separated programs that exploited the potentials of current computers into extreme. While demos have mostly remained an obscure subculture and a niche form of computer art, it can be argued that they have had a significant impact on both the game industry and the new media art scene. (For more, see Tasajärvi 2004.)

[40] One of the first games to include a level editor was *Lode Runner* (1983). The popularity of the game was bolstered as current gaming magazines such as *Computer Gaming World* held contests for the best *Lode Runner* level. (http://en.wikipedia.org/wiki/Lode_Runner)

new battlegrounds to the players of FPS games, in case of MMOs they focus in improving the player's ability to perceive and effectively explore the existing game worlds. The changes a FPS mod makes, concern all the players in the given server. MMO mods, on the contrary, work to individualize the gaming experience and can be hand-picked by any player. While it is theoretically possible to construct a typology in which all the different forms of content mentioned here could fit, the result would necessarily be very abstract. A typology of this kind could probably reveal some of the differences between the modding scenes. A typology may, however, not be necessary, as the different emphases can be quite directly tracked back both to the very design of the particular game and the modding-support agenda of the developer (Laukkanen 2005, 141). In any case an abstract grouping can tell us relatively little about the use of the mods, the motivations behind them or the social practices that surround the design and playing of mods.

Finally, as Nieborg (2005) points out, if mods are described as modfications of existing games, many commercial game productions should be included to this category. Building up-to-date game engines is a costly and time-consuming project. Therefore, as discussed earlier, commercial developers often reuse their own engines or license other existing engines. On the other hand, it is not solely the original games that are modified, but popular total conversions, for example, can as well spawn active modding scenes.

From the outset, I have adopted an open attitude on what constitutes modding. I have suggested that modding could be understood as a dynamic practice that is defined between players, modders, game developers, publishers and other related actors. The meanings associated with mods are necessarily situated in time and place and the descriptions and forms of modding can vary significantly. Basically, mods work to alter and add content to pre-existing games. The customized games can include both commercial releases and earlier player-made modifications. The game engine-driven design paradigm and player supportive developer strategies can have a significant effect on which games are modified and how they are modified. Traditionally mods are non-commercial, but this does not mean that they cannot have monetary value.

The particularity of modding, when compared to other current phenomena that build on the labour of willing amateurs and hobbyists, is that mods are entirely dependant on mass market games. As mentioned, some modifications alter existing player-created total conversions, but even in this case a commercial engine is needed to run the modifications. Mods are, however, not just interpretations or appropriations of existing games but they become an integral and compatible element of the software structure. The seamless co-operation of the industrially developed code and player-created customizations is required to produce the full effect. This process normally requires that the programmed structure of the game is opened to allow the consumer-side contributions. Nevertheless, the full source code is seldom released. If this happens it is normally years after the release, once the sales have significantly declined and the right owners have broken even. In this

regard, modding importantly differs from the typical forms of open source development. It is also worth noticing, that releasing easy-to-use level editors and supporting the import of objects from third party applications, has effectively worked to bring non-programmers to the scene.

Mods can be seen as a concrete manifestation of gaming capital. Tinkering with and adding to official releases requires special knowledge and can advance a range of different skills. A modder need not only to know the game to the core but also be familiar with a variety of tools.[41] In larger projects no individual modder needs to know everything but the significance of communicative, co-operative and project management skills increases. In addition, uploading models to a fan site or contributing to a larger mod project can work as a way of acquiring prestige among the fans of the particular game. Large mod teams often have a website of their own where interested players can follow the development of the project and download the offsprings of the team. Other sites aggregate hundreds or thousands of modifications and a large amount of other related information. While sites like Moddb.com provide content for several widely-modded games, other sites like Warcraft-mods.com (*World of Warcraft*) or Hl2mods.co.uk (*Half-Life 2*) focus on following the modding scene of individual games. Mod databases can contain detailed groupings and advanced search functions that help players to easily find content they are after. In addition, as large amounts of players interested in designing and playing mods gravitate towards these sites, they become important centres in which people meet, create shared knowledge and as a result, accumulate different forms of gaming capital.

The doings of modders are not necessarily limited to acquiring immaterial capital. In is not uncommon, that the skills people learn and the feedback they receive from the modding projects can direct their professional orientation or offer some entrepreneurial inspiration. It is, however, not only players who can benefit from the accumulation of gaming capital. As Consalvo (2007, 181-182) points out, large media companies can provide resources so that the administrators of the central sites can keep them flourishing. As compensation, corporations can acquire important information concerning the habits and preferences of the players. It is not uncommon for 'modder-friendly' developers to have their own sites dedicated for the modding community. Some companies like Valve, the developer of Half-Life games, or Epic Games, responsible for the Unreal Tournament series, have gained many dedicated mod-making and -consuming fans that enthusiastically follow every move they make. In this respect, it is clear that mods can increase customer loyalty. The potential benefits, companies can gain from player-made modifications, are not confined to the increase of loyalty. As active modding scene can assure the constant flow of new playable content even years after the launch of the game, the crucial shelf-life of the original title can be significantly extended. Furthermore, modders'

[41] Laukkanen divides the modding tools to three subcategories: "official" (tools/support provided by the developer), "unofficial" (tools/support from the fan community) and "other" (tools/support from a third party source, i.e. generic graphics applications) (Laukkanen 2005, 144-146).

achievements can both reduce game developers' R&D and marketing costs and provide a neat solution to the developers' recruitment problems. (Kücklich 2005.) As the examples above show, the impact of mod teams is no more limited to subcultural shadow industries. Instead, these forms of player productivity are increasingly integral to the "official" digital game industry.

Manovich crystallizes the 'new cultural economy' in the following way:

> The producers define the basic structure of an object, and release a few examples as well as tools to allow consumers to build their own versions, to be shared with other consumers. (Manovich 2001, 245)

As the examples of *Counter-Strike* and some others show, it is possible to turn results of player production into commercial products. Still straight-forward commercialization of existing modifications happens relatively seldom. In average, the impact on the sales of original game titles and the company image is far more important than the potential of capitalizing on an individual modder project. As discussed, a vibrant mod scene can generate a dedicated body of gamers who then form a very potential customer base for the official expansion packs and sequels. Mods also test and strech the potentials of the underlying game engine. These demonstrations effectively advertise the engine for the potential licensees. Furthermore, mods are also able to spawn different kinds of third party industries. Many mod sites have developed from hobby projects to small-scale enterprises that often actively co-operate with the game developers. Producing mod tutorials can also be turned into a business, the products ranging from websites to books and dvd productions.

Consalvo (2007) has described the peripheral industries that surround games as 'paratextual industries'. In this connection paratext, a term originally coined by narratologist Gerard Genette, refers to a variety of texts that accompany the actual game and significantly shape our understanding of games and their players. Paratexts can range from such issues as the name of the game and the game cartridge to the official press materials and game reviews. Consalvo (2007, 9) further argues that many games-related industries – for example gaming magazines, strategy guide publishers and mod chip makers – can also function as a paratexts. Paratextual industries are tightly linked to the idea of gaming capital. Players utilize paratexts like walkthroughs, strategy guides and databases in accumulating gaming capital. (Ibid., 184.) The question then is, how do mods work as paratexts? First of all, making mods can significantly deepen players' understanding of digital games. The knowledge acquired does not necessarily make people better players but it can definitely improve their ability to analyse how current games work. The effects of mods are not limited to those who have the time and inclination to produce their own projects, but also playing mods can accumulate forms of gaming capital. Mods can also provide a point of comparison that helps to assess the merits and shortages of the original game. Several functions can be identified also for the paratextual mod industries. The tutorial books, for example, can both work to expand the number of potential modders and try to affect the modder motivations. While the

Wiley Publishing books like *Quake 4 Mods For Dummies* (2006) and *Half Life 2 Mods For Dummies* (2007) attempt to broaden the understanding of who can modify games, Freeman's *Career Building Through Skinning and Modding* (2008) advises its readers "that their skinning and modding skills are not only gaming skills but also career skills they can ply in the digital marketplace".

The examples evidently show that the status of gaming capital can be highly contested. It is not enough that modders may appreciate very different issues when compared to players who do not mod. Developers and related third parties are also eager to describe the forms and uses of gaming capital. As Consalvo formulates:

> Clearly, commercial entities have vested interests in commodifying as many elements of gaming culture as possible, to then sell those bits back to players as most desirable forms of capital. (Consalvo 2007, 184)

As discussed earlier, the sphere of play has been highly commodified for long and today games exist mostly as proprietary products. It is however fair to say that the ways digital games capitalize on players' activities take the process to the new level. The results of modders' work is not limited to potential new forms of gaming or to accumulating game cultural capital, but this very work can be a crucial and integral part of the game industry. Players' productive activities can also in a larger scale be seen as a form of immaterial labour that is put to work by the game industry (for more, see Arvidsson & Sandvik 2007). Particularly in the case of mods, both game developers and third party industries can benefit from players' inclination to customize their gaming experiences. These observations do not go very well with the tradition of considering play in antagonism to work. Modding radically questions the idea of these to fields as mutually exclusive categories as many activities can be at the same time regarded as both play and work. The shift is partly connected to the larger blurring of boundaries between work and leisure time and is further examined in the article number 3.

Once the concrete strategies of modder-friendly developers are examined, different forms of support and encouragement can be identified. Without the developer-produced tools that are published to the players, the whole modding phenomenon would probably be very different from the one we know. As discussed, the paratextual industries have for their part been in a big role in defining the "proper" uses of the official modding tools. Game developers and third party companies also organize modding competitions that provide recognition and publicity for the most proficient mod makers. Eventually, though many game cultural developments and forms of player productivity have been significantly influenced by the developer support, a little room for altruistic intentions can be found. Already in the case of *Doom*, opening the structure of game and inviting players to participate was all part of Id Software's marketing plan (Herz 1997, 90). Later on, the modder-friendly developer agendas have often been compensated with more possessive strategies:

> As in other media businesses, there is a conflict between cultivating player productivity (e.g. through modding, blogging, fansites) and policing consumer

> behaviour (e.g. through regional variations in disks, lock-out chips, end user licence agreements (EULAs) and active pursuit of 'pirates'). (Kerr 2006, 150)

End User Licence Agreement, a contract that players normally need to accept once they start the game, defines the permitted uses of the particular software. This document also often specifies what modders are allowed and not allowed to do and who owns the modifications. The functions and consequences of restrictive EULAs are further discussed in the articles 3 and 4. Here they exemplify the concrete means of controlling and constraining the player productivity. They also highlight how the value of digital games rests upon the regime of intellectual property rights. Once the games business is largely based on exploiting the value of intangible assets, the guarding of the copyrights and trademarks becomes increasingly significant (see Herman et al. 2006, Coleman & Dyer-Witheford 2007). As a result, behind the celebrated award-winning mods one can find a spectrum of banned mod projects. While the cease and desist letters that mod teams have received, do not necessarily come from developers but more likely from the third party copyright owners, the mothballing of mods is far from uncommon (Postigo 2008). The mod forums are full of stories of cancelled projects and closed websites. These examples, for their part, disclose how mods, like many other forms of player production, are supported and left to grow freely as long as the benefits to the related bodies are clear. Based on all this, it can be said that the contemporary game culture is interestingly characterized both by diminished and increased industry control. Players are allowed and supported to rework games in ways never seen before. At the same time the forms and results of player production are closely monitored and actively restricted once they can be seen to danger the profits gained by different industries.

Discussion

In the beginning of this chapter I suggested that several forms of player behaviour can be seen to include productive elements. Rather than defining restrictive dichotomies and typologies between production and non-production or constructing rigid player-producer types I have argued in favour of conceptualizing player production as a network of activities. The composition and dynamics of this network is guided by forms of gaming capital. Individuals can be engaged in different modes of productive activities and over time some forms can increase and others decrease in intensity. In this respect, a phenomenon like modding should be studied in relation to playing and other productive player activities. Adding to the game or using it as a tool to produce new digital objects can be seen as another form of play that can have a significant influence on the overall playing experience.

At the same time modder activities are shaped by the specific industrial operations. Thereby, modder activities can both accumulate gaming capital that

shape the dynamics of digital game culture and be turned into a form of immaterial labour that can significantly benefit the game developers and spawn paratextual industries around it. Arguably, player production contains the potential to create a more diverse and culturally enriched medium (Dovey & Kennedy 2006, 123). At the same time, the embrace of playful fan cultures and cooperation with players has become a standard procedure for some developers. All in all, modding phenomenon highlights how a digital game is not only a professionally produced piece of software but increasingly requires creative effort from a multitude of non-professionals.

As discussed in the previous chapter, player behaviour and experiences can be directed by the design of rules and other formal elements of the game. Therefore, as Aki Järvinen (2008, 102) argues in his dissertation, game designers can be seen to analyse and design players rather than games. In addition, the marketing materials, previews, trailer movies and playable demos shape players' expectations already before the game is launched. Players can further consult several different paratexts before they even see the starting screen of the game. As I have tried to show in the chapter, players' out-game productivity is also directed and manipulated by the industry. In this respect, the sphere of game culture, understood as a meeting ground of players and the game industry, shares structural similarities with the virtual worlds in which the games are played. Both sites are characterized by affordances and constraints defined by game developers and other industry bodies. While many players are happy to hand over the productive control to the industry, some are keen to follow their productive inclinations that result in bending and transforming the products of the game industry into potentially new directions. Some players choose to adjust the challenges, create completely new self-defined side games and test the limits of the game world. In other words, they move from playing the game to playing with the game. The same applies to modding. Modders can decide to closely follow the paths marked by the developers and even reach for potential employment. On the other hand, many hobbyists appreciate modding just for the sake of it and set their tasks according to this.

As discussed, the early fan studies argued that fan production is characterized by a limited access to the means of production. Based on the examples discussed in this chapter, this may not any more hold true for the current game cultures. During the past decade the combination of players' increased skills and developers' supportive strategies have taken player production from the shadow cultural economy to the spotlight. The increased access to the means of media production does, however, not necessarily equate to increased freedom. In one sense facilitating players with productive tools has only underlined the centrality of distribution that is traditionally strictly controlled by the industry bodies.

Chapter 7: The Negotiated Sites of Player Production

One of the model examples often used in the early studies of the post-war youth subcultures was 'The Mod'. Among teds, skins and punks, the Mods, short for Modernists, were a 'prototype' working class youth culture, mostly remembered for their smart suits, cool demeanour, use of narcotics and quarrel with the rockers.[42] While the connection between the 1960's mod(ernist)s and the current day mod(ification)s may seem far-fetched, I suggest a short comparison can highlight some of the challenges a scholar of contemporary game culture necessarily faces. Similar to modern day mod makers, Mods were highly inventive in seeking inspiration and constructing their memorable style. While the Mod movement was in principle a very British phenomenon, the musical taste of the Mods was cultivated both by the American modernist jazz, emerging r'n'b music and Caribbean ska rhythms. Further inspiration was drawn from the European lifestyle, especially from the French new wave cinema and Italian fashion and design. (Hewitt 1999.) The way, mods were described to collect influences and elements of style from diverse sources, is not so far from the recent theorizations of the late modern identity. In a general level, it can be argued the gamy hobbyists of our time follow somewhat similar strategies in order to make a difference within the surrounding game culture.

Possibly the most characteristic emblem of the mod movement was the scooter, borrowed from Italy and converted from an ultra-respectable means of transport into a symbol of style and solidarity. In line with this, the early cultural studies inquiries were eager to point out how the style of the mods was fundamentally based on appropriating particular commodities, refining their uses and relocating their meanings within a very different context. This semantic rearrangement was suggested to characterize the mod style at every level of the experience (Hebdige 1974, 9). One of the central concepts utilized by the early British cultural studies was 'resistance'. Resistance accentuated the creative and productive potential of youth cultures to challenge the dominant ideologies. Compared to some of the more pessimistic critical analysis, the aura of resistance-driven theories was clearly more 'hopeful' or 'upbeat' (Saukko 2003, 4-5). The idea of resistance is closely connected to the logic of juxtaposition. The studies place youth cultures like Mods

[42] Although the heyday of the Mod phenomenon was the early sixties, mods have every now and then returned to the media spotlight. The first revival took place in the late 1970's and early 80's with the launch of mod film *Quadrophenia* (1979) and the success of bands like *The Jam*. The second significant wave was connected to the mid-1990's rise of Britpop, bands like *Oasis* and *Blur* being the most popular representatives of the 'new mod'. Today, the Mod aesthetics are frequently recycled and remixed by the global design and fashion industries.

not only in contrast to the patronizing adult culture but also in strong opposition to the corporate culture (Hall & Jefferson (eds.) 1976, Hebdige 1979). Hebdige (1974, 2) argues that youth styles are threatened by a neutralisation of resistance. To him the eventual fading of the mod movement is just an example of how vulnerable and susceptible to commercial manipulation all youth cultures are. In this respect, the alternatives, early cultural studies provide for the Mods, are very limited. Simply put, either they are fully incorporated into dominant ideology and corporate culture or they remain in the margins and resistant to this incorporation.

As I have tried to show in the dissertation at hand, the relations between corporate media and subcultural formations have significantly changed from the time of the Mods. For digital games, player activities are not limited to appropriation of industry products but players can concretely add to games and build completely new products by exploiting the 'game engines'. Furthermore, in many sites gaming and game culture is no more a marginal or subcultural phenomenon but they have become an integral part of the everyday of millions of people. At the same time, the theories and research methods have witnessed fundamental changes. A need for more nuanced and less-dichotomous models has been underlined by the new generations of scholars. In the beginning of this dissertation I stated that my central research problem arises from the tension between players' cultural activities and the processes and calculations of the game industry. Thereby, my particular interest has been on the different roles and sites player production takes among computer game culture. While 'resistance' is definitely still in the mix, the relations between players and game industry are more and more often described more accurately with the concepts of negotiation, collaboration and co-production. Thus, the game cultural phenomena discussed in this study are not fully explained through the processes of incorporation, commodification and exploitation. Instead, it is crucial to acknowledge that while some ideas emerge from bottom up, others spread from top down (Jenkins 2006b, 257). It seems that *game culture originates in many sites, often at the same time defined both by resistance, exploitation and mutually beneficial relations*. In the following I conclude the central results of the study. It is also in place to shortly evaluate how I have succeeded in answering the questions and what new directions and challenges have been opened by my work.

The different forms of player production largely spawn from play. Initially, play can be seen to be inherently productive and various forms of player behaviour to include "producerly" elements. As the variety of player-created content indicates, players already often have the skills and inclination to produce their own entertainment experiences. In this dissertation the primary focus has been limited to the creation, distribution and circulation of such forms of co-constructive production that result in new game elements or exploit the game software to produce entirely new digital objects. In order to see the place and significance of these forms of player production it has been necessary to construct the larger game cultural perspective in which these activities get their meaning. The historical origins of

modding can, among other developments, be traced back to the early programming subcultures and the 1990's FPS culture. While the contemporary forms of modding still to a certain extent carry within this legacy of the white male 'hacker ethic', the spectrum of game genres, supportive industry activities and different forms of modding have opened the field for more diverse approaches. The skills and motivations behind modding are diversified, tied to the individual player histories and often related to the larger 'real-world' interests of players. The impact of player production is, however, not limited to players who deliberately turn their gaming hobby into a productive activity. While the number of people involved in, say, modding may be relatively limited, the number of players who download and play mods and whose gameplay experience is thereby importantly shaped by modding can be much higher than we think in the first place.

As a phenomenon, player production calls us to update our understanding of production in general. The significance of modder activities is not limited to player cultures, but the creative involvement of players can be turned into a form of immaterial labour that benefits the game developers and further spawns paratextual industries around it. Game industry is these days capable of transferring some of its productive tasks to game hobbyists. In case of game modifications, players are facilitated with specialized editors and other tools, often bundled with the retail title or uploaded to the developer website, that allow them to alter existing and design completely new game elements. While straight-forward commercialization of player-made mod projects happens relatively seldom, diverse benefits from mods can be identified. Modders can significantly add to the life span of games as they produce new content to popular games possibly years after the launch of the game. This can be vital in a market in which the self-life of new games normally ranges from weeks to a few months. Furthermore, modders' achievements can both reduce game developers' R&D and marketing costs and provide a neat solution to the developers' recruitment problems. The benefits for the business do not come as given but the players need to be carefully nurtured to cultivate their labour. Modding tools are in one hand used to support the player production but they at the same time constrict and determine what aspects of games can be modified. Furthermore, the industry-organized mod competitions reward modder contributions but also teach 'proper conduct' to modders and thereby work to tame the potentially unruly aspects of modding culture.

The relation between the game and the player of the game is one of the key objects of game studies. Both the formal analyses of game systems and the more player-centred studies of game experience discuss the interplay between the rules of the game and the various player inputs. While this is no doubt central for our understanding of games, *my dissertation has worked to extend this agenda*. First of all, *more attention should be directed to the 'rules' imposed by the game industry to promote and delineate player production and to the player behaviour triggered by these byelaws*. Following this line of thought, my articles on modding (articles 2 and 3) and machinima (article number 4) have tried to highlight the significance of after-

launch strategies in shaping player production. The spaces and boundaries of player production are, however, significantly defined and negotiated already during the game design and production process. Therefore also *the pre-launch 'rules' that participate in defining the player form an intriguing and under-researched object of study*. In the articles on player-centred design (articles 5 and 6) I have tried to provide some starting points for critical inquiry of this kind.

Game design can for good reasons be seen as design of players. In addition, as the increasing importance of playtesting indicates the concrete contributions of players have become crucial to the production of games. At the same time, while players are intimately tied to the design of games, the perceptions of player and player production that advise game design have been scarcely examined. While players' contributions are increasingly acknowledged, the design ideologies still often rely on abstracted ideal players or simplified player types. Taking the potentials of player production seriously requires new models and methods that move from considering the player solely as designer's muse or patient. I suggest that as specialists of 'everyday gaming', players can become significant not only after the launch of the game but also in the early phases of game design.

As discussed in many occasions, the earlier theories of play and culture can provide important starting points for the study of game culture and player production. Some redefining and adjusting is, however, required when the theories and concepts are applied to current digital games. One of the concepts 21st century game studies have inherited from the "canonical" texts is the 'magic circle', first introduced by Johan Huizinga in his *Homo Ludens* (1950). 'Magic circle' indicates a clear-cut antagonism between the sphere of play and "ordinary life", "seriousness" and "utility". I have argued that if this separatedness is taken as given we run the risk of hiding the similarities and interesting connections between play and the related realms. Thereby, following the example of several other scholars, I have argued that *the space for play is rather negotiated both among the players and between the players and the producers of the game*. My particular contribution to this discussion is twofold. First of all, I have examined *how these negotiations spread beyond the borders of the game as games are increasingly integrated into our daily lives*. Secondly I have suggested that also *the boundaries between 'players' and 'producers' are by definition blurred and actively negotiated*.

The commitment to the detachment of play, posed by the classic texts of Huizinga and Caillois, results in accentuating the "unproductive" nature of play. In other words, the separation from 'ordinary life' necessarily detaches play from the economic aspects of life. In the light of the various examples discussed in this dissertation a total detachment from the economic contingencies, however, seems increasingly unconvincing. Following Juul (2005) I would rather say that the consequences of play are negotiable and therefore player activities can surely have producerly characteristics. The particular productive character of play is visible as more and more players engage in productive activities in and around play. In this

regard, the productive characteristics should be central to all understandings of play in general and digital games in particular.

All in all, rather than taking the boundaries of magic circle as given, they are actively challenged and redefined. It might, however, be too radical to claim that the boundary between play and our everyday lives is completely demolished. If we want to preserve games as a site of cultural experimentation, a circle of some sort probably needs to be established. From the perspective of my dissertation, possibly even more important circle is, however, related to the concept of 'gaming capital', originally introduced by Mia Consalvo (2007). In general the term refers to the forms of knowledge players possess in relation to games. This social currency is dynamic by definition and therefore it is applicable to a variety of games and game cultural phenomena. This is of importance as the dissertation builds on a notion of culture that highlights the centrality of the communal modes of practice. For digital games, this means that different game (sub)cultures can be identified inside the singular 'game culture'. Furthermore, playing digital games spawns diverse hobbyist activities and forms of productivity. One advantage of 'gaming capital' is that the concept offers a way to examine the web of player activities together. The ways of gaining gaming capital are not limited to playing games but the games-related productive activities that are appreciated in the player's social circle can as well become sources of gaming capital. As the interviews with modders showed, knowledge and skills learned at school can in some occasions be relevant for the modding hobby, but much of the specific knowledge required in a large project is learned only through doing and sharing information with other game hobbyists. Similar to magic circle, the boundaries of gaming capital are not easily defined. The significance of gaming capital is not necessarily limited to players' realm but particular commercial bodies aim to benefit from player activities. Corporations are colonizing the sphere of play and commodifying the results of players' work. Therefore the flows of gaming capital are shaped within the complex networks consisting of a large gamut of players, game hobbyists, developers and other industry actors.

Arvidsson and Sandvik (2007, 102) suggest that the "inclusion of agency within the circuit of capital – as a sort of programmed freedom – poses and important challenge for contemporary cultural studies". They suggest that in case of digital games agency and freedom may no more be taken as sources of resistance against the cultural industries as agency has become a pre-programmed feature of the corporate media environment in which subjectification occurs. While I agree that cultural studies need to "abandon the habit of equating agency and freedom with resistance and critique" (ibid.), I see no need for overtly pessimistic or gloomy conclusions. As Banks (2005) suggests, players are often well aware of the practices designed for exploiting their labour. As the co-operative relations between players and developers evolve, some players become experienced practitioners capable of negotiating more favourable terms for their works.

At the same time, it is important to bear in mind that similar to players who adopt different positions and tactics, the game industry is far from a homogenous entity. No one consistent dominant culture rules the business but the attitudes on players and player production vary between individual designers and development teams. While some developers and publishers still jealously guard their rights and carefully limit players' influence, others have recognized the value of players input. An example of progressive player-relations management was witnessed in the summer of 2008 as CCP, the developer of the multi-player universe *EVE Online*, announced the establishment of the Council of Stellar Management (CSM)[43]. The nine delegates of this democratically-elected representative council are chosen by *EVE Online* players and they have already had the first face-to-face summit with developer representatives at the company's corporate headquarters. The Councilors are expected to offer suggestions of the future of the game and discuss other *EVE*-related issues. The players are able to follow these negotiations as the meeting minutes are made public on the CSM online forum. While most of the game developers cannot match the progressive move of CCP, more openings of this kind are on the cards.

All things considered, players are often capable and motivated to produce their own entertainment experiences. At the same time, the business models that rely on player-created content require a lot of after-launch work both in content development and ongoing support for the community. It is not only the shelf-life of the games that is increased but also the duration a professional spends with the game can significantly increase. While the development phase of an AAA title takes at least a couple of years, the same time is easily spent after the launch in intense collaboration with the players. In this respect, *player production not only challenges our conceptions of the player's realm but has at the same time significant consequences to our understanding of software development in general, and game design processes in particular.*

At this point it is important to assess the offerings of this work for the larger theories of media culture. First of all, *my study seriously questions the tendency of media studies to study media consumption and production in separation. As the media practices are becoming increasingly participatory and co-operative, it is difficult to argue for keeping these domains of research apart from each other.* In this respect, the configurative relationship towards media needs not to be limited to players and game cultures. Exploration and configuration can be seen to characterize all digital media use. *Player production underlines how digital media products are increasingly also tools that allow media consumers not only to personalize their experiences but also to share and circulate their productions.*

In a larger scale, the emergence of user-created content and self-made media can indicate new transformations of fandom and stardom. Enterprises grow out of enthusiasm and hobbyists can have a large fan following (Hartley 2008). The

[43] Press release: CCP Announces Election Results for EVE Online's Council of Stellar Management, http://www.ccpgames.com/press/press_releases.asp?pressReleaseID=45

decentralization of production and the emergence of immaterial labour indicate serious transformations in the organization of work. As discussed, one of the consequences of this development is the mobilization of player labour that can in particular settings significantly benefit the game developers. Player production as a form of immaterial labour also challenges our understanding of the relation between work and leisure. While corporations actively adopt playful practices and are capable of including player labour into their ranks, the sphere of play becomes to resemble work in many occasions. As the ideas already constantly drift between players and developers it is no surprise that the practices they follow are becoming more alike. This furthermore underlines the need to abandon the dichotomous and stabile either-or models and the demand for holistic studies of the emerging media culture. On the whole, *game cultures, are not entirely defined by players but various actors, including the industry bodies, take part in shaping the emerging cultural formations. At the same time it is increasingly difficult to understand game industry without taking players into account.*

Altogether, the study of player production and its relationship to both player behaviour and the industrial development of games are still largely in their infancy. Many pertinent questions concerning player production remain unanswered also after this study. As so often happens, answers to the questions posed in the beginning of the project have uncovered a variety of new research questions. For a good reason the focus of my work has been in PC games. The common standards and open architectures of the PC environment have for long provided an accessible platform for modding and other forms of player production. Recently the traditionally closed console environment has, however, witnessed interesting new developments. While a 'console mod' has so far mostly referred either to the imaginative case customizations or to the mod chips that are utilized to disable the built-in restrictions of the game consoles, the emergence of hard drives and proprietary network services has paved the way for content modifications. As console games have for years constituted by far the largest segment of global game sales, this development should be of interest to game scholars. The recent announcements from both Microsoft and Nintendo have made it clear that the console manufacturers are finally taking the hobbyists and their productive aspirations seriously.[44] It is of importance to closely follow this development actively advertised as "democratization" of game production and distribution. This development also reactivates the gender issue as production is made accessible for ever larger audiences.

A major question that still needs some further elaboration is that what happens to media production theory and audience research once everyone becomes a producer. As I have tried to point out in a couple of articles, one answer could be found by

[44] Hawkins, D. (2008) Democratizing Game Distribution: The Next Step, http://www.gamasutra.com/view/feature/3545/sponsored_feature_democratizing_.php and Ivan, T. (2008) WiiWare: Developer Impressions, http://www.next-gen.biz/index.php?option=com_content&task=view&id=10417&Itemid=2

turning to the theory of labour. The issue of 'labour' has so far been marginally discussed among game studies. The significance of player production and other forms of player labour demonstrates how game scholars should to take this perspective more seriously. It has been recently suggested that the forms of user-generated content call for a theory of labour that is at the same time able to map exploitation and free labour (Mørk Petersen 2008). In this connection, the contribution of game studies can be more significant than we may think in the first place. As more productive opportunities are provided for players, the professional game labour also phases new challenges. Therefore, another task for further study would be to look more specifically at the cultures of professional game design and the significance of players in the actual processes of game development.

Building on observations made here, it would be worthwhile to closely examine how the creative input of players is managed in the different phases of game development. It is clear that game developers face completely new management and support tasks that can potentially change the nature of game development from commodity-centred business into a more service-driven industry. Therefore a dedicated industry ethnography would be an obvious next step in the analysis. An inquiry of this kind could more precisely highlight which dimensions of the "digital divide" between different forms of paid and free labour will close and which will widen.

Literature

All online sources accessed in March 2009.

Aarseth, E. (1997). *Cybertext: Perspectives on Ergodic Literature*. Baltimore: Johns Hopkins University Press.

Aarseth, E. (2001). Computer Game Studies, Year One. *Game Studies*, 1(1).

Aarseth, E. (2003). Playing Research: Methodological Approaches to Game Analysis. In *Proceedings of the 5th Digital Arts & Culture Conference*. Melbourne, Australia.

Aarseth, E. (2004). Genre Trouble: Narrativism and the Art of Simulation. In N. Wardrip-Fruin & P. Harrigan (Eds.), *First Person: New Media as Story, Performance, and Game* (pp. 45–55). Cambridge (Mass.) & London: MIT Press.

Aarseth, E. (2007). I Fought the Law: Transgressive Play and The Implied Player. In A. Baba (Ed.), *Situated Play: Proceedings of the Third International Conference of DiGRA* (pp. 130-133). Tokyo, Japan: University of Tokyo.

Althusser, L. (1971). Ideology and Ideological State Apparatuses. In *Lenin and Philosophy and Other Essays* (pp. 127-186).

Anchor, R. (1978). History and Play: Johan Huizinga and His Critics. *History and Theory*, 17(1), 63-93.

Arvidsson, A., & Sandvik, K. (2007). Gameplay as Design: Uses of Computer Players' Immaterial Labour. *Northern Lights*, 5(1), 89-104.

Avedon, E. M., & Sutton-Smith, B. (1971). *The Study of Games*. New York, London, Sydney & Toronto: Wiley.

Banks, J. A. L. (2003). Negotiating Participatory Culture in the New Media Environment: Auran and the Trainz Online Community – An (Im)possible Relation. In *Proceedings of the 5th Digital Arts & Culture Conference*. Melbourne, Australia.

Banks, J. A. L. (2005). Opening the Production Pipeline: Unruly Creators. In S. de Castell & J. Jenson (Eds.), *Changing Views - Worlds in Play: Proceedings of the Second International Conference of DiGRA* (pp. 147-153). Vancouver, Canada: University of Vancouver.

BBC (2005). *Gamers in the UK: Digital Play, Digital Lifestyles*. Retrieved from: http://open.bbc.co.uk/newmediaresearch/files/BBC_UK_Games_Research_2005.pdf

Benkler, Y. (2006). The *Wealth of Networks: How Social Production Transforms Markets and Freedom*. New Haven, Conn.: Yale University Press.

Boellstorff, T. (2006). A Ludicrous Discipline? Ethnography and Game Studies. *Games and Culture*, 1(1), 29-35.

Bogost, I. (2006). *Unit Operations: An Approach to Videogame Criticism*. Cambridge (Mass.) & London: MIT Press.

Bryce, J., & Rutter, J. (2006). An Introduction to Understanding Digital Games. In J. Rutter & J. Bryce (Eds.), *Understanding Digital Games* (pp. 1-17). London, Thousand Oaks & New Delhi: Sage Publications.

Bull, M. (2000). *Sounding Out the City: Personal Stereos and the Management of Everyday Life*. Oxford & New York: Berg Publishers.

Burn, A. (2006). Reworking The Text: Online Fandom. In D. Carr, D. Buckingham, A. Burn, & G. Schott (Eds.), *Computer Games: Text, Narrative and Play* (pp. 72-87). Cambridge & Malden: Polity Press.

Caillois, R. (1961). *Man, Play and Games* (M. Barash, Tran.). New York: Free Press of Glencoe, Inc. (1958)

Castronova, E. (2005). *Synthetic Worlds: The Business and Culture of Online Games*. Chicago (Ill.): University of Chicago Press.

de Certeau, M. D. (1984). *The Practice of Everyday Life* (S. Rendall, Tran.). Berkeley, Los Angeles & London: University of California Press.

Coleman, S., & Dyer-Witheford, N. (2007). Playing on the Digital Commons: Collectivities, Capital and Contestation in Videogame Culture. *Media, Culture & Society*, 29(6), 934-953.

Consalvo, M. (2003). Zelda 64 and Video Game Fans: A Walkthrough of Games, Intertextuality, and Narrative. *Television & New Media*, 4(3), 321-334.

Consalvo, M. (2005). Rule Sets, Cheating, and Magic Circles: Studying Games and Ethics. *International Review of Information Ethics*, 4(12), 7-12.

Consalvo, M. (2007). *Cheating: Gaining Advantage in Videogames*. Cambridge (Mass.) & London: MIT Press.

Copier, M. (2005). Connecting Worlds. Fantasy Role-Playing Games, Ritual Acts and the Magic Circle. In S. de Castell & J. Jenson (Eds.), *Changing Views - Worlds in Play: Proceedings of the Second International Conference of DiGRA*. Vancouver, Canada: University of Vancouver.

Copier, M. (2003). The Other Game Researcher: Participation In and Watching the Construction of Boundaries in Game Studies. In M. Copier & J. Raessens (Eds.), *Level Up: Proceedings of the First International Conference of DiGRA* (pp. 404-419). Utrecht, Netherlands: University of Utrecht.

Cover, R. (2004). New Media Theory: Electronic Games, Democracy and Reconfiguring The Author-Audience Relationship. *Social Semiotics*, 14(2), 173-191.

Crawford, C. (1984). *The Art of Computer Game Design*. Osborne/McGraw-Hill.

Crawford, G., & Rutter, J. (2006). Digital Games and Cultural Studies. In J. Rutter & J. Bryce (Eds.), *Understanding Digital Games* (pp. 148-165). London, Thousand Oaks & New Delhi: Sage Publications.

Danet, B. (2001). *Cyberpl@y: Communicating Online*. Oxford: Berg Publishers.

Deuze, M. (2007a). Convergence Culture in the Creative Industries. *International Journal of Cultural Studies*, 10(2), 243-263.

Deuze, M. (2007b). *Media Work*. Cambridge & Malden: Polity Press.

Dovey, J., & Kennedy, H. W. (2006). *Games Cultures: Computer Games As New Media*. Maidenhead: Open University Press.

Du Gay, P., Hall, S., Janes, L., Mackay, H., & Negus, K. (1997). *Doing Cultural Studies: The Story of the Sony Walkman*. London, Thousand Oaks & New Delhi: Sage Publications.

Ehrmann, J. (1968). Homo Ludens Revisited. *Yale French Studies*, (41), 31-57.

Ermi, L., & F. Mäyrä. (2005). Fundamental Components of the Gameplay Experience: Analysing Immersion. In S. de Castell & J. Jenson (Eds.), *Changing Views - Worlds in Play: Proceedings of the Second International Conference of DiGRA* (pp. 15-27). Vancouver, Canada: University of Vancouver.

ESA (2007). *Essential Facts about The Computer and Video Game Industry*. Entertainment Software Association. Retrieved from: http://www.theesa.com/facts/pdfs/ESA_EF_2007.pdf

Eskelinen, M. (2001). The Gaming Situation. *Game Studies*, 1(1).

Eskelinen, M. (2004). Towards Computer Game Studies. In N. Wardrip-Fruin & P. Harrigan (Eds.), *First Person: New Media as Story, Performance, and Game* (pp. 36-44). Cambridge (Mass.) & London: MIT Press.

Fiske, J. (1987). *Television Culture*. London & New York: Routledge.

Fiske, J. (1991). *Understanding Popular Culture*. London & New York: Routledge.

Fiske, J. (1992). The Cultural Economy of Fandom. In L. A. Lewis (Ed.), *The Adoring Audience: Fan Culture and Popular Media* (pp. 30-49). London & New York: Routledge.

Fornäs, J. (1995). *Cultural Theory and Late Modernity*. London, Thousand Oaks & New Delhi: Sage Publications.

Fornäs, J. (1998). Digital Borderlands: Identity and Interactivity in Culture, Media and Communication. *Nordicom Review*, 19(1), 27-38.

Frasca, G. (1999). Ludologia kohtaa narratologian. *Parnasso*, 1999(3), 365-371. English version retrieved from: http://www.ludology.org/articles/ludology.htm

Frasca, G. (2001). Simulation 101: Simulation versus Representation. Retrieved from: http://www.ludology.org/articles/sim1/simulation101.html

Frasca, G. (2003a). Simulation versus Narrative: Introduction to Ludology. In M. J. P. Wolf & B. Perron (Eds.), *The Video Game Theory Reader* (pp. 221-235). London & New York: Routledge.

Frasca, G. (2003b). Ludologists Love Stories, Too: Notes from a Debate that Never Took Place. In M. Copier & J. Raessens (Eds.), *Level Up: Proceedings of the First International Conference of DiGRA* (pp. 92-99). Utrecht, Netherlands: University of Utrecht.

Fullerton, T., Swain, C., & Hoffman, S. (2004). *Game Design Workshop: Designing, Prototyping, and Playtesting Games*. San Francisco (Calif.): CMP Books.

Garnham, N. (2000). *Emancipation, the Media, and Modernity: Arguments about the Media and Social Theory*. Oxford & New York: Oxford University Press.

Giddings, S., & Kennedy, H. W. (2006). Digital Games as New Media. In J. Rutter & J. Bryce (Eds.), *Understanding Digital Games* (pp. 129-147). London, Thousand Oaks & New Delhi: Sage Publications.

Gray, A. (1999). Audience and Reception Research in Retrospect: The Trouble with Audiences. In P. Alasuutari (Ed.), *Rethinking the Media Audience: The New Agenda* (pp. 22-37). London, Thousand Oaks & New Delhi: Sage Publications.

Haddon, L. (1988). Electronic and Computer Games: The History of an Interactive Medium. *Screen*, 29(2), 52-73.

Hall, S. (1980). Encoding/Decoding. In S. Hall, D. Hobson, A. Love, & P. Williams (Eds.), *Culture, Media, Language* (pp. 123-148). London: Hutchinson.

Hall, S. (1994). Reflections upon the Encoding/Decoding Model: An Interview with Stuart Hall. In J. Cruz & J. Lewis (Eds.), *Viewing, reading, listening: Audiences and cultural reception* (pp. 253–274). Boulder: Westview Press.

Hall, S., & Jefferson, T. (Eds.). (1976). *Resistance Through Rituals Youth Subcultures in Post-War Britain*. London: Hutchinson.

Hardt, M., & Negri, A. (2000). *Empire*. Cambridge (Mass.) & London: Harvard University Press.

Hardt, M., & Negri, A. (2006). *Multitude: War and Democracy in the Age of Empire*. London: The Penguin Press.

Hartley, J. (2008). From the Consciousness Industry to Creative Industries: Consumer-created Content, Social Network Markets, and the Growth of Knowledge. Retrieved from: http://www.uchri.org/images/john-hartley-from-the-consciousness.pdf

Hawisher, G. E., & Selfe, C. L. (Eds.). (2007). *Gaming Lives in the Twenty-First Century*. New York & Houndmills, England: Palgrave Macmillan.

Hebdige, D. (1974). The Style of The Mods. Stencilled Occassional Paper, Birmingham: Center for Contemporary Cultural Studies, University of Birmigham.

Hebdige, D. (1979). *Subculture: The Meaning of Style*. London: Methuen.

Herman, A., Coombe, R. J., & Kaye, L. (2006). Your Second Life? Goodwill and The Performativity of Intellectual Property in Online Digital Gaming. *Cultural Studies*, 20(2-3), 184-210.

Herz, J. C. (1997). *Joystick Nation: How Videogames Gobbled Our Money, Won Our Hearts, and Rewired Our Minds*. London: Abacus.

Hesmondhalgh, D. (2006). Introduction. In D. Hesmondhalgh (Ed.), *Media Production* (pp. 1-6). Maidenhead: Open University Press.

Hewitt, P. (1999). *The Sharper Word: A Mod Reader*. London: Helter Skelter Publishing.

Hills, M. (2002). *Fan Cultures*. London & New York: Routledge.

Hills, M. (2005). *How to Do Things with Cultural Theory*. London: Hodder Arnold.

Hine, C. (2000). *Virtual Ethnography*. London, Thousand Oaks & New Delhi: Sage Publications.

von Hippel, E. (2005). *Democratizing Innovation*. Cambridge (Mass.) & London: MIT Press.

Howe, J. (2006). The Rise of Crowdsourcing. *Wired Magazine*, 14(6).

Hughes, L. (2005). Beyond the Rules of the Game: Why are Rooie Rules Nice? In K. Salen & E. Zimmerman (Eds.), *The Game Design Reader: A Rules of Play Anthology* (pp. 504-516). Cambridge (Mass.) & London: MIT Press.

Huizinga, J. (1950). *Homo Ludens: A Study of the Play-element in Culture*. Boston: Beacon. (1938)

IGDA (2004). *IGDA Quality of Life White Paper*. International Game Developers Association. Retrieved from: http://www.igda.org/qol/whitepaper.php

Jenkins, H. (1992). *Textual Poachers: Television Fans & Participatory Culture*. New York: Routledge.

Jenkins, H. (2002). Interactive Audiences? The 'Collective Intelligence' of Media Fans. In D. Harris (Ed.), *The New Media Book* (pp. 157-176). London: British Film Institute.

Jenkins, H. (2003). Quentin Tarantino's Star Wars? Digital Cinema, Media Convergence, and Participatory Culture. In D. Thorburn, H. Jenkins, & B. Seawell (Eds.), *Rethinking Media Change: The Aesthetics of Transition* (pp. 281-312). Cambridge (Mass.) & London: MIT Press.

Jenkins, H. (2005). Games, the New Lively Art. In J. Raessens & J. H. Goldstein (Eds.), *Handbook of Computer Game Studies* (pp. 175-189). Cambridge (Mass.) & London: MIT Press.

Jenkins, H. (2006a). Excerpts from 'Matt Hills Interviews Henry Jenkins'. In *Fans, Bloggers, and Gamers: Exploring Participatory Culture* (pp. 9-36). New York : New York University Press.

Jenkins, H. (2006b). *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press.

Johnson, R. (1986). The Story So Far: And Further Transformations. In D. Punter (Ed.), *Introduction to Contemporary Cultural Studies* (pp. 277–313). London: Longman.

Jones, R. (2006). From Shooting Monsters to Shooting Movies: Machinima and the Transformative Play of Video Game Fan Culture. In K. Hellekson & K. Busse (Eds.), *Fan Fiction and Fan Communities in the Age of the Internet: New Essays* (pp. 261-280). Jefferson (N.C.) & London: McFarland & Company, Inc., Publishers.

Juul, J. (2001). The Repeatedly Lost Art of Studying Games. *Game Studies*, 1(1).

Juul, J. (2005). *Half-Real: Video Games Between Real Rules and Fictional Worlds*. Cambridge (Mass.) & London: MIT Press.

Järvinen, A. (2003). The Elements of Simulation in Digital Games: System, Representation and Interface in Grand Theft Auto: Vice City. *Dichtung Digital*, 2003(4). Retrieved from: http://www.brown.edu/Research/dichtung-digital/2003/issue/4/jaervinen/index.htm

Järvinen, A. (2008). *Games without Frontiers: Theories and Methods for Game Studies and Design*. PhD dissertation, University of Tampere. Retrieved from: http://acta.uta.fi/pdf/978-951-44-7252-7.pdf

Kallio, K. P., Kaipainen, K., & Mäyrä, F. (2007). *Gaming Nation? Piloting the International Study of Games Cultures in Finland*, Hypermedia Laboratory Net Series, 14. Tampere: University of Tampere. Retrieved from: http://tampub.uta.fi/tup/978-951-44-7141-4.pdf

Kellner, D. (1995). *Media Culture: Cultural Studies, Identity and Politics Between the Modern*. London & New York: Routledge.

Kellner, D. (1997). Critical Theory and British Cultural Studies: The Missed Articulation. In J. McGuigan (Ed.), *Cultural Methodologies* (pp. 12-41). London, Thousand Oaks & New Delhi: Sage Publications.

Kennedy, H. W., & Giddings, S. (2007). 'Feeling the Force': From Lego Star Wars Cyberaesthetics to Wii Proprioception. In Gamers in Society Seminar, April 17-18, 2007. Tampere, Finland: University of Tampere.

Kerr, A. (2006). *The Business and Culture of Digital Games: Gamework and Gameplay*. London, Thousand Oaks & New Delhi: Sage Publications.

King, G., & Krzywinska, T. (2002). Introduction: Cinema/Videogames/Interfaces. In G. King & T. Krzywinska (Eds.), *ScreenPlay: Cinema/Videogames/Interfaces* (pp. 1-32). London: Wallflower Press.

Kline, S., Dyer-Witheford, N., & Peuter, G. D. (2003). *Digital Play: The Interaction of Technology, Culture, and Marketing*. Montreal & Kingston: McGill-Queen's University Press.

Koster, R. (2006). Are single-player games doomed? Blog entry. Retrieved from: http://www.raphkoster.com/2006/02/10/are-single-player-games-doomed/

Kushner, D. (2003). *Masters of Doom: How Two Guys Created an Empire and Transformed Pop Culture*. New York: Random House.

Kücklich, J. (2004). Play and Playability as Key Concepts in New Media Studies. Retrieved from: http://www.playability.de/Play.pdf

Kücklich, J. (2005). Precarious Playbour: Modders and the Digital Games Industry. *Fibreculture Journal*, 5. Retrieved from: http://www.journal.fibreculture.org/issue5/kucklich.html

Lammes, S. (2007). Approaching game-studies: towards a reflexive methodology of games as situated cultures. In A. Baba (Ed.), *Situated Play: Proceedings of the Third International Conference of DiGRA* (pp. 25-30). Tokyo, Japan: University of Tokyo.

Laukkanen, T. (2005). *Modding Scenes: Introduction to User-Created Content in Computer Gaming*, Hypermedia Laboratory Net Series, 9. Tampere: University of Tampere. Retrieved from: http://tampub.uta.fi/tup/951-44-6448-6.pdf

Lauteren, G. (2007). No Work, all Play: Social Values and the 'Magic Circle'. In Game in Action, June 13-15, 2007. Gothenburg, Sweden: University of Gothenburg. Retrieved from: http://www.learnit.org.gu.se/digitalAssets/904/904215_lauteren_rev.pdf

Lehtonen, M. (2000). *The Cultural Analysis of Texts*. London, Thousand Oaks & New Delhi: Sage Publications.

Levy, S. (2001). *Hackers: Heroes of the Computer Revolution*. New York: Penguin. (1984)

Lievrouw, L. A., & Livingstone, S. (2006). Introduction. In L. A. Lievrouw & S. Livingstone (Eds.), *Handbook of New Media: Social Shaping and Social Consequences* (pp. 1-14). London, Thousand Oaks & New Delhi: Sage Publications.

Lister, M., Dovey, J., Giddings, S., Grant, I., & Kelly, K. (2003). *New Media: A Critical Introduction*. London: Routledge.

Lotz, A., Tinic, S., & Havens, T. (2006). Cultural Industry Studies: Recovering Material Concerns in Cultural Studies. In Media Change and Social Theory, September 6-8, 2006. Oxford: University of Oxford.

Lowood, H. (2005). Gosu Game Studies. Digra Hard Core Columns, (hc3). Retrieved from: http://www.digra.org/hardcore/hc3/

Lunenfeld, P. (2003). The Design Cluster. In B. Laurel (Ed.), *Design Research: Methods and Perspectives* (pp. 10–15). Cambridge (Mass.) & London: MIT Press.

Mactavish, A. (2003). Game Mod(ifying) Theory: The Cultural Contradictions of Computer Game Modding. In Power Up: Computer Games, Ideology, and Play, July 14-15, 2003. Bristol: University of West of England.

Manovich, L. (2001). *The Language of New Media*. Cambridge (Mass.) & London: MIT Press.

Marx, K. (1973). *Grundrisse: Foundations of the Critique of Political Economy*. Harmondsworth, UK: Penguin Books.

Mast, G. (1974). What Isn't Cinema? *Critical Inquiry*, 1(2), 373-393.

McAllister, K. S. (2004). *Game Work: Language, Power, and Computer Game Culture*. Tuscaloosa (Ala.): University of Alabama Press.

McLuhan, M. (2001). *Understanding Media: The Extensions of Man*. London: Routledge. (1964)

Meehan, E. R. (2000). Leisure or Labor? Fan Ethnography and Political Economy. In I. Hagen & J. Wasko (Eds.), *Consuming Audiences? Production and Reception in Media Research* (pp. 71-92). Cresskill, New Jersey: Hampton Press.

Miller, T. (2006). Gaming for Beginners. *Games and Culture*, 1(1), 7-12.

Montola, M. (2005). Exploring the Edge of the Magic Circle. Defining Pervasive Games. In *Proceedings of the 6th DAC conference*. Copenhagen: IT University of Copenhagen.

Morley, D. (1992). *Television, Audiences and Cultural Studies*. London & New York: Routledge.

Morris, S. (2004). Co-Creative Media: Online Multiplayer Computer Game Culture. *SCAN: Journal of Media Arts and Culture*, 1(1). Retrieved from: http://www.scan.net.au/scan/journal/display.php?journal_id=16

Moulthrop, S. (2004). From Work to Play: Molecular Culture in the Time of Deadly Games. In N. Wardrip-Fruin & P. Harrigan (Eds.), *FirstPerson: New Media as Story, Performance, and Game* (pp. 56-69). Cambridge (Mass.) & London: MIT Press.

Mulligan, J., & Patrovsky, B. (2003). *Developing Online Games: An Insider's Guide*. Indianapolis (Ind.): New Riders.

Mäyrä, F. (2006). Welcome to Mapping the Global Game Cultures: Issues for a Socio-Cultural Study of Games and Players. In M. Santorineos (Ed.), *Gaming Realities: A Challenge for Digital Culture* (pp. 9-14). Athens: Fournos Centre for the Digital Culture.

Mäyrä, F. (2008a). *An Introduction to Game Studies: Games and Culture*. London, Thousand Oaks & New Delhi: Sage Publications.

Mäyrä, F. (2008b). Getting into the Game: Doing Multidisciplinary Game Studies. In B. Perron & M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 313-331). New York: Routledge.

Mørk Petersen, S. (2008). Loser Generated Content: From Participation to Exploitation. *First Monday*, 13(3). Retrieved from: http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2141/1948

Newman, J. (2004). *Videogames*. London & New York: Routledge.

Newman, J., & Oram, B. (2006). *Teaching Videogames*. London: British Film Insitute.

Nieborg, D. B. (2005). Am I Mod or Not? An Analysis of First Person Shooter Modification Culture. In Creative Gamers Seminar, January 10-11, 2005. Tampere, Finland: University of Tampere. Retrieved from: http://www.gamespace.nl/content/DBNieborg2005_CreativeGamers.pdf

Nieborg, D. B., & Hermes, J. (2008). What is Game Studies Anyway? *European Journal of Cultural Studies*, 11(2), 131-147.

Nikunen, K. (2005). *Faniuden aika: kolme tapausta televisio-ohjelmien faniudesta vuosituhannen taitteen Suomessa*. Tampere: Tampere University Press.

Pargman, D., & Jakobsson, P. (2006). The Magic is Gone: A Critical Examination of the Gaming Situation. In M. Santorineos (Ed.), *Gaming Realities: A Challenge for Digital Culture* (pp. 15-22). Athens: Fournos Centre for the Digital Culture.

Parlett, D. (1999). *The Oxford History of Board Games*. Oxford: Oxford University Press.

Pearce, C. (2002). Emergent Authorship: The Next Interactive Revolution. *Computers & Graphics*, 26(1), 21-29.

Pearce, C. (2005). Theory Wars: An Argument Against Arguments in the so-called Ludology/Narratology Debate. In *Changing Views - Worlds in Play: Proceedings of the Second International Conference of DiGRA* (pp. 41-45). Vancouver, Canada: University of Vancouver.

Pearce, C. (2006). Productive Play: Game Culture From the Bottom Up. *Games and Culture*, 1(1), 17-24.

Perron, B. (2003). From Gamers to Players and Gameplayers: The Example of Interactive Movies. In M. J. P. Wolf & B. Perron (Eds.), *The Video Game Theory Reader* (pp. 237-258). London & New York: Routledge.

Pietilä, V. (1997). *Joukkoviestintätutkimuksen valtateillä: tutkimusalan kehitystä jäljittämässä.* Tampere: Vastapaino.

Postigo, H. (2003). From Pong to Planet Quake: Post-Industrial Transitions from Leisure to Work. *Information, Communication & Society*, 6(4), 593-607.

Postigo, H. (2007). Of Mods and Modders: Chasing Down the Value of Fan-Based Digital Game Modifications. *Games and Culture*, 2(4), 300-313.

Postigo, H. (2008). Video Game Appropriation through Modifications: Attitudes Concerning Intellectual Property among Modders and Fans. *Convergence*, 14(1), 59-74.

Raessens, J. (2005). Computer Games as Participatory Media Culture. In J. Raessens & J. H. Goldstein (Eds.), *Handbook of Computer Game Studies* (pp. 373–388). Cambridge (Mass.) & London: MIT Press.

Rodriguez, H. (2007). The Playful and the Serious: An Approximation to Huizinga's Homo Ludens. *Game Studies*, 6(1).

Rollings, A., & Adams, E. (2003). *Andrew Rollings and Ernest Adams on Game Design.* Indianapolis (Ind.): New Riders.

Salen, K., & Zimmerman, E. (2004). *Rules of Play: Game Design Fundamentals*. Cambridge (Mass.) & London: MIT Press.

Saukko, P. (2003). *Doing Research in Cultural Studies: An Introduction to Classical and New Methodological Approaches*. London, Thousand Oaks & New Delhi: Sage Publications.

Schiller, F. (2004). *On the Aesthetic Education of Man* (R. Snell, Tran.). New York: Dover Publications. (1794)

Schleiner, A. (1999). Parasitic Interventions: Game Patches and Hacker Art. Retrieved from: http://www.opensorcery.net/patch.html

Schott, G. (2006). Agency in and around Play. In D. Carr, D. Buckingham, A. Burn, & G. Schott (Eds.), *Computer Games: Text, Narrative and Play* (pp. 133-148). Cambridge & Malden: Polity Press.

Sicart, M. (2006). *Computer Games, Players, Ethics*. PhD dissertation, IT University of Copenhagen.

Sihvonen, T. (2009). *Players Unleashed! Modding The Sims and Game Culture*. PhD dissertation, University of Turku. (forthcoming)

Siitonen, M. (2007). *Social Interaction in Online Multiplayer Communities*. PhD dissertation, University of Jyväskylä. Retrieved from: http://dissertations.jyu.fi/studhum/9789513929312.pdf

Silverstone, R. (1999). *Why study the media?* London, Thousand Oaks & New Delhi: Sage Publications.

Skirrow, G. (1986). Hellivision: An Analysis of Video Games. In C. McCabe (Ed.), *High Theory/Low Culture. Analysing Popular Television and Games* (pp. 115-142). Manchester: Manchester University Press.

Smith, J. H. (2006). *Plans and Purposes: How Video Games Shape Player Behavior*. PhD dissertation, IT University, Copenhagen. Retrieved from http://jonassmith.dk/weblog/phd-plans-and-purposes/

Steinkuehler, C. A. (2006). Why Game (Culture) Studies Now? *Games and Culture*, 1(1), 97-102.

Sudnow, D. (1984). *Pilgrim in the Microworld*. New York: Warner Books.

Tasajärvi, L. (2004). *Demoscene: The Art of Real-time*. Helsinki: Even Lake Studios.

Taylor, L. N. (2007). Platfrom Dependent: Console and Computer Cultures. In J. P. Williams & J. H. Smith (Eds.), *The Players' Realm: Studies on the Culture of Video Games and Gaming* (pp. 223-237). Jefferson (N.C.) & London: McFarland & Company, Inc., Publishers.

Taylor, T. L. (2006a). *Play Between Worlds: Exploring Online Game Culture*. Cambridge (Mass.) & London: MIT Press.

Taylor, T. L. (2006b). Beyond Management: Considering Participatory Design and Governance in Player Culture. *First Monday*, (Special Issue 7).

Thornton, S. (1996). *Club Cultures: Music, Media, and Subcultural Capital*. Hanover & London: Wesleyan University Press.

Toffler, A. (1981). *The Third Wave*. Toronto: Bantam Books.

Weinzierl, R., & Muggleton, D. (2003). What is 'Post-subcultural Studies' Anyway. In R. Weinzierl & D. Muggleton (Eds.), *The Post-subcultures Reader* (pp. 3–23). London & New York: Berg Publishers.

Williams, J. P., & Smith, J. H. (2007). Introduction: From Moral Panics to Mature Games Research in Action. In J. P. Williams & J. H. Smith (Eds.), *The Players' Realm: Studies on the Culture of Video Games and Gaming* (pp. 1-15). Jefferson (N.C.) & London: McFarland & Company, Inc., Publishers.

Williams, R. (1976). *Keywords: A Vocabulary of Culture and Society*. London: Fontana Press.

Williams, R. (2001). Culture is Ordinary. In J. Higgins (Ed.), *The Raymond Williams Reader* (pp. 10-24). Oxford and Malden: Blackwell Publishing. (1958)

Wirman, H. (2007). "I Am Not a Fan, I Just Play a Lot" – If Power Gamers Aren't Fans, Who Are? In A. Baba (Ed.), *Situated Play: Proceedings of the Third International Conference of DiGRA* (pp. 377-385). Tokyo, Japan: University of Tokyo.

Wirman, H. (2008). Skinning Women and Modding Men? Gendered Co-Creative Practices in Computer Game Cultures. In *Brunel Digital Games Postgraduate Conference, September 18, 2008*. Brunel University, UK.

Wright, T., Boria, E., & Breidenbach, P. (2002). Creative Player Actions in FPS Online Video Games. *Game Studies*, 2(2).

Wright, W. (2006). Dream Machines. *Wired Magazine*, 14(4). Retrieved from: http://www.wired.com/wired/archive/14.04/wright.html

Yates, S. J., & Littleton, K. (1999). *Understanding Computer Game Cultures: A situated approach*. Information, Communication and Society, 2(4), 566-583.

Yin, R. K. (2003). *Case Study Research: Design and Methods (Third Edition.)*. London, Thousand Oaks & New Delhi: Sage Publications.

Young, B. (2007). The Disappearance and Reappearance and Disappearance of the Player in Videogame Advertising. In A. Baba (Ed.), *Situated Play: Proceedings of the Third International Conference of DiGRA* (pp. 235-242). Tokyo, Japan: University of Tokyo.

Appendix: Articles

The starting points of the individual articles included in my dissertation are relatively diverse. As discussed already in chapter 2, in a couple of articles the analysis is tightly connected to the collected materials and the approach can be said to have ethnographic characteristics. Email interviews and other forms of continual communication with modders, or some of the assignments included in the self-designed probe-pack have been appropriate in producing a "thick" understanding of the player lifeworld. Methods like this and the data they can produce may however not be very helpful in answering some of my other questions. As Bryce and Rutter formulate:

> [N]o amount of ethnographic-style participation observation with gaming communities and playing of digital games will help understand the economic models upon which the contemporary digital games industry is based. (Bryce & Rutter 2006, 12)

Not surprisingly then, articles in the other end of methodological spectrum seek inspiration from such traditions as ideology critique and political economy of media. The changing focuses and methodological stances have allowed me to critically evaluate the conceptual core of the work. The central concepts like 'player production' and 'game culture' have gone through several iterations. Therefore the use of the terms may vary a bit between the articles. My current understanding of the terms, significantly informed by the network of methods, has been presented and discussed in the introductory chapters.

As discussed above, the different research materials have allowed me to ask different kinds of questions. It is, however, not only the different materials that have shaped the forms the individual articles have taken. In some cases the articles have been directly or more indirectly connected to particular research projects and in these cases the focus of the article is affected by the larger research agenda set by the project. In other cases, the articles have been written with some particular publication in mind. In these occasions, the particular traditions and audiences of the publication forums have been taken into account. Then again, the proposals of the book or theme issue editors and reviewers have been a great help in clarifying the argumentation and communicating the results of my research. Finally, the restrictions appointed by the publishers have in some cases significantly shaped the articles still in the final stages of the process. I will in the following introduce more closely the starting points and special characteristics of the individual articles.

My dissertation includes six articles. Five of them were published between the years 2005 and 2007 and one of them has been accepted to be published in the near future. In the following they are divided to three thematic pairs: player cultures,

industrial cultures and cultures of game design. The themes are far from exclusive. They rather imply the focus and emphasis of the individual articles. As the good research practice presumes that the research problem, research traditions and studied phenomena are at least briefly introduced in every article, it has been practically impossible to avoid some repetition. I can only hope that my readers will bear with this and focus on observing how the different articles can contribute to one another.

Player Cultures

1. *Sotamaa, Olli (2005) "Creative User-centred Design Practices: Lessons from Game Cultures", in Haddon et al. (eds.) Everyday Innovators: Researching The Role of Users in Shaping ICTs. Springer Verlag, London, 104-116.*

The first article works as a compact introduction to the topics of my dissertation. An earlier version of the paper was published already in 2003[45] and it covers many of the ideas I had when I was starting the project. This article provides a background for the more strictly defined follow-up articles. Many of these discussed themes are elaborated and further developed in the later articles. The book in which the article was originally published focuses on the role of users in innovation. I was advised by the editors not to expect the readers to know very much about digital games and gaming. Hence the textbook-style approach that is visible in some parts of the article. In retrospect, some of the celebratory ethos of the player-focus probably rose from my personal discontent with the structuralistic focus that to my mind all too widely dominated the game studies of the time. Tracing the historical and cultural background of player production had a visible influence on my thinking as it concretely revealed the many overlaps of play and design. In this phase, the notion of 'game culture' is visibly more player-oriented than some of my later proposals that accentuate the dialogue between players and other actors that are in a position to negotiate the rules and boundaries of game culture.

2. *Sotamaa, Olli (forthcoming) "When The Game is Not Enough: Mapping The Agency in Computer Game Modder Culture", Games and Culture.*

In this article the focus turns to players who develop game modifications. The data is collected among the 'modders' of the shooter game Operations Flashpoint. My interest is in attitudes, motivations and practices of the modder community. Both the specialized roles within the modder teams and the forms of collaboration are examined. The article proposes that it is difficult to define an average modder.

[45] Sotamaa, Olli, "Who's Game Is This Anyway? Creative User-centred Design Practices among Gaming Cultures" in Haddon et al. (eds.) The Good, The Bad and The Irrelevant: The User and The Future of Information and Communication Technologies. Conference Proceedings, UIAH, Helsinki, 2003, 257-259.

Instead, in case of OFP and also more generally, mod makers can be grouped at least based on the nature of the mod project, motivations and skills behind the activities and the different notions on the ownership and commercialization of mods. For the first time my thoughts on this subject and the collected interview data were presented at the Association of Internet Researchers Conference in late 2004.[46] For many reasons, some of them beyond my control, the final article was accepted for publication only almost four years later.

Industrial cultures

3. *Sotamaa, Olli (2007) "On modder labour, commodification of play, and mod competitions", First Monday, 12:9 (September 2007).*

The idea for this paper arose indirectly from the communication with modders. The more I learned about the everyday practices of mod makers, the more obvious it became that the institutional frame of modding required some critical consideration. While already the first two articles suggest that the player labour can significantly benefit the industry, this article moves on to concretely investigate the industry practices. While the emergence of modern game industry is fundamentally based on the commodification of work and leisure, the way developers are able to capitalize on modders' leisure time work still seem like a significant departure from the established business models within the cultural industries. Industry-organized mod competitions are used as an example to study the strategies used for motivating and persuading hobbyist to produce content that most effectively benefits the industry. An early version of this paper was presented in DiGRA 2005 Conference in Vancouver.[47] Before the publication of the final version, the manuscript went through several iterations and parts of it were completely rewritten.

4. *Sotamaa, Olli (2007) "Let Me Take You to The Movies: Productive Players, Commodification, and Transformative Play", Convergence, 13:4 (October 2007), 383-401.*

The fourth article applies and redevelops some of the arguments of the earlier articles. The significant shift is that the focus is turned from making modifications to making movies. The article discusses the cultural, economic and political context of the Lionhead game *The Movies* (2005). The game facilitates players with easy-to-use tools that allow them to produce and distribute short machinima movies of their own. The case study concretely exemplifies how digital games should be seen as

[46] "Playing it My Way?: Mapping The Modder Agency", Internet Research Conference 5.0, University of Sussex, UK, 19.-22.9.2004.
[47] "'Have Fun Working with Our Product!': Critical Perspectives On Computer Game Mod Competitions" in de Castell et al. (eds.) Proceedings of DiGRA 2005 Conference: Changing Views - World in Play. Vancouver. University of Vancouver, 2005, CD ROM.

both products and tools. *The Movies* also calls into question the concept of transformative play, as the limits of what is transformative and to whom seem to be in a constant flux. The paper further examines the specific ways in which players' "producerly" activities are carefully controlled and delineated. Finally, the article calls more precise understanding of industry-defined 'out-game rules' that can be as important as the designed in-game rules in shaping the activities of players. Some of the ideas presented in this article were tested in two conference presentations.[48] The feedback from the presentations assured me of the importance of the close reading. Focusing on an individual title allowed me to produce a multifaceted picture of the interconnected player and developer activities.

Cultures of game design

5. *Sotamaa, Olli (2007) "Perceptions of Player in Game Design Literature", in Baba A. (ed.) Situated Play: Proceedings of the Third International Conference of DiGRA. University of Tokyo, Tokyo, 456-465.*

Article number five turns the focus to the recent game design literature. The initiative for this article was to produce some clarity to the fragmentary field of player-centred design approaches. While all game design approaches are based on a particular perception of player, these player models are seldom openly discussed. Ten key game design books constitute the studied "canon". The similarities and differences of the player-focus of these books are examined in detail. The article has something of a meta-design focus. I am particularly interested to tease out both the different notions of player that shape the design and the actual roles reserved for player in design process. As a result, the article provides a grouping of different player models and particular designer-player relationships that reflect the current design ideologies.

6. *Sotamaa, Olli, Laura Ermi, Anu Jäppinen, Tero Laukkanen, Frans Mäyrä & Jani Nummela (2005) "The Role of Players in Game Design: A Methodological Perspective", in Proceedings of the 6th DAC Conference. IT University of Copenhagen, Copenhagen, 34-42.*

The last one of the articles presents a case study in which some of the ideas from player studies are applied to game design. The impulse for this article grew out from the observation that no well-defined player-centred methods for the early phases of the design process seemed to exist. The article introduces a method for collecting and communicating player information. The approach is based on self-

[48] "*Let me take you to The Movies: Empowerment in the age of commodified play*", Media Change and Social Theory, The University of Oxford, 6.-8.9.2006. "*It's a wrap! - On The Movies, empowerment and commodification of player productivity*", Gaming Realities, Athens, Greece, 6.-8.10.2006.

documentation sets with playful features. The article highlights the overall need for research-based methods for game design. It also exemplifies a particular way of doing research through design. This time the design initiative is turned into new research methods.

The project during which the design research approach was developed allowed me to closely co-operate with an interdisciplinary research team and a group of professional developers. It is clear that the diverse skills of the team allowed a configuration of research methods that would not have been possible as an individual endeavour. While the methodological approach is a joint contribution, I am still entirely responsible for the article and the possible shortcomings of it.

Chapter 7

CREATIVE USER-CENTERED DESIGN PRACTICES: LESSONS FROM GAME CULTURES

Olli Sotamaa

1. Introduction

The field of Human Computer Interaction (HCI) studies has lately undergone some significant transitions. The focus of research has shifted from tasks to actions, from offices to the streets and the home, from laboratories to settings where people actually spend their time and from simple "ease of use" to evaluating the suitable level at which an activity should be challenging. Traditional design ideals have been confronted by visions of "affective computing" and HCI research has identified the central position of emotions in designing user experiences. Alongside the standard usability concerns there is an increasing interest in questions concerning enjoyment, fun, and pleasure (cf. Blythe *et al*., 2003; Jordan, 2002). Meanwhile, and elsewhere, academic game research has challenged the traditional usability methodologies by analyzing the components of pleasure in gaming. The concept of "social usability" has been introduced to acquire "a broader understanding of the ways and needs to use and consume media products, and the habits and practices associated with them" (Järvinen *et al*., 2002, pp. 10–11). In search for criteria for evaluating "playability," Järvinen *et al*. suggest that alongside functional and structural factors one should study the audiovisual and social dimensions of games and gaming. In other words, current research in both fields is expanding our ideas about different types of emotion and pleasure to be experienced in relation to information and communication technologies (ICTs).

Widely adopted principles of user-centered and participatory design raise the perspectives of user and context of use to the center of the design process. Not only academic design studies but also business oriented analyses of innovation highlight the importance of observing real people in real life

Leslie Haddon (ed.), Exploring Users, 104–116.

situations and encourage approaches that make user participation an inseparable part of production (Kelley, 2002). Similarly, the games industry has rapidly learned to appreciate active and constant dialog between developers and gaming community. Gamers are allowed to alter the source code of games and create imaginative modifications of original games. A popular "mod" can significantly extend the life span of a game title. Furthermore, the global gaming community can also serve as an inexpensive research and development team.

Thereby, it seems obvious, that game design and research on gaming culture can inform the design of emotionally satisfying and challenging ICT products in numerous ways. Still, as Clanton (2000) has pointed out, HCI designers and game developers have complementary skills but so far have few contacts and little awareness of one another. The objective of this chapter is to introduce games research to a wider design audience. I hope the examples encourage designers from various fields to think about different types of active roles that users can play.

In this phase, we must pose the question: why is it important to take a look at computer games. I suggest, we can find more than one answer to this. First of all, from their origins and over the course of many years computer games have always been in the front line in developing new means of interaction. Games from the 1970s text-based MUDs (Multi-User Dungeons) to the 21st century MMORPGs (Massively Multiplayer Online Role-Playing Games) have introduced forms of human–machine interaction and computer-mediated communication that are also widely used today outside gamer communities. Computer games are also pushing the development of new technologies through demanding superior graphic cards, graphic processing units, advanced gaming peripherals, and so on. Furthermore, in pointing out the profound blurring of such categories as production and consumption, professionalism and passion, and work and leisure I suggest that game cultural activities already indicate the future relationship between people and new digital technologies.

Although games studies as an academic discipline is still in the making, the different approaches applied can provide interesting insights for people designing and researching satisfying user experiences more generally. Game studies examine why particular games inspire and excite and are fun to play. Other approaches focus on the meaning and significance of the games to the player looking at how games contribute to an understanding of oneself and other people and what the potential effects of games on social behavior are. The manifold dimensions of contemporary games require methodological diversity. First of all, games exist as products consisting of code and different features. Second, games can be approached by examining the experiences of particular gamers. Third, we can look at the larger cultural and social framework and the different interpretations and discourses that give significance to games (Mäyrä, 2002, pp. 5–6).

The emphasis of my approach is on studying players and game cultures. Players actively construct meanings and new ways of using games. They also create content for other gamers to consume. Simultaneously, particular industrial mechanisms attempt both to encourage and to control and regulate player innovation. Therefore, by analyzing what the players can and cannot do we have potential indicators of how the nature of new media user experience is changing and what are the wider scale transitions in the relationship between people and new digital technologies.

2. Gaming and Culture

The particularity of games in general is based on the fact that they cannot simply be read or watched: they must be played. The creative involvement of the player is a fundamental feature of any game. In other words, the result of the game is highly dependant on the skills and creativity of the player (cf. Aarseth, 2001). Thus, the gaming experience is always constructed in a dialog between the player and the rules of the game. Yet, the general history of gaming includes a variety of interesting examples where existing rule systems and appearances of boards or cards have been modified in order to produce new games. Many traditional board games like backgammon or chess have appeared in several significantly different versions throughout the centuries. Also such an everyday example as a game of soccer played in the backyard shows that play as an activity seems to be open to various kinds of alterations: the soccer game can be played with a varied number of players, the duration of the game can be very flexible, almost any object at hand – be it a tree or a bag – can serve as a goal post, and so on. At the level of rules, games are made of more or less fixed structures. Still, playing them often consists of bending and reworking these rules. As Salen and Zimmerman (2003) point out:

> *Because a game by its very nature has room for the movement of free play, it is always possible for players to drive a wedge into the system, bending and transforming it into a new shape* (Salen and Zimmerman, 2003, p. 565).

In this connection, it is useful to recall that in recent decades several theoretical movements have been eager to highlight the fact that all media audiences are active and therefore they should be understood in terms of production, not of reception. Following this argument, it can be claimed that gamer-made designs can empower gamers and communities and help them to become active participants rather than passive consumers. On the other hand, the industrial context and practical developer choices can limit and regulate gamer activities. What we need here – as a growing literature has lately identified – is a closer integration of studies of media production and consumption. The meanings

that new media technologies acquire are not fixed but are continuously negotiated through their life cycle. To arrive at a profound picture of the meanings attached to artifacts and media texts neither processes of production nor forms of consumption should be privileged (Deacon, 2003; du Gay *et. al*.,1997).

Furthermore, I suggest that to understand contemporary games requires examining them in relation to the qualities of new media more broadly. As Manovich (2001) points out, digital media objects are open for algorithmic manipulation and therefore media have become programmable. In the context of computer games this leads us in two different directions. First of all, programmability brings us back to the issue already emphasized by Aarseth, namely the nature of computer games as simulations. In brief, "the story" or "the result" of a game is not determined beforehand but has to be understood as a process. The idea of programmability is also tied to the processes of decentralization and personalization that make the daily media environment more fragmented. According to Lister *et al*. (2003) until the 1990s there was a rigid separation between what was acceptable for public distribution and what was acceptable for personal, domestic exhibition (e.g., to friends). Lately, the so-called "prosumer technologies," aimed not only at professionals but also hobbyists, have made the production accessible to a wider range of people. Powerful and inexpensive machines are today available to the hobbyists so that they can easily experiment with editing and mixing media contents.

As Kamppuri and Tukiainen (2004) point out in their study, "culture" is a relatively recent concept in the field of HCI research. HCI was originally heavily built on cognitive science and therefore cultural, social, and historical contexts were mostly excluded from its research agenda. The cultural perspective has risen in significance during the past decade but still the uses of the concept have been varied. Often culture is still taken for granted, or else it is limited to national cultures and seen as coherent wholes (Kamppuri and Tukiainen, 2004, pp. 43–44, 53). In order to produce an alternative perspective I suggest we take a look at how game researchers have approached culture.

On a general level "culture" can be defined as social and symbolic meaning-making. From this perspective game cultures are not restricted to interactions with technological systems but encompasses all the player activities and dealings connected to gaming. Often new game cultures and cultural qualities arise in relation to particular games and game genres. Therefore, rather than speaking of a single coherent computer game culture, different game cultures can be interpreted as "subcultures." The cultural studies tradition defines subcultures as groups of people who share interests, values, and practices. Important markers include a particular language, shared rituals and interests in collecting and producing artifacts that promote one's belonging to a group. This understanding of subculture comes very close to fandom and fan activities – but we will come back to this connection in a moment (cf. Mäyrä, 2004, pp. 4–7). Furthermore, Salen and Zimmerman (2003) introduce two ways of understanding games as

culture: in terms of reflection and transformation. As any system of representation, computer and video games reflect existing values and ideologies: games oversimplify and construct biased views but they can also be used to educate and introduce ethical dilemmas (see for example, newsgaming.com). On the other hand, by introducing new forms of expression games have a potential to transform their surrounding contexts. From the player perspective this implies that player activities are not restricted to creative in-game play. In the words of Salen and Zimmerman, *games offer players forms of participation that extend the boundaries of play beyond the edges of a magic circle* (Salen and Zimmerman, 2003, p. 507).

Gamer-made contents and designs can play a significant role in the gamer's life-world, but at least according to the game press they also have a potential to change the whole composition of the game industry (cf. Edge, 2003). In fact, as Haddon points out in Chapter 4, in the case of computer games there is a rather thin line between user and designer. In the following, I introduce a couple of telling examples from the history of computer games. These examples attempt to demonstrate the significance of hobbyist activities in particular cases. After that I take a closer look at the different manifestations of player innovation.

3. Player Innovation

The urge to modify existing computer systems can be tracked at least back to the first generation of hackers. According to journalist Steven Levy, who has studied the early hackers of the 1960s and 1970s, a hack is *a project undertaken or a product built not solely to fulfil some constructive goal, but with some wild pleasure taken in mere involvement* (Levy, 1984/1994, p. 23). Thus, the hacker approach to computers was right from the beginning very different from the official one: instead of seeing computers as tools, the hackers treated the early machines as if they were toys. Hacking is often understood as an action involving a high level of enthusiasm and enjoyment but the resulting "hacks" can also be entertaining. In the context of this article, it is noteworthy that Levy sees the first modern computer game *Spacewar!* (1962) as being one of the most significant early hacks. *Spacewar!*, built on the minicomputer PDP-1 by MIT students, was partly based on the innovative use of earlier program code. Even the controls for the game were hacked from push-buttons used for 1940s telephones. Typical of the exploratory projects of the time, *Spacewar!* was freely distributed to other PDP-1 owners to play and to rewrite (Haddon, 1988, pp. 55–57; Levy, 1984/1994, pp. 50–69). As *Spacewar!* shows, early computer games were important vehicles for learning about computers and programming. Exploring games helped to understand the potential of the machines. Tinkering with computers and improving the existing algorithms went hand in hand with playing games. Games posed challenges and puzzles that

were somewhat like programming itself (Haddon, 1988, pp. 58–59). In other words, in the early days of computer gaming – as they moved from mainframes and from minicomputers to microcomputers – modifying games was an organic part of the gamer life-world. The arrival of the first microcomputers (mid-1970s to early 1980s) introduced programming manuals that widely used games as a vehicle to explain the structure of computer languages. At the same time, computer magazines presented games as a suitable activity for relaxing in the midst of programming. Early magazines not only reviewed games but they also offered tips on how to break into the programming structure and make the games operate differently. At first, games were mainly both produced and consumed by early microcomputer hobbyists. The introduction of cassette technology made it possible to save and distribute the gamer-made alterations. This had not been possible in the case of earlier home video game machines. At least in the UK the cheap cassette technology also encouraged the hobbyists to found the first mail order ventures selling entertainment software (Ibid., pp. 59, 69–70).

For a slightly more recent example, we can look at Id Software's Doom (1993). Already Id's earlier first-person shooter *Wolfenstein 3-D* (1992) had inspired modified gamer-made versions, which according to David Kushner's *Masters of Doom*, were in turn a source of inspiration for the developers at Id software. To give one example, there was a version where the game music had been replaced by a theme song from the children's show Barney and instead of the SS boss character, players encountered a smiling purple dinosaur (Kushner, 2003, pp. 115–116). In *Wolfenstein* this kind of replacement always required erasing parts of the original code. Once a picture was changed, there was no easy way to bring the original back. In the case of *Doom*, the media files were intentionally separated from the main program and located in an accessible directory. This reorganizing of game data made it possible to replace sounds and graphics in a non-destructive manner. Id programmer John Carmack also facilitated the amateur designers by making available the source code for the level-editing and utilities program. In only a matter of weeks gamers began swapping *Doom* modifications or "mods" and "homebrew" or amateur editing tools on Bulletin Boards and across the Internet. (Ibid., pp. 165–169.)

These examples show that enthusiastic users can have a significant role in the development of new technologies. Users appropriate technologies in various ways other than the designers originally intended. In Chapter 4 of this book, Leslie Haddon explores innovative use of ICTs and produces a tentative grouping of the different ways in which users can be creative or innovative. I suggest Haddon's four-level categorization can be used as a starting point in introducing and evaluating different types of innovation taking place among gamers.

The first level includes designing and re-designing ICTs and applications. Haddon associates this level with technologically skilled and often enthusiastic users. A telling example from games culture is the phenomenon noted

above called "modding." "Mods" and "modders" come in many forms. Console gamers install "mod chips" to their systems. These programmed microcontrollers bypass the region code system that the game industry has created to control the international markets. Anyway, hardware modding is not limited to allowing gamers to play imported games but in the hands of a creative hobbyist the games console can become a versatile video player, mp3 jukebox, or a personal game archive. Some gamers also use significant amounts of time and energy on "case modding": decorating and altering the semblance of their gaming devices. While hardware modding has so far been limited to fairly small groups of enthusiasts, game content modifications have been a great success all over the world. The digital nature of games allows them to be manipulated and reprogrammed – even by individual consumers. Players personalize the appearance of their in-game characters by creating models and skins and create new maps and adventures based on existing game titles. For example, sports game fans create detailed copies of national and local leagues including player statistics, uniforms, and stadiums. Moreover, modders also develop and share new tools and editors that enable production of more sophisticated modifications.

Turning to the next level in Haddon's categorization, innovation need not be merely technological, but it can also consist of introducing new practices and doing new things with technology. "Machinima" films are a fairly recent example of this from games culture. These computer-generated animations utilize game engines to create virtual 3-D environments. Machinima films come in several genres: some films follow a narrative plot while others are mostly experimenting with the modified engine features. Similarly games like *The Sims* (Maxis, 2000, PC) are no longer used merely for playing but gamers also use them as a medium for producing and distributing contents of their own.

The various ways in which online games are making use of the Internet provide a good example of practices that exceed the objectives that global information networks were originally intended to fulfil. No longer are people playing alone but they connect with other gamers via the Internet to compete and share experiences. Text-based adventure games called MUDs, short for Multi-User Dungeons, originated in the late 1970s and introduced communication patterns that today are widely used in chats and other real-time online environments. Furthermore, networked multi-player games are very social in nature and inspire gamers to unite. While role-playing games and shooter games give birth to clans, tribes and guilds, sports games are played in local and global teams and leagues. Here, we move towards the next level. Gaming as a hobby often finds its expression in online forums and personal websites. Gamer groups and individual gamers regularly update thousands of websites to promote the achievements of a particular clan, to share the significant pieces of information (patch updates, walkthroughs, strategy guides, etc.) and to keep in contact with other gamers.

Finally, some innovations reside not in improving the performance of technology or in creating new forms of gaming, but in groups of gamers creating complex sets of practices and negotiating the meanings around gaming technologies. Sometimes finding a time and a place to play can itself require some creativity in everyday life. It is important to bear in mind that these categories of user innovation obviously overlap. In the following we move on to examine how innovative gamers both follow and challenge the theories of media fandom.

4. Fans and Modders

Fandom and fan cultural formations are traditionally associated with "cultural forms that the dominant value system denigrates" (Fiske, 1992, p. 30). Therefore, it is no surprise that such typical objects of fandom as pop music, television series, movies, and cartoons have recently been accompanied by modern computer games, all being the ideal commodities of digital popular culture. Fans draw their resources from commercial media culture while also reworking them to serve alternative purposes. In his influential study, Henry Jenkins borrows de Certeau's term "poaching" to characterize the relationship between fans and corporate producers of media texts as "an ongoing struggle for possession of the text and for control over its meanings" (Jenkins, 1992, p. 24). Later on, Jenkins suggests that "[f]andom originates, at least in part, as a response to the relative powerlessness of the consumer in relation to powerful institutions of cultural production and circulation" (ibid., p. 278).

The history of media fandom can at least partly be seen as the history of series of efforts to influence programming decisions (ibid., p. 28). In this connection, in order to examine the collective power of the gaming community, we can look at the case of the *Babylon 5* computer game. On September 1999, Sierra studios cancelled the production of the long-awaited computer game, *Babylon 5: Into The Fire*. *Babylon 5* fans organized a worldwide boycott of Sierra titles and gave all their support to the game development team. With the encouragement of this large community, the developers of the game formed their own company to continue the project. Eventually it proved impossible to get the rights to the original material but several fan-created freeware games and B5-themed game modifications have later seen the light. When pressuring industry proved to be difficult, gamers themselves took on the role of programmers and producers. My point here is that innovative gamers, who rework and develop further the products of the games industry, share characteristics with fans of other media texts and therefore earlier fan ethnographies can assist in understanding the motivations and strategies behind gamer actions. At the same time, other forms of fandom offer a useful point of comparison that can highlight important differences and clarify the particularities of game cultures.

As mentioned earlier, the theory of "active audiences" has emphasized the productive nature of all media use. Still, fans hold a particular position in relation to media texts since their productivity often takes a textual and material form: they create things. The commitment of fans is manifested in various ways. Fans write stories, "fanfiction," using characters and settings of some original media presentation (film, television series, computer game, etc.). Similarly fan paintings, songs, and videos comment on the original industry produced texts and add new meanings and points of view on them. Today, the forms of fan creativity often have counterparts in games culture ranging from themed websites to image manipulations, collages and Machinima films. Abercrombie and Longhurst have studied television audiences and produced a five-class classification (Abercrombie and Longhurst, 1998). If we apply this schema to the context of gaming culture *consumers* are the ones who occasionally play games and see them as one leisure time activity among others. In case of the *fan*, gaming becomes an inseparable part of everyday life. *Cultists* see gaming and being part of gaming community as a central element of identity while for an *enthusiast* gaming and talking about games becomes subordinated to producing them. To clarify what this means in context we can turn to my interviews among computer game mod makers. When asked about the influences of modding they often highlighted that the time spent on playing had significantly diminished and launching the game mostly meant that some new component had to be tested. (Sotamaa, 2004). In the case of *petty producers*, cultural production is no longer random but the skills are marketed to an imagined community – the members of particular gaming culture (cf. Järvinen, 2003). Applying this classification helps us to see that players hold very different positions and sets of skills in relation to games. Therefore, instead of seeing gamer communities as coherent and homogenous groups game cultures seem to consist of different subgroups with complementary roles.

Just over 10 years ago, Henry Jenkins noted that *fans lack direct access to the means of commercial cultural production and have only the most limited resources with which to influence the entertainment industry's decisions* (Jenkins, 1992, p. 26). In the same manner John Fiske wrote:

(F)ans do not write or produce their texts for money; indeed, their productivity typically costs them money. Economics, too, limits the equipment to which fans have access for the production of their texts, which may therefore often lack the technical smoothness of professionally-produced ones. There is also a difference in circulation; because fan texts are not produced for profit, they do not need to be mass-marketed, so unlike official culture, fan culture makes no attempt to circulate its texts outside its own community (Fiske, 1992, p. 39).

Investigating the contemporary game scene immediately indicates that the landscape of fan culture has developed during the past decade. The networked

PC has opened a variety of new possibilities and caused visible changes in everyday fan activities. One of the traditional claims of the fan critics is that fan cultural texts are not produced to make profit. Indeed, earlier fan activities were mainly discussed in fan conventions and copies of texts were circulated in the fan community. This system with its own rules for production and distribution is called a "shadow cultural economy" by Fiske. Today the Internet is extensively used both for distribution of materials and as a platform for discussion. Furthermore, industrial media companies have been eager to bring the petty productions of fan culture from the "subcultural shadows" to the "mainstream light."

A well-known example of the development described above is the Star Wars Fan Movie Awards, a yearly competition organized by Atomfilms in partnership with Lucasfilms – the producer of the official Star Wars movies. Those fan filmmakers who win an award receive a commercial distribution contract that guarantees them legitimate royalty payments. In addition, from the production company's point of view the awards offer an important opportunity to control and regulate fan production. Equally, Epic Games and Atari Inc. announced a big modding competition in the summer of 2003. "*Make Something Unreal*" was organized together with Nvidia to generate modifications to Epic's popular first person shooters Unreal Tournament 2003 and UT 2004. While offering considerable prizes and significant publicity opportunities for the winning mod groups the companies also obviously expect to increase the sales of the games and the latest Nvidia graphic processors.

The game development kits that modders use are often released with commercial PC games. Tools are often available for free downloading via the official game websites. It is also quite common for modders to create tools of their own. This is not something entirely new, since games from the early 1980s like *Lode Runner* (Broderbund, 1983, C-64) already included editors that allowed players to create additional levels. The Commodore 64 scene also witnessed such titles as *Boulder Dash Construction Kit* (First Star Software, 1986), a tool set inspired by the popular *Boulder Dash* game series and a generic shooter editor *Shoot-Em-Up Construction Kit* (Sensible Software, 1987). Mods are typically downloaded from the Internet for free but they do not normally work without the retail version of the original game. Therefore a popular mod can significantly extend the life span and the sales of a game title and participate in developing a devoted fan base. The games industry has so far been mostly unwilling to estimate the commercial significance of an enthusiastic mod community but the various ways in which modding is encouraged and supported suggests that companies see some value in modder activities (Postigo, 2003,p. 596, 603). Particularly successful works of the mod community can make the jump from being a mod to a retail title. Probably the most well known example of this is *Counterstrike* (2000), a team play modification of *Half-Life* (Valve Software,

1999). Furthermore, from the games industry point of view the mod community can serve as an inexpensive research and development team. During the year 2002 members of top mod teams all over the world were flown to Electronic Arts' Westwood Studio*s* for a full day Mod College aimed at informing the mod community about the new game engine.

5. Discussion

The very well-known quotation from usability guru Jakob Nielsen says that *"users are not designers*" (Nielsen, 1993, p. 12). In brief, this means that one should not expect users to be able to design things and therefore the input they give should not be regarded as an unquestionable truth. I suggest that computer game mods reflect a very different design policy. At least some game developers and producers regard game development as an iterative process in which modders' observations, suggestions, and designs are used as an invaluable resource. Instead of analyzing user needs and validating user requirements that is typical of traditional user-centered design approaches the tools are given to the users and fiddling and experimenting with them is encouraged.

Similar approaches have also emerged lately in other high-tech fields. In academic terms, this phenomenon has been discussed under the title "Toolkits for user innovation" (see Thomke and von Hippel, 2002; von Hippel and Katz, 2002). The pioneers of this approach emphasize the point that toolkits for innovation have existed for a long time since developers and designers are normally equipped with suitable tools. Many users also have personal toolsets that can be applied to modify and repair existing products and to create new ones. What is new and unique in the toolkits for user innovation is the integration of user toolsets which can customize products and enable users to produce the designs "as is" by manufacturers (von Hippel and Katz, 2002, p. 825). In connection to mods, this means that the user-driven content generated following the rules embedded in a tool kit will be compatible with original code and immediately available for sharing.

I suggest that from the industry point of view, this invitation to experiment arise not only from an interest in learning what gamers want or learning to recognize and exploit the groups whose work has proven popular among this community. Developers also want to learn that their work is appreciated and that there is a worldwide community developing their project further. I hope this can also produce a wider understanding of the games industry as a field that consists not only of manufacturers, game development studios and distribution companies but also of an enthusiastic crowd of skilled hobbyists (Postigo 2003, pp. 595–596). Enabling users to develop new features to games can have a significant effect on the tasks of game industry professionals. Instead of developing new variations and combinations of existing game types

in order to satisfy the needs of the increasing variety of specified target groups, developers can leave at least a part of that job to mod developers. Mods can experiment with ideas that are too "obscure" or "far out" for mainstream productions and the ones that prove to be popular in the market can be picked for official release. On the other hand, the increase of detail in contemporary games has already caused a huge increase in the workload of mod developers. Instead of single virtuosos we already witness the rise of large global development teams. Coordinating and facilitating such teams places new challenges both on mod community members and on the game development professionals. It seems likely that even more complex symbioses between media companies and individual media (prod)users will arise.

From the player perspective the maturing of the games industry has produced new and interesting possibilities. In some cases gaming can shift from being a hobby to a full-time job. Video game tournaments with considerable prizes and sports-like national teams training several hours per day can transform gaming into a serious business. Some game developers have openly admitted that today mod projects are often used as a portfolio when applying for a job in the games industry. I would like to end this chapter with a quotation from an interview I conducted during the summer of 2004. In my opinion, this excerpt shows clearly that through designing their own projects young gamers can learn not only particular skills but also a more mature attitude towards games and the game industry.

> *It [modding] has made me more aware of the little details in a game. Also instead of being interested in whether an item could be killed I am now more interested in how it's made. [—] OFP [computer game Operation Flashpoint] has made me realize that it is not so great as it first seamed, there's a lot of hard work involved, and you have good days and you have bad days. I would have to say that OFP has given me the lust to try and get a job within the game industry, but it has also in a strange way showed me that it is a serious commitment and you have to be incredibly dedicated . . . . so in that way it has also scared me away from a job within the gaming industry in that aspect* (Modder, aged 15).

References

Aarseth, E. Computer game studies, year one. Game Studies, 1(1) (July 2001). Available at http://www.gamestudies.org/0101/editorial.html; 2001.

Abercrombie, N., Longhurst, B. Audiences: A Sociological Theory of Performance and Imagination; 1998 Sage, London, Thousand Oaks and New Delhi.

Blythe, M.A., et al. (Eds.) Funology: from usability to enjoyment, 2003. Kluwer Academic Publishers, Dordrecht and Boston.

Clanton, C. Lessons from game design. In Bergman, E.(Ed.) Information Appliances and Beyond: Interaction Design for Consumer Product; (2000) Morgan Kaufmann Publishers, San Fransisco: 299–334.

Deacon, D. "Holism, communion and conversion: integrating media consumption and production research". Media, Culture and Society, 2003; 25: 209–231.

du Gay, P., et al. Doing Cultural Studies: The Story of Sony Walkman; 1997. Sage, London, Thousand Oaks and New Delhi.

Edge The future of electronic entertainment, 126 (8/2003), 2003.

Fiske, J. The cultural economy of fandom. In Lewis, L.A. (Ed.) The Adoring Audience: Fan Culture and Popular Media. Routledge, London and New York: 30–49.

Haddon, L. Electronic and computer games: the history of an interactive medium. Screen, 1988; 29(2): 52–73.

Järvinen, A., Heliö, S., Mäyrä, F. Community and communication in digital entertainment services. Hypermedia Laboratory Net Series 2, University of Tampere. Available at http://tampub.uta.fi/teos.phtml?7310; 2002.

Järvinen, A Verkkopelien ABC – Doomista MMORPGiin, Quakesta roolipeleihin, mediumi 2.1. Available at http://www.m-cult.net/mediumi/article.html?id=231andlang=fiandissue_nr=2.2 andissueId=15; 2003.

Jenkins, H. Textual Poachers: Television Fans and Participatory Culture; 1992. Routledge, New York and London.

Jordan, P.W. Human factors for pleasure seekers. In Frascara, J. (Ed.) Design and the Social Sciences: Making Connections; 2002 Taylor and Francis, London and New York: 9–23.

Kamppuri, M., Tukiainen, M. Culture in human–computer interaction studies. In Sudweeks , Ess (Eds.) Proceedings cultural attitudes towards communication and technology, Murdoch University, Australia: 43–57.

Kelley, T. The Art of Innovation: Lessons in Creativity from IDEO, America's Leading Design Firm; 2002. Harper Collins Business, London.

Kushner, D. Masters of Doom: How Two Guys Created an Empire and Transformed Pop Culture; 2003. Random House, New York.

Levy, S. Hackers: Heroes of the Computer Revolution; 1984/1994. Delta, New York.

Lister, M., et al. New media: a critical introduction; 2003. Routledge, London and New York.

Manovich, L. Language of New Media; 2001. MIT Press, Cambridge, Mass. and London.

Mäyrä, F. Introduction: all your base are belong to us. In Mäyrä, F. (Ed.) Computer Games and Digital Cultures Conference Proceedings. Studies in Information Sciences; 2002, Tampere University Press, Tampere: 5–8

Mäyrä, F. Introduction and prehistory of digital games. Unpublished course material for Master's Course in Digital Games Research and Design. University of Tampere, Hypermedia Laboratory, 2004.

Nielsen, J. Usability Engineering; 1993 Academic Press, Boston.

Postigo, H. From Pong to Planet Quake: post industrial transitions from leisure to work. Information, Communication and Society, 2003; 6(4): 593–607.

Salen, K., Zimmerman, E. Rules of Play: Game Design Fundamentals; 2003. MIT Press, Cambridge, Mass. and London.

Sotamaa, O. Playing it My Way? Mapping The Agency of Modders. Presentation at Internet Research 5.0 Conference, University of Sussex, UK, September, 19–22, 2004.

Thomke, S., von Hippel, E. Customers as innovators: a new way to create value. Harward Business Review, 2002; 80(2): 5–11.

von Hippel, E., Katz, R. Shifting innovation to users via toolkits. Management Science, 2002; 48(7): 821–833.

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Abstract

As the boundaries between play and work are becoming increasingly blurred among digital games, avid player labour is increasingly harnessed as a source of revenue. This article focuses on “modders”, hobbyists who build on existing retail game titles, and the strategies the game industry uses to motivate and persuade these hobbyists to produce content that most effectively benefits the industry. Special focus is on industry–organized mod competitions that form an area of experimentation where the potentials of free modder labour are tested.

Contents

Introduction

In May 2006 the Entertainment Software Rating Board (ESRB), the self–regulatory body of North American game industry, issued a parental warning announcing that the computer game *Elder Scrolls IV: Oblivion* had been re–rated from T (Teen 13+) to M (Mature 17+) [1]. The decision of the ESRB was based in part on the existence of a third–party modification capable of exposing a nude art graphic in the PC version of the game. Soon after the incident game designer John Romero posted a blog entry suggesting that “modders are now screwing up the industry they’re supposed to be helping.” [2] It is possible to understand some of Romero’s frustration since many major U.S. retailers recalled the title immediately; without doubt the re–rating caused some decrease in sales of the celebrated role–playing game. Still, this statement was somewhat unexpected since it came from a man who once co–developed games like *Doom* and *Quake*, which without dispute had a great contribution to the birth of computer game modding as we know it today.

Romero's outburst on modders is a telling example of the present industry stances on computer game mods. One could argue that facilitating avid gamers with easy–to–use tools has been one of the most important reasons for a general increase in game modifications and player–created content. What the industry is currently seeking are new methods for controlling the works created with these tools. This need for more effective ways to control mod makers has been expressed frequently after the *Hot Coffee* incident in the summer of 2005 [3]. Since both the *Hot Coffee* and *Oblivion Topless* mods basically unlock content already on the game disc, some of these concerns seem quite hypocritical. In any case, what these affairs have shown is that although modders can be highly beneficial to the success of games, game developers find it increasingly crucial to create ways to monitor, regulate and manipulate the workings of game enthusiasts.

The objective of this article is to take a critical look at the conditions where avid players produce content that is increasingly vital to computer game developers. Further, the article examines the strategies that the game industry uses to motivate and persuade hobbyists to produce free content that most effectively benefits the industry. Since the boundaries between play and work are becoming increasingly blurred among digital games different forms of labour are contemplated and the conditions where modder labour is commodified as an inseparable part of game development are investigated. Further, I attempt to outline some concrete game industry strategies that have a direct influence on the current status of the mod phenomenon. To illustrate my points I draw examples from mod contests organized by the industry. I suggest these contests are an important testing ground and area of experimentation where the game industry puts the potentials of free modder labour to test. The paper also discusses the larger changes that mod competitions reveal of strategies of digital game industry.

Studying game modifications

Player–made alterations to game industry products are today widely recognized as 'modding'. 'Modders' deploy a range of techniques in their projects that range from simple rearrangements of game world elements to total conversions that can be relatively independent of the original game. Inventive reworkings of pre–existing games and other player–made content have been part of game cultures since the first computer games. Still, the emergence of the mod phenomenon is closely tied to affordable personal computers and the development of the Internet into a global distribution channel for fan–created content.

Today, almost any genre of PC games generates mods and other player–made content. It was, however, the first–person shooter (FPS) games that paved the way for the phenomenon. A short glance to the history of FPS games can be used to highlight the importance of modding as a source of innovation in the game industry. As widely agreed, *Doom* (1993) by id Software was the first game to gain a large–scale modder base. The blossoming of *Doom* mods was highly influenced by the fact that the game code was consciously designed to facilitate player–driven content creation [4]. However, it was the modder community hooked to *Quake* (1996) that introduced to the gaming world such team–based mods as *Capture the Flag* and *Team Fortress* that later become standard game modes included in most popular shooter games. Still, probably

the most famous product of modder labour is *Counter–Strike*, originally a team–based mod for *Half–Life* (1998). Soon after its launch *Counter–Strike* attracted more players online than any of the professionally produced FPS titles, a little later more than all of them combined. *Counter–Strike* also became the first commercially released mod as *Valve*, the producer of *Half–Life*, acquired the *Counter–Strike* team to turn their mod into a retail version. Afterwards, no developer has been able to replicate the success story on the same scale. Even so the extent and quality of fan–produced content has become an important factor in marketing contemporary PC games.

Elsewhere I have argued that player innovation resulting in reworkings and modifications of existing games has been central to game cultures since the first computer games (Sotamaa, 2005). This article goes further in suggesting that this player labour is a crucial source of inspiration and innovation for the whole computer game industry. Since modding is obviously no more about occasional hobbyist programmers messing around with the game code, it is important to pay attention to the ways in which game industry interests support, regulate, and direct modder activities. Based on interviews conducted with modders I have earlier argued that modders themselves are far from a homogeneous group. In the case of a single computer game, mod maker identities construct a wide spectrum based on differences in such factors as motivation, experience, skills, and social organization. There is no such thing as average modder but the inspirations differ from hacking and researching to artistic expression and co–operation with other hobbyists (Sotamaa, in press). Theories of fandom and grouping of motivational factors clearly help to clarify the diversity of modder practices. However the results of my earlier study also indicate that in order to fully understand the framework of modders, it is important to identify the context of the game industry. Thus, the interviews conducted with modders have been a great source of inspiration also for this article [5]. Various other sources are examined as well.

Contemporary digital games form a field where the realms of business and culture are converging in novel ways. While successful large–scale businesses have developed around popular culture for decades, the computer game industry can be used to illustrate how interlocked these areas are today (Consalvo, 2006). This kind of fusion also sets particular requirements for research. A thorough study should take in account the multiple aspects of games as produced, marketed and consumed artefacts.

Both dialectical social thought applied by critical theory and various approaches at the cultural studies front have frequently emphasized the importance of multi–sited and multi–perspectival approaches. In this article a perspective that has the power to explain the complex economic structures — without disregarding the pleasures and motives involved in mod making — is needed. Therefore this article is informed both by the critical political economy of media and cultural studies approaches more sensitive to the pleasures of players. Cultural studies have posed some well–grounded critiques against the beliefs that those who own the media can control the hearts and minds of consumers. As a consequence the focus of cultural research has often been turned away from the specific properties culture acquires as a commodity [6]. Thus, while political economy approaches have often been considered incompatible with cultural studies perspectives there are scholars who suggest that these traditions may have significant contributions to offer to each other. Meehan (2000) points out that while fan ethnographers traditionally study the activities and handcrafts of self–aware subcultures that appropriate and rework mediated ideologies, political economists focus on activities and structures that generate

these ideologies [7]. Bringing these perspectives together can serve to balance optimism and pessimism in relation to our understanding of the agency of modders. However, in order to avoid a problematic bipolarity between these approaches I will further introduce the issue of labour that has so far been marginalized among game studies. I suggest this concept is useful in opening the complex combinations of voluntary activities, consumption and industry–driven initiatives that emerge in the relations between modders and the game industry.

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Commodifying leisure time work

Recently it has been proposed that digital games, child of computer technologies that lie in the heart of the reorganization of work in contemporary societies, are the ideal commodity of post–Fordism [8]. It is exactly the commodity form that now exercises a profound influence over the forms of playing: today more than ever before, gaming exists as a commodity. As culture is commodified into game titles, it encounters a world where corporations strictly control its flows [9]. At the same time the creativity of game fans is encouraged to prosper as long as it follows the well–marked paths, designed to ensure industry control.

Historically speaking, the birth of “wage labour” is a result of commodification, namely the commodification of work. Following Marx we can say that in industrial capitalism labourers do not only create for immediate use but can also sell their capacity to work as a commodity. Horkheimer and Adorno (2002) further argued that the systematic application of the principles and values of industrial capitalism to the creation of mass culture has lead to a situation where also modern culture industry follows Fordist assembly line logic. While the cultural industry thesis may generally lack current favour a few continuities can be tracked once the game industry, where the objects and interactions linked with playing and games are effectively commoditized into saleable goods and services, is investigated. First of all, within the highly developed cultural industry the creation of a product is divided into its constituent parts [10]. In connection to digital games we can see that today such core components as game engines can be individually perfected and repeatedly cycled through the marketplace. Standardization is visible also in relation to the labour issue since various game industry assignments include a lot of routine and monotonous tasks. For example the production of thousands of textures required in every large–scale game can come close to mechanical repetition. It is, however, obvious that the culture industry thesis lacks adequate tools for analysing the development of new forms of ‘agency’ [11]. Although many of the arguments of the cultural industry thesis still hold true the strategies visible in the mutually beneficial relationships between the game industry and modders move beyond those outlined by Horkheimer and Adorno. Therefore we have to widen our perspective.

In relation to work leisure time has strong, positive connotations: “freedom *from* work; freedom *to be* one’s self; freedom *to do* as one pleases” (italics in the original) [12]. Everyday accounts seldom pay attention to the fact that the origins of ‘leisure time’ are rooted in the capitalist regimen of work. Fordist industrialists recognized the need to recover from work and attacked this inefficiency by granting leisure time. In other words the purpose of leisure is to replenish the working energies of labour — to reproduce the conditions of work. However, leisure time is

not necessarily insulated from capitalism since simultaneously the recovery time is transformed into consumption time. The alliance of work and leisure becomes completed at the moment the commodified products of workers labour are sold back to themselves [13]. Furthermore, as political economists have pointed out, labour with media generates a product itself, namely the audience commodity [14]. This is increasingly visible in games: selected target groups are delivered to advertisers via in–game adverts and product placement.

Thus, both work and leisure are highly commodified in contemporary capitalism. Nevertheless, in case of modification we witness a one more level: it is the modders' *leisure time work* that is being commodified. As Kücklich (2005) points out, this "seems a radical departure from the established business models of the leisure industries that the game industry not only sells entertainment products, but also capitalises on the products of the leisure derived from them." To understand this transition we need to consider the larger recent changes that have made the distinction between leisure–time labour and wage–based labour somewhat muddled.

Building on Lazarratto's concept of 'immaterial labour' Terranova (2000) suggests that the creative industries of late capitalist societies are increasingly dependant on voluntary activities. According to Terranova 'free labor' is responsible for a variety of activities carried out on a daily basis on the Internet. This new form of labour is a major source of value creation in the networked economy. Thus creative labour is not limited to highly skilled workers inside companies but is a more of a form of activity of every productive subject within post–industrial societies. In connection to digital games we can see that this 'free labour' creates significant value by playing and experiencing things together, actively discussing their experiences in electronic forums, updating thousands of Web sites, teaching each other valuable skills and producing games of their own. These activities are important not only because they offer support and useful tips for other players but also because they participate in generating an important sense of community among players.

Thus, from the perspective of free labour it is not plausible to claim that modder actions are in any simple cause–and–effect fashion solely produced by the game industry. It is the larger economic and social shifts that generate the context in which social activities — such as forming and supporting community, volunteering and pursuing hobbies — can be harnessed as a source of revenue [15]. Even as profit is normally disproportionately appropriated by companies, it is a form of collective cultural labour that makes many computer game industry products possible. We will examine how the forms of play and work co–exist in game cultures.

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The relation of play and work in games

It is a fact that game industry is a labour–intensive business. Paradoxically, the long working hours are often fuelled by depictions that portray making games as fun. The notion that work in the digital game industry is actually a form of play is very important for the industry's self–image. As Kline, *et al.* point out, "[e]very bit of game marketing and promotion actively *discourages* us from associating them [games] with such mundane and boring realities as jobs, management, and labour relations." [16] Although such studies as International Game

Developers Association's *Quality of Life in the Game Industry* (2004) plainly show that game–making is often pretty far from sheer entertainment the myth of getting paid for playing prospers. This work as play ethos can be seen as a central strategy deployed by game industry to motivate and mobilize its labourers (de Peuter and Dyer–Witheford, 2005).

As anyone who has played just about any contemporary computer game for an extensive period of time knows, playing is not always fun. On the contrary gaming is quite often repetitive, frustrating, and boring. It requires commitment, endurance, skill and concentration. In other words, gaming involves various kinds of work.

At the same time as work is frequently represented as play, we seldom pay attention to the fact that game–playing itself has become pretty laborious (Yee, 2006). As anyone who has played just about any contemporary computer game for an extensive period of time knows, playing is not always fun. On the contrary gaming is quite often repetitive, frustrating, and boring. It requires commitment, endurance, skill and concentration. In other words, gaming involves various kinds of work. Nonetheless, digital games are still regularly framed as sites of joy, leisure, and entertainment. Once again this image is a product of game industry's active work. Moreover, by proclaiming that "it's only fun" cultural industries have for long excused their products from critical examination [17].

The blurring of boundaries between work and play has not gone unnoticed in recent game research. It has even inspired scholars to introduce such neologisms as "gamework" (Ruggill, *et al.*, 2004) or "playbour" (Kücklich, 2005). Not only are these new articulations important in understanding the cultural and social transitions related to digital games but they also have a potential to reveal larger developments in contemporary culture. The changing relations of work and leisure are intimately tied with the reconfiguration of media production and consumption. As Pearce (2006) concludes:

> I would like to argue that in fact neither play nor games is inherently unproductive and furthermore, that the boundaries between play and production, between work and leisure, and between media consumption and media production are increasingly blurring.

I agree that recognizing these redefinitions of boundaries unavoidably lead us to question the traditional ways of understanding game and play. However, it may be problematic to assume that there actually ever was a moment when we were able to distinguish game producers from consumers with relative ease. The line between a user and a designer seems to be pretty thin in the history of digital games. Furthermore, it is not entirely simple to distinguish 'game producers' as such since also publishers increasingly operate in–house studios and contract third–party developers. It seems that we face the same problem when trying to define 'consumption'. It is difficult to indicate precisely, where consumption starts and where it ends [18]. Thus the moments of production, circulation and consumption are not all that distinct. As Johnson (1986) argues production should be treated as a feature of each of these moments in the 'circuit of culture'. In the case of games this should be pretty obvious. Digital games are, after all, inherently dependant on the workings of the player. Once again, this all seems to

suggest that in the heart of computer game industry is the labour of avid players and game hobbyists.

If we continue this line of thought a little further digital games can be conceived as working platforms. This is particularly obvious in case of massively multiplayer online games (MMOGs). In these games the experience of an individual player is often significantly shaped by other players' actions. Still players do not receive a monthly salary for their achievements but instead they actually pay a monthly fee for this privilege. As Yee (2006) argues, although digital games are sold to us as relaxation and escape from work life, some players can find game play more stressful and demanding than their actual jobs. Thus, the work in games seems to become increasingly similar to actual employment.

In case of MMOGs, players working hours are transformed into virtual properties and assets. It is not uncommon that the virtual economies based on the exchange and trading of game world goods extend beyond the boundaries of fictional empires. Virtual goods and characters are auctioned for real money although several game developers forbid these actions. Real–money trading has also facilitated the emergence of gaming workshops, often known as gold farms, where people actually earn their living by playing MMOGs. According to some estimates, only in China these businesses employ up to 100,000 workers (Dibbell, 2007). Thus, it is not only about games becoming working environments but also about players becoming labour.

If we now turn to modifications, we find another group of laborious players. Interviews conducted with modders proved that many mod community projects follow disciplined strategies very similar to those applied by game industry professionals. When describing their everyday actions modders often used rhetoric familiar from working life settings. As one of the interviewees stated:

> We communicate via e–mail and ICQ, we have FTP with a structure that allows us download "tasks" (for me these are models) and upload finished work (textures). I also participate on overall design of the mod, make some promotional graphics shown at forums and discuss other people's work. Of course, I have access to betas, this means lotta playtesting. (Operation Flashpoint modder)

This level of commitment indicates a bit different relation to leisure than discussed earlier. While one function of leisure is to provide compensatory balance to work life leisure often goes beyond casual consumption and pursuit of immediate pleasures. Stebbins (2001) describes this 'serious leisure' as "the steady pursuit of an amateur, hobbyist, or career volunteer activity that captivates its participants with its complexity and many challenges." [19] This form of leisure produces uncommon pleasures and significant social rewards for its participants. In this regard modding shares characteristics with other hobbies that permit people to engage in worklike behaviour in noncoercive environments (Gelber, 1999). As Kücklich (2005) argues modders share some traits with voluntary workers as well, as modding is not at least directly financially directed. Voluntary work is, however, largely limited to non–profit oriented projects and therefore indicates rather different values compared to the highly competitive and profit–oriented games industry.

In conclusion, while the commodification of leisure is not something entirely new, the phenomena described above indeed pose some novel questions concerning not only the player–

designer relationship but also industry practices and economic models applied to control and satisfy skilled game fans. In order to understand how this is executed I will move on to briefly discuss the dimensions of commodification in the operations of game industry.

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Game industry perspectives on modifications

Several facts highlight the risk averseness and labour intensity of the game industry. The development of a major title can today involve more than one hundred people. The mushrooming of development team sizes is obviously driving production costs upward. It is not uncommon that the production of a high–standard computer game lasts up to two years. Since the development of gaming hardware is so rapid, developers often end up designing games to be played on technologies that may not yet exist. However, as Ruggill, *et al.* point out: "This futurism is counterbalanced by the short shelf life — typically measured in weeks — of most computer games." [20] This is of particular concern since the game industry has so far remained mostly incapable of creating similar diversified revenues as for example the film industry has in home video market and television distribution.

The continuous growth of game industry and the increased competition for market shares has lead to importing and adopting processes familiar from other branches of the entertainment industry to consolidate existing practices. One of the consequences is the increasing importance of licensing, recycling and repackaging of contents from one medium to another. Although high–profile licences — be it movies, sports or television series — are expensive, they obviously facilitate the promotion of a game. Another issue are the game sequels that for their part highlight the hesitancy of the industry to take commercial risks. A critical look at the Entertainment Software Association's (ESA) sales charts confirms how heavily the industry relies on licensed games and sequels. Out of the twenty best selling video game titles (console games) in the year 2005 no less than 19 are either licensed or sequels and over one half of them are both. The only game that can be to some degree considered an original title is *God of War* (Sony Computer Entertainment) and even it relies heavily on ancient mythology. Among the top 20 selling computer games (PC games) there are two games that are not sequels. These are *Guild Wars* (NCsoft) and *Rome: Total War* (Acticision) (ESA, 2006) Ironically, both *God of War* and *Rome: Total War* have already cumulated full scale sequels to the market. At the time of writing the launch of third expansion pack for *Guild Wars* is closing and the development of *Guild Wars 2* has also been announced.

Another way to minimize labour costs and in that way to decrease risks involved in computer game development is to rely on the growing number of players who are willing and capable of creating games of their own. The open access nature of the PC environment has importantly facilitated modder activities. At the same time, the PC game industry has been quite competent in developing such revenue and distribution models that are able to tolerate free game content next to chargeable ones, playable demos being maybe the most obvious example [21]. The primary function of the demos is to tempt and convince gamers before the finished title hits the stores. Interestingly, mods seem to complement the distribution model by offering free content also after consumers have bought the retail title. Although no revenue is directly generated

from modifications downloaded from the Internet, the game industry is still able to get its share, since gamers usually need to have a copy of the original game software installed on their hard drives in order to run modifications. Furthermore, it can be argued that modifications have also paved the way for retail additions to pre–existing game titles, known as expansion packs. Similar to modifications, expansion packs are mostly developed for the PC platform and they normally build upon the existing game engine. Expansion packs introduce a specific way to exploit existing intellectual property and have become an integral element of game cultures (Nieborg, 2006). The improved capacity and reliability of digital distribution channels has also facilitated the emergence of so–called episodic games that rely entirely on serialized game content.

... mods can serve as an important source of innovation that actually reduces game developers' R&D and marketing costs.

Although it is difficult to estimate the exact scale of modder cultures it is clear that at least some PC game developers substantially benefit from mod makers' work. An active mod scene and high level mods can both increase the popularity of the original game and help to understand the players' preferences. People who modify games form a close attachment to particular games and this is obviously important for developers. Kücklich (2005) lists various benefits industry acquires from player–made modifications. When commercialising popular mods, companies do not have to create the brand from the scratch since masses of players already recognise the game. This pre–existing fame can be compared to benefits gained from licencing. Popular mods extend the crucial shelf–life of the original product. In the long run, mods can also increase customer loyalty. Furthermore, mods can serve as an important source of innovation that actually reduces game developers' R&D and marketing costs. Finally, since the mod projects produce highly trained experts modding community can be used as a recruiting pool.

In case of traditional industrial production, a lot of attention is paid to the reproduction of the means and agents of production. An important part of this process is the reproduction of productive forces and especially the issue of labour power. In his influential "Ideological State Apparatus" essay Althusser argues that the function of ideology is to reproduce the social relations of production. Reproducing labour does not in this context refer only to biological or technical reproduction, but at the same time social and cultural reproduction. Therefore producing skilful and technically competent labour is not enough but as importantly workers have to be politically subordinate and subjected to the ruling ideology (Althusser, 1971; Hall, 1985). Althusser may not be the most popular theorist among game scholars but interestingly his arguments seem to fit neatly to the digital game industry where employees are often persuaded to continuous overworking. However, the free modder labour that mainly acquires its skills and attitudes by communicating with other hobbyists on the Internet cannot be controlled in the same way as the more traditional types of labour.

Althusser also argues that in capitalist social formations, cultivating labour of certain cultural and moral kind takes increasingly place "outside the firm." Therefore institutions like schools and universities have a significant role in educating labour suitable to the modern capitalist mode of production. Some mod makers may have a formal education in programming, graphic

design or some other related area but most advanced modding skills are learned by doing, by discussing the problems on online forums and by following online tutorials made by other modders. However, the game industry has demonstrated that they are not completely at a loss. Encouraged by the success of earlier Unreal games among mod makers the developers of *UT2004* contracted a third–party company to produce over 150 hours of detailed video tutorials shipped with a special edition of the game. Later those responsible for the tutorials also completed a hefty book on the subject (Nieborg, 2005). In addition, such examples as Mod College by Westwood Studios and Unreal University by Epic Games and North Carolina State University show that game developers are willing to take over parts of the education market to reach the elite of hobbyists. In these cases the loyalty of successful mod groups is increased by inviting them to participate in tutorials and to share their ideas with company representatives.

In the case of game industry professionals the reproduction of labour is ensured by wages. Since modders seldom financially benefit from their work different methods have to be used. It is clear that no single entity can commandeer people's leisure in the same way that employers commandeer their labour. Instead, modders need to be persuaded that these activities are beneficial to the industry over others. In the following I suggest that mod competitions should be seen as a central forum of enculturating the free modder labour. Among mod competitions we can also identify several concrete industry practices aimed to guide hobbyists to industry–beneficial directions.

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Mod competitions and cultivating free modder labour

In order to support and direct amateur's productive activities, game developers and publishers organize competitions for mod developers. In case of Make something Unreal Contest organized by Epic Games and Nvidia the total value of prizes exceeded one million dollars. At the other end even small fan contests hosted by hobbyist Web sites can sometimes lure corporate sponsors and receive relatively much attention among the fans of a particular game. Contests often guarantee large scale visibility for the awarded entries. Often developers also see competitions as a chance to acknowledge modders' hard work and show their respect to hobbyists. In this connection it is important to notice the similarity between mod contests and other recent industry–organized competitions for creative amateurs. Drawing a parallel between mod contests and for example such televised talent–search shows as *Popstars* or the *Idol* series explicitly reveals that while these competitions have a potential to offer unique opportunities for entrants, in most cases it is the industry that remains the biggest winner. Furthermore, competitions where consumers are challenged to practice their creativity are today widely used as a marketing strategy. For example contests for best consumer–created logos, slogans and testimonials seem to be everywhere. It is important to notice that these contests may not actually be about brand managers wanting dozens of thousands of suggestions for new slogans. Perhaps, as Svahn (2006) points out, it is more about self–persuasion — a given industry getting masses of consumers to spend some time thinking about a specific product.

Now if we take a look at mod competitions, we can identify several benefits from bringing fan cultural petty productions from the “subcultural shadows” to the “mainstream light” (Sotamaa, 2005). If we look at high–profile competitions, they offer considerable prizes and significant publicity opportunities for winning mod groups. What organizers and sponsors expect to get, is at least some good publicity and possible increase in the sales of the original game, but obviously there are further benefits. Already competition rules are utilized to direct the hobbyist creativity by defining what is suitable and fitting and what is clearly prohibited. The rules often mention that the entries are expected to conform to the very restrictive End User License Agreements (EULAs) that come with the retail titles. The exact formulations of the license agreements vary but typically they include a subsection where the intellectual property rights of modifications are guaranteed to the game developer. If we think of the amount of work and passion a high level mod takes to be completed, these rigid license agreements appear increasingly questionable. Therefore, the competitions seem to serve as a countercheck to legitimise this exploitation. With few exceptions, competition organizers once more explicitly reserve the rights to publish the contest entries. As the rules of The Valve Half–Life 2 Map Contest quite clearly state:

> By accepting a prize, each winner grants Valve the royalty–free, fully–paid, worldwide, irrevocable, nonexclusive, perpetual right to exploit the intellectual property rights in the Contest Entry, including without limitation, at Valve’s option, distributing the Contest Entry to the public commercially or for free. [22]

The further benefits of competitions include building and maintaining a lively contact to the mod community. Understanding the routines and detailed problems modders encounter in their projects can provide valuable help for mod support development. Competitions can also have a practical aim to guide the actions of mod community. An illustrative small–scale example of this can be found in Operation Flashpoint: Mission Editing Competition. A competition launched by Bohemia Interactive was directed especially to mission–makers, “a highly skilled but diminishing section of the community.” The advertisement text for the contest highlights the importance of mission–makers in poetic fashion: “If addon/mod creators are the body of the Flashpoint community then mission creators are the very necessary blood.” [23] This choice can be interpreted in at least two ways. First of all, the decision to focus on mission making can be read as a democratic move. Making innovative missions does not require expensive commercial software packages or expert knowledge on programming languages and therefore the competition is at least theoretically accessible for quite a broad audience. A bit different intentions become exposed if we look at the competition from the developer point of view. At the time of the contest the number of hobbyists working with OFP mission editing had been constantly decreasing for some time. From the company perspective this poses a significant problem since even the most sophisticated add–ons are unlikely to find their way to the hands of gamers without high–quality missions. Therefore, what the competition was expected to do was to refuel the production of missions that are needed to highlight the possibilities of the game engine and the outputs of the add–on community.

As mentioned earlier, competitions can serve as a forum where game developers express their gratitude to modders. Interestingly, even this can be elegantly transformed into a form of advertisement. In a recent interview, Epic Games Vice President Mark Rein stated the following:

> If you one [*sic*] UT2004 you really need to download the latest versions of these mods and check them out. If you don't own UT2004 you should go out and get it because, with all the content we put into the game and with these FREE mods available, it is by far the best value in computer gaming that I'm aware of ... [24]

Although, this statement is mainly addressed to regular UT players interested in mods, there is obviously another message directed to mod makers. The developer acknowledges that the success of the game is partly attributable to mod makers. What happens here, in Althusserian terms, is that modders become interpellated as important members of the industry. Now if we take a look at the statements presented by the members of the Make Something Unreal Contest winning team we can see that the ideological lesson has been more than a success. In an interview with the Red Orchestra team one of the modders praises: "If you buy UT2k4, you will get access to a gazillion very different games, great value for your money." [25] The similarities between these statements may seem pretty innocent or co–incidental. However, the way the celebratory discourse is voluntarily adopted alludes that at least these modders have merrily accepted the subject position suggested by the industry. It is clear that no ideologies or attitudes can be simply forced to individuals but instead certain identities and subject positions can be presented as more natural and obvious than others. As discussed earlier, cultivation of modder labour necessitates new methods. An important foundation is laid when industry point of views become the hegemonic ways of conceptualizing the positions and experiences inside game culture. In the following we move on to examine the further consequences of addressing modders as free labour.

As earlier discussed, the game industry benefits from the perception that work in games industry is seen as a form of play. This can be extended to cover modder activities. Addressing modding as an extension of play and therefore a voluntary and non–profit–oriented activity helps to justify the contemporary economic structure in which companies can decrease their risks by transforming parts of the development tasks to the hobbyists (Kücklich, 2005). Commercial developers are not only free to choose the most successful mod community projects for further development but also able to pick the most skillful self–trained specialist for potential recruitment. From this perspective the mod contests appear as a perfect channel for recruitment. Developers do not need to observe the messy hobbyist forums but they can simply ask the international fan base to send their best works to be evaluated.

The role of the gaming press should not be underestimated in the process of cultivating free modder labour. Relatively moderate amounts of money are invested in straightforward advertising of competitions but press releases are actively cited on game magazines and Web sites. Publications like *Computer Games* magazine ensure continual coverage for gamer–made projects and annually award best modifications. Every now and then, award–winning mods can be found next to playable demos and trailer movies on the DVDs delivered with PC game magazines. All this takes part in building a glamorous image for mods.

Furthermore, fan sites actively adopt gaming press traditions. Mods are extensively reviewed (and increasingly previewed) and appreciated mod team members are interviewed. Interestingly fan sites also adopt the celebratory marketing ethos typical of the gaming press. Symptomatically, when a hobbyist–driven site that hosts a large mod archive released a competition of their own, the bulletin started with following words:

> Modding has taken the world by storm, it is now a great way to get into the world of game design. No longer do you need to have 'real life' experience in game design to get a job, most developers are even picking up talented modders straight from the scene. This is where the Levels4you Max Payne 2 modding competition comes in. [26]

It is not a secret that an increasing number of game industry professionals have a background in mod communities. What the quote above shows is that modders are not only aware of this development but can also use the publicity generated by competitions for their own purposes. When asked about his thoughts on the Make Something Unreal contest, one of the makers of popular and award–winning mod *Red Orchestra* stated:

> I also think a lot of individual Mod–ers [*sic*] have gained good experience with working in a deadline tight environment, it pushes you to your limits, and should be a nice preview on what you can expect when you want to work in the industry. [27]

As these examples incontestably show, one of the consequences of mod competitions is the professionalization of modding. Thus, paradoxically the same competitions that provide an attractive means to monitor the mod scene, can at the same time work against industry's advantages by revealing the laborious nature of computer game development to the hobbyists. Award–winning mods require larger teams, longer production times and tighter regime. As pointed out above, this does not necessarily scare hobbyists away. Anyway, we can see the influence of this development on the modder attitudes.

As I have argued elsewhere (Sotamaa, in press), opinions on this professionalization seem to vary among modders. Some see the opportunity of getting recruited tempting while others highlight the benefits of leaving modding just a hobby–like source of enthusiasm and excitement. It seems difficult to reconcile the different standpoints and therefore the game industry is very much in a position to determine the future of modding. There are already some justifiable concerns about modding becoming purely market–oriented and loosing its innovative edge (Kücklich, 2005).

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Discussion and conclusions

Taking into account the changing relations of work and leisure, it seems increasingly clear that the rhetoric of opposition is not helpful in explaining the participatory nature of modding phenomenon. In one hand the larger economic and social shifts have made it possible to harness players' social and productive activities as a source of revenue. On the other, the realms of work and play seem to intermingle in a variety of ways among digital games. Therefore, modding should be understood in relation to other laborious tasks players perform when playing games.

Several facts draw attention to the similarities between modders and commercial developers. In the level of code it may be difficult to distinguish modder–made total conversions from commercial games that utilize licensed game engines. Just like aggressively advertised game

titles, popular mods can generate large–scale fan following. Furthermore, the lengthening production times and mushrooming team sizes are not only a problem of commercial development studios but the developing complexity of technologies has also forced mod projects to recruit an increasing number of team members (Sotamaa, in press). It can be argued that the flexible organizational structures that facilitate communication and collaboration between industry professionals and fan producers resemble the working conditions of knowledge workers in general. Nevertheless, even though the celebratory industry announcements sometimes treat modders as important members of the industry modders mostly lack the basic benefits guaranteed for wage–labourers. Therefore other kinds of methods have to be used to persuade this new form of labour to prefer such activities that are beneficial to the industry. I have argued that mod competitions bring together a variety of industry practices aimed to enculturate the free modder labour.

In the light of mod competitions we can see that avid players may voluntarily accept the exploitation of their work as far as they can see reasonable benefits for themselves.

Since modders embody a variety of motivations and also developer strategies vary there is no foundation to claim that the increasing reliance on modders is entirely a case of the exploitation of unknowing players. Even so, the way companies often jealously reserve the rights for hobbyists' work can and should be questioned. Further, drawing on modders' labour may often be an out–sourcing strategy aimed at lowering the increasing development costs [28]. In the light of mod competitions we can see that avid players may voluntarily accept the exploitation of their work as far as they can see reasonable benefits for themselves. As Banks (2005) argues, gamers are not only well aware of these practices and objectives of game industry. Instead, they are sophisticated practitioners who participate in these practices.

The increasing professionalization of modding obviously causes changes in the environment where hobbyists work. Mod contests produce a competitive setting where the merits of an individual modder team are evaluated in comparison to handiworks of other teams. While it is too early to say anything definite, this setting has a potential to work against such prevailing mod cultures that often remain faithful to open source ethos. It is not uncommon that modder teams pool their resources in order to produce something that can benefit the whole community. Often the modifications are built on creative use and reworking of earlier modifications. Mod community members also often participate in the development by beta testing other people's mods and writing extensive bug reports. What happens to this participatory culture if a mod team actually benefits from not publishing anything before the deadline?

Finally, modding also poses larger questions concerning the future of game development. The increasing participation of mod makers in different phases of development challenges our understanding of what a game development process is and how it should be managed. The opening of the commercial game production pipeline to free modder labour obviously demands a lot of work from the developer side. Without the necessary labour force needed for supporting the work of enthusiastic hobbyists the development process can result in frustration, misunderstandings and communication problems (Banks, 2005). As I have underlined managing

unruly modder labour requires new methods of management. If developers want to see modders' work become a routine part of development it is obvious that hobbyists have to be professionally appreciated and nurtured. Probably the best way to keep the fans devoted is to make sure that they find their investements valued.

About the author

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Notes

1. http://www.esrb.org/about/news/downloads/oblivion_release_5.3.06.pdf, accessed 25 July 2007.

2. http://rome.ro/2006_05_01_archive.html, accessed 25 July 2007.

3. *Hot Coffee* is a gamer–made modification for *Grand Theft Auto: San Andreas* that unlocks a sexually explicit mini–game hidden inside the game code.

4. Kushner, 2003, pp. 165–169.

5. The participants of 29 individual interviews were all male, represented thirteen different nationalities, and their ages varied from 15 to 40 (average age 23).

6. Gunster, 2004, p. 6.

7. Meehan, 2000, p. 72.

8. Kline, *et al.*, 2003, pp. 74–75.

9. Consalvo, 2006, pp. 131–132.

10. Gunster, 2004, p. 38.

11. Gunster, 2004, p. 273.

12. Meehan, 2000, p. 75.

13. Meehan, 2000, pp. 76–77; Gunster, 2004, pp. 42–43.

14. Meehan, 2000, p. 77.

15. Postigo, 2003, pp. 597, 605.

16. Kline, *et al.*, 2003, p. 197.

17. Gunster, 2004, p. 63.

18. According to Marx, production and consumption are 'directly co–incident'. They are not only mutually connected but rather internally connected. Since production includes the use of raw materials and individuals consuming their abilities, there is a kind of consumption inside production. In the same sense we can find production inside consumption: consuming food, for

example, can be seen as the means for producing, or reproducing one's physical existence. Furthermore, Marx adds the relation of 'mutual dependence'. This means that neither consumption nor production is able to exist or achieve its result without the other. Consumption 'produces' production in two different ways. First, every product is finally 'realized' in the act of consumption. Secondly, consumption also creates the need for 'new production'. Correspondingly, production participates in producing consumption. Production both furnishes consumption with its object and specifies the 'mode' of consumption. Furthermore, according to Marx, production is not limited to the production of objects but it also produces the need that is satisfied with object (Marx, 1973; Hall, 1974).

19. Stebbins, 2001, p. 54.

20. Ruggill, *et al.*, 2004, p. 307.

21. Already in the early 80's some of the hobbyist programmers decided to distribute their PC programs freely, asking for a modest donation from users who found the software useful. This new method of distribution and marketing brought significant incomes to individual software developers but the attempts to produce shareware games were mostly unsuccessful until Scott Miller of Apogee Software popularised a method of breaking an action–adventure game up into episodes. The shareware version of a game included the first few levels but the additional levels had to be purchased from the software publisher. Shareware introduced both to gamers and to the industry a successful business model where free game content operated side by side with chargeable ones. Today, the legacy of shareware is most obviously visible in free playable demos that have become a game industry standard.

22. http://web.archive.org/web/20041206230346/http://steampowered.com/?area=map_contest_rules, accessed 25 July 2007.

23. http://www.bistudio.com/, accessed 25 July 2007.

24. http://unrealtournament2004.filefront.com/news/Make_Something_Unreal_Interview;15793, accessed 25 July 2007.

25. http://unreal.boomtown.net/en_uk/articles/art.view.php?id=7514, accessed 25 July 2007.

26. http://www.levels4you.com/, accessed 25 July 2007.

27. http://unreal.boomtown.net/en_uk/articles/art.view.php?id=7514, accessed 25 July 2007.

28. Postigo, 2003, p. 597, Banks, 2005.

References

Louis Althusser, 1971. *Lenin and philosophy and other essays*. London: New Left Books.

John A.L. Banks, 2005. "Opening the production pipeline: Unruly creators," In: Suzanne de Castell and Jennifer Jenson (editors) *Changing views: Worlds in play — Selected papers of the 2005 Digital Games Research Association's Second International Conference*. Vancouver: Digital Games Research Association and Simon Fraser University.

Mia Consalvo, 2006. "Console video games and global corporations: Creating a hybrid culture," *New Media and Society*, volume 8, number 1 (February), pp. 117–137.

Julian Dibbell, 2007. “The life of the Chinese gold farmer,” *New York Times* (17 June), at http://www.nytimes.com/2007/06/17/magazine/17lootfarmers-t.html?ei=5090&en=1676d344608cb590&ex=1339732800, accessed 21 August 2007.

Entertainment Software Association (ESA), 2006. “ESA’s 2006 essential facts about the computer and video game industry,” at http://www.theesa.com/archives/files/Essential%20Facts%202006.pdf, accessed 25 July 2007.

Steven M. Gelber, 1999. *Hobbies: Leisure and the culture of work in America*. New York: Columbia University Press.

Shane Gunster, 2004. *Capitalizing on culture: Critical theory for cultural studies*. Toronto: University of Toronto Press.

Stuart Hall, 1985. “Signification, representation, ideology: Althusser and the post–structuralist debates,” *Critical Studies in Mass Communication*, volume 2, number 2, pp. 91–114.

Stuart Hall, 1974. “Marx’s notes on method: A ‘reading’ of the ‘1857 Introduction’,” *Working Papers in Cultural Studies*, volume 6. Birmingham: Centre for Contemporary Cultural Studies, University of Birmingham.

Max Horkheimer and Theodor Adorno, 2002. *Dialectic of enlightenment: Philosophical fragments*. Edited by Gunzelin Schmid Noerr. Translated by Edmund Jephcott. Stanford, Calif.: Stanford University Press.

Richard Johnson, 1986. “The story so far: And other transformations?” In: David Punter (editor). *Introduction to contemporary cultural studies*. London: Longman, pp. 277–313.

Stephen Kline, Nick Dyer–Witheford and Greig de Peuter, 2003. *Digital play: The interaction of technology, culture, and marketing*. Montreal: McGill–Queen’s University Press.

David Kushner, 2003. *Masters of Doom: How two guys created an empire and transformed pop culture*. New York: Random House.

Julian Kücklich, 2005. “Precarious playbour: Modders and the digital games industry,” *Fibreculture*, number 5, at http://journal.fibreculture.org/issue5/kucklich.html, accessed 25 July 2007.

Karl Marx, 1973. *Grundrisse: Foundations of The Critique of Political Economy*. Translated by Martin Nicolaus. Harmondsworth: Penguin.

Eileen R. Meehan, 2000. “Leisure or labor? Fan ethnography and political economy,” In: Ingunn Hagen and Janet Wasko (editors). *Consuming audiences? Production and reception in media research*. Cresskill, N.J.: Hampton Press, pp. 71–92.

David Nieborg, 2006. “The expansion pack economy,” paper presented at *Media Change and Social Theory: The Second Annual ESRC Centre for Research on Socio–Cultural Change Conference*, University of Oxford, U.K. (6–8 September).

David Nieborg, 2005. “Am I mod or not? — An analysis of first person shooter modification culture,” paper presented at *Creative Gamers Seminar — Exploring Participatory Culture in Gaming*, University of Tampere, Finland (14–15 January).

Celia Pearce, 2006. “Productive play: Game culture From the bottom up,” *Games and Culture*, volume 1, number 1, pp. 17–24.

Greig de Peuter and Nick Dyer–Witheford, 2005. “A playful multitude? Mobilising and counter–mobilising immaterial game labour,” *Fibreculture*, number 5 at http://journal.fibreculture.org/issue5/depeuter_dyerwitheford.html, accessed 25 July 2007.

Hector Postigo, 2003. “From Pong to Planet Quake: Post industrial transitions from leisure to work,” *Information, Communication and Society*, volume 6, number 4, pp. 593–607.

Judd Ethan Ruggill, Ken S. McAllister and David Menchaca, 2004. “The gamework,” *Communication and Critical/Cultural Studies*, volume 1, number 4 (December), pp. 297–312.

Olli Sotamaa, in press. “When the game is not enough: Mapping the agency in computer game modder culture,” to appear in *Games and Culture*.

Olli Sotamaa, 2005. “Creative user–centred design practices: Lessons from game cultures,” In: Leslie Haddon, Enid Mante, Bartolomeo Sapio, Kari–Hans Kommonen, Leopoldina Fortunati and Annevi Kant (editors) *Everyday innovators: Researching the role of users in shaping ICTs*. Berlin: Springer–Verlag, pp. 104–116.

Robert A. Stebbins, 2001. “Serious leisure,” *Society*, volume 38, number 4, pp. 53–57.

Mattias Svahn, 2006. “Brainwashing is fun! A theoretical approach to why role–playing can work for advertising, propaganda and educational purposes,” paper presented at *Seminar on Playing Roles*, University of Tampere (30–31 March).

Tiziana Terranova, 2000. “Free labor: Producing culture for the digital economy,” *Social Text*, volume 18, number 2, pp. 33–58.

Nick Yee, 2006. “The labor of fun: How video games blur the boundaries of work and play,” *Games and Culture*, volume 1, number 1, pp. 68–71.

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Perceptions of Player in Game Design Literature

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ABSTRACT
Few studies have examined the role of players in game design. The objective of this paper is to provide some clarity on the issue of player-centred design by analysing the notions on player in current game design literature. This research also discusses the potentials a multifaceted approach on players can offer for the design of games. The article starts by analysing different approaches on player from abstract ideal player to player profiles and players as co-creators. Later, the benefits of involving players in different phases of design process are examined. As a result the paper produces a grouping of different designer-player relationships that reflect the different design ideologies and traditions. This article contributes to the new field of game design research by producing clarity to some of the inarticulate and ambiguous issues related to the role of players in games and their design. At the same time, the analysis is relevant to the larger understanding of players as game cultural actors.

Author Keywords
Game design research, player research, game design literature, player-centred design

INTRODUCTION

It is not entirely uncommon to argue that all game design is player-centred. If we agree that game design is much about challenging the player's skill and creativity, game designer is deeply engaged in the battle of wits with her players [12]. If we agree that all design is in the end about having a conversation with the intended user it would be ridiculous if the design of games – systems that rely on player's active participation – would not have a player focus [10].

At the same time, there is a growing amount of evidence that professional game designers still in many occasions primarily rely on personal experience and intuitive sense of market demand. Further, games are often claimed to be designed primarily for game designers themselves. [9, 5, 12]. In the words of Ernest Adams: "In eight years of working for Electronic Arts, I never once saw a really thorough, properly-conducted market survey. Our understanding of our players was based on guesswork and hunches." [1] What all this highlights is a need for more rigorous and organized study of meanings and roles attached to players in game design.

This research poses the following question: how players are represented in professional game design? This is of concern since there is not very much information available on the topic. Academic studies focusing on this subject matter are rare and most of the industry studies are never made publicly available. One can still identify various ways to gather information on the role of players: examining the implied player of different games, by interviewing the designers, through participatory observations or via a detailed analysis of the design process. In this study I have, however, decided to examine the recent game design books written to teach the fundamentals of game design. These books form a multifaceted source of accumulated knowledge, are based on practical experience and therefore provide an interesting spectrum of tested design approaches. I suggest game design books can be more influential than we recognize at the first glance. They are not only read by critical game designers, but also used in teaching the fundamentals of game design to the upcoming generations of game industry professionals. Thus, the precise research question of this article is as follows: what are the different perceptions on player that can be found in recent game design literature?

The article should not, however, be read only as a literature review. The objective is also to discuss the potentials a multifaceted approach on players can offer. The lack of earlier meta-discussion on the topic necessitates that I nonetheless have to start with a mapping of the current literature. This analysis aims to 1) address the common claims shared by most of the game design books and 2) to expose the key differences between the current approaches. This article contributes to the new field of game design research by producing clarity to some of the inarticulate and ambiguous issues related to the role of players in games and their design. At the same time, I find the analysis highly relevant to the larger understanding of players as game cultural actors. It is clear that the designers' formulations of "imagined player" not only shape the design process but also have an influence on the freedom of action players have with the finalized product [17].

BRIEF INTRODUCTION TO PLAYER-CENTRED DESIGN

Game scholars have recently expressed a growing interest on player-centred design. Involving players more in the design of games is suggested to increase the diversity of

Situated Play, Proceedings of DiGRA 2007 Conference

games and inject a shot of originality to the development of commercial games [6].[1]

Often the approaches that emphasize the significance of players draw their inspiration from the tradition of user-centred design. A number of known user-centred design techniques, such as focus groups, usability testing and participatory design, can surely benefit the design of games. At the same time, the particularity of games poses new challenges. Digital games are used voluntarily, they are expected to challenge the player and her skills, and games are not entirely about the ease of use but more about the well-balanced difficulty. Therefore the user-centred methods need some tuning when applied to game design. [8, 11, 16]

TL Taylor argues strongly in favour of participatory design and commitment to in-depth user participation and sees the "serious inclusion of players" as the central future design challenge [17]. Not all writers, however, share this enthusiasm on participatory design which highlights the fact that there is no clear consensus of the definite status of player-centred design [15]. In any case, there is a growing number of research projects where players are involved from the early phases of game design process [6, 14, 18]. These experimental projects have an important contribution to the development of archive of appropriate player-centred methods.

It is too early to evaluate the impact these player-centred game design research experiments will have on large-scale commercial projects. There are, however, early hints that professional designers are starting to take the player issue seriously. An indicative example can be found from the writings of the noted game developers Ernest Adams and Andrew Rollings. While they no doubt discuss players in their game design book from 2003 there is no indication of a particular player focus. In a recent revised version of their work Adams and Rollings, instead, openly state that they "favor and approach called player-centric game design" [2].

GAME DESIGN LITERATURE

The ten game design books analysed in this article are as follows:

- Bartle, Richard A. (2003) *Designing Virtual Worlds* [BAR in the following]
- Bateman, Chris and Richard Boon (2006) *21st Century Game Design* [BAT]
- Björk, Staffan and Jussi Holopainen (2004) *Patterns in Game Design* [BJÖ]
- Crawford, Chris (2003) *Chris Crawford on Game Design* [CRA]
- Fullerton, Tracy; Christopher Swain & Steven Hoffman (2004) *Game Design Workshop: Designing, Prototyping, and Playtesting Games* [FUL]
- Koster, Raph (2004) *A Theory of Fun for Game Design* [KOS]
- Mulligan, Jessica and Bridgette Patrovsky (2003) *Developing Online Games: An Insider's Guide* [MUL]
- Rollings, Andrew and Ernest Adams (2003) *Andrew Rollings and Ernest Adams on Game Design* [ROL]
- Rouse, Richard III (2001) *Game Design: Theory and Practice* [ROU]
- Salen, Katie and Eric Zimmerman (2003) *Rules of Play: Game Design Fundamentals* [SAL]

This "canon" of game design was constructed in order to delimit the object of study. The selection process included a few formal requirements. I decided to focus on monographs that provide an overall picture of game design and limited the entries to one book per writer. Since the recent popularization of massively multiplayer online games (MMOGs) I wanted to include a couple of books that focus on the particular challenges these games pose. There are certainly important game design anthologies and works that focus on particular branches of design (e.g. storytelling, character design or level design) but for the sake of clarity they are excluded from this article. I am aware that a different collection of books could be picked and possibly fairly different results could be drawn. The body of literature discussed here is, however, not completely a result of my subjective taste. Instead, during the selection process I have consulted both individuals working in the industry and scholars studying and teaching game design and therefore the collection can be argued to be relatively representative.

The number of game design books has in the past few years grown considerably.[2] The style of the books ranges from practical 'how to' guidebooks to more theoretical works that find their inspiration in academic research. Thus, the emphasis and tone varies but without exception the books

[1] Player-centred approaches are not, however, equivalent to design-by-consensus or design-by-committee.

[2] There was a long pause in book-length presentations after Chris Crawford's *The Art of Computer Game Design* (1984). However, today the production of game design guides can be characterized as an industry. At the same time this genre is perceptibly new and almost every writer is eager to produce an extensive model of the field. Further, other game design literature is often referenced at best sporadically.

under study introduce fairly extensively the formal elements of games. One of the reasons for this analysis of game components is the identified need for critical design vocabulary. Other issues commonly discussed in the books include the game design process, the skills required from a game designer, a short history of game design and introduction to some landmark games. There seems to be, however, no clear consensus on the innermost nature of the activity of designing games. Some writers passionately support the idea of games as an art form and equate game design with artistic expression. Others argue that the requirements for game designer actually bear more similarity to the demands traditionally made for entertainers, engineers, researchers, social directors or craftspeople. [ROL, 4-5, FUL, xv.] The different conceptions of game design, however, indicate relatively different approaches on players. I will come back to the issue of designer-player relationship in the latter part of the article but first I will take a general look at the ways players are treated in game design literature.

INTRODUCTION TO THE PLAYER ISSUE

Based on my research data it would be a mistake to argue that game designers are not interested in players. On the contrary, players are mentioned frequently in various connections. Some writers cover the player issue in a dedicated chapter or part of the book [BAR, BAT, MUL, ROU]. Others [BJÖ, CRA, FUL, KOS, ROL, SAL] allow players to roam more freely on the pages and call them into view as particular themes are discussed. More often than not the player is, however, a theoretical figure that is directed and guided through particular design decisions. Although almost every single book has a definition for 'game' and 'game design', a clear explication of 'player' is often nowhere to be found. Most of the time readers have to content themselves with an ideal player who surely has abstract needs, expectations and capabilities but is seldom further discussed.

In the more formally oriented books players mostly remain structural components of the game. Björk and Holopainen define players as "the representations of the different agencies that are competing (or cooperating) in the game to achieve their goals" [BJÖ, 24]. From this structural perspective players are presented mostly as design choices (how many of them, what kind of roles, player vs. player or player vs. system etc.) [FUL, 43]. Answering these questions surely has a significant effect on the overall design but reveal very little about the flesh-and-blood players. Rollings and Adams argue that "[w]hen designing any game, the first question you have to ask yourself is, what is the player going to do" [ROL, 430]. To answer this question one should be able to define the available player interaction patterns. In a similar manner players are in various occasions considered indirectly. They are discussed in a varying degree at least under the following topics: play, gameplay, interactivity, and user experience. Unfortunately I can't fit a comprehensive analysis of all these topics in this article but would gladly see someone to do it in the future.

Both the relation between the player and the game and the relations between players are covered in a varying fashion. On average, the issues of player identity and player community that are diligently discussed among game scholars get perhaps understandably a relatively practical treatment. Salen and Zimmerman consider the relationship of player and character in the light of sociologist Gary Alan Fine's model of different "levels of meaning". They caution designers of the so-called immersive fallacy, the idea that players would identify completely with the character and to "become" the character they play. [SAL, 453-455.] Bartle also ponders player identities from different perspectives but otherwise the issue inspires mostly very practical takes on character design and development. The issue of community gains most attention from the perspective of MMOGs. Mulligan and Patrovsky have actually quite a few things to say about managing community relations and supporting player-run communities [MUL, 259-271]. Sometimes I, however, find it difficult to avoid the cynical conclusion that the communities are needed primarily to keep the players coming back and paying their monthly fees.

Several books agree that it is important for a game designer to understand and specify her audience [ROL, 41; BAR, 125-128, BAT, xiv-xv]. At the same time there seems to be no mutual understanding of the practical ways of acquiring this understanding. Thus, I will in the following move on to analyze the central viewpoints presented in this discussion.

APPROACHES ON PLAYER

Ideal Player

As mentioned earlier, it is relatively common to write about players in a collective and abstract manner. The various games-related needs discussed in the books are often addressed by "many players" or "most people". In the beginning chapter titled "What players want" Rouse discusses the different motivations of players. The list of player wants is quite extensive[3] but there are no clear guidelines how it is supposed to be used. One has to ask if it is enough for a game designer to memorize this list in order to understand players. The chapter also introduces a similar list focused on player expectations [ROU, 8-18]. Even though the discussion on wants and expectations is very sensible it is not clear where all the claims and facts come from. There is a good reason to question whether all this talk about players is actually just a clever strategy to bolster designers' self-confidence: a good designer knows endogenously what players want. This interpretation is supported in the end of the chapter when readers are

[3] According to Rouse, players want 1) a challenge, 2) to socialize, 3) a dynamic solitaire experience, 4) bragging rights, 5) an emotional experience and 6) to fantasize.

encouraged to "create their own list of *what they think gamers want*" [ROU, 19]. Thus, the ideal player is often produced by reducing players into a collection of needs and capabilities. The attributes connected to this ideal player are mainly based on anecdotal evidence, solitary cases, analogies, personal experience and common knowledge. The value of this information should not be underestimated but the problems start to occur when it is used to draw generalizations.

Another popular approach among the textbooks is to perceive players in the light of popular cognitive science. From this perspective players are taken into account through mental models, memory capacity, pattern recognition, reaction times and other features dependant on human brain. Both Koster [KOS, 12-33] and Crawford [CRA, 41-53] take an interest in the ways brain works and connect this to the ways people play. Koster builds on psychologist Howard Gardner's theory of different forms of intelligence[4] and goes on to explain how game designer can target each of these dimensions. Therefore, since people learn in different ways they will be interested in different games "because of their natural talent" [KOS, 100]. Further, according to Koster "players tend to prefer certain types of games in ways that seem to correspond to their personalities" [KOS, 104]. Be it different brain types, personality types or learning patterns, these divisions have a potential to produce an ever-increasing number of different player types. Thus, the introduction of different predispositions and talents highlights the need for player categories.

Player profiles

Marketing segments

The most rudimentary popular division of players is made between novice players (newbies) and experts (experienced players). This classification is primarily useful when setting the difficulty of the game and tuning up the interface to serve players with varying levels of experience. Another basic model is to group players into hardcore and casual gamers. Hardcore players can be described as game literate people who play as a lifestyle preference and spend substantial amounts of time and money on games. Casual players are understood to be a more diverse group. They play for fun or to kill time, have little knowledge about game conventions and play few games.[5] [BAT, 16.] This hypothetical split is primarily market-oriented and widely known in the game industry. A reference to hardcore and casual can be found in most of the game design books. Mulligan and Patrovsky argue that in case of online games the players should actually be divided into three separate segments: hard-core, moderate, and mass-market. In this case the moderate gamers are something between hardcore and mass-market (casual): they tend to spend quite a bit of money on games but are concerned about of getting as involved as hardcore gamers [MUL, 10-11]. According to Bateman and Boon the audience model of Electronic Arts is actually very similar to the one introduced by Mulligan and Patrovsky. EA, however, refers to the moderate segment with the term Cool Gamers. [BAT, 19-21]. While these basic player groupings are used relatively unproblematically in design literature, a few writers also identify a need for categories that go beyond the popular concepts.

Different genre models can be interpreted to be an indirect way of categorizing players. Market-wise the genre system is based on a conception that certain players buy games of a particular type. While the genre system can arguably be used to acquire data of the relative sales of different genres, this reasoning should not be taken too far since games are neither bought nor played merely on the basis of genre. [BAT, 17-19.] The most comprehensive audience model found in the data is introduced by Bateman and Boon and I will in the following move on to discuss the background and details of their approach.

According to Bateman and Boon the central objective of the book is to introduce "the first detailed audience model produced specifically to inform game design decisions" [BAT, 1]. Their approach titled *demographic game design* is based on a conception that all game design inherently targets an audience. Therefore, in order to produce successful products, the first step of game design is to study audiences. [BAT, 14.] This analysis of audiences is based on so-called Myer-Briggs dichotomies[6]. The personality typing system based on these dichotomies was originally developed in the 1940s and it is based on the work of Carl Jung. According to the writers the typology is publicly recognized and widely utilized among the major U.S. companies. In case of Bateman and Boon, applying the dichotomies to survey data results in four different clusters of play. *Conqueror play* focuses on winning and "beating the game", *manager play* revolves around a strategic and tactical challenge, while *wanderer play* involves the search of enjoyment and fun experience. About the fourth category, *participant play*, the writers have surprisingly little to say. People involved in participant play are told to prefer participating either in the story of the game or in social experiences with other players. One particularly interesting observation concerning this continuum of play styles is that each of the classes includes both hardcore and

[4] According to Gardner the different forms of intelligence are: linguistic, logical-mathematical, bodily-kinesthetic, spatial, musical, interpersonal, and intrapersonal (internally directed, self-motivated).

[5] 'Casual players' described here should not be mixed up with 'players of casual games'.

[6] The Myers-Briggs system is built on four pairs of traits: introversion – extroversion, sensing – intuition, thinking – feeling, and judging – perceiving.

casual players. The rest of the book then applies the model into different parts of game design and analyses the relations between particular play styles and different game mechanics.

First of all, it has to be said that the model Bateman and Boon introduce is refreshing. Even though similar models may have a long history in other markets many of the arguments are fresh when discussing the design of games. It is also important and exceptional that the authors actually spend some time to inform their readers about the hypotheses and research behind the model. Nevertheless, it is not entirely insignificant that the authors persistently use the term *audience*. It is clear that in this book the players are discussed first and foremost as customers who buy games. And if the needs of the customers can be anticipated and classified into categories, these relatively passive figures can be satisfied with new products. Further, the model introduced in the book can at best be a preliminary one since the authors openly admit that they have in some occasions difficulties in drawing conclusions about the insufficient data [BAT, 69]. In any case, the contribution of Bateman and Boon surely provokes important new questions concerning the understanding of players in design. While their player profiles are primarily based on personality typing we will in the following take a look at player categories that find their inspiration in different playing styles.

Play styles

To give context and produce vocabulary to discussions about game systems Fullerton et al. introduce a 'play matrix' that plots games on two axes. The horizontal axis represents a continuum between skill and chance, and the vertical one a continuum between mental calculation and physical dexterity. The matrix can be used not only to chart games of different kind but also to identify different player motivations by asking people to place games they enjoy in different quadrants. [FUL, 208-210.] The matrix is somewhat suggestive of the famous game classification introduced by anthropologist Roger Caillois[7] and highlights the interconnectedness between game types and play motivations. Further, other somewhat related lists of different player roles can be found. Salen and Zimmerman turn to play theorist Brian Sutton-Smith's model of social play roles [SAL, 464-465] and Fullerton et al. list a variety of potential player types [FUL, 90]. These models are, however, not developed further or extensively applied.

Salen and Zimmerman also introduce a player typology where player groups are defined by their relation to the rules of the game. *The standard player* follows the rules and plays the game as it was designed to play. *The dedicated player* studies the formal structure of a game and is able to exploit unusual strategies in order to win. *The unsportsmanlike player* follows the rules but violates the spirit of the lusory attitude. *The cheat* violates the formal rules of the game in order to win the game. *The spoil-sport* refuses to acknowledge the magic circle and attempts to ruin the game. [SAL, 267-285] If Salen and Zimmerman focus on the relation between player and the rules of the game, Mulligan and Patrovsky introduce a grouping based on the relations between players. *The general players* obey the rules and are fairly neutral, much like the standard players of Salen and Zimmerman. *Barbarians* exploit the bugs (cheat) and get their enjoyment from ruining other players' experiences (grief). *Tribesmen* focus on their micro-community. They help other players but can also cause problems if that is beneficial for their team. *Citizens* are described as "the good people" who are likely to help new players, lend their resources for greater cause and always have a nice word for other players. [MUL 216-220] While both these formulations can surely help designers to anticipate player behaviour they still remain relatively abstract and are based more on personal experience than empirical data.

The most thorough and influential model based on play styles is introduced by Richard Bartle. In the beginning of the long chapter focusing on players Bartle makes a following statement: "Players are all different, and they all behave differently. Nevertheless, there will be general playing styles that they adopt [--]." [BAR, 127] Based on his earlier article[8] Bartle then introduces four different player types: *achievers*, *socializers*, *explorers*, and *killers*. This taxonomy has been very influential both among online world designers and game scholars. Both Salen and Zimmerman [SAL, 465-466] and Rollings and Adams [ROL, 521-522] discuss the categories in their book. Further, the player perception of Mulligan and Patrovsky is entirely inspired by Bartle's player types[9]. The merits of Bartle's model are not limited to identifying the four things people typically enjoy in online worlds but he also discusses the dynamics between different player types [BAR, 133-137]. It becomes clear that these relations between different playing styles and balancing between them are of great importance in case of multi-player online worlds. The potential problems with the model rise from the fact that the original categorization was concluded from

[7] In his book *Man, Play and Games* (1961[1958]) Caillois develops a classification of game types based on whether the role of competition, chance, simulation, or vertigo (being physically out of control) is dominant. A short introduction to Caillois's classification can be found in Salen & Zimmerman's book (pp. 307-309). Also Boon & Bateman discuss the categories of Caillois (pp. 84-88).

[8] Richard Bartle (1996) "Hearts, Clubs, Diamonds, Spades: Players Who Suit MUDs", available: http://www.mud.co.uk/richard/hcds.htm

[9] The original article by Bartle is actually reprinted in Mulligan's and Patrovsky's book.

long-lasting debates of experienced MUD players that took place in 1989 and 1990. Thereby, the model is not exactly based on carefully collected and analyzed data on players but more like a summary of different views on the topic. It is also important to question how far the observations made over fifteen years ago on solely text-based online worlds can be applied to present MMOGs.

Bartle himself seems to think that the points raised in his mid-1990s article still hold true but at the same time he is aware of the limitations of the model [4, BAR, 139-140]. He welcomes other people to produce a superior model and openly introduces alternative player categorizations. One of the projects Bartle discusses is Nick Yee's grouping of play motivations. Yee has in different occasions criticized Bartle's model and his research based on exploratory factor analysis reveals a five factor model of user motivations - *relationship*, *immersion*, *grief*, *achievement* and *leadership*.[10] Bartle contemplates Yee's contribution and later introduces four new player categories: *learners*, *experts*, *doers*, *instinctives*. The most visible benefit of the new categories is that they allow Bartle to discuss the development tracks of how people move on from one category to the next [BAR, 165-174]. Even though Bartle's developments are clearly preliminary, the idea of changing and time-dependant player types is interesting. Possibly this notion could be used to supplements the idea of player lifecycle by Mulligan and Patrovsky (confusion, excitement, involvement, boredom) [MUL, 13-15]. All this shows how multi-player aspect brings new absorbing player-related questions to game designers.

Player analysis based on market segments may offer designers a general view of their audience but it seldom helps to understand the interactions between different players. Then again, profiles based on playing styles are either relatively abstract or limited to particular games or genres. While profiles can surely be useful in anticipating or simulating player behaviour it can be questioned how extensively they after all grasp the rich ecosystem of player motivations and creativity. Therefore, I will in the following move on to contemplate the offerings of player creativity to the design of games.

Players as co-creators

In the introduction of their book Rollings and Adams pay attention to the fact that players often negotiate and change the rules of the games they play. They go on to claim that thinking about and modifying the rules is actually an act of design and therefore "[e]very game player is a potential game designer". [ROL, xxi.][11] Certainly there is a long way from a simple change of rules to a development of entirely new game but this observation highlights the overlapping between the categories of 'player' and 'designer'. Also Björk and Holopainen take into consideration the creative contribution of the player. Their approach is based on so-called *game design patterns* that are described as "semiformal interdependent descriptions of commonly reoccurring parts of the design of a game that concern gameplay" [BJÖ, 34]. In a chapter in which they introduce particular patterns for social interaction they discuss the issue of *Constructive Play*. Games that provide constructive play allow players to construct compound game elements. This can in some cases lead to the development of *Player Constructed Worlds*. The freedom of players can be further increased by allowing *Player Decided Results* and *Player Defined Goals*. [BJÖ, 255-258, 317-319.]

Understandably the perspective of MMOGs has an important contribution to the understanding of player's creativity and player-created content. Mulligan and Patrovsky are eager to point out the importance of allowing players to create and tell their own stories and provide their own amusement. They further advise designers to be flexible and willing to change their games according to the actions of players over time. [MUL, 145-148.] The authors continue that designers who allow players to have an impact on the game world will find players to be eager to create their own content. These actions can be supported and managed with providing access to tools that allow players to manipulate and enhance their own gaming experience. Mulligan and Patrovsky suggest that with appropriate tools players can change the *physical*, *political*, *economic* and *social* landscape of the game. [MUL, 152-153.]

In the late chapter of their book Salen and Zimmerman discuss *games as open culture*. Games designed following the schema of open culture allow players to access the game structure and manipulate the meanings attached to it. In other words, the structure of the game grants players explicit creative agency. The writers are aware that the expressions of player creativity are not limited to in-game behavior but that open culture approach can inspire a whole ecology of fan culture. In this connection they introduce a pyramid of player creativity originally described by Will Wright, the lead designer of The Sims. The figure presents the levels of player creativity in the following way: *toolmakers* are the ones who create tools, *object-makers* use the tools to create game objects, *webmasters* host websites that distribute the objects, and finally *players* make use of the objects in their games. [SAL, 538-540] The approach of open culture indicates some changes in the relation between

[10] Since the printing of Bartle's book Yee has slightly altered his model. In [19], central motivations are presented as follows: achievement, relationship, immersion, escapism and manipulation. In [20] he introduces a new 10 component model of player motivations.

[11] Crawford has some words of caution on the notion that anybody can be a game designer. His critique is, however, directed primarily to the lack of respect for game designers game industry sometimes expresses. (CRA, 180-182.)

designers and players. Instead of being afraid that the productive players ruin the game they suggest that "one of the sweetest pleasures as a game designer is seeing your game played in ways that you did not anticipate" [SAL, 540]. Koster seems to share this optimistic notion. He suggests that modding (making modifications) is just a different way of playing the game and later compares hacking a game to the act of literary analysis. [KOR, 142.]

The different manifestations of player creativity indicate that game developers should not get too attached to their designs. Once players engage in negotiation with games they often end up reinscribing and remaking them anyway. To provide an alternative view to the player perceptions I will in the following move on to examine the game design process.

PLAYERS IN GAME DESIGN PROCESS

Game design can be divided into distinct stages. The descriptions of design process have slight differences but in general it can be brought back to following stages: concept design, pre-production, production, and post-production. [9, FUL, 347-358] The process model offers another useful perspective on the roles reserved for players. Sykes and Federoff suggest that game designers could gain clear benefits from different user-centred design techniques throughout all four of these stages [16]. In the following I will take a look how the game design books answer to this challenge.

Briefly, the objective of the concept stage is to create and refine an idea for a game. The game idea obviously involves some sort of outlook of the potential players. Bateman and Boon argue that their model based on market segments can help game projects to succeed by assessing players before design is initiated [BAT, 76]. It is likely that Bartle's player types can equally inform the early phases of design at least in case of multi-player online games. It may, however, be that Bartle's model is even more useful in pre-production phase when the potential user base is sketched in more detail [BAR, 139]. One method that is used in the early phases of development is focus group testing. This is a marketing-oriented approach in which a group of people are asked about their attitudes and preferences towards particular game concepts, games or game elements. Rouse expresses a strong distrust of focus groups [ROU, 19, 487]. His suspicion is directed especially towards using focus groups to test and evaluate game ideas and concepts.[12] A sidebar article in the book by Fullerton et al. takes a fairly different opinion on focus groups.[13] While the writer agrees that focus groups should not be used to evaluate games or to gauge the popularity or quality of game concepts, he suggests that focus groups can be useful in generating ideas for games.

Both Salen and Zimmerman and Fullerton et al. outline a method significantly different from the abstract player models and marketing-oriented focus groups. They argue in favour of iterative design method, which relies on inviting feedback from players early on. In this context "iterative" refers to a process in which the game is designed, tested, evaluated and redesigned throughout the project. As part of this approach designers are encouraged to construct first playable version of the game immediately after brainstorming and this way get immediate feedback on their ideas [FUL, 10-11]. Salen and Zimmerman suggest that the iterative approach is of great concern since it is not possible to fully anticipate play in advance. Later Salen and Zimmerman note laconically that most digital game designers of today do not for varying reasons follow the iterative process. [SAL, 12-13][14]

Playtesting, which lies in the heart of iterative approach, is probably the most established method to involve players in design. Playtesting should not be confused with internal design review, bug testing, usability testing or focus group testing. Playtesting is not primarily about identifying the target audience or tweaking the interface but it is performed to make sure that the game is balanced, fun to play, and functioning as intended. [FUL, 196.] According to Fullerton et al. "[p]laytesting is the single most important activity a designer engages in, and ironically, it's often the one designers understand the least about" [ibid.].

Interestingly, there seems to be a profound disagreement whether playtesting should figure in the early phases of design. Fullerton et al. argue that if playtesting is started only when designers have a fully working game in their hands it is really too late to make any fundamental changes to the game [FUL, 197]. In contrast, Rouse argues, that "bringing them [playtesters] in too early will only delay the game's progress" [ROU, 480]. What this seems to highlight is an existence of two very different takes on testing. Playtesting can either be seen as the central dynamic of the whole design process straight from the beginning or then alternatively playtesting can become a strictly limited phase of the process conducted when large sections of the game are already playable.

[12] As far as I can see Rouse's suspicion is mainly based on an interview conducted with Will Wright (chapter 22 of the book). In the interview Wright reveals that the focus group for *The Sims* went so poorly that the game was nearly canceled.

[13] Kevin Keeker, "Getting the Most Out of Focus Groups", in Fullerton et al. 2003, pp. 212-213.

[14] Bateman & Boon (pp. 8), instead, advise designers to be cautious about using iterative design as their core method. Their perception of iterative design is, however, somewhat different since their version does not seem to include players at all!

One way to further understand this disagreement is to take a more detailed look at different groups of playtesters. Fullerton et al. suggest that in the early phases of design games should be tested by the designer herself, designers' confidants and some people the designer does not know and only after this should one consider testing with actual target audiences [FUL, 198-200]. If we agree that Rouse is referring only to the members of target audience his arguments become more sensible but they still indicate a very limited perception of playtesting. Limiting playtesting to production stage (beta testing) or possibly pre-production (testing prototypes) indicates a very different relation to players when compared to the iterative process. Leaving testing to the late phases of development can be seen to indicate a perception that players do not actually know what they want but they can only identify it when they see it [ROU, 18-19].

The emergence of MMOGs has highlighted the importance of post-production and maintenance work. It has been suggested that player support can become an important differentiator between competing online worlds [MUL, 188-190]. As mentioned earlier, the issue of player-created content is also of special interest in case of MMOGs. If players are allowed to create content of their own, they will expect some support from the developer.

Obviously the maintenance responsibilities are not limited to online games. Fullerton et al. advise designers to carefully monitor player feedback once the game is shipped. Information gathered from internet forums helps design team to produce "patches" that fix bugs, errors and inconsistencies from the original code. [FUL, 358.] Collecting opinions and suggestions from players brings us back to the concept stage as this information can be used when designing the expansion packs and potential sequels.

THE RELATIONS BETWEEN PLAYER AND DESIGNER

To conclude some of the central themes discussed in this article I have sketched a list of possible relations between players and designers. The various roles and relations can be seen to reflect different design ideologies and traditions.[15]

Designer as Player

Game design books unanimously argue how important it is for a game designer to play games. The idea is that the required understanding and expertise develops on the basis of the personal gaming experience. Arguably, the game literacy needed in the job is very difficult to gain without playing a variety of games. There is, however, a drawback to deriving game ideas purely from other games and individual experience. As mentioned in the beginning of the article designers are often claimed to design too much for themselves and forget the variety of players. This is argued to result in very similar and at best mediocre game projects. Thus, even though playing games is essential for designers it can be only a starting point in understanding the wide variety of players and play styles.

Player as Designer's Muse

One fuction for players in design is that of inspiration. Non-anticipated uses players invent for games and other anecdotal evidence can surely produce new game ideas. During the design process designers can every now and then come back to the inspiring pieces and re-evaluate their targets. The downside of this approach is that the player in question mostly remains very abstract and ideal.

Player as Designer's Patient

Many promising game projects suffer from interfaces and control schemas that are nonassociative, hard to use or illogically mapped. Therefore the known usability methods have their place also in connection to games. Interviewing and observing players and recording their play session to identify the problems players have in interacting with the game is valuable when hunting down the inconsistencies of the software. From this perspective the interaction between designer and player to a large extent resembles doctor-patient relationship. Designer first diagnoses the problems players experience while playing the game or prototype and then carefully attempts to cure those problems.

Player as Designer's Adviser

Focus groups offer a quick method for collecting player conceptions. Marketing executives are eager to use focus groups to evaluate game concepts and to study how much people would pay for the product. Game design, however, probably benefits the most from focus groups that concentrate on generating ideas for new games. In any case, the central method of getting advice from different kinds of players is playtesting. The proponents of iterative design argue that inviting feedback from players early on is the single most important activity game designer engages in. Even if one has studied the audience of the game and has an adequate player model in use it is still not possible to fully anticipate how people play your game. Therefore it is difficult to argue strongly enough on behalf of iterative game design.

Player as Designer

As mentioned earlier, opening parts of the game structure for player manipulation will encourage players to create content of their own. Allowing players to become co-designers can result in novel innovations and diversify the field of games. At the same time there are signs that some developers are considering opening parts of the production pipeline to player input [3]. While openings of this kind are certain to produce headaches to design teams, once successful they may open whole new perspectives to our

[15] This division is inspired by an article by Jääskö & Keinonen [7] in which they discuss the relations between users and designers in different design fields and traditions (pp. 100-103).

understanding of game design. The growing reliance on players work noticeably blurs the boundaries between the categories of 'player' and 'designer'. Therefore, it is not surprising that it has become relatively common to recruit new design team members from player community.

I hope the grouping presented above can increase the understanding of the roles of players in relation to game design. Typically these roles change during the design process. My suggestion is that a successful large-scale design project should possibly involve all these different approaches.

FURTHER DISCUSSION: PLAYERS BEYOND THE DESIGNED EXPERIENCE

As discussed in this paper, players are still often understood through demographies, psychological models or in-game playing styles. The perceptions of player vary, but are still relatively fixed. I am not against abstractions or player profiles per se. Quite the contrary, they definitely have their uses in design, but at the same time one should consider approaches that involve more playing and flesh-and-blood players. Bateman and Boon argue that "because you cannot ask them [players] personally to participate, an audience model is needed in order to make intellectual assumptions about their needs" [BAT, 53]. Based on the projects I have earlier participated I have to strongly disagree with this [14]. Instead, one should seriously consider recruiting player representatives that can actively participate the different phases of design process and share their knowledge with designers. I suggest that if game designers acknowledge the status of players as the specialists of "everyday gaming" they can actually focus more freely on the things where they are good at.

If the game design books are to believe, flexible and playful identities and ludic attitudes discussed among social theorists have very little to do with players. I find it somewhat ironic that only in the Coda of his book Richard Bartle has the courage to discuss "players as people".[16] What this indicates is that in the design of games players are seldom treated as complicated socio-cultural actors. Similarly, the reader of current game design guides ends up knowing very little about the everyday life of players. I find this both surprising and annoying since this is exactly the space where players negotiate the time and place for gaming. Therefore it can be argued that the academic studies of players and experimental player-centred designs have still a lot to offer in widening designers' understanding of players.

[16] Bartle is, however, one of the few writers who actually is interested and capable of discussing the larger societal relations of games. Other refressing exceptions can be found from Salen & Zimmerman (Unit 4: Games as Culture) and Koster (Chapter 9: Games in Context).

REFERENCES

1.Adams, E.W. "Introduction" in Bateman, C., and Boon, R., *21st Century Game Design*, 2006, pp. xii-xvi.

2. Adams, E., and Rollings, A. *Fundamentals of Game Design*. Prentice Hall, Upper Saddle River, New Jersey, 2007.

3.Banks, J.A.L., "Opening the Production Pipeline: Unruly Creators" in de Castell S., and Jenson, J. (eds.) *Changing Views: Worlds in Play - Selected Papers of the 2005 Digital Games Research Association's Second International Conference*. Digital Games Research Association & Simon Fraser University, Vancouver, 2005.

4.Bartle, R. "2002 introduction to the Article by Dr. Bartle" in Mulligan, J., and Patrovsky, B., *Developing Online Games: An Insider's Guide*, 2003, pp. 397-400.

5.Dovey, J., and Kennedy, H.W. *Game Cultures: Computer Games as New Media*. Open University Press, Maidenhead & Milton Keynes, 2006.

6.Ermi, L. and Mäyrä, F. "Player-Centred Game Design: Experiences in Using Scenario Study to Inform Mobile Game Design", *Game Studies* 5(1), 2005. Available: http://www.gamestudies.org/0501/ermi_mayra/

7.Jääskö, V., and Keinonen, T. "Käyttäjätieto konseptoinnissa", in Keinonen, T. and Jääskö, V. (eds.) *Tuotekonseptointi*. Teknologiateollisuus, Helsinki, 2003.

8.Jørgensen, A.H. "Marrying HCI/Usability and Computer Games: A Preliminary Look", in *Proceedings of the third Nordic conference on Human-computer interaction*, 2004, pp. 393-396.

9.Kerr, A. *The Business and Culture of Digital Games*. Sage Publications, London, Thousand Oaks & New Delhi, 2006.

10.Koster, R. "Player-Centered Design", 2005. Available: http://www.raphkoster.com/?p=191

11.Pagulayan, R. et al. "User-Centrered Design in Games", in *The Human-Computer Interaction Handbook: Fundamentals, Evolving Technologies and Emerging Applications*. Lawrence Erlbaum Associates, Mahwah, NJ, USA, 2003, pp. 883-906.

12.Pearce, C. "Emergent Authorship: The Next Interactive Revolution", *Computer & Graphics*, 26 (2002), pp. 21-29.

13.Rollings, A. and Adams, E. *Fundamentals of Game Design*. Pearson Education, New Jersey, 2007.

14.Sotamaa, O. et al. "The Role of Players in Game Design: A Methodological Perspective", in *Proceedings of the 6th DAC Conference*, IT University of Copenhagen, Copenhagen, 2005, pp. 34-42.

15.Sykes, J. "A Player-Centred Approach to Digital Game Design", in Rutter, J. and Bryce, J. (eds.) *Understanding Digital Games*. Sage Publications, London, New York & New Delhi, 2006, pp. 75-92.

16.Sykes, J. and Federoff, M. ”Player-Centred Game Design”, in *CHI Extended Abstracts* 2006, pp. 1731-1734.

17.Taylor, T.L. ”Beyond Management: Considering Participatory Design and Governance in Player Culture”, *First Monday*, special issue 7, 2006. Available: http://firstmonday.org/issues/special11_9/taylor/index.html

18.Vanden Abeele, V.A. and Van Rompaey, V. ”Introducing Human-Centered Research to Game Design: Designing Game Concepts for and *with* Senior Citizens”, *CHI Extended Abstracts* 2006, pp. 1469-1474.

19.Yee, N. “The Demographics, Motivations and Derived Experiences of Users of Massively-Multiuser Online Graphical Environments”, *PRESENCE: Teleoperators and Virtual Environments*, 15, 2006, pp. 309-329.

20.Yee, N. “Motivations for Play in Online Games”, *CyberPsychology and Behavior*, 9(6), 2006, pp. 772-775.

The Role of Players in Game Design: A Methodological Perspective

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ABSTRACT

In order to understand what a game is and how to design good games, we need to understand the players as well as the act and the experience of playing. However, the players are not typically very much involved in game design processes, especially in their early stages. To develop and evaluate methods of player research and ways to integrate them into game design processes, we conducted a study with self-documentation sets. To bring playful elements into design of games the tasks were presented in the form of a game. The game box included several different tasks designed to encourage participants to reflect on their relation to games and gaming from various and also unexpected viewpoints. In this paper we focus on the methodological issues, but also present findings on some of the tasks in order to demonstrate what kind of results can be obtained using this kind of approach.

Keywords

Player-centred design, play in design, self-documentation sets, cultural probes

1. INTRODUCTION

Games have to be played. In other words, games – however complex or simple their abstract rules are – remain piles of dead pieces without players. Playing is an integral part of any game and gaming experiences are always constructed in a dialogue between players and gaming systems. [1] Although many popular titles in the era of digital are single-player games, various types of social interaction can be identified among contemporary gaming cultures. Players constantly surprise designers by constructing unexpected strategies and ways of using games. Players also create and share different kinds of game-inspired content with other gamers. Thus, it can be argued that the creative input of players – ranging from clever in-game strategies including bending the rules and cheating to sophisticated modifications of gaming hardware – should be seen as a part of contemporary game industry. [26] However, the creative potential of players is relatively seldom used to enhance commercial game design.

Significant amounts of money are used on engaging players in game testing but that is often the first phase when actual players are considered in the development process. Some developers have seen the benefits of supporting gaming communities and player-driven content production. However, these strategies normally aim to influence player behaviour after the game is released. Thus, there is a clear difference when compared to traditional user-centred design ideals where the 'real' user is involved in the process from the very beginning. During the past couple of decades user-centred design has established itself a central position in the heart of academic HCI studies. Simultaneously the user-centred ideals have been successfully applied to a variety of commercial design fields. However, regardless of the obvious mutual benefits, there has been little or no communication between game designers and practitioners of user-centred design until recently.

In general, it seems clear that game design can benefit from the basic usability evaluation methods. Equally interface designers can learn a lot from the strategies computer games use to immerse players into the game worlds. However, there are significant differences between utility applications and computer games. [13] Therefore players should not be seen as mere users of the game. Designing meaningful challenges that are integral to games is obviously a different task from minimizing the cognitive load or making the software easy to use. Therefore playability must be seen as a somewhat different target than usability. [14,6] What then, are the particular advantages of involving players more in the game design processes? Firstly, players can be an important source of innovation for future games. This is not to say that knowing player 'needs' or letting players design games themselves would guarantee more innovative or pleasurable games. However, as the contemporary game industry is repeatedly criticized of sticking with the tried and trusted methods and genres, a player-centred approach can have an important impact on the overall diversity of game cultures. [6,3] Secondly, player-centred methods seem to be lacking especially in the early stages of game development. The impulses for new games are often considered to be mysterious and to have their origins in individual insights or random occurrences. What we expect to produce is an alternative that can improve our understanding of players in the early phases of design process. Thirdly, there is an overall need for evaluated research-based methods for game design [6]. Since the field of player-centred design has yet to be defined the focus of this paper is in contemplating the methodological challenges we have identified during our project. It is our sincere hope that a detailed review of our approach can encourage other researchers to experiment in the area.

Design and Research Environment for Lottery Games of the Future (SuPer) is a research initiative that focuses on developing an environment for testing and evaluating future game concepts. In this project our research group at the University of Tampere Hypermedia Laboratory works in close co-operation with representatives from the Finnish National Lottery Veikkaus. In

practice, we concentrate on developing and evaluating methods of player research and integrating this research into game design processes The most important thematic starting point for this study, already discussed in our earlier research [15], is the increasing overlapping between cultures associated with the products of digital games industry and lottery games and betting. The intention was to collect rich contextual information on the actions, habits, motivations, ideas and beliefs related to games and playing. The research frame included no strict distinction between the games of chance and the games of skill. Instead we wanted to see if those kinds of distinctions would arise from the research data.

During the first project year we developed a self-documentation method that allows participants to elaborate and share their notions and wishes concerning games and gaming. The participants received a set of tasks that encouraged them to contemplate their relation to gaming from various, sometimes unusual, perspectives. Later on, we organized interviews where the materials were discussed with the participants. We also organized workshops with our research partners where we used the self-documentation materials to both inform the existing design initiatives and to inspire new ones.

From a basic research perspective, we wanted to explore the everyday meanings and habits associated with different types of gaming. We wanted to reject stereotyped views on gaming as solely solitary and isolated experiences or as something associated only with infants and adolescents. Instead of simplifying playing and game cultures into interactions with various gaming peripherals we attempted to grasp the role of playing and games in a larger context of leisure. Furthermore, our interest was not limited to digital games, but we were eager to explore the differences and similarities between different game types. From the design perspective, our primary focus was on developing and evaluating the method. The self-documentation sets were designed to accumulate inspirational data and the materials were later analyzed and processed. Still, our intention was not to produce straightforward design requirements but more to go beyond existing game concepts and genres and target groups and open up our notions on gaming cultures very different from each other.

This paper is an attempt to document the key findings of our research so far. The primary focus is on the evaluation of the method. Other results are discussed as far as they are able to exemplify the potential of the method. Since the research tasks were relatively open the project offers a chance to discuss the larger questions that remain currently unclear. What are the limits of player-centred approach and can we identify where it is especially useful?

The second more general theme deals with bringing elements of play into game design. The importance of more profound understanding of fun has been recently highlighted both in the design of user interfaces and in game design [23,17]. Still, such experimental and fun approaches as design games have mostly not reached the area of game design. Our approach introduces a way of bringing playful elements into design of games. We suggest that it is important to ask how gamelike tasks can benefit the design process. Is it possible to make the whole design process more enjoyable and exciting by involving players in challenging and fun ways?

The structure of this paper is as follows. First we will briefly explore the theoretical background and the reasons that led to the development of our approach. After that we describe the self-documentation method and the way we applied it in the research. Then we will move on to demonstrate the kinds of data our approach was able to produce. Finally, we will discuss and evaluate the method based on our experiences.

2. DESIGN AND PLAY: BACKGROUND FOR PLAYER-CENTRED DESIGN APPROACH

It may be argued that all design involves elements of play. Some predetermined rules normally direct the course of design choices but the final result of any design process is dependent on the productive activities of actors involved and therefore not known beforehand. The idea of using different kinds of games in concrete design projects is not entirely new. Already early Scandinavian participatory design projects used games to engage workers in development processes. These approaches investigated the practical conditions needed for pleasurable engagement in design and emphasized the playfulness of design work. [4] More recent research literature includes relatively many examples of the use of game-like approaches in different design fields. Design games have been used to help the idea generation and communication between stakeholders [2] and to encourage experimental and creative engagement [20]. Games have also been used to facilitate the use of field studies materials in design process [12]. Furthermore, role-playing has been a relatively popular method to explore the potential uses of new technologies [27]. The arguments for using games and playfulness in design vary and are not limited to improving features of the end-product. Games and playful tasks can help to open up the dialogue between designers and other stakeholders and encourage participants to share their ideas. Games may also enable players to step outside ‘ordinary’ life for a moment and adopt positions different from their ‘everyday’ identities. Providing new and unexpected perspectives on familiar situations can produce information that is seldom uncovered with traditional methods like interviews or observing.

In this contexts it is notable that majority of the projects applying game-like methods focus on developing utility applications. To our knowledge, game design books and manuals seldom mention game-like methods at all. Furthermore, it can be argued that the spectrum of player-centred methods used during a typical retail game development process is fairly limited. Market research can produce information about player demographies or general consuming habits and trends. Different testing phases (alpha, beta, playtesting) can involve significant number of voluntary players. [3] However, when we turn our attention to the early stages of game development that are sometimes referred to as the “fuzzy front end”, player-centred approaches remain almost non-existent. We suggest this is especially noteworthy since various important decisions concerning the features of any product are made in these early stages of development [22].

The impetus for developing the player-centred approach described in the following arose from various sources. First of

all, our earlier experiences obtained by using self-documentation packages suggested that the rich multimodal data, an approach of this kind is able to produce, is highly valuable when the objectives of the study are fairly open [25]. Secondly, although the Cultural Probes approach introduced in [7] has been adopted in several design fields it has not been extensively applied to game design. Since this approach aims "to provide opportunities to discover new pleasures, new forms of sociability, and new cultural forms" [7], we suggest it lends itself well to study of emerging game cultures. Thirdly, the way cultural probes emphasize the aspects of play and exploration suits our purposes well. We expected that by encouraging participants to play with the materials we would not lose the fun and pleasurable aspects associated with games.

In brief, Cultural Probes is an experimental design-lead approach that is utilized in research to understanding users. Rather than building on a precise scientific tradition cultural probes have their background in the traditions of artist-designers. These self-documentation packages are meant to provoke and collect inspirational responses from participants. The tasks gather data on people's everyday actions and contexts but also provide participants with means to reflect their opinions and communicate with designers. As Gaver et al. emphasize [8], the primary objective of probes is not to collect existing user needs or extract user requirements but to provoke new and unexpected ideas. Later on, as probes-like approaches have been applied in various design projects, there has been some discussion concerning the potentials and the limits of probes. It has been claimed that the range of self-documentation sets is not limited to producing inspiring signals. Probes have been used to collect contextual ethnographic information in an unobtrusive manner [11]. In some cases, in order to gain a more holistic understanding of participants, the probes approach has been combined with interviews [19,25].

On a general level, the term 'probe' refers to recording instruments that are sent to places where human researchers are not able to go. Some examples include space probes and medical instruments that operate inside human body. In the context of our project we found the probe metaphor to be a bit obscure and even misleading and therefore when introducing a probe-inspired approach into game design we decided to present the tasks in the form of a game. If 'probes' are supposed to gather information automatically, 'game' puts the emphasis on the creative involvement of players. The rules of the game may set the scene but it is up to the players to decide the course of actions. As we will see later on, the participants are also able to bend the rules and apply unexpected strategies. Some of the practical design choices performed to support "the game approach" are documented in the following section.

3. DESIGNING THE SELF-DOCUMENTATION SET

Since the self-documentation set was the main channel to communicate our ideas to the participants we put quite a lot of effort into the concrete design of the set. From the very beginning, we wanted the design to reflect playful and fun attitude characteristic to our study. The aesthetics stressed the distance between our approach and formal questionnaires and other traditional academic methods. In order to distinguish our materials from commercial products both the physical design of the set and the layout of individual tasks were deliberately left a bit rough on the edges. For example the fabric bags for storing cards were self-made and the individual game boxes were modified from used cardboard cases originally designed for delivering 12-inch vinyl records.

Figure 1: Contents of the Game box: rules sheet, two workbooks, disposable camera, sticker sheets, daily bonus cards and a fabric bag, drawing pens and paper glue.

Also the gamelike dimension that we wanted the self-documentation set to reflect, was highlighted by design. Firstly, the components were packaged in a case that was made to resemble an average board game box. The idea was that opening the case and familiarizing oneself with the tasks would remind the participants of the moment of learning a new game. One function of the box was to enable safe storing and transporting of materials. Interestingly, this proved to be of significance since during the interviews we learned that a 8-year old participant had even taken the box to her friend's place to "play" together. The game metaphor was also supported by the "daily bonus" mission where participants were requested to pull a random card out of the deck delivered inside a little fabric bag. The purpose of this mechanism was to introduce the element of chance to our self-documentation set. The cards included different tasks ranging from straightforward questions to simple mini-games. The other function of this task was to remind participants of the "leisure diary" advised to fill on a daily basis. The third significant component in building the playful setting was the rules sheet. The sheet introduced the contents of the box and instructed participants how to begin the game. Yet, the rules did not define any penalties for breaking the rules or clear winning or losing conditions. Finally, when the boxes were delivered to people we tried to emphasize the playful aspects. Later, a single telephone call from a participant convinced us that our efforts had not been

misspent. The 71-year male started the conversation by announcing "I have been playing this game of yours and now I'd be ready to discuss it with you." [1]

The tasks were presented in two different books (see Figure 2). The idea was to distinguish quick daily tasks from the ones that were not time-dependent but required a bit more consideration. This decision was partly inspired by our earlier research project where similar starting point had proved successful [25]. Collecting all participant output to a pair of books also facilitated the analysis and easy filing of the materials.

Figure 2: The two workbooks

The smaller book included a diary-like task where participants were asked to report their recreational activities during a seven-day period. Again, the aesthetics were used to distinguish our approach from formal time managers. Each 24 hour period was represented with a colourful illustration (see Figure 2). We used the figure of sun to indicate daytime and the moon to represent night. Activities were loosely divided to themed groups (watching television, playing games, outdoor activities, socializing, cafes and restaurants and so on). Participants were asked to mark their daily doings with coloured stickers that were delivered with the set. Additionally, every double page spread had space for answering and reflecting the daily bonus task.

There were five different tasks in the larger of the books. As is typical for the probes-inspired studies, participants received a disposable camera. The photography assignments ranged from quite concrete "A game that has grown dusty" to more ambiguous like "Seeking for excitement" or "I wish I was someone else". A few pages in the end of the larger book were allocated for developed photos. Secondly, the participants were asked to reflect on their favourite games from different periods of life. Thirdly, we wanted to survey notions associated with different game types. The examples ranged form outdoor games, board games and slot machines to console and mobile games. The next task encouraged participants to be creative and reflect on their notions, beliefs and desires by creating collages. The task consisted of pictures of three sad trolls and the assignment was to bring the trolls back to a good mood by adhering fitting newspaper clippings, illustrations, pictures and printed texts. "Troll of misery" hungered for luxury and exclusive items, "Troll of defeat" was short of good luck and rewards and "Troll of boredom" chased excitement and risks. By introducing an artistic technique of collage we wanted to map the various assosiations related to different pleasures. Assemblages created from "found" materials served as rich and abundant inspiration. Although several participants found this task difficult and somewhat puzzling at first, in the end some of them were really excited and curious to discuss different possible interpretations. Finally, we asked the participants to complement pictures that portrayed everyday gaming situations. We had used similar tasks before when interviewing children [5] and now we were interested to see how this would work with people of different ages. In the hands of our participants the pictures transformed into lively social situations.

The tasks were designed to encourage participants to reflect on their relation to games and gaming from various perspectives Some tasks were closely tied to particular games and playing situations, others had a more open focus. Some of the tasks were deliberately ambiguous and speculative. The idea was to provoke new and unusual viewpoints on the matters. We also hoped to uncover games-related everyday practices and routines people normally find too self-evident to document.

Since the approach based on the self-documentation sets is laborious and time consuming we knew that the number of participants could not be very high. Some of our 12 participants were chosen among the people who had earlier filled a related web questionnaire. Others were obtained through colleague contacts. All participants were Finnish, half of them male, half female. Ages ranged from 8 to 71 years. The sample included individual informants, couples and a family with children. Informants living under the same roof were chosen to participate since we wanted to examine the everyday negotiations and collective decisions related to playing and enjoyment.

The participants differed significantly with respect to their relation to gaming: some of the participants were very active players, others played every now and then and some hardly played at all.

Depending on participant's wishes the self-documentation period lasted from ten days to two and a half weeks. Since the information gathered was highly contextual we organized personal interviews to discuss the materials further with participants. After the documentation period we reserved a couple of days to familiarize ourselves with the materials to be fully prepared for interviews. Some shared themes were decided in advance but otherwise the flexible structure allowed us to focus on themes the interviewee found interesting. Thus in methodological terms, the approach can be divided into two different phases, those of "observation" and "interpretation". [19] Still, the starting point is somewhat different from traditional fly-on-the-wall observation since the tasks provoke participants to consider their habits and beliefs from new perspectives. What the self-documentation set produces is an impressionistic account on a wide spectrum of themes. Interviews provide and opportunity to adjust the early

[1] All citations are translated from Finnish by the authors.

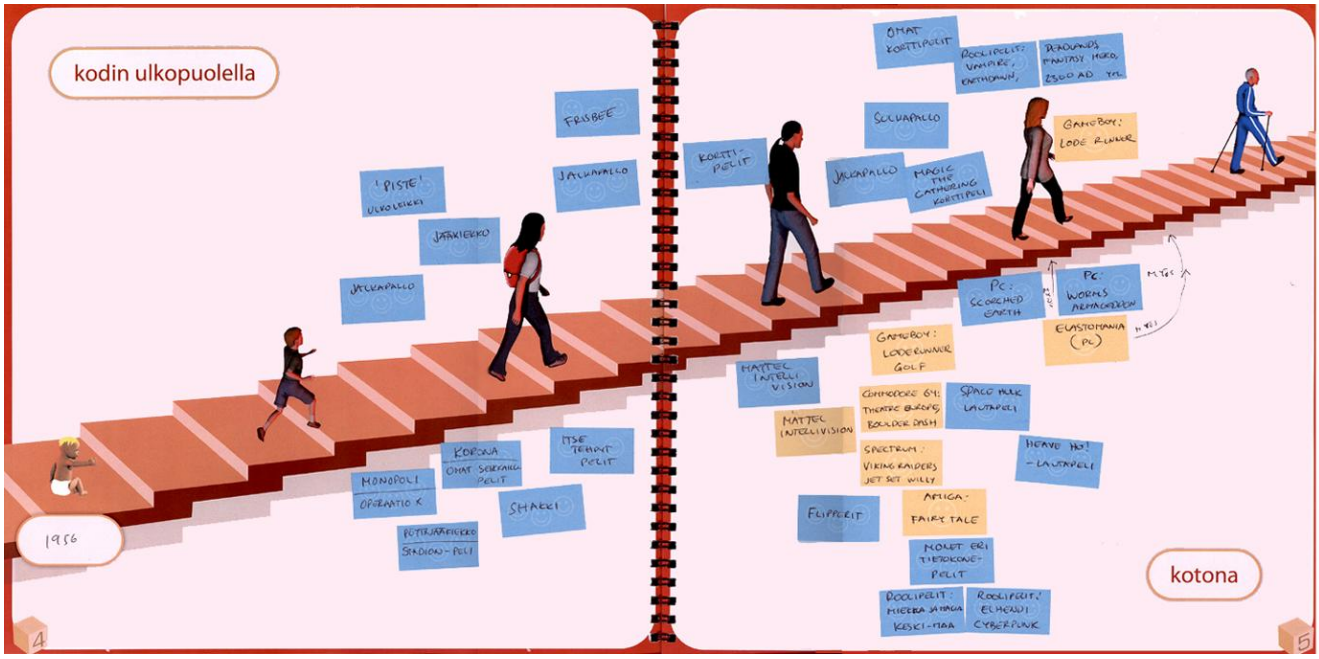

Figure 3: "My Favourite Games of All Times": Games below the stairway were located at home and games above were played outside home. The ones marked with lighter stickers (yellow) were played alone, the darker ones (blue) together with someone.

interpretations made based on the materials. However, interviews should not be used solely to vindicate earlier notions but to deepen the understanding on particular themes. Interviews also produce new research data since they often introduce new themes and topics.

4. EXPLORING THE WAYS PEOPLE PLAY

Understandably, it is not possible to include a detailed reading of the research data here. Instead, we apply a thematic approach that aims to highlight the nature of findings the method is able to produce. In this section we mainly focus on two different tasks: the personal game history and the one where people were asked to add speech balloons to illustrated gaming situations. Findings from other sections are also introduced when they significantly contribute to the theme.

Gaver et al. argue [8] that sharing some sense of humor, passion, and empathy with users can have a significant impact especially when designing for pleasure. In order to learn to know the passions of our participants we asked them to collect up a summary of their gaming life. The function was not only to get to know these people but also to produce background information that would help to interpret the other tasks. In practice, participants were asked to attach their favourite games to the illustration where different periods of life were placed in a stairway (see Figure 3). The figure allowed them to express whether the games they mentioned were played at home or outside home and alone or together with someone else.

It is obvious, that we could have asked people to reflect their memories without any additional resources, and possibly got very profound and informative answers. However, 'the gaming stairway' provided us with a concrete outline where the entire gaming life was visible at once. The map offered a chance to reflect on one's past and it seemed to give the participants enjoyment per se. Reminiscing about old games brought out lively memories of childhood playgrounds and dear gaming partners. Participants living under the same roof had specially enjoyed remembering together. As we learned, you can actually tell quite a lot about a person on the basis of their personal gaming histories. The variety of vivid memories made a strong argument for the larger significance of games.

Similarly, in the photo assignment section, no participant found it difficult to find "a game that has grown dusty". It is no surprise that people get bored, make inconsiderate purchases, and yearn for change. However, the interesting thing here is that games that are no more played, are seldom thrown away. It seems that often some particular games have become an important part of the personal history and therefore they are stored even if not played. Symptomatically, a 34-year old female participant, who had played next to nothing during the past few years, told us the following: "I guess it tells something about their [games] significance that somewhere on the way my old school books have been junked. But I couldn't imagine giving them [games] to someone else. They're mine!" This comment also highlights the fact that games, and especially board games and card games, are also artefacts that can become meaningful as such.

The visual mapping of important games allowed us to trace possible parallels between different stages of life. For example, a 49-year old male participant had written "self-made games" on one of the stickers. When we asked what this meant, he explained: "I've been constructing games of my own from the age of seven or eight. [---] Let's say for example Monopoly… It was

an entertaining game but when you had played it three or four times you began to get bored. I wanted the game to have alternatives [---] so I made a city of my own that had alternative routes and more variety. You had more power on your own and it wasn't so dependant on the chance anymore." The consequences of this early preference were clearly visible in the later stages of his gaming life. Nowadays he was a member of a group that met each other on a weekly basis to play roleplaying games, board games and card games. This familiar group was also a favourable audience for introducing the self-made games. When discussing digital games, the participant emphasized how important it was to be able to create levels and maps of one's own. When we asked about his current favorites he told us: "Well, then is this Lode Runner for Gameboy. It's one of my favorites. I got it from my friend approximately fifteen years ago. [---] And you can make a new level in a minute or two. It's fun to make new challenges for yourself and try to play through the levels you've designed. [---] I know it's a kind of silly that I don't lose my interest on the game. Just played it this morning."

Many of the interviewees had a distinctive break from gaming at some phase during adolescence. This gap was explained to follow from 'the more important things' like other hobbies, going out and dating. Often the childhood games made a comeback after a few years since people begun to play the same games again with their own children. It was not uncommon that parents and grandparents taught children games they had played as children or games they still play. Often the games learned from older generations were traditional card games and board games or outdoor games. However, as our participants witnessed, this also works the other way around. It was relatively common that parents were familiar with digital games since their children played them. In order to moderate the quantity and quality of gameplay, parents found it important to know at least the basics of their childrens' favourites. Thus it can be argued that games are seen as a part of cultural heritage people find important to distribute to younger generations. At the same time, children can have a significant role in updating their parents gaming knowledge.

According to the interviewees the major changes in the role of games over the lifespan are primarily due to changes in social life. Thus, adopting new games is not entirely dependant on the superiority of games or the introduction of new gaming platforms. Instead, such things as moving to another place or learning to know new people can have an effect on the gaming behaviour. A female participant who otherwise was a relatively active gamer had an almost gameless period after moving in with a partner who was not interested in playing games. Based on our data there seems to be multiple reasons for adopting a new game. Although game magazine reviews were found useful, often praising comments from friends or seeing someone actually play a game had a significant impact on the decisions. However, choosing a game is not a completely rational process. One of the participants often played games in a bar. In these sessions, a new game was often given a chance whenever there happened to be a new one in the place.

Our data suggests that games can be viewed as a "social lubricant" for people of varying ages. Further, games can unite people even in situations where they do not know each other. The potential social nature of gaming was further investigated with a task where participants were asked to complement four different illustrations. The pictures portrayed different gaming situations and every picture included more than one individual. The participants were asked to describe the situations by drawing facial expressions to the characters and by adding speech and thought balloons to the picture. The example introduced here portrayed four people gathered around a sofa. Two of the characters had game controllers in their hands.

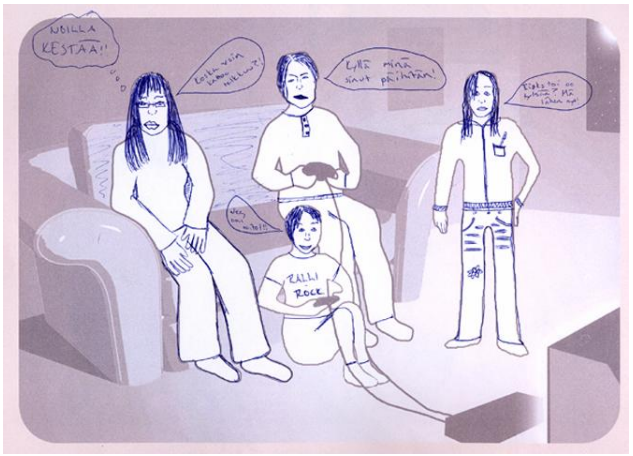

Figure 4

In Figure 4 the characters in the middle are competing with each other and they both express a strong belief in one's abilities. The two other characters look a bit frustrated and suggest alternative ways of spending time. The replies received from participants included a variety of different interactions between individuals. The characters with controllers were not only competing or co-operating but also teaching each other to work out the challenges. The two other characters were either waiting for their turn or cheering for the players' achievements. In some cases the characters were not so harmonious but some of them wanted to watch television, play a different game or do something completely different. Once, the character on the left was portrayed asleep. While a home can be argued to be a focal setting of everyday life, it is also the primary space for relaxation and escaping the social pressures. During the interviews some people described situations where they wanted to play alone, even if there were other people in the same room. Others enjoyed watching other people play although they were not interested in joining the game.

The second version explaining the events by the couch introduces a new technique, not suggested by our original instructions (Figure 5). Not only one, but two different participants had clipped pictures of celebrities from magazines and used them to bring nature into otherwise empty figures. This strategy introduces an element of intertextuality that has to be taken into account when interpreting the materials.

Figure 5

The communication between characters suggests a somewhat different situation from the one represented in Figure 4. If the earlier picture introduced people competing with each other, this one portrays the pair with game controllers celebrating a shared success more typical of games that support co-operative strategies. Once again, the other two characters concentrate on whining and wondering. The gendered division of the group is clearly visible: this time the players are female and the men are left on the side. If we take a closer look at the picture we notice that the male characters are recognized Finnish celebrities, the one on the left an ice hockey player and the other one a rock musician. Contrary to the usual media coverage where they are presented as active and competent subjects, here they are pictured as uncertain and infantile. Thus attaching celebrity faces to the pictures – completely unanticipated by us – appeared to be a fun and powerful way to highlight the complex nature of gaming situations. In the interviews the participant phrased her message in the following way: "Normally it's fathers and sons that play. And girls just sit by and watch when boys colonize the computer. And the computer is often in the boy's room and the girl is not allowed occupy that space." This view suggests that such spatial practices as placing of game consoles can both limit and open up possibilities for gaming. It also questions the simple explanations for gender differences among gamers. As Livingstone has noted, although boys and girls are almost equally likely to have computer at home, boys are twice as likely to have one in their bedroom [18]. It is obvious that these kinds of decisions do not leave the preferences of young people unaffected.

To consider the meanings games have for individuals it may be necessary to take a brief step back from the close examination of materials. It is obvious that games mean different things in the lives of different people. Games may even have different functions for a single individual at any given moment. Games can provide both excitement and relaxation, an undisturbed kingdom of freedom or a complex and vital network of people. It is clear that game hobbyists actively negotiate their identity with reference to games. Also in case of more casual players, talking about games and other social activities that derive from playing games can become important aspects of everyday life.

One lesson to be learned here is that one should not draw a strict division line between the ones who play and the ones who do not. Computer games are often played in turns: the one who seems to be playing at the moment may be the spectator at the next one. Further, audiences seldom stay in passive role: map readers, co-pilots, puzzle-solvers and lookouts can be found next to the "controlling" players [21]. Thus games that are meant to be played by one person at a time, can become shared endeavours. For example the school-aged informants of our study had created a two-player strategy for a horse racing simulator. While one of the players was responsible for steering the horse the other one took care of jumping the fences.

The design initiatives developed in different phases of our ongoing project will not be presented here in detail. On a general level, it can be said that the study has highlighted the narrowness of the spectrum of pleasures associated with traditional lottery games. Adding elements familiar from leisure games has a potential to diversify these motivations and pleasures. For example games that support co-operation and various player roles have a potential both to attract new player groups and to produce alternative goals not seen among lottery games so far.

A recent study among hardcore machine gamblers shows that they often appreciate features like high tempo, being alone and not being interrupted. It seems that these people do not actually seek entertainment from games. They just want to be absorbed. [24] Obviously one should not generalize this to all gaming where money is involved or to everyone who has ever played gambling machines. However, optimizing games for these kinds of players would probably produce such dubious designs as the AutoPlay option familiar from certain Australian poker machines. When this option is turned on, the game just plays itself and the player merely concentrates on watching the credit meter go up and down. In this connection, our obvious task is to create more responsible and plural starting points for design.

5. DISCUSSION

One of the crucial questions about adoption and application of any methodology is its relation first to the goals and nature of research at hand, and, secondly, to the nature of the outcomes this method produces. Our approach has been aimed at conveying understanding about the qualitative framework the existing game cultures create and which any new game needs to be adapted within. Since many aspects and dimensions of game cultures are something that even the persons inhabiting and producing them are not aware of, the method first needs to provide our informants means for coming into terms with their own implicit knowledge about their gaming and its contexts. Those cultural frames are temporal, spatial and social, but they also relate to the self-understanding of particular individuals. Our method was therefore deliberately relying on the creative processes of our informants; they were given tasks as stimuli, which inspired them to articulate what games are and mean for them. The next step in the interpretative process was reached in a dialogue between informants and researchers, as they jointly attempted to make sense of the outcomes of the designed "research games".

As mentioned earlier, the starting point for our study was much broader than in most user-centred projects that typically aim to improve existing systems or appliances. It is true that there are

tools like workflow analysis or task analysis that have been developed to improve our understanding of users. However, these approaches are useful when improving existing systems and otherwise when the focus of a project is relatively narrow. When developing for example work-place systems that aim to improve particular modes of working, the objectives and working environments can be examined in detail. In contrast to this, playing games is mostly considered to be voluntary and deliberate and the environments are much more diverse.

It is not simple to conclude this rich and diverse approach in a few sentences but we would like to highlight the following three points. First of all, it seems that our approach was able to produce some interesting and inspiring results. All in all, the interviews benefited significantly form the self-made materials. The playful materials seemed to liberate people to share their crazy or unconventional ideas. The significant amount of work the participants had made already before the interviews allowed us to pass over the "warm-up questions" and right from the beginning we were able to consider the relatively complex issues related to the research themes.

Secondly, the diverse data enabled multiple uses and could be used as such in our design workshops. This was a crucial benefit since typically the field studies materials require editing and filtering before they can be brought to the design process. This way we could also guarantee that no information was lost before the design workshops.

Thirdly, it is clear that some of the tasks were more successful than others. Some of them were able to produce insights that are likely to support our design initiatives. Others gathered profoundly interesting information but design-wise were not very informative. The approach offers a broad and fascinating overview on the research theme but does not produce clear guidelines for the next phases or straight-forward instructions for future design. The information one receives with playful self-documentation sets is diverse, multimodal and typically not measurable. The analysis of data is extremely demanding and requires combinations of different methods of analysis. Besides, creative and artful works invite multiple interpretations. Simultaneously one should be aware, after all, that the creative – or 'artful' – construction of knowledge is not the opposite of science, or the scientific method. One can here only quickly refer to the tradition going back all the way to Plato, and to the way art (particularly, *technê*) is not the opposite of knowledge (*epistêmê*), but rather something that is roughly identical to it: skill, discipline, method, rationality. [10]

One of the topics dicussed recently in the field of design research is the role of empathy [16]. In this context, empathy should be understood as an imaginative projection into other people's situations. Since our understanding of the emotional and motivational qualities of players and gaming situations has clearly improved, we suggest our approach shares similarities with the emphatic design ideals. It may be early to point the exact place of our approach in relation to the whole design process but we can mostly agree with Koskinen and Battarbee who state that: "[T]he place of emphatic methods in the product development process must be questioned. We suggest that the best place for these methods in the early, conceptual part of the product development process. In particular, emphatic methods work best in concept search, which we see as preparation for concept design." [16]

Our approach also raises larger questions about the current role of researcher. It goes without saying that an open-minded approach on applying and developing methods would not have been possible without the interdisciplinary background of our research team. Although some responsibilities were distributed, everyone was expected to participate both in planning the approach and analyzing the results. One of the most important characteristic was the ability to deal with unexpected and surprising results. Everyday meanings players attach to games and playing cannot be understood without moving between different positions. Working with people on the field and communicating the findings the way they can relevantly inform the concept development and design requires extreme delicacy. It seems that although the field of game design research is still in the making, we have already began to witness the emergence of multi-skilled researcher-designer who is capable of adopting information from various sources, co-operating and thinking on several levels at once.

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7. REFERENCES

[1] Aarseth, E. Computer Game Studies, Year One. *Game Studies*, vol. 1, issue 1, 2001. Available: http://www.gamestudies.org/0101/editorial.html

[2] Brandt, E., and Messeter, J. Facilitating Collaboration through Design Games. In *Proceedings of Participatory Design Conference 2004* (Toronto, Canada, July 27 - 31, 2004). ACM Press, 2004, 121-131.

[3] Charles, D et al. Player-Centred Game Design: Player Modelling and Adaptive Digital Games. In de Castell S., Jenson J. (ed.) *Changing Views: Worlds in Play - Selected Papers of the 2005 Digital Games Research Association's Second International Conference.* Vancouver: Digital Games Research Association & Simon Fraser University, 2005, 285-298.

[4] Ehn, P. Scandinavian Design: On Participation and Skill. In Adler. P.S., and Winograd, T.A. (eds.) *Usability: Turning Technologies into Tools*. Oxford University, New York, 1992, 96-132.

[5] Ermi, L., Heliö, S., and Mäyrä, F. *Pelien voima ja pelaamisen hallinta: lapset ja nuoret pelikulttuurien toimijoina*. Hypermedia Laboratory Net Series 2. University of Tampere, Tampere, 2004. Available: http://tampub.uta.fi/tup/951-44-5939-3.pdf

[6] Ermi, L., and Mäyrä, F. Player-Centred Game Design: Experiences in Using Scenario Study to Inform Mobile Game Design. *Game Studies*, vol. 5, issue 1, 2005. Available: http://gamestudies.org/0501/ermi_mayra/

[7] Gaver B., Dunne, T., and Pacenti, E. Design: Cultural Probes. *Interactions*, 6, 1 (Feb. 1999), 21-29.

[8] Gaver, W.W., Boucher, A., Pennington, S., and Walker, B. Cultural Probes and the Value of Uncertainty. *Interactions*, 11, 5 (Sept.-Oct. 2004), 53-56.

[9] Hackos, J.T., and Redish, J.C. *User and Task Analysis for Interface Design*. Wiley, New York, 1998.

[10] Hancher, M. *The Science of Interpretation, and the Art of Interpretation*. *MLN: Modern Language Notes*, 85, 6 (Dec. 1970), 791-802.

[11] Hemmings T., Clarke K., Crabtree A., Rodden T., and Rouncefield M. Probing the Probes. In *Proceedings of Participatory Design Conference 2002* (Malmö, Sweden, June 23-25, 2002). Palo Alto, CA, 2002, 42-50.

[12] Johansson M., and Linde, P., Playful Collaborative Exploration: New Research Practice in Participatory Design. *Journal of Research Practice*, 1, 1 (2005). Available: http://jrp.icaap.org/content/v1.1/johansson.html

[13] Jørgensen, A.H. Marrying HCI/Usability and Computer Games: A Preliminary Look. In *Proceedings of NordiCHI '04* (Tampere, Finland, October 23-27, 2004). ACM Press, 2004, 393-396.

[14] Järvinen, A., Heliö S, and Mäyrä F. *Communication and Community in Digital Entertainment Services. Prestudy Research Report.* Hypermedia Laboratory Net Series 2. University of Tampere, Tampere, 2002. Available: http://tampub.uta.fi/tup/951-44-5432-4.pdf

[15] Järvinen, A., and Sotamaa, O. *Pena: rahapelaamisen haasteet digitaalisessa mediassa*. Hypermedia Laboratory Net Series 1. University of Tampere, Tampere, 2002. Available WWW: http://tampub.uta.fi/tup/951-44-5411-1.pdf

[16] Koskinen, I., and Battarbee, K., Introduction to User Experience and Emphatic Design. In Koskinen I., Battarbee K., and Mattelmäki T. (eds.*) Empathic Design: User Experience in Product Design*. IT Press, Helsinki, 2003, 37-58.

[17] Koster, R. *Theory of Fun for Game Designers.* Paraglyph Press, Scottsdale, Arizona, 2005.

[18] Livingstone, S. *Young People and New Media*. Sage, London, Thousand Oaks, New Delhi, 2002.

[19] Mattelmäki, T. Probes: Studying Experiences for Design Empathy. In Koskinen I., Battarbee K., and Mattelmäki T. (eds.) *Empathic Design: User Experience in Product Design*. IT Press, Helsinki, 2003, 119-130.

[20] Mazé, R., and Jacobs, M. Underdogs & Superheroes: Designing for New Players in Public Space. In Haddon et al. (eds.*) The Good, the Bad and the Irrelevant: The User and the Future of Information and Communication Technologies, Conference Proceedings* (Helsinki, Finland, September 3-5, 2003). University of Art and Design, Helsinki, 2003, 260-265.

[21] Newman, J. *Videogames*. Routledge Introductions to Media and Communications. Routledge, London & New York, 2004.

[22] Rhea, D. Bringing Clarity to the "Fuzzy Front End": A Predictable Process for Innovation. In Laurel B. (ed) *Design Research: Methods and Perspectives*. MIT Press, Cambridge, Mass. & London, 2003, 145-154.

[23] Schneiderman, B. Designing for Fun: How Can We Design User Interfaces to Be More Fun?. *Interactions*, 11, 5 (Sept.-Oct. 2004), 48-50.

[24] Schull, N.D. Digital Gambling: The Coincidence of Desire and Design. *The ANNALS of the American Academy of Political and Social Science*, 2005, 597: 65-81.

[25] Soronen, A., and Sotamaa, O. "And my microwave is a fox": Reflecting domestic environments and technologies by means of self-documentation packages. In Sudweeks & Ess (eds.) *Proceedings of the Fourth International Conference on Cultural Attitudes towards Technology and Communication* (Karlstad, Sweden, June 27 – July 1, 2004). Murdoch University, Australia, 2004, 211-225.

[26] Sotamaa, O. Creative User-centred Design Practices: Lessons from Game Cultures. In Haddon et al. (eds.) *Everyday Innovators: Researching the role uf users in shaping ICTs.* Springer Verlag, London, 2005. (forthcoming)

[27] Svanæs, D., and Seland, G. Putting the Users Center Stage: Role Playing and Low-fi Prototyping Enable Users to Design Mobile Systems. *In Proceedings of the 2004 Conference on Human Factors in Computing Systems, CHI 2004* (Vienna, Austria, April 24 - 29, 2004). ACM Press 2004, 479-486.