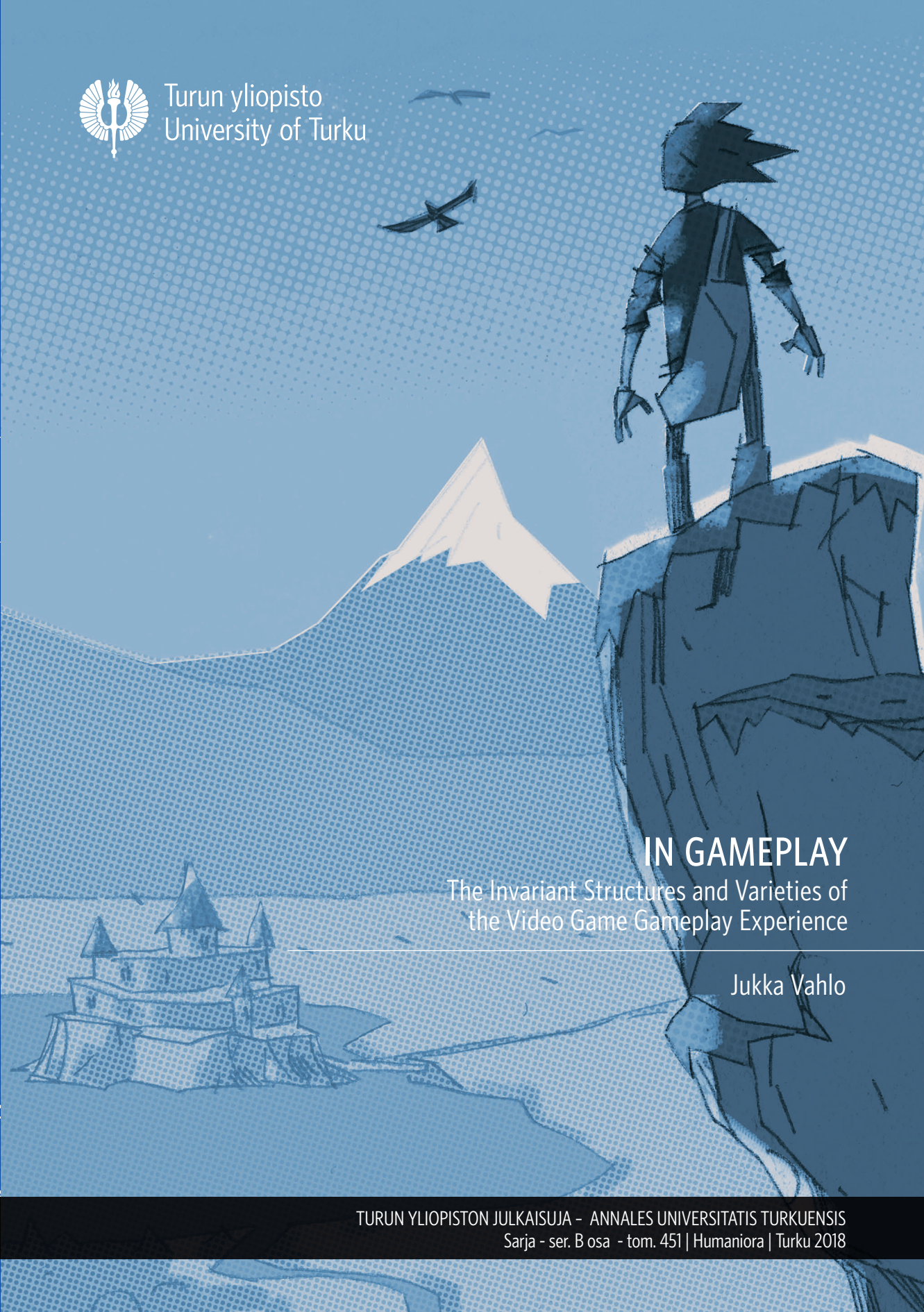

Turun yliopisto
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IN GAMEPLAY

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Jukka Vahlo

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VAHLO, JUKKA: *In Gameplay. The Invariant Structures and Varieties of the Video Game Gameplay Experience*
Doctoral Dissertation, 335 pages, 9 appendix pages
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This dissertation is a multidisciplinary study on video game gameplay as an autonomous form of vernacular experience. Plays and games are traditional research subjects in folkloristics, but commercial video games have not been studied yet. For this reason, methods and concepts of the folkloristic research tradition have remained unknown in contemporary games studies. This thesis combines folkloristics, game studies and phenomenological enactive cognitive science in its investigations into player–game interaction and the video game gameplay experience at large.

In this dissertation, three representative survey samples (N=2,594, N=845, N=1,053) on "Rewarding gameplay experience" are analyzed using statistical analysis methods. The samples were collected in 2014–2017 from Finnish and Danish adult populations. This dissertation also analyzes data from 32 interviews, through which the survey respondents' gameplay preferences, gaming memories, and motivations to play were further investigated. By combining statistical and qualitative data analyses, this work puts forward a mixed-methods research strategy and discusses how the findings relate to prior game research from several disciplines and schools of thought.

Based on theoretical discussions, this dissertation argues that the video game gameplay experience as a cultural phenomenon consists of eight invariants in relation to which each individual gameplay experience can be interpreted: The player must demonstrate a lusory attitude (i), and a motivation to play (ii). The gameplay experience consists of explorative and coordinative practices (iii), which engender a change in the player's self-experience (iv). This change renders the gameplay experience inherently emotional (v) and performative (vi) in relation to the gameworld (vii). The gameplay experience has the dramatic structure of a prototypical narrative (viii) although a game as an object cannot be regarded a narrative in itself.

As a key result of factor analytical studies and qualitative interview analyses, a novel approach to understanding player–game interaction is put forward. An original gameplay preference research tool and a player typology are introduced. This work argues, that, although video games as commercial products would not be intuitive research subjects for folkloristics, video game gameplay, player–game interaction, and the traditions in experiencing and narrating gameplay do not differ drastically from those of traditional social games. In contrast to this, all forms of gameplay are argued to be manifestations of the same vernacular phenomenon. Indeed, folkloristic research could pay more attention to how culture is experienced, modified, varied and expressed, regardless of whether the research subject is a commercial product or not.

Keywords: video games, factor analysis, experience narratives, storytelling, cognition, phenomenology, motivations, performativity, variation, agency, emotions

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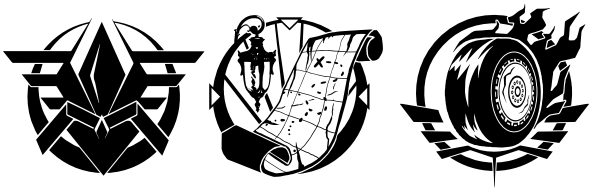
Käsillä oleva väitöskirja on monitieteellinen tutkimus videopelien pelaamisesta itsenäisenä kansanomaisen kokemuksen muotona. Pelien ja leikkien tutkimus on perinteikäs tutkimusaihe folkloristiikassa, mutta kaupallisten videopelien tutkimusta ei ole juuri tehty. Tästä syystä folkloristiikan tutkimusmenetelmät ja -käsitteet ovat jääneet tuntemattomaksi nykyaikaisessa pelitutkimuksessa. Tutkimus yhdistää folkloristiikan ja pelitutkimuksen näkökulmien lisäksi enaktiivisen kognition fenomenologista teoriaa pelaaja–peli-vuorovaikutuksen tutkimukseen sekä pelikokemuksen analyysiin.

Tutkimuksessa analysoidaan tilastotieteellisin menetelmin kolmea aikuisväestöä edustavaa ”Palkitseva pelikokemus” -kyselytutkimusaineistoa (N=2,594, N=845, N=1,053), jotka kerättiin Suomesta ja Tanskasta vuosina 2014–2017. Kyselytutkimusaineiston rinnalla analysoidaan 32 teemahaastattelun aineistoa. Haastatteluilla tuotettiin syvempää ymmärrystä kyselyyn vastanneiden henkilöiden pelimieltymyksistä, pelimuistoista ja pelimotivaatioista. Tilastoaineiston ja haastatteluaineiston analyysi tuodaan yhteen monimenetelmällisellä ja dialogisella tutkimusotteella, joka yhdistää havainnot usealla eri tutkimusalalla tehtyyn pelitutkimukseen.

Teoreettisen analyysin tuloksena argumentoidaan, että videopelien pelikokemusta ilmiönä määrittää kahdeksan muuttumatonta ominaisuutta, joiden suhteen kunkin yksittäisen pelikokemuksen ainutlaatuisuutta voidaan tarkastella: Pelaajalla tulee olla leikkisä asenne (i) ja motivaatio pelaamiseen (ii). Pelaamisen kokemus rakentuu tutkivista ja suorittavista käyntänteistä (iii), jotka tuovat väliaikaisen muutoksen pelaavan henkilön minäkokemukseen (iv). Tämän muutoksen myötä pelaajuudesta muodostuu emotionaalinen (v) ja performatiivinen (vi) positio suhteessa pelimaailmaan (vii). Näin syntyvän omakohtaisen pelikokemuksen rakenne vastaa kertomuksen dramaattista perusrakennetta (viii), vaikka peliä itsessään ei voida pitää kertomuksena.

Tutkimuksen empiirisenä tuloksena esitellään faktorianalyyttisiin tapaustutkimuksiin ja laadullisten aineistojen analyysiin perustuva uudenlainen näkökulma ja menetelmä pelaaja–peli-vuorovaikutuksen ja pelimieltymyksen tutkimukseen, sekä edelliseen perustuva pelaajatyyppiluokittelu. Samalla väitetään, että vaikka videopelit kaupallisina esineinä eivät olisi folkloristiikan tutkimuskohteita, videopelien pelaaminen, pelaaja–peli-vuorovaikutus ja pelien kokemisen tavat eivät eroa ratkaisevasti pihaleikeistä vaan ovat saman kansanomaisen ilmiön esiintymiä. Folkloristisen tutkimuksen soisikin kiinnittävän nykyistä painokkaampaa huomiota kulttuurin kokemisen, muokkaamisen ja ilmaisun tapoihin riippumatta siitä, onko tarkastelun kohteena kaupallinen tuote vai ei.

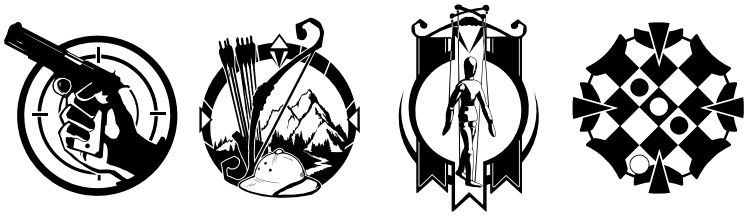
Asiasanat: videopelit, faktorianalyysi, kokemuskerronta, kertomusperinne, kognitio, fenomenologia, motivaatio, performatiivisuus, variaatio, toimijuus, emootiot



So, there you are, glued to the PC or console or what you have. And you are hungry as hell, but you just have to go there and find the item and then you, of course, want to take it back to the village and solve the mystery in a dungeon not so far away. And your stomach starts to hurt because of the excitement, and your shoulders are in pain.

And when the situation is resolved, you can finally breathe and go to the bathroom and watch whether someone tried to phone you three hours ago. This is why I play. Did I describe fun? Well, I do not know, but this is the best kind of gaming for me.

— Interview participant P2



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This project has been with me since 2004 when I finished my master's thesis in Folkloristics on the experience of humor. A great many things have happened since then, and it was only a decade later when I finally got the perfect opportunity to begin to plan this dissertation. I have truly enjoyed writing this thesis, indeed so much that I have forgotten to do one of my favorite things: I cannot remember when I last played a video game.

The past four years with this thesis have been frantic. My daily job at Centre for Collaborative Research (CCR) at University of Turku, School of Economics has made it possible for me to participate in several ambitious and enthralling research projects. Without CCR and its spectacular staff, this work would not exist. Although I had only six months' time to really sit down to write this monograph thesis, I have been able to collect the empirical data over the course of several game research projects conducted by CCR and other participating disciplines. In these research projects, I learned to design surveys and analyze data with statistical methods, and I had the opportunity to work closely with economists, psychologists, nurse scientists, theoretical physicists and many others.

I thank my professor, Pekka Hakamies, for being open-minded and calm. My choice of studying how commercial video games are experienced would not have been as warmly welcomed by all folklorists. In my view, folkloristics needs such an attitude to be able retain a relevant discipline in the age of digital culture, and to contribute to other academic disciplines. Pekka's calm responses were exactly what I had wished for, since at times this work has felt quite overwhelming, not that I do not enjoy real challenges. I also thank the whole personnel of the Department of Folklore—especially you Kaarina Koski—and my fellow PhD candidates, whose talent and enthusiasm in folkloristic research have been true inspiration to me. A special thanks also goes to Professor Emerita Annikki Kaivola-Bregenhøj, who said that to be a folklorist is to never quit reading, writing, and being curious of what emerges in the vernacular. Of all academic disciplines, there is no other place that would quite feel as much as home as folkloristics.

My closest colleague and a maniac, who goes with by name Aki Koponen, has been a true (although unofficial) supervisor of this work. Together with Aki, I have managed to conduct several game projects and drive the track of Road Atlanta countless times. Aki has challenged my ideas on a daily basis throughout these years, and I have learned so much from him that I do not even know what to say. Together with another amazing person, cognitive psychologist Johanna Kaakinen, Aki has instructed me in making robust statistical analyses. Johanna, I sincerely thank you also for your guidance in psychological literature and scientific writing. It was truly a wonderful thing that I met you in 2013. Thank you, Aki, Johanna, Suvi and Markus, also for the explosive laughs in our many research workshops. Indeed, I have had a rare privilege to work with extremely skillful people from many academic fields. I take this opportunity to thank especially data scientist and AI expert Jani Sainio: It was truly inspiring to work together in developing a novel game recommendation engine based on the player profiling method I present in this thesis.

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Director Antti Saurama and the whole work community of CCR deserve my thanks as well. Thanks to the interdisciplinary work done at CCR and the positive attitude towards research-oriented careers, I was able to write this thesis while working at CCR at the same time. Relatedly, I thank Tekes for financing two major game research projects *Play for Reward* (2014–2016) and *Your Kind of Games* (2016–2018), which enabled me to collect the empirical data and co-author several game research articles with our research collaborators. I also thank the Finnish Cultural Foundation for giving me a grant, which made it possible for me to immerse myself completely in the writing process of this dissertation in 2016–2017. Thanks also to both the School of History, Culture, and Art Studies and the School of Economics at the University of Turku.

I thank my parents and family for their endless support. My beloved wife Krista has been without a doubt the most important person who made this dissertation possible. She made sure that I used every second I had efficiently and focused on nothing unimportant. I ruined countless evenings and weekends practically forcing her to listen my thoughts and to be critical towards everything I claimed. Because of her patience, and the lack thereof, this dissertation turned out the way it did. Also, I thank my children Eero, Inkeri and Kaiku—who at the age of four years is already very skilled in creating his own imaginative games out of thin air—you are the most important persons in my life, and I promise that I will now have more time to play games with you, as we did before I engaged with this project.

The writing process of this dissertation was a deep exploration into the complex realms of game literature. In this immersive experience, pounding monotonous techno, EBM and industrial mixtapes always put me into the right mood. So, thank you, music. When I now look at the dissertation as a whole, I feel that it is not what I intended it to be, but it is what I wanted it to be. In this sense, I feel that constructing this dissertation was a creative process for me, and I believe that I was able to express myself in its entirety. Finally, I thank all the memorable gameplay moments I have experienced with a variety of video games since the early 1980s.

That is thanks to you all,

Turku 14.4.2018

Jukka Vahlo

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INTRODUCTION

> [T]he path is our footsteps, laid down in walking
> (Evan Thompson, 2007, p. 166)

The Phenomenon of Interest

This thesis is an investigation into the video game gameplay experience, and into what in this phenomenon varies and what does not vary between encounters with games. It is a fundamentally folkloristic question to ask how a cultural expression alters and stays fixed when enacted; to examine what in an expression remains the same and what changes is to consider the interplay between *tradition* and *variation* in culture.

Playing video games has become a widespread pastime activity during the past four decades. For instance, 87 percent of Finnish people and 73 percent of Danish people aged 18–70 play digital games at least for a little while weekly, and 66 percent of Finnish people and 55 percent of Danish people play digital games at least one hour every week. On average, a Finnish person plays digital games for almost 8 hours weekly in a total of 15 play sessions, while the mean weekly play time for a Danish person is 6.5 hours in 14 play sessions. Today, playing video games is equally common for both men and women; of those who play at least one hour weekly, 48 percent are women in both Finland and Denmark, with a mean age of 42 years in Finland and 43 years in Denmark. Considering the entire data set (N=2000 of which 50.9 percent were men), since the mean age for adults is 42.7 years, it can be concluded that playing digital games is a common and pervasive activity for most of us. Indeed, we encounter games everywhere and all the time.[1]

From a folkloristics perspective, video games are fascinating as technology-bound cultural products and participatory practices. Yet, until recently, video games have largely escaped the attention of folklorists. With the exception of Sharon R. Sherman (1997), Kiri Miller (2008; 2012), Kimberly Lau (2010), Robert Guyker (2016), Jeffrey A. Tolbert (2016) and Anthony Bak Buccitelli (2017), there are hardly any full-blown folkloristic studies on *video games* or the activity of playing them. This is rather surprising because games, and especially traditional children's games, have been collected and categorized in folkloristics since the early 19th century.[2]

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[1] These results are from two surveys with nationally representative samples (Finland, N=1000; Denmark, N=1000). These surveys were conducted in the research project, *Play for Reward*, financed by *Tekes* (Finnish Funding Agency for Innovation) in 2014–2016. I report more details about the survey process and sampling in empirical Chapter 3 of this thesis.

[2] See, for instance, *The Sports and Pastimes of the People in England* by Joseph Strutt (1801), *Games and Songs of American Children* by William W. Newell (1884), *The Traditional Games of England, Scotland and Ireland* by Alice Bertha Gomme (1894; 1898, two volumes) and *The Game of Rich and Poor* (1932, FF Communication 100) by Elsa Enäjärvi-Haavio, which included both game classifications and a historic-geographic analysis of a singing game (see Georges, 1972, pp. 174–176).

Although Newell (1884) established games as a fundamental part of folklore, folklorists only started to pay more attention to studying games as a specific subject area after 1950s. Folklorists of that time were especially influenced by the works of Johann Huizinga, Roger Caillois and Brian Sutton-Smith, who studied games and play in relation to culture, and by the social-psychological investigations of Jean Piaget and Erik H. Erikson. Scholars of folklore, such as Alan Dundes, Robert A. Georges, Roger Abrahams, Jay Mechling, and Kenneth S. Goldstein, began to find the concept of a 'game' to be an intriguing research subject for folkloristics—a discipline that had started to emphasize more and more the performative contexts of folklore. According to Simon J. Bronner (2007), Dundes (2007 [1964]) was among the first folklorists to argue that folklore was to be understood as a type of knowledge in social lives, and as the varied cultural expressions through which this knowledge is transmitted, rather than as specific texts and textual forms. Because games, ceremonies, rituals, dances and festivities are also "types of knowledge, characterized by particular kinds of cultural expression," they began to be regarded as folklore (Bronner, 2007, p. 154).

Whereas Dundes (2007 [1964]) studied games with structural, morphological and psychoanalytic analyses, American folklorist Georges (1972) examined the subject by applying behavioral models. Abrahams, furthermore, appropriated a rhetorical approach to the performances of play and games, and Goldstein analyzed games from the framework of the ethnography of speaking. As Goldstein (1999 [1967], p. 235) notes, games are a significant research subject for folklorists since in games the participants are exceptionally aware of *the rules* of the performance. Because folklorists have conducted few studies on video games, the methodological tools of folkloristics have remained foreign in game studies of today. The opportunity thus presents itself for a folklorist to investigate the meaning of video game gameplay in today's culture.

I have always been interested in games, whether those games were collectible card games like *Magic: The Gathering* (1993, Wizards of the Coast), board games or video games. I remember from my childhood when playing, e.g., cards with my family, I never wanted to quit, but would have liked to play yet another game. As a teenager, I grew attached to my in-game avatars in the tabletop role-playing game, *RuneQuest* (1984, Avalon Hill), which I played mostly with my big brother and his friends. I remember writing my own fantasy short stories, drawing characters and designing world maps based on my *RuneQuest* experiences.

I have never played any games as much as tens of hours weekly, but I have always been interested in game cultures and game aesthetics, and especially in the gameplay experience. In the case of video games, I have preferred role-playing games over other types of games since the 1990s, and I have been especially fascinated in Japanese role-playing game aesthetics. I have played many action-adventure games, platformer games, graphic adventures, puzzles, and racing games, mainly with gaming consoles (MSX, Atari ST, Playstation, Playstation 2, Playstation 3, Playstation 4, XBox One, Super Nintendo, Nintendo Wii, Nintendo WiiU) and handheld consoles (GBA, DS, 3DS, PSP, PSVita). I have much less player experience with first-person shooter games, strategy games, and sports games. Also, I have played only a few mobile games, and I have no real experience with multi-player online games or competitive esports.

While my interest in video games surely has had an impact on the thesis at hand, I believe that this impact has been positive. In game studies, the idea is held that, in order to study games, much of the researcher's knowledge of this phenomenon

should come from his or her first-hand experiences. I also believe that my own background as a game hobbyist made it much easier for me to conduct in-depth interviews with players and design quantitative surveys for investigating gameplay experiences and game preferences.

Context of the Study

In *The Ambiguity of Play* (2001 [1997]), folkloristically inclined psychologist, Brian Sutton-Smith, famously presents seven rhetorics of studying play. By rhetorics, Sutton-Smith refers to the persuasive discourses utilized by researchers who argue for the worthwhileness of their particular research strategy. I find it fitting to begin this thesis by positioning it within the seven rhetorics proposed by Sutton-Smith.

The first rhetoric Sutton-Smith presents is *the rhetoric of play as progress*, which argues that play is adaptation through which children and animals develop. *The rhetoric of play as fate* is to be contrasted with the first one, since this second rhetoric deals with games of chance and gambling, and the chaos and the luck that resides in the element of uncertainty associated with all games. The third rhetoric is that of *play as power*, and it is the rhetoric of conflict and competition. This latter rhetoric is about status, control, and heroes that emerge from play.

The rhetoric of *play as identity* is how play traditions build, maintain, and transform the identities of individuals and communities, and the *rhetoric of imaginary* is the sustaining positive modern attitude towards creativity and innovation, with play as the core driver of them both. *The rhetoric of the self* deals with the first-person experience of playing games, what motivates people to play, and what kind of meanings people attach to gameplay experiences. And *the rhetoric of play as frivolous* is the trickery, foolishness and carnivalesque of play.

The thesis at hand is to be situated firmly as a representative of the rhetoric of the self, the first-personal character of gameplay. This emphasis on the lifeworld of an individual is also central for the rhetoric of progress, and indeed the current work is influenced by the latter rhetoric. However, it is not my intention to focus only how gameplay experiences come forth for the individual, but rather approach gaming as a form of cultural and social participation from a phenomenological vantage point of the first-person. Here, my work will be connected to the rhetoric of identity.

Sutton-Smith (2001 [1997], pp. 219–220) lists key researchers and concepts for every type of rhetoric. In relation to prior research on the rhetorics of the self, this thesis draws from authors such as Richard Bauman (performance), Eugen Fink (ecstatic actions), and Mihály Csíkszentmihályi (flow experience); some key authors from rhetorics of identity in this context are George Herbert Mead ('self,' social and symbolic interactionism), Erving Goffman (dramaturgical approach), and Roger

Abrahams (stylization and enactment); and from the rhetorics of progress Jean Piaget (assimilative and accommodative conducts) and Brian Sutton-Smith himself.[3]

Importantly, Sutton-Smith (2001 [1997], pp. 192–200) situates "play as ecstatic *performance*" and "play's stylized excitement" within the rhetorics of self alongside the phenomenological research attitude. This is a noteworthy observation since it is indeed the purpose of the current thesis *to bring phenomenology and folkloristics together*. Similar to Sutton-Smith, I conceive 'performance' as a key concept for understanding the gameplay experience. Examining player performance and performativity in the process of gameplay emerges as a focal point of this thesis.

This thesis is also closely related to *game ontology*. As described by Espen Aarseth (2014b, p. 484), game ontology can refer to the formal and functional characteristics of game *objects* or to existential ontologies, which ask what kinds of existence a game has and what games are as *processes*. In game studies, the object perspective can refer either to games as artwork or as formal systems, and both the object-centered and process-centered investigation can be conducted as normative or descriptive (Aarseth, 2014b, p. 483; see also Stenros, 2015, pp. 128–129).

The current work is as an exercise of process-centered descriptive and existential game ontology (see Aarseth, 2014b, p. 492), which challenges the notions of real and fiction by investigating gameplay experience, i.e., *game as experienced* in the ongoing interplay between a player and a game system. Although the profound questions of game ontology have visibility in this thesis, it is not my primary objective to focus only on what games are. Rather, I delineate this thesis as an exploration on *how* games emerge as played. In this demarcation, the gameplay experience arises a phenomenon that can be perceived meaningful and memorable by players representing different cultural backgrounds and motivations to play.

Thinking of discourses on contemporary game studies from the past twenty years, the debate between narratological and *ludological*[4] approaches on games are of special interest for a folklorist. However, this intriguing phase in the development of interdisciplinary game studies has been discussed at length by many authors, and it is not the objective of the current work to reiterate their arguments. In my view, Gonzalo Frasca (2004, p. 86; see Aarseth, 1997), described the then peaked debate clearly by stating that since video games require active participation from the player, they rely on simulation rather than on semiotic representation, the latter of which is essential for narrative interpretation. Through participation, players have a different *kind of access* to the content of the game than they have to the narrative content.

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[3] This thesis is, of course, also influenced by many other authors from enactive cognitive theory, phenomenology, folkloristics, and game studies. Yet, this short list may suffice here since the purpose of presenting some central researchers is merely to relate the current work to the rhetorics of self, progress, and identity as proposed by Sutton-Smith (2001 [1997]). As a general guideline, I would situate the phenomenological theorists mostly into the rhetoric of the self, the enactive theorist into the rhetoric of the progress and the folkloristics and game studies primarily into the rhetoric of the identity.

[4] The term 'ludology' was introduced to video game studies in 1999 by Gonzalo Frasca, but its identity has remained rather ambiguous. Depending on the context of usage, 'ludology' can refer to the general study of games and thereby also to studies on e.g. social play and children's games; to a specific approach to study especially video games, their structure and functionality; or to an academic movement that was active in 1998–2001 in game studies (see Aarseth, 2014a).

The subject areas of the "debate" between ludologists and narratologists are still relevant in game studies; first, there remains the question of whether games as a medium can tell stories, i.e., if and how games are capable of full-blown storytelling. This is the vantage point of *critical ludology*. Second, there is an ongoing critical discussion on whether narratological concepts and methods are applicable to games, or should there instead be a particular methodology developed for studying game phenomena. As noted by Dominic Arsenault (2014, p. 476), in a narratological view by Janet Murray (1997), computer and computer games indicate new forms of narration, whereas Aarseth (1997) emphasizes that studying games requires developing novel analytical tools since they function differently than narratives. The third theme deals with the link between ludology and hermeneutics. This theme asks how the relationship between a player and a game is defined simultaneously by the interactivity of gameplay and its mechanics *and* by the semiotic representational aspects of the game (Aarseth, 2014a, pp. 186–188).

From the three themes in the ludology/narratology discourse, this thesis deals mostly with the third one. Although I will also discuss in the course of the current study how games relate to storytelling and experiencing stories (Chapter 8), the question of how interactivity in playing games constitutes a gameplay experience is absolutely crucial for this dissertation. Just as Aarseth (2014a, p. 188) writes, an application of the third theme should put "emphasis on the player as a part of the game system, an agent partly definable by the role the game affords, and as a condition framed by the game's *affordances*[5] and therefore as an integrated part of the game." However, the theoretical framework of this thesis is not ludo-hermeneutic, but instead enactive and phenomenological, which, when brought together with a research interest and the methodological tools of folkloristics, constitutes an approach I call *first-person folkloristics*.

A central argument of this thesis is that there is an element of folklore to all games, whether the game under analysis is a children's schoolyard game or a recent commercial video game. However, it must immediately be clarified that folklore in games is not necessarily found from the game objects that are transmitted through institutional channels such as retail stores and online marketplaces. Instead, folklore in games resides at the other end of the ontology of games, in games as processes. This is to contend that the *gameplay element in games has an inherent vernacular quality*. I will return to this argument many times during this thesis. Here it suffices to offer that folklorists should not decline from investigating commercial products solely based on an argument that the type of object is not folkloric. Folklorists could instead embrace the different traditions by which objects are experienced, modified, altered, interpreted and communicated to others. Games represent a prime example of this since the ontology of games is inseparable from the process of experiencing them.

[5] Affordances can be shortly defined as environmental possibilities for action (Chemero, 2009). I discuss the concept of affordance further in Chapter 7.

Research Gap and the Purpose of the Study

The thesis at hand is about the organization of the experience of video game gameplay, the focus being on the phenomenology of the first-person experience. Second, this thesis is about the cultural narratives and meanings that emerge from the organizations of the gameplay experience. The title of this thesis, *In Gameplay*, thus refers to my objectives of 1) investigating the *ongoing interaction*[6] between a video game and a player, and 2) how players remember and interpret their first-hand experiences of gameplay.

This work has substantive, methodological and theoretical objectives. On a substantive level, the task of this thesis is to provide an extensive and rigorous empirical portrait of the *video game gameplay experience* by combining qualitative and quantitative data. As Laura Ermi and Frans Mäyrä (2007) note, studies on the gameplay experience have remained scarce partly due to the "disciplinary tilt" in game studies. Most game scholars have a background in academic disciplines that study the ontology of games as objects rather than as processes. Although interaction analyses in the lineage of, e.g., Erving Goffman (see Deterding, 2013) are today more common than ten years ago, there is an evident need for empirical investigations into what makes a gameplay experience memorable and worth sharing with others.

On a methodological level, this work aims to combine the theoretical traditions of folkloristics, phenomenology and enactive approach to cognition, and proposes this combination as a significant addition to the discourses on game studies. This work has another methodological goal, and it is directed to the academic discipline of folkloristics: I aim to demonstrate many potential areas of investigation in video game cultures that folklorists could study in future research. In the empirical sections of this thesis, I present a developed mixed-methods approach to quantitative and qualitative data that could be a promising research strategy for both game scholars and folklorists.

On a theoretical level, I aim to unveil the invariant structures of the video game gameplay experience. Since prior research on video games has largely focused on game objects, the crucial question of what constitutes a gameplay experience has not been studied rigorously. From the framework of phenomenological enactivism and folkloristics, I aim to open new horizons on the invariants of games as a processes, as seen from the first-person vantage point of the player herself. Another theoretical goal of this thesis is to present *first-person folkloristics*, that is, phenomenologically inclined folkloristics that focuses on the life-world of the individual and how folklore is expressed and experienced by the embodied subject. The essential research questions of this thesis can be summarized as:

> RQ1: How do we experience video game gameplay and what are the constitutive principles, i.e., *invariants*, of this cultural phenomenon (theoretical level)?

[6] I will return to the concept of interaction in Chapter 2.

RQ2: How do players value, remember, and narrate their past experiences of video game gameplay (substantive level)?

RQ3: How can the academic traditions of folkloristics, phenomenology and enactivism be brought together, and how can this combination open new horizons for interdisciplinary game studies (theoretical and methodological levels)?

Plan of the Thesis

The thesis unfolds as follows. In Chapter 1, I develop theoretical grounds for the dissertation by bringing together folkloristics, enactivism and phenomenology (RQ3). In Chapter 2, I situate the thesis in game studies by defining the key concepts and by identifying discourses on academic game studies relevant to the dissertation (RQ3). In this latter chapter, I consider the concepts of 'game,' 'play,' 'the magic circle,' and 'the self of the player' from the viewpoint of first-person scholarship.

In Chapter 3, I introduce the most important concept of the thesis: *gameplay*. I begin the chapter by presenting how the concept has been defined in earlier literature and move then to conduct a series of statistical analyses with two large datasets (N=2,594, N=845) collected in 2014 and 2015. I study RQ2 by analyzing how we can identify the recurrent modes of player–game interaction that contemporary video games offer for the players and players' preferences of engaging with these modes in gameplay. As a result of the statistical analyses, I introduce five factors in gameplay preferences and seven player types. Several of the main findings I report in Chapter 3 are previously published in an article, "*Digital Game Dynamics Preferences and Player Types*" (Vahlo et al., 2017). In Chapter 4, I describe how I designed and conducted a series of 32 interviews and a call for meaningful gameplay experience writings (N=10) with players representing the revealed seven player types.

In Chapters 5–9, I first investigate the invariant structures of the gameplay experience (RQ1), and then analyze how players attach meanings to each of the proposed invariants (RQ2). The theoretical considerations combine aspects of phenomenology, enactivism, folkloristics and game studies (RQ3). In corresponding empirical analyses, I continue to explore both the statistical (N=2,594, N=845, N=879) and the qualitative data by asking how players come to appreciate some gameplay experiences more than others. During these five chapters, I develop a theoretical framework for studying the video game gameplay experience. The framework is *exploratory*, and I construct it from the perspective of a *meaningful gameplay experience*. Because of this demarcation, the framework is probably more suitable for investigating memorable and emotionally engaging gameplay experiences than for studying casual gaming, such as short-term mobile gameplay.

Chapter 5 is an investigation into how gameplay as the temporary phenomenon between a player and a game should be conceived and how both enactivism and folkloristics can deepen our current understanding of this phenomenon. The main theoretical arguments of this chapter are published earlier in the journal, *Game Studies*

(Vahlo, 2017). In the context of this thesis, however, I broaden the theoretical analysis by examining how the respondents of a survey (N=1,718) and my interviewees (N=32) reflected on their experiences of different forms of player-–game interaction.

In Chapter 6, I change my focus from gameplay to that of the player position. By utilizing the concept of 'presence,' I analyze how a gameplay experience can matter to the participatory player. The chapter will revolve around the concept of *player persona* and the idea that we do not play games only as persons but precisely as players. Building on writings by Erving Goffman (1959), I argue that the position of the player is performative, and that gameplay is a performance of the self. I conclude the chapter with empirical analyses on performative player experience and emotions in gameplay.

After investigating the player–game interaction of gameplay and the player's position within it, I continue in Chapter 7 to analyze the cultural event of playing video games. I ask whether an occurrence of gameplay can be regarded as a performance, given that the participatory position of the player is indeed performative. For this purpose, I introduce the concept of 'enactment' as it is conceptualized in folkloristics. I then continue to describe the relationship between a player and a game by studying how 'game' arises as an alternative environment of significant interaction, *the game-world*. I conclude the chapter by analyzing how players representing different player types come to appreciate different qualities in the gameworlds of contemporary video games. I move then to examine the *elapsed* experience of video game gameplay. In Chapter 8, I discuss the possibility of new stories emerging from the gameplay experience. I argue that, although gameplay could not be conceived a narrative in itself, gameplay nevertheless has, as a form of experience, a structure not unlike prototypical narratives. I proceed then to investigate how gameplay experiences can be argued to be folkloric. Chapter 8 concludes with an analysis of how my player-interviewees narrated their most memorable gameplay experiences.

In the final chapter of this thesis, I study emotional gameplay experience and the profound question of why we play video games with a mixed-methods approach combining the statistical data and the qualitative data analyses. As a conclusion for this study, I argue for a total of eight invariants that are present in every instance of the phenomenon of video game gameplay. Taken together, Chapters 5–9 constitute a chronological analysis on what is going on in gameplay (Chapter 5), how the identity of player emerges in it (Chapter 6), how this identity relates to the world-like qualities of games (Chapter 7), what kind of structure of experience is produced by gameplay and how players reflect on these experiences (Chapter 8), and what motivates us to engage with gameplay repeatedly (Chapter 9).

A few remarks must be made considering the ethical aspects of this thesis. Since I consider myself a gamer, I have a sympathetic relationship with games and gaming cultures. This surely affected the interviews I had with the 32 participants, at least those interviews in which the interviewee and I shared similar preferences in games. In several interviews, I empathized with how the interviewee described his or her gameplay experiences. Surely my enthusiasm had an impact on the flow of the interviews, but because my objective was to have informal discussions rather than ask a series of structured questions, I did not find my emotional and empathic responses problematic.

Because a central objective of this thesis is to provide an extensive portrayal of the first-person gameplay experience, it is not my purpose to give any kind of normative statements about whether playing games can be a good or a bad thing for an individual, a family, specific social groups, or a culture at large. Instead, I focus in this work on taking the experiencer's vantage point to gameplay, and finding patterns in how experiencers describe games, gameplay preferences, and meaningful play. For instance, I do not give much consideration to the theme of 'addiction' since this subject had only minor visibility in the statistical and qualitative data—and when it did, the interviewees talked mostly about 'good addiction,' which they typically associated with games they liked the most.

The participants included in the statistical analyses of this study (N=2,595, N=845, N=879) were all recruited via a market research company that holds large online panels in several countries. The company maintains certifications for highest quality data collection and project management. Individual survey respondents are kept anonymous, and therefore the statistical data used in this dissertation was already anonymized. When analyzing both the statistical and the qualitative data, I tried to carefully describe the respondents' views as they were originally described in the data. This means that I did not detach the quotations from the context of a broader discourse, and thus I sincerely believe that the interviewees would recognize themselves from the interview passages.

A Word for the Reader

Since this thesis is an interdisciplinary endeavor and it has goals at the substantive, methodological, and theoretical levels, I appropriate a dialogical research attitude. I aim to develop my arguments by relating them to prior literature from different fields of academic research. The dialogical attitude also encompasses my analyses of gameplay experience.

The dialogical and interdisciplinary attitude means that this dissertation may contain sections that only some readers will find relevant for their purposes. Therefore, I propose that the reader interested in folkloristics will perhaps find Chapter 1, Chapter 3, Chapter 7, and Chapter 8 the most valuable. For a researcher interested in the theoretical contribution of this work, Chapter 1 and the first halves of Chapters 3–9 will offer more insight than the latter empirical halves of these chapters, which, correspondingly may be interesting for the ethnographically inclined.

A game scholar may wish to concentrate on the proposed combination for folkloristics, enactivism, and game studies. For this purpose, I recommend that the reader could focus first on Chapter 1, Chapter 2, the discussion sections of each Chapter, and the Conclusions. For a representative of the game industry or game design research, I believe that Chapter 3, Chapter 9, and the empirical parts of Chapter 6 and Chapter 7 are worthwhile. Finally, I hope that researchers of enactive cognition and phenomenology will find Chapter 5 and Chapter 6 intriguing.

However, it is my sincere belief that the work as a whole is relevant for both game studies and folkloristics, and that the central arguments of this study are best conceived by reading the whole thesis. Let me begin, then.

1. THEORETICAL FRAMEWORK: FIRST-PERSON FOLKLORISTICS

> [F]olklore must be enacted, as it exists nowhere outside of a performance (Roger Abrahams, 2005, p. 59).

Situating the Study within Folkloristics

I begin this chapter by situating the current work in relation to contemporary folkloristics and its theoretical currents. Then I proceed to present enactivism and its phenomenological foundations as a theoretical framework for studying first-person experience. I conclude this chapter by arguing that folkloristics and phenomenological enactivism together constitute a promising theoretical stance for studying both the invariant structures and varied experiences of video game gameplay.

Folklore, in the early nineteenth century, when the scientific study of folkloristics began, meant the traditional items of knowledge that described people, their surroundings and their practices. It was what was remembered from the past, and the task of a folklorist was to collect and study these *objects* of culture (Abrahams 2005, pp. 58–61). The 'folk' in the folkloristics of today, however, refers much more broadly to the informal and unofficial level of expressive culture. It is on this level that cultural meanings, values and understandings are communicated to others, as well as enacted and transmitted between everyday people.

Folk groups, which are an essential unit of examination for folklorists, are in contemporary research considered to be any groups of people who engage with cultural meaning-making that entails an element of vernacularity, or unofficial self-expression. Such groups share at least one common factor (Dundes, 1965, p. 2), and may come in different sizes. According to Elliott Oring (1984, p. 19; see Oring, 1986), two persons who engage in enduring informal interactions—such as friends—are enough to constitute a folk group, i.e., a *folk dyad*, and to sustain dyadic traditions.

Although all groups have institutionality, by studying folk groups, folklorists focus their attention specifically on the non-official culture, or at least on the dialogical relationships between the vernacular and the institutional in the arrangement of the folk group. The 'lore' encompasses expressive forms of communication within a folk group. These expressions include, e.g., the narratives, customs, performances, beliefs, and expressions of humor. According to Lynne S. McNeill (2013a, p. 6), what distinguishes folklore from institutional forms of culture is the *way in which folklore is transmitted*, *used* and *shared*. The content does not, by itself, make something, e.g., a story, folklore.

Similar to anthropology, media studies and literary studies, folkloristics is an analytical field of academic research. Folkloristics focuses not only on the items of folklore, but it also observes the processes and patterns of contextual conduct through which folklore emerges, varies and evolves. This it shares with anthropology. With literary studies, folkloristics shares the interest to study the items of folklore, e.g. the texts, the narratives, the rituals, and the customs, and the meanings we attach to them (McNeill, 2013a, p. 23).

Roger Abrahams (2005, pp. 22–23) suggests that there are four ways to approach a work of folklore in folkloristics. The first emphasizes the artistry of the "author" of folklore and studies the audiences and the work of folklore as byproducts of the artistic performance. The second view focuses on the internal characteristics of an object that is the work of folklore, which it sees as a self-sufficient entity without taking the performer and the audience into account. The third approach investigates how the performance affects its audience, and the fourth is concerned with how the audience affects the performance and thus highlights the interactional elements of folklore. Whereas the interests of literary folklorists still lie in studying folklore as texts and discovering how these texts are varied, anthropologically inclined folklorists are most interested in studying the interactional qualities and audience values. Also, structuralist analysts take the audience's point-of-view as a vantage point by studying formalized enactments such as rituals and festivities.

As a folklorist, I lean towards both anthropological and structural schools of thought. I am more interested in studying how items of folklore are experienced in performances (anthropological emphasis) and how these experiences are constituted and organized (structuralist emphasis) than in studying the textual qualities of folklore. However, "[t]he full analysis of a tradition or genre calls for study of the organizational elements of both items and performances" (Abrahams 2005, p. 25).

Similar to Dundes (2007 [1964]), I propose that the organization of a performance type, or "the structure of context," can be analyzed. An investigation into how a performance is organized focuses on the relations between participants, e.g., a performer and her audience, as affected by the spatiotemporal, traditional and situational factors. Here the attention of the structural analyst is not only morphological in the sense that it would emphasize the holistic and organic organizational structure of folklore (Bronner, 2007, p. 154)—i.e., how an expression of culture is brought forth in specific relations of its essential parts—but especially in its *dramatic* and dynamic aspects.

According to Abrahams (2005, p. 26), items of expressive culture are best understood as "a strategy for achieving speech rights and a device for putting forth an argument." This understanding can be achieved by bringing together rhetorical intent and contextual structure of the dynamical qualities of folklore in a performance. Folklore thus presents itself as *movement*, that is, how an item of folklore when performed manages to invoke sympathetic and empathic reactions in its dramatic organization. Abrahams' (2005, p. 3) analysis is that of *expressive interaction*, and this description fits with the approach I develop in this thesis. Following Abrahams (2005, p. 27), we must then be able to approach folklore from a theoretical stance that is capable to consider both the organization of a performance and the item that has an existence of its own beyond the ongoing performative event.

Elliott Oring (2013, pp. 39–41) offers a highly informative account of tradition as product and process. He argues that the study of folklore has always focused on certain traditions and products whereas the process of tradition has received only marginal research attention. Oring suggests that the process of tradition is cultural reproduction in which culture is reenacted and thus reproduced in transmission and repetition. He argues that more attention should be paid to the conditions and circumstances in which tradition is invoked as well as to how and why tradition is enacted.

This would involve investigations that take into account psychological elements such as memory, intentions and affections. To put it differently, the focus turns to the *experience* of folklore, and how folkloristics takes the first-person view of the subject into its careful consideration.

The questions of how 'game' can be approached both as an item of folklore and as a performative process of expressive culture is related to an ongoing discussion on how folklore should be defined and conceptualized in the digital age of today. Although I agree with Anthony Bak Buccitelli (2012), who argues that digital environments should be understood as arenas of performance rather than media that transmit texts, I acknowledge that appropriating 'performance' as the definitional concept of folkloristics is not without challenges.

'Performance' was introduced to folkloristics in the 1960s and 1970s to emphasize the agency of the tradition-bearer over that of 'tradition' as a social structure. According to Richard Bauman (1992; 2012), this made it possible for folklorists to study the aesthetic aspects of tradition, as these aspects were expressed in ongoing situations. As emphasized by Dan Ben-Amos (1971; 1976; 1997), who was another central character of the performative school in folkloristics, "the application of the concept of performance to folklore, hence, has transformed its subject from being a cultural metanarrative to becoming acts of narrating, singing, and speaking" (Ben-Amos 1997, p. 630). Bronner (2012, p. 30) observes that most American folklorists who approach their research subject from the conceptual framework of performance argue that folklore is aesthetically marked (framed, staged) and observable small-group events rather than textual items. During these situated events, performers take the responsibility of the expression they present for their audience (reflexive practice) and shape their conduct in response to the reactions of that audience (Bauman, 1975; Bauman, 1992).

Bronner (2016, pp. 13–15) notes that folkloristics, and especially the performative school of thought within the discipline, today faces at least five profound challenges that may force another paradigm shift or necessitate the re-evaluation of the definition of both 'folk' and 'lore.' *First*, vernacularity in digital cultures is characterized more by "variation in repetition" (e.g., *memes*) than by being social in the sense of face-to-face interaction. *Second*, the role of tradition in folkloric expressions should be re-evaluated. Performance-oriented approaches have had challenges in incorporating tradition in their analyses because these studies tend to emphasize contextual meaning-making and aesthetic expression. *Third*, there is a growing need in folkloristics to relate the discipline to the theories of mind, and thus to cognitive descriptions of actions and activities that generate folklore. *Fourth*, digital environments and mediated communication give rise to the question of letting go of the requirement of 'group' in folklore. We should ask whether intersubjective presence is indeed needed to sustain, transform, manipulate and generate folklore (see e.g., Mechling, 2006). And *fifth*, the "practice turn" in philosophy indicates that folklorists, too, should pay more attention to the skills, habits, know-how and silent expectations that underlie both everyday activities and stylized cultural events.

Indeed, Bronner (2016) suggests that *practice theory* could be a solution to alter the focal point of a folklorist from "artistic communication in small groups" (Ben-Amos, 1971) towards "traditional knowledge put into, and drawing from, practice" (Bronner, 2016, p. 15). The latter view proposed by Bronner studies activities or practices as knowledge and knowledge-generating processes that often manifest in

stylized and expressive forms. In these practices, the aesthetic element is not separable from the routines or from the technologies that make the particular activities possible, repeatable, and comparable.

In my reading of Bronner (2016), 'practice' as a concept comes close to vernacular traditions of *sense-making*. It is through practices that both everyday life and stylized forms of cultural expression come to make sense to us. I concur with Bronner (2012; 2016) that performance-centered understanding of folklore faces challenges when we are examining digital culture and human–technology relations. I also concur that utilizing the concept of 'practice' may indeed provide a possible solution for many of these problems. However, I do not position this dissertation as a representative of 'practice-centered' folkloristics. Instead, I advocate for a closely related concept of 'enactment' as an additional way to understand folklore both as an object and as a process. I maintain that folkloristics would benefit from theoretical work that enables us to grasp the lifeworld of the experiencer of folklore, and that 'enactment' is more promising in this regard than 'practice.'

I am not the first to note the potentiality of 'enactment' in folkloristics. Maria Schwertl (2016) writes that enactment is to be situated between performance and practice because enactment is a lens with which to look at both embodied subjective agency and the objects of culture, including mediating technologies such as human–technology interfaces. What 'enactment' enables, I propose, is that by appropriating this concept we are able to analyze the physical aspects, situated restrictions and social expectations *in relation* to ongoing activity, conducted by a conscious and affective subject.

The fundamental difference between 'enactment' and 'performance,' then, is that an enactment-centered study investigates how a subject brings forth her perspective to that which is established and expected without restricting its attention only to the aesthetic qualities or the face-to-face dimensions of this participation. 'Enactment' differs from 'practice' by keeping the first-personal agency of the participating subject as its paramount focal point. I suggest that in contrast to 'practice,' 'enactment' is better able to consider the subject as an embodied person with hopes, desires and purposeful goals.

As Schwertl (2016, p. 173) contends, 'enactment' is sensitive both to the routines of everyday activities and to the transformations that may occur in the interrelations of subjective agency and the traditional. In this sense, it can be situated precisely in between 'performance,' which emphasizes the unique qualities of a social situation, and 'practice,' which designates the holistic structural aspects of culture. However, I acknowledge that the important question of relating an enactment-centered approach to the practice theory is largely beyond the scope of this thesis.

Enactive Approach to Embodied Cognition

In this thesis, *enactivism* is suggested as a theoretical stance for studying gameplay and meaningful gameplay experience. Enactivism was initially coined by Francisco

Varela, Evan Thompson, and Eleanor Rosch in *The Embodied Mind* (1991) as a program to understand embodied cognition. It has recently gained a fair amount of attention, primarily in cognitive science, philosophy, phenomenology, and psychology.

Whereas in representationalism, computationalism, and connectionism the mind is generally conceived in the framework of data processing between sensory input and motor output, in enactivism a living organism is argued to actively *enact*[7] a meaningful perspective to the world (Thompson, 2007, pp. 4–10, 59). All forms of enactivism understand humans as profoundly social and material beings, as the focus of cognitive action is understood to be on the interface where an agent and the world meet. In enactivism, cognition is best conceptualized as a contextual practice, i.e., *relation*, instead of capacity of being a database of information; the purpose of cognition is in guidance of actions and not in formation of mental representations (Engel 2010, pp. 219, 221; Thompson & Stapleton, 2009, p. 26; Di Paolo & De Jaegher, 2012, p. 2).

Enactivism has been described as noncartesian, nonreductive and nonfunctionalist naturalism, focused on researching the dynamics of *coupling*[8]—the mutual, situational influence between an agent and its environment. It further argues that *meanings* emerge from these dynamical processes of being-in-the-world. (Di Paolo et al., 2010, p. 36; McGann et al., 2013, p. 204)[9] In enactivism, 'objective' is understood as a "body of regulated knowledge from individual accounts of experience" (Varela & Shear, 1999) rather than as something that can be analyzed without taking the observer's vantage point into careful consideration. This positions enactivism firmly a theoretical tradition that builds from *first-person view* to cognition. First-person methodologies emphasize the lived experience, that is, 'qualia' or 'phenomenal consciousness.' The focus of a first-person view is thus on the processes that have a relevant subjective and experimental side. However, "[d]ealing with subjective phenomena is not the same as dealing with purely *private* experiences… The subjective is intrinsically open to intersubjective validation" (Varela & Shear, 1999, pp. 1–2).[10]

By emphasizing a brain–body–environment perspective and being-in-the-world position, enactivism strongly draws from theoretical biology, neuroscience, and phenomenology—especially from Husserl and Merleau-Ponty (Thompson, 2007, p. 14). Although there is hardly a unified understanding of an enactive approach to embodied cognition (Gallagher & Bower, 2014, p. 233; see Kyselo, 2014), it is possible to argue that the concepts of *autonomy*, *embodiment*, *emergence*, *experience*,

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[7] 'Enaction' connotes the performance or carrying out of an action (Thompson 2007, p. 13).

[8] *Coupling* means linking or bonding between oneself and the other, based on the similar qualities between the two constituents of interaction (Thompson, 2007, p. 393).

[9] Enactivism has also been defined to be ontologically nonobjectivist and radically bioconstructivist in the views in which 'the world' is understood as a relational domain brought forth or enacted by the cognitive system itself. In these accounts, reality has been argued to manifest as a *multiverse* (see Maturana & Varela, 1987; cf. Brier, 2008, pp. 179–185).

[10] Although enactivism builds from first-person methodologies which emphasize the life-worlds of embodied subjects, it takes *second-person approach* to intersubjectivity and to the theory of mind debate (Kyselo, 2014). Schilbach et al. (2013, pp. 407–410) note that the primacy of second-person engagements demands that emotion is to be taken as central to an awareness of minds. This is why second-person view on cognition focuses on emotionally engaged, interactive perspective and emotional responses rather than mental reflections, i.e., *simulation* (Rizzolatti & Sinigaglia, 2010) or *mentalizing* (cf. Frith & Frith, 2010).

and *sense-making* comprise the core elements of the approach (Di Paolo et al. 2010, pp. 36–45).

The central concept of *autonomy* in enactivism originates from Chilean biologists Humberto Maturana's and Francisco Varela's (1980) theory of *autopoiesis* as an organizational principle for all living systems.[11] According to the theory, living systems constitute themselves as unities by establishing a boundary between themselves and the environment in actions that regenerate the conditions of their own survival (Weber & Varela, 2002, p. 117).[12] As far as the system sustains, defines and regenerates its constitution in its own dynamics, it has autonomy. In enactivism, an autonomous system, extended from the theory of autopoiesis, is considered operationally closed (Di Paolo & Thompson, 2014; Thompson, 2007, pp. 44–46, 92, 98–107).

Operational closure means that every constituent process in the system is conditioned by another process or other processes within the same system. This self-organized network of processes brings about and maintains the *identity* of an individual. An autonomous system is also precarious since a given process of the system will stop or run down if the recursive networked relations that enable the process are absent. To maintain its autonomy, an autonomous system is required to interact with the world, and so these interactions have intrinsic value for its self-individuation (Cuffari et al., 2015; Thompson & Stapleton, 2009; Di Paolo & Thompson, 2014; Kyselo, 2015).[13]

The environment in which an individual interacts is not external to the processes that constitute it as a unity: the environment is an active ingredient of the networked self. Individuals are identified in relation to their environment instead of being ontologically distinct from it (Kyselo, 2015; see Thompson, 2007, p. 26). The configuration of the relations that define the system as a singular entity equals to its *organization*, which is realized in its structure. If the organization of the system changes, its identity is destroyed (Maturana, 2002, p. 16). Thus, we encounter situations not consisting of mere objects but rather as promises of meanings; we are *structurally coupled*[14] to our environment (Thompson, 2007, p. 45).

Operational closure of an autonomous system is non-trivial and requires autonomous adaptive agency in which the system actively regulates the conditions of its couplings with the environment and self-generates its individuation and identity (Di Paolo & Thompson, 2014). These relational and interactional activities are called

[11] Tom Froese and Ezequiel Di Paolo (2009) suggest that the development of enactive framework begun in the early 1970s when Maturana and Varela started to work on their theory of autopoiesis.

[12] This view was originally suggested by Aristotle: A living thing is designed to maintain and reproduce itself. It is its own end (Korsgaard, 2011, p. 35).

[13] Varela (1979) hinted that this type of organizational logic could be seen in other domains such as communication networks and conversations. This line of thought was further developed, especially by Niklas Luhmann, who applied the principle of autopoiesis in his theory of operationally-closed social systems (1995).

[14] Structural coupling refers to the history of interactions that leads to the structural congruence between systems. These couplings manifest in mutual communicative connections between living systems and their environment (Maturana & Varela, 1987, p. 75; Brier, 2008, p. 25).

sense-making. It is through sense-making that an agent actively monitors and regulates its interactions with the world, and both sustains itself and establishes, i.e., enacts, a meaningful perspective to the world (De Jaegher & Di Paolo, 2007, p. 488; Di Paolo et al., 2010, pp. 36–40). In enactivism, emotions and cognition are not held as separate systems but are thoroughly integrated; cognition is always affective since the individual makes sense of its activities according to a fundamental norm—its own continuity (Thompson, 2007, p. 126; Colombetti, 2014). With these arguments, enactivism offers a naturalistic science of meaning (McGann et al., 2013, p. 207).

Emergence is a novel process that arises in the interactional dynamics between existing processes or events (Thompson, 2007, pp. 60–65). An emergent process has its own autonomous identity and mutual constraints with the processes that enables the emergence to happen. A situation in which an embodied *agent*[15] interacts with its environment in the processes of sense-making and emergence belongs to the domain of experience (Di Paolo et al., 2010, p. 36–45).

According to Froese and Stewart (2012), enactivism differs from other branches of embodied cognitive science by emphasizing a first-person stance and biological autonomy. In addition to its very close relations to phenomenology and embodied cognitive neurosciences, enactivism is connected to post-gibsonian ecological psychology, dynamical systems research, and the writings of pragmatists such as James, Dewey, Mead, and Peirce. It has further affinities with, e.g., Piaget's theory of cognitive development, Vygotsky's take on "region of proximal development," and Jerome Bruner's theory about narrative construction of reality (Di Paolo & De Jaegher, 2012, p. 2; Gallagher & Bower, 2014, p. 232; Chemero, 2009, pp. 29–30, 152–154; Hutto & Myin, 2013, pp. 1–2; Thompson & Stapleton, 2009).

I have already delineated in the title of this thesis that a central purpose of this study is to investigate the *invariants of the gameplay experienc*e. To study invariants of an experience is to examine its structure through patterns of time. This is also known as phenomenological reduction in the Husserlian approach with which enactivism is congenial. Phenomenological reduction means to focus on analyzing the ways by which things appear to us, as correlates to our first-person experience. The analysis, i.e., *phenomenological reduction*, pivots around examining "the correlation structure of our subjectivity and the appearance or disclosure of the world" (Thompson, 2007, pp. 17–19). As Thompson (ibid.) emphasizes, reduction here does not stand for eliminating one theory in favor of another but redirecting thought to the unreflected characteristics of our involvement with the world (Latin *re-ducere,* 'lead back'). In phenomenological reduction, the attention is on how the imagined appears as imagined, the remembered as remembered and the perceived as perceived. The core research question of phenomenological reduction, and also this thesis, is not what things are but *how they are experienced*.

[15] An *agent* is here defined as an autonomous adaptive system that has an ability of sense-making in its interactive domain. This definition differs profoundly from the way in which the concept of 'agent' has been used in, e.g., robotics and human-computer interaction research. An agent here has *constitutive autonomy*— it is capable of organizing and creating itself. It thus has intrinsic teleology, which is not yet found among non-living things (De Jaegher & Froese, 2009, p. 447).

A methodological principle in Husserlian phenomenological reduction is called the *epoché*, which in this context means suspending or refraining from judgment about the "objective reality" and focusing on analytic investigation of experience instead. The "'epoché' can be described as the flexible and trainable mental skill of being able both to suspend one's inattentive immersion in experience and to turn one's attention to the manner in which something appears or is given to experience" (Thompson, 2007, p. 19). Through the strategy of the epoché, one becomes able to focus on the modes of experiencing the phenomena and how the world appears to us (Gallagher & Zahavi, 2008, p. 27). The epoché is thus reflective awareness of awareness, and it entails a change in our attitude towards reality.

The epoché requires adopting a phenomenological attitude instead of a natural attitude. In a phenomenological attitude, the realistic position of a natural attitude is replaced with attention on 1) the appearances, that is, *phenomena*, of reality to the subject; 2) how these appearances come to have meanings; and 3) how meaningful phenomena are constituted. Together, these three aspects of phenomenological reduction aim to track down the *invariant* structure of meaningful experience that encompasses the intentional acts of a living bodily subject and the intentional object of that experience (Thompson, 2007, pp. 21–24; Gallagher & Zahavi, 2008, pp. 23–29).[16] This, indeed, precisely describes the theoretical objective of the current thesis.

The theoretical stance adopted in this thesis is rooted both in enactive second-person account to cognition and in phenomenological first-person approach to meaningful, embodied experience. A rich theory of cognition that starts from ongoing dynamic interaction between an embodied agent in its environment and locates meaning-making to these very processes suggests great potential for studying gameplay experience, the phenomenon of gameplay, and the ontology of games as process.

By appropriating a theoretical framework of phenomenological enactivism on gameplay, the focus of this study is on the embodied dynamical interplay between a player and a game during ongoing gameplay. The strength of an enactivistic approach to social cognition lies in its capability to establish a solid biological foundation for its argumentation. It has significant similarities to how Jan H. G. Klabbers (2009) has studied games. Both enactivism and Klabbers' theory adopt emergence, autopoietic organization, and interactional dynamics as their key concepts. Although also the other central research concepts of enactivism—such as autonomy, embodiment, meaning, and agency—are all used commonly in different branches of game studies, these concepts are only rarely utilized rigorously in the framework that is rooted in theoretical biology, first-person phenomenology, and cognitive neuroscience.

Why is phenomenological enactivism relevant for a folklorist exploring games and gameplay experience? First, enactivism is a solid approach to the human cognition, as it is also capable of studying action-orientedness and dynamic contextual experiences including intentionality and emotions. Thus, it offers a promising stance

[16] Shaun Gallagher and Dan Zahavi (2008) conclude that in contrast to representationalism, which can be argued to neglect the subjective qualities of experience, phenomenological analysis pays attention specifically to the qualitative and subjective characteristics of an experience (ibid., p. 28).

for investigating the understudied ontology of games as processes. Second, by refusing to narrow its approach to analyzing the cognitive agent detached from its situatedness, enactivism is a valid option for studying an autonomous system such as a human agent, the context in which the agent acts, and the ways in which mutual influence happens between the agent and the environment. Recall the four ways to approach a work of folklore, as proposed by Abrahams (2005): 1) the artistic expression by a performer; 2) the internal characteristics of an object of folklore; 3) experiencing folklore as an audience; and 4) the ongoing interaction between a performer and her audience. Enactivism is a potential theoretical framework, especially for studying the fourth, but also the first and the third dimensions of approaching folklore—since these three views emphasize the *relational* qualities of folklore, whether this relation is between a performer and a product of folklore (1), between a product of folklore and the audience (3), or between the performer and her audience (4).

Phenomenological analysis focuses on identifying the invariants of a phenomenon, but it is not interested in idiosyncratic descriptions of experiences. In this sense, phenomenology is not closely related to folkloristics, which aims to carefully describe the lifeworld of a vernacular. However, I suggest that phenomenology and folkloristics can be brought together if these two research traditions are considered as distinctive phases of research. This is indeed what I aim to do in this thesis. During the first halves of Chapters 5–9, I investigate the invariants of the phenomenon of gameplay. Then, based on the findings from enactive phenomenological analysis, I move to examine the idiosyncratic perspectives and personal narratives of the gameplay experience through each of the argued invariants. The two parts of this dissertation focus on the *invariants* and the *variable* qualities of video game experiences, respectively.

With the enactivistic stance that I apply, folklore is approached as embodied activity of participatory sense-making. In this frame of thought, "identity is a performance," as Dorothy Noyes puts it (2003, pp. 27–29). I propose that the central concepts of *autonomy*, *embodiment*, *emergence*, *experience*, and *sense-making* are also crucial for folklorists, and that the shared focus on investigating dynamic first-person experiences is what makes enactivism deeply congenial with folkloristics; "Autonomous adaptive systems enact a world of meaning and value through their movement in it," De Jaegher and Froese write (2009, p. 447). It is the notion of *movement* that leads us back to consider enactive accounts together with folkloristics as a framework within which to study the gameplay experience, because "Movement is, in fact, the most important characteristic of any item of folklore" (Abrahams, 2005, p. 27).

Play Genres and the Theoretical Stance

Simon Bronner, who has collected and edited a selection of Alan Dundes' analytical essays in *The Meaning of Folklore* (2007), notes that for Dundes, folkloristics is a discipline valuable for understanding the human experience since it provides *a view from within* rather than from outside; folklore expresses how people think and interpret their own experiences individually and collectively. For Dundes, this "position within" also meant the possibility to examine the unconscious aspects of cultural mentalities. As an interdisciplinary folklorist, Dundes drew from anthropology, psychol-

ogy, structuralism and philosophy to study, e.g., how folklore "uses symbols in elaborated narratives and in rituals to encapsulate (or intensify) experience and provide a release from reality" (Bronner, 2007, p. 3). Furthermore, folklorist Robert A. Georges emphasized already in 1969 that folklorists interested in the phenomenon of play should study it from the participants' point-of-view.

Bringing together an enactive account to cognition and folkloristic meaning-making means that the statement of folklore as "fast vanishing" turns into an observation of folklore as "constantly emerging" in the dynamics of enactment and social interaction. In this framework, the attention of a folklorist focuses on how vernacular meanings are 'brought forth' in processes of motivated participation and experience. This is indeed what both Barbara Kirshenblatt-Gimblett (1996, p. 249) and Dundes affirmed by noting that folkloristics does not study only what is at the brink of vanishing, but just as much what keeps emerging (see Bronner, 2007, p. 4). Folkloristics is an academic research tradition focused on the constantly manifesting cultural experiences, and enactivism is a theoretical stance devised precisely on investigating the emergence of an experience.

Indeed, Abrahams (2005) analyzes 'experience' as key concept of ethnographic and anthropological folkloristics. Experience is rendered both an idiosyncratic and social construct. It is always personal and yet can also be regarded as typical. Because experiences can be typical, an experience is to be positioned at the nexus of the individual and socially shared, and so are also, thus, our sentiments arising from the experience. Here we may meet the *experience of experience*, the reflection of a relevant event that takes place in one's life. Common everyday experiencing becomes *an experience* special enough for remembering and communicating to others (Abrahams, 2005, p. 117). Abrahams notes that experience is a way to understand both the everyday ongoingness of life and instances of special meaning and significance. Anthropology and folkloristics of experience starts from recognizing stylistic expressions and "the range of expressive means, affects, techniques and sentiments" (ibid., p. 124). In the case of the current thesis, the interest is in studying these means, effects and techniques as they manifest in the genre of 'game.'

'*Genre*'[17] is a fundamental concept in folkloristics, as it is in the vocabulary of many related disciplines. Folklorists Frog, Kaarina Koski and Ulla Savolainen (2016) track the roots of the term in late eighteenth-century English, and to its French meaning as "kind, sort, style". Corresponding to its Latin ancestor *genus*, 'genre' came to describe assemblages of texts and other objects that share resemblance to their qualities. Since genres focus on the qualities common for multiple items, they communicate not of any single object but of a class, or a category, of objects. As Abrahams (2005, p. 53) states: "Genre suggests that the experience of literature and other artistic media arises from the set of associations which can be drawn upon both by writers, as they compose, and by readers, as they read in an anticipatory fashion… Genre, then,

[17] The folkloristic understanding of 'genre' has profound similarities with how Goffman (1986 [1974], p. 24) came to describe the analytical concept of 'frame.' Similar to 'genre,' 'frame' describes patterns of sociocultural experience, and how differently organized experiences set normative expectations for communicating and encountering particular types of situations. Like 'genre,' 'frame' in Goffman's writings facilitates expectations for activities and communication and therefore also contextual meanings and emotional relevancy.

suggests *patterns of expectation* which both artist and audience carry into the social and political, as well as aesthetic, transaction."

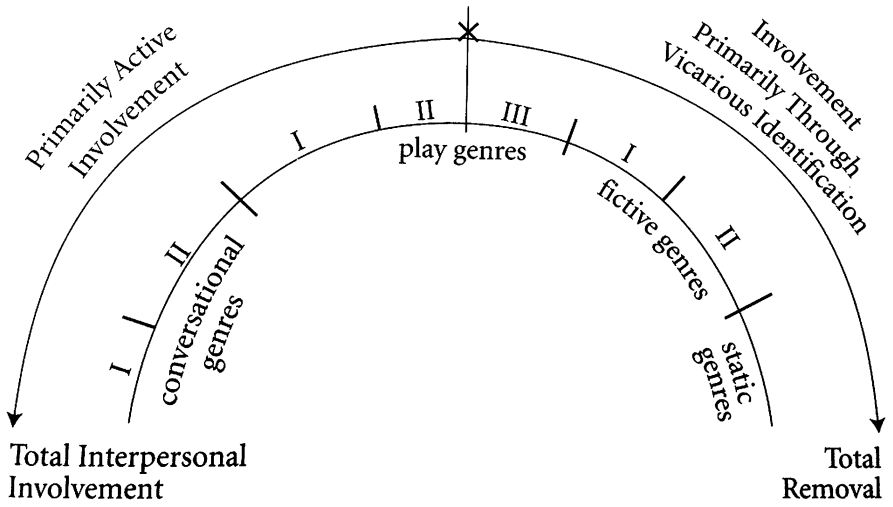

Figure 1. *Range of levels of interaction between performer and audience in different genres of folklore, as printed in Abrahams (2005, p. 45).*

Abrahams (2005, pp. 44–69) divides the genres of folklore into four categories based on two criteria: the type of involvement a product of a specific genre necessitates from the participants, and whether a genre emphasizes conflict o r its resolution. He then introduces i) *conversational genres,* ii) *play genres*, iii) *fictive genres,* and iv) *static genres* of folklore (Figure 1). The 'borders' between the four categories are not discrete: rather the model describes the genres of folklore as a *continuum* in the terms of range of performer–audience relationships and changes in dramatic focus. I find Abrahams' model valuable for positioning game studies within the folkloristic research tradition, and I therefore present this model in more detail. In Abrahams' view, all of these genres bring forth conflict by confronting social and personal problems and by attempting to adjust social positioning. Their rhetoric thus revolves around the themes of *power* and *domination* (Abrahams 2005, pp. 44–51).

Abrahams (2005, pp. 63–65) divides *play genres* into three groups. In Play I, the play happens quite spontaneously and frequently, and the participating people remain closely involved with each other. This group includes riddles, jokes and verbal contests as well as many games. Just as conversational genres, the members of Play I genres operate according to the principle of back-and-forth movement of interpersonal communication. However, riddles and games, for example, oftentimes take place in riddling sessions and gaming sessions, and thus they are somewhat removed from casual conversation. Furthermore, riddles, games, jokes etc. imply roles of the riddler and riddlee, the players, and the joker and the joke-listener.

In Play II and Play III, we move from free-form back-and-forth interaction towards more formalized and less spontaneous expressive culture. In Play II and Play III, we have distinctive roles for the players and for the audience. Play II includes

sports, traditional contests and debates, and Play III consists of rituals, role-playing games and folk plays. The sense of spontaneity diminishes when we move from Play I towards Play III and the fictive genres. As the formality of the genres increase, the progression of movement pointing to predetermined resolution becomes more apparent. In Play II, referees, judges and timekeepers appear, enforcing the rules of interaction.

Finally, in Play III, the identification with the conflict occurs vicariously, not through the active participation of the players; "When narrative movement is introduced, the outcome of the story becomes as important as the original conflict situation in the strategy of the piece" (ibid., p. 67). The genres of Play III thus emphasize *resolution* rather than *conflict*, latter of which is a central element of the conversational genres and Plays I and II. In Play III, movements are described more fictively than in Plays I and II. Thus, Play III begins to converge into the myths, legends, fairy tales and fables of *fictive genres*.

By following Diane E. Goldstein (1993), McNeill (2013b) argues that folkloristics can be distinguished from its perhaps closest academic discipline of anthropology by the concepts of *genre*, *transmission* and *tradition*. These three methodological "tools of a folklorists" are all relevant for folkloristic studies, and can be argued to be essential for the skills and training of a researcher of the discipline. As we have seen above, 'genre' refers to the established practices of both interpreting and enacting cultural communication. 'Genre' illuminates the distinctive interest of a folklorist to understand expressive culture, "the stuff of folklore," and a performer's identity and motivation to communicate in a particular way.

Transmission is how expressions of culture move through space and time, from a person to another through mostly informal channels. By studying transmission, a folklorist investigates performances, contexts of performances and folklore as experience. *Tradition* is the social, cultural, material and historical continuity of expressive culture and informal transmission processes as understood together. The continuity of tradition is built on a dialogical relationship between varied and unvaried, or dynamic and stable, which introduces tradition as malleable construct that has intrinsic value in the society in which it emerges. As Sandra K. Dolby Stahl (1977, p. 15) writes, "'tradition' has two interrelated aspects; the first is continuity as opposed to change, and the second is collectivity as opposed to individuality."

Recall that Espen Aarseth (2014b) argues that game ontology has two dimensions that are inseparable from the essential quality of any game: games are both objects (cultural artifacts and systems) and processes in which something arises as a game through play. We have now seen that the academic discipline of folkloristics can be distinguished from its close cousins of anthropology and literary studies by the three conceptual tools of a folklorist: genre, transmission, and tradition (Goldstein, 1993; McNeill, 2013b). The three tools reveal a deep yet largely unexplored synergy between folkloristics and game studies. For if the three tools of 'genre,' 'transmission,' and 'tradition' are what make folkloristics an independent academic discipline, then folkloristics may be an exceptionally fit stance for investigating game ontology. In the research practices of studying 'genre,' a folklorist has the understanding of examining an object, an artifact, or a system of expressive culture; and in the research practices of 'transmission,' a folklorist is both methodologically and theoretically

equipped to analyze processes of expressing, performing, and experiencing culture. Importantly, these two aspects of folkloristic research ('genre'/'transmission') do not only correspond to the two ontologies of game ('object'/'process') but are in folkloristics studied in a particular fashion—in relation to each other. This is 'tradition,' the third tool of a folklorist, argued by some to be the most foundational for the discipline of folkloristics.

In this thesis, I aim to demonstrate that the "three tools of folklore" are all valuable in game studies. Although games have been studied widely as artistic communication, as implied in the folkloristic understanding of 'genre,' the aspects of processual transmission in game cultures are much less studied. Furthermore, the perspectives of games as artistic communication ('genre') and as processes ('transmission') are scarcely, if ever, brought together ('tradition') within a single research framework. This is, in my view, the most important contribution of folkloristics to game studies: its unique capability to focus both on games as aesthetically significant objects and as contextual processes of cultural experience. This is to argue that the folkloristic toolkit of "genre + transmission = tradition," as put by McNeill (2013b, p. 183), makes it possible to examine the two ontologies of games as objects and as processes (Aarseth 2014b) as a whole under the even broader concept of *games as traditions*.

However, folkloristics, just as any one discipline, has limited a capability of study games and gameplay. As noted by Sutton-Smith (2001 [1997, pp. 6–7]) studying play and games requires interdisciplinary attitude, and anchoring a study on folkloristics does not change this requirement. Since folkloristics is able to examine both of the game ontologies within the frames of variation, continuity, vernacular, and tradition, though, I propose that folkloristics is an exceptionally well-suited *platform* for conducting interdisciplinary game studies.

An important contribution of folkloristics for game studies is that folkloristics does not study only one genre of expressive culture but all of them. It is the mission of folkloristics not to describe a genre, e.g., 'game,' in isolation from the other genres but precisely in relation to the other forms of vernacularity; "[O]ne should be able not only to point to a class of expressions like proverbs and riddles but also to demonstrate how they differ from each other: for example how games differ from rituals and myths from *Märchen* (fairy tales)" (Abrahams, 2005, p. 54). There is scant discussion in contemporary game studies on how games relate to other forms of folklore, although some studies have highlighted, for example, the similarities between games and rituals (e.g., Harviainen, 2012). Folkloristics, instead, has decades of experience of describing genres in relation to each other, and I argue that a similar research attitude would be very valuable for contemporary video game studies as well.

2. A VISIT TO GAME STUDIES: DEFINING KEY CONCEPTS

> Video games come into being when the machine is powered up and the software is executed; they exist as enacted (Alexander Galloway, 2006, p. 2).

In this chapter, I relate the thesis to key concepts of game studies literature, including the concepts of 'game' and 'play' (RQ3). Before I can proceed to theoreticize and analyze the dynamics of the gameplay experience in Chapter 3, I describe the position of the player and how a person may acquire this position. For this latter purpose, I rely on the theory of social self by George Herbert Mead (2015 [1934]) and on phenomenological and enactive literature.

My point of departure for situating the current work in relation to prior definitions of 'game' is the reference manual book *The Study of Games* (1971), edited by Elliott M. Avedon and Brian Sutton-Smith. Especially important for the current thesis is a section written by Avedon, called *The Structural Elements of Games* (ibid., pp. 419–428). Albeit written nearly 50 years ago, I find the argumentation by Avedon still relevant for studying both vernacular social games and commercial video games. Although this thesis is about video game gameplay experience, video games are games, regardless of the fact that they are also software systems and are thus "algorithmic cultural objects" as described by Alexander Galloway (2006, p. 6). Where I interpret that video games and other games should be described as differentiated phenomena, I will explicitly express this need. Otherwise, video games will be considered throughout this thesis as a special type of games but games nonetheless.

Avedon (1971) examines the structural elements in games by building on writings by G. H. Mead (2015 [1934, pp. 158–159]), who identified five necessary characteristics in game structure: a game has a "definitive end to be obtained," which Avedon labels *purpose*; it consists of *action procedures* that are both related to each other and directed towards the definitive end; these action procedures manifest as *interaction patterns*, which regulate the interplay between players and the game according to predefined *rules*; and finally, in order to play, a player must take the *role* of the player (Avedon, 1971, pp. 420–421). Avedon adds another five elements to Mead's description of a game's necessary structure: *the number of required players*; *result* or pay-off; *skills and abilities required for participation*; *physical setting* and; *equipment* needed for playing.

Avedon and Sutton-Smith (1971) provide another take on the definitional characteristics of play and game: play is an "exercise of voluntary control systems" (ibid., p. 6), and a game is "an exercise of voluntary control systems in which there is an opposition between forces, confined by a procedure and rules in order to produce a disequilibrial outcome" (ibid, p. 7). By voluntary control systems, Avedon and Sutton-Smith (1971) refer to an individual's pursuit of mastery through the, e.g., skillful choosing of the ways of behavior and free-willed allocation of attention to the task at hand.

Game scholar Jesper Juul (2001) criticizes the definitions provided both by Avedon (1971) and Avedon and Sutton-Smith (1971) by describing the definitions as too vague. Juul does not find Avedon's (1971) list of structural elements of games convincing either. He asks: "Can we tell the interaction patterns from the role of the participants," "Is equipment a bit imprecise since many games (such as Checkers or Mancala) can be played with whatever objects are at hand," and, "Couldn't it be argued that the pay-off (such as money) is rather something you can apply to every game—is chess the same game whether it is played for money or not?" A few years later, in his book *Half-Real* (2005, pp. 6–7), Juul gave his own definition of *game*, which he calls the "classic game model":

> [A] game is 1) a rule-based formal system; 2) with variable and quantifiable outcomes; 3) where different outcomes are assigned different values; 4) where the player exerts effort in order to influence the outcome; 5) the player feels emotionally attached to the outcome; 6) and the consequences of the activity are optional and negotiable.

While Juul (2001) is correct in his critique of Avedon's (1971) definition when he notes that Avedon does not specify how the ten elements relate to each other, the questions posed by Juul (2001) have, in my reading, an unfortunate tendency towards the straw man fallacy. *First*, Avadon does not imply whether or not the interaction patterns could be derived from the roles players take in a game situation. This question remains open for investigation. *Second*, Avadon does not define the qualities that make a piece a *game piece*. He does not claim that one must use "official" pieces but only that the *function* of a set of equipment must be met. *Third*, surely one can add a 'pay-off' to any game but, again, Avedon (1971) refers to the observation that for something to be a game, it must have *an* outcome. So, chess remains chess also when it is played for money, but—according to Avedon (1971)—it is not chess (or even a game) without the outcome that is marked by checkmate.

In my view the "classic game model" by Juul (2005) has more profound problems to be dealt with than the definition by Avedon. Juul's (2005, pp. 6–7) model begins as a definition of a formal game system and explores what Aarseth (2014b) calls the ontology of "games as objects." When Juul introduces the player, however, "where the player exerts effort in order to influence the outcome," the definition crosses ontological boundaries and suddenly discusses "games as processes." Although both "games as objects" and "games as processes" can be observed from a *third-person* stance, which approaches its research subject from an objectivist viewpoint—that is, from a perspective that does not take into account the subjective experiences of an experiencer—Juul crosses this border by stating that players are necessarily emotionally attached to the outcome of the game. This latter turn still belongs to the ontological context of "games as processes" but investigates it now from a *first-personal* phenomenological stance. Just as Aarseth (2014b, p. 484; see also Deterding, 2013, p. 166) stresses: "Games are both object and process… but the phrase 'a game' will refer to either one or the other, not both." In Juul's definition (2005), 'game' not only refers to games as objects and processes but also from both third-person and first-person perspectives, which is another ambiguous quality of the "classic game model."

Rules, Interaction, and Game Mechanics

Of the ten elements of *game* as proposed by Avedon (1971), only four are considered at length in this thesis, namely the *position of the player*, *interaction patterns*, *action procedures* and their relation to *game mechanics*.[18] However, I find it imperative to shortly discuss game rules, since all of the other themes are related to this overarching principle of games. After all, almost every definition of game includes the element of rules (see Georges, 1972; Parlett, 1999, p. 3; Salen & Zimmerman, 2004, p. 79; Juul, 2005, pp. 29–33; Deterding, 2013, p. 156). As Celia Pearce (2009, p. 26) notes, many game scholars agree that "a game is a formal system for structured play constrained by a set of rules that prescribe the means of achieving a specific goal," and the dispute on the more fine-grained definition is placed on this general foundation.

In their game design-oriented book, *Rules of Play* (2004), Katie Salen and Eric Zimmerman introduce a distinction between *constituative rules* and *operational rules* (pp. 130–132). Constituative rules or "foundational rules" are the logical, mathematical and abstract formal structure of a game artifact. In video games, foundational rules are defined in the code of the game. Operational rules are the guidelines that describe how a game is to be played. In contrast to foundational rules, operational rules are directed at the players, and these rules can be written in a game instruction manual and transmitted orally or through demonstration. Salen and Zimmerman (ibid., p. 130) also write about *implicit rules*, by which they refer to the conventions and norms that underlie game conduct, including, e.g., good sportsmanship.

Linda A. Hughes (1999) has made yet another important distinction that further clarifies the implicit rules of a game. In her studies on children's informal games, Hughes writes about *basic rules*, *real rules* and *social rules.* Basic rules are what Salen and Zimmerman call operational rules. Real rules, however, are how games are being played, and how players appropriate the basic rules of a game in play. Hughes, who studied children's *gaming*, that is, the processes of how children modulate existing games into actual play, added that social rules are present in all acts of gaming (see Georges, 1972, p. 174).

There is no actual video game gameplay without all the four aspects of rules; a video game has *foundational rules*, which are perceivable by the player through operationalization, whether this operationalization happens by describing the rules in a manual or by showing the player the *basic rules* during the actual flow of the gameplay. However, whether the player accepts the operative rules of a game, or transforms them to better fit her preferences, every instance of gameplay necessarily includes an aspect of *real rules*—a player-centric perception of how the game is played. The player brings along the implicit *social rules* as expectations of how the game *should* be played. As psychologist Jordan B. Peterson (2002, p. 192) notes: "The game itself, at its first stages, is played at the procedural level; the rules remain implicit. Once a representation of the game has been established, then the game can be shared; later, the rules themselves can be altered."

[18] I will return to the definition of game mechanics shortly.

Deterding (2013, pp. 157–158) has provided an insightful critique on Salen's and Zimmerman's (2004) understanding of rules from a *frame analytic*[19] stance. He contends that Salen and Zimmerman repeat what he calls "structuralist and cognitivist notions of rule-following." With this, Deterding means that foundational rules are, for Salen and Zimmerman, the *true formal identity* of a game, conceivable by the player only through the operational rules, which are introduced as representational expressions of this formal identity. The operational rules, furthermore, are taken as something that guide the player's conduct in relation to the game. For Deterding, this approach is misleading because it implies a hierarchical top-down model from a designed formal game system to the social and cultural experience of the player. Deterding argues that the operational rules of a game do not "guide" players, but that the meaning of these rules should instead be understood from the perspective of how players interpret, appropriate and use these rules.

For Deterding (2013, pp. 157–158), rules are social resources and reference points, not algorithms to be executed. The fact that every video game has a formal code does not, indeed cannot, be considered separable from always situational and indexical human understanding and sense-making. Deterding's frame analytic stance of "games as processes" aims to bring together the first-personal character of experiencing games and third-personal perspective of analyzing the situational interaction system, whereas Salen's and Zimmerman's system analytical and formalist framework studies "games as objects" from a third-personal perspective—which makes their objective to investigate "meaningful game experience" rather puzzling.[20] This is because, and I agree here with Deterding (2013, p. 164): "'Games,' like any other social entity, are human–environment relations... formalised rules… mean nothing without humans."

In video games, the game system has rules, but these rules are not necessarily presented to the player. Instead, the rules implemented in the code of a video game become observable by the player as rule-following outputs, which at least partly depend on rule-following inputs made by the player. In video games, rules are "material arrangements that do something" (Deterding, 2013, p. 169) rather than static representations that stand for something else within the game system. This description introduces video game rules as how player actions (input) and game effects (output) relate to each other. Here, we encounter the concepts of 'interaction' and 'game mechanics,' both of which are important for the current thesis.

When we move from describing formal characteristics of game artifact (object) to discussing game-as-played (process), we necessarily come across the concept of 'interaction,' or at least related concepts such as 'interplay' or 'coupling.' *Interaction* is a contested concept that remains central to video game studies. This is so, regardless of the difficulties of providing a satisfactory definition for this phenomenon that can be regarded as a property of a user, a medium and an allopoietic system. Lori Landay (2014, p. 173) has provided a definition for interaction that I find useful for the current study: "Interaction is an action that occurs as two or more participants exchange information (people, artifacts, materials, or machines) that has a reciprocal effect on each other."

[19] I will relate this thesis to the frame analytic approach in Chapter 6.

[20] I will return to the subject of 'meaningful game experience' many times during this thesis, especially in Chapter 6 and Chapter 9.

I interpret Landay's definition as an extended version of Chris Crawford's (2002, p. 5) influential characterization according to which interaction is "a cyclic process in which two actors alternately listen, think, and speak." Importantly, Landay adds the aspect of reciprocal effect to this definition and thus emphasizes the dynamic nature of interaction. In his reading of Janet Murray's *Hamlet on the Holodeck* (1997, pp. 6–10, 74; 2004, p. 2), Ian Bogost (2010, p. 3) reiterates that environments that are interactive are participatory and procedural. They are participatory since these environments remain responsive to (player) inputs. Their core representational mode is procedural since their organization produces varied behaviors and multiple outcomes when set in motion.

Game mechanics are the rule-defined and designed methods by which players interact with games in any given state of gameplay.[21] In this description, a 'method' is understood according to object-oriented programming terminology as "the behaviors available to a class," as specified by game scholar Miguel Sicart (2009). To put it differently, a game mechanic is how a player, by taking rule-afforded actions with input devices such as a game controller, invokes in-game behaviors that have an effect on the state of the game (see Juul, 2005, pp. 59–64). Following Aki Järvinen (2008), Miguel Sicart (2009) and Chris Crawford (2013), I concur that game mechanics are best expressed by *verbs* that facilitate a player's agency during gameplay: "rules are normative, while mechanics are performative" (Sicart, 2009; see Järvinen, 2008, p. 74). Through gameplay, engaging with game mechanics generates patterns of the player–game interaction (Salen & Zimmerman, 2004, pp. 316–317). Game mechanics are thus the *modes of interaction* that a game provides for the performative player.

Play, and the notion of 'The Magic Circle'

The question of whether a game should be understood first and foremost as an object that can be played in varied situations or as a process that may or may not include an independent game artifact, is related to another influential question: is play a form of *specific activity* or rather a particular *type of experiencing* the world?

Thomas Malaby (2007) argues that 'play' sustains usefulness as a concept that points towards a *mode of human experience*. For Malaby, similar to Bateson (2000 [1955]), play is a stance to be set apart from the immediate environment. This introduces play as 'playfulness,' i.e., something that the individual brings along with her into every situation and not as something internal to any particular situation. In contrast to Malaby (2007), Jaakko Stenros (2015) sees play primarily as a type of activity. Not unlike Sicart (2014, pp, 1–34), Stenros separates 'play' as a type of activity from the attitude or mindset of 'playfulness.'

Deterding (2013, p. 139), however, contends that one does not have to separate *play as a type of activity* and *play as a mode of experience* if the phenomenon is

[21] Although not all game mechanics in video games are triggered by players but can also be invoked by artificial agents within the code (Sicart, 2009), I discuss game mechanics in this thesis only in relation to the modes of interaction that take place between a player and a formal game system.

approached from a frame analytic research perspective. He notes that social interaction structures do not set apart the inner experience from external or environmental situations. This means that play as a type of activity entails a particular motivational relevance, ethos, and attentive involvement; and playfulness is not only an inner state but also a stance that is readily observable in a social situation. Deterding (ibid., p. 140) concludes that playfulness includes a subjective attitude and an observable "type of transformation of activity." In his view, then, play is not a specific kind of activity but a "form of transformation of a source activity," according to a set of "transformation rules." I will return to this description shortly.

I am not willing to separate playfulness from play activity, but, similar to Detarding (2013), I offer that whereas the former term highlights the first-personal perspective and the attitude towards the unfolding events, the latter introduces the situation from a third-person view as something in which playfulness is expected to manifest. The subjective experience of playfulness may be encouraged by the designed environmental cues, which is the case with games, but it nevertheless also includes a specific attitude towards that which takes place. A distinction between play activity and playful attitude is therefore needed, but it depends on the vantage point of the researcher whether or not the 'activity' and 'attitude' of play can be analyzed together.

I propose that if one engages with a game system with work-like attitude, the activity that then takes place is not to be regarded as play. I follow here philosopher Bernard Suits (2005 [1978]), and describe this *first invariant quality of gameplay experience* as 'lusory attitude.' A type of activity such as engaging with a video game is not a sufficient quality for gameplay. For a phenomenon to be regarded gameplay, it must also include an experiencer who adopts a lusory attitude and continues to embrace it during gameplay—"A definite milieu demands a definite attitude", as Carl Gustav Jung wrote (1946, p. 589). This is also to state that taking a lusory attitude towards a situation does not yet constitute it as a game-play event. For gameplay to emerge, the situation must also include qualities that make distinctive game-play activity possible, because "games are a way to *organize* play" (Abrahams, 2005, p. 98).

Thus, a border emerges between game as object and game as played, that is, game as a process, and this border is impassable for the formal game system but not for the player. Although a formal system of a game cannot, by itself, include, e.g., purpose, player actions, or a lusory attitude, a player can indeed appropriate the non-game system she faces as a system of rules, an outcome, game mechanics, physical setting, equipment and interface. This is what is meant by saying that, in principle, any system can be made into a game, or be *gamified*. It also means that no artifact in itself can be regarded as a complete game without also postulating a subject who engages with this system by adopting a lusory attitude.

Let me give an example. A system may fulfill many of Avedon's (1971) criteria of a formal game but lack, e.g., a clear outcome. For example, the "video games" *The Sims* (Electronic Arts, 2000) and *SimCity* (Electronic Arts, 1989) lack clear outcome. This observation highlights that the system in question, i.e., *The Sims*, is not a complete game by itself. But if the player who then engages with the system brings along not only a lusory attitude but also her own goals, the system *as a whole*, that is, the game as played, acquires an outcome and can be regarded as a full-blown game. Still, although a video game would have a clear end state, for this end state to be perceived as a meaningful outcome, we must presuppose an intentional player. I therefore suggest the following further categorization of Avedon's (1971) ten elements,

where 'game as object' only includes a formal game system, but 'game as process' postulates an intentional, albeit ideal player who engages with the formal game system.

Necessary qualities of a 'game'

Ten elements of a game (Avedon, 1971)	*Game as object*	*Game as process*
Rules	Foundational rules, operational rules	Real rules, social rules
Action procedures	Game mechanics	Player actions
Outcome	Altering game state	Outcome
Physical setting	Physical setting	Embodiment
Equipment	Equipment, Interface	
Number of Players		A Player
Purpose		Purpose
Skills and abilities		Skills and Abilities
Interaction Patterns		Interaction Patterns
Role of the Player	A player position	Lusory attitude

Table 1. *The ten elements of a game by Avedon (1971), approached from a third-person viewpoint of formal game system (game as object) and gameplay activity (game as process).*

In the current study, the formal system of game is understood as a game artifact *affording* gameplay and providing an "optimised material anchor" (Deterding 2013, p. 163) for stabilizing the constitution of games. However, a fully developed formal game is not a complete game without being played. As Malaby (2007) argues "the essential point, then, is that games are grounded in and constituted by human practice and are therefore always in the process of becoming" (2007, p. 103). The situated activity in which play in general and gameplay in particular manifest through human practice is often called 'the magic circle' in game studies literature.

Discussion on the magic circle has its origins in Johann Huizinga's groundbreaking work, *Homo Ludens* (2014 [1950]). In this book, Huizinga (ibid., p. 8) argues that "play is not 'ordinary' or 'real,'" but, "a stepping out of 'real' life into a temporary sphere of activity with a disposition all of its own." Huizinga described this "temporary sphere of activity" as distinctive in locality, duration and meaning (ibid., p. 9). Huizinga's description of the magic circle entails two important elements: the element of being *separated from ordinary* life in both spatial and temporal fashion, and that of *endogenous meaning*. Both of these two elements have engendered wide discussions

in game studies. Whereas the notion of inherent meaning is generally agreed-upon, the portrayal of play as separated from the ordinary is highly debated.

The critical discussion on the magic circle revolves around how the border between play and non-play should be understood—or whether such a border can be argued to exist at all. Is the border between play and non-play spatial, temporal, psychological or social, or maybe a combination of these? Stenros (2012; 2015, pp. 132–137) notes that the border has been interpreted as *psychological*, which entails how play signifies the absence of real danger and a feeling of being detached from what takes place in play. Another way to interpret the magic circle is to emphasize play as a *social contract*. Play is open for negotiation and it is sustained by interpersonal trust. According to Stenros (ibid.), the magic circle has also been discussed in the literature as an *arena*: a spatial, temporal, conceptual and cultural site for play.

The basic criticism addressing the concept of 'the magic circle' states that the "boundary" is to be understood as social and negotiable rather than as spatial and fixed (Juul, 2008). However, this argument is not exactly in contrast to Huizinga, who wrote: "All play moves and has its being within a playground marked off beforehand either materially or ideally, deliberately or as a matter of course" (Huizinga, 2014 [1950], p. 10). The underlying other criticism furthermore argues that there is no border at all between play and non-play, and thus the concept of "the magic circle" should be discarded altogether (see Salen & Zimmerman, 2004; Taylor, 2006, pp. 151–155; Calleja, 2007; Calleja, 2012; Malaby, 2007; Juul, 2008; Liebe, 2008; Consalvo, 2009; Nardi, 2010, p. 108; Stenros, 2012; Zimmerman, 2012; Stenros, 2015).

Regardless of the active academic debate on the subject, the discussion lacks versatility. As Deterding (2013) observes, the usages of 'the magic circle' are often restricted to conceptual analyses without trying to better understand the phenomenon to which the metaphorical expression of 'the magic circle' refers. This is indeed "the basic fallacy of 'the magic circle': it abstracts and reifies a game/non-game 'boundary' from the process of situated action as some entity existing next to or as an analytically separable part of this process" (ibid., p. 207).

As mentioned earlier, the notion of endogenous meaning is generally accepted as a recurrent or even a definitional characteristic of play and games. For instance, Salen and Zimmerman (2004, p. 332) write that "every game implicitly asserts the premise that the value of the game is intrinsic." To say that a game has endogenous meaning is expressed also by stating that *games are autotelic*. The concept of "autotelic" originates from Greek, where 'auto' denotes 'self' and 'telos' refers to 'goal.' Autotelic activity is thus self-contained in the sense that it is conducted not because of some instrumental or external value but "because the doing itself is the reward" (Csíkszentmihályi 1990, p. 67). Since the meaning of gameplay is largely intrinsic to the activity itself, *participating* becomes the main driver of engaging with games; games are largely means to their own end. Importantly, Klabbers (2009, p. 52) states that in order to retain its autotelic character, a game must provide the player with both the freedom to act according to her own goals and motivations and the means to do so. Thus, a game can be regarded as autotelic only inasmuch as the player retains her *autonomy* as being the player. I return to the concept of autonomy in Chapter 5 and later in Chapter 9.

In a sense, the current thesis is very much about 'the magic circle' since the main purpose of this study is to better understand how gameplay experiences are constituted. However, my research is related to 'the magic circle' in the fashion urged by

Deterding (2013). In a study that aims to analyze the couplings between a player and a game, postulating a general metaphor to describe these couplings as a whole is not necessary or beneficial.

With the aspects of 'game' in Table 1, I explored the original list of ten necessary elements of game by Avedon (1971) through the lens of the two ontologies of games as objects and games as processes. The elements listed in Table 1 are therefore fundamental components in identifying an object or an activity as game. These components, however, do not take into account the first-personal vantage point of the player. Instead, they discuss a game object or a game process as readily observable from a third-person viewpoint, that is, "outside" the actual experience of playing the game. The purpose of this thesis is to investigate aspects of *first-person video game gameplay experience* which renders the list proposed by Avedon (1971) or any other third-personal definition of game only orthogonal to the current work.

The Self of the Player

For understanding the phenomenon of gameplay, we must not only focus on games but equally importantly on the person who takes on the position of the player. Let me next specify how I conceptualize the self of the player in this thesis, based on phenomenological enactive literature and writings by George Herbert Mead.

In *Mind, Self & Society* (2015 [1934]), Mead discusses the origins of the self. According to Mead, "the self" arises from social interaction as *an object to itself*, which entails a reflective position of self-consciousness. Mead argues that one becomes an object to herself by assuming the attitudes of other individuals—*the generalized other* (Ibid., pp. 154–156)—toward herself. The process of becoming an object to oneself is made possible through language and signification. We become selves, not by individual right, but in the virtue of our relation to others.

The activity of reflecting upon oneself is simultaneously an experience of subjectivity and of communality, which Mead coins consequently as "I" and "me" perspectives of self-consciousness. Internalization of the *generalized other* is how social meaning-making and cultural signification comes forth. This is the "me" aspect of the self, and it encompasses how social processes influence the subject's behavior through institutions, practices and control. "I", in contrast, is the constantly present initiative aspect of the self; it is the freedom, self-expressivity and immediate agency of an individual. In the self-referential processes of oneself—such as in reflective and reflexive thinking or in imaging—"I" can modify the social process itself but this change is conceivable only in relation to the "me" as a perspective of the generalized other and as a conventional, habitual individual. There is thus a constant self-reflective inner dialogue between the enacting and novel "I" and the structure and form that is "me" (Mead, 2015 [1934], pp. 173–186).

Philosopher Dan Zahavi (2014, pp. 10, 36, 95) goes against social constructivism, which argues that the self is entirely negotiated and constructed in social interactions. Instead, he argues for *experiential self*, which is defined as the very subjectivity of experience. Zahavi's notion of experiential self is strongly rooted in Hus-

serl's phenomenology, and that of Sartre's. He contends that the self is first and foremost experience-based, and that this minimal experiential self is a necessary precondition for the socially constructed self. Experiential self is *pre-reflective self-consciousness*, which renders the reflection possible, as Sartre argued (Sartre, 2003 [1957], p. 9).

Pre-reflective self-consciousness prevails independently from the reflective self-consciousness and has therefore priority over the latter. "Prereflective experience is logically prior to reflection, for reflection presupposes something to reflect upon; and it is temporally prior to reflection, for what one reflects upon is a hitherto unreflected experience" (Thompson, 2007, p. 250). Pre-reflective bodily consciousness of selfhood, or *ipseity* (Sartre, 2003 [1957], p. 126; Zahavi, 2005, p. 115) is the phenomenal presence of self-consciousness in experiential life. Experiential self-consciousness is not something unique to humans but instead given to all phenomenally conscious creatures. "Although I live through various different experiences, there is consequently something that remains the same, namely, their first-personal character. All the different experiences are characterized by a dimension of *mineness*, or *for-me-ness*, and we should distinguish the plurality of changing experiences from their persisting *dative of manifestation*" (Zahavi, 2014, pp. 18–19).

The mineness of experience does not refer to specific content in question but to the first-personal presence of experientiality. It is a constitutive, subjective aspect of every experience. In phenomenology, constitution is the process by which objects appear as they are and come to have meanings. For an object to appear, we have to also postulate a consciousness for whom the objects present themselves: "without consciousness, no appearance" (Gallagher & Zahavi, 2008, p. 26). The fact that experiences are given to me first-personally makes these experiences mine: my experiential life is distinguishable from the experiential life of others most fundamentally because of the for-me-ness instead of their specific content (see Zahavi, 2014).

It is of paramount importance to clarify that in existence is not only reflective self-consciousness that renders possible to understand oneself as an object and thus engage with me–I dialogue. Just as profoundly, the experiential pre-reflective self, the *lived-through-experience*, exists and precedes reflection. We are pre-reflectively self-aware of our experience, but we do not tend to attend to it. When we do, we do it through reflection (Gallagher & Zahavi, 2008).

In the current thesis, 'the self' is conceptualized consisting of the *minimal experiential self* and the *narrative extended self*. Self-experience in the minimal experiential sense equals to being pre-reflectively aware of our own consciousness when we are engaged with the world and its temporality. Self-experience in the narrative or extended sense is being self-reflectively aware of oneself (Zahavi, 2005, p. 129). We manifest our consciousness to ourselves in narrative practices, we *make sense* of our experiences through self-narration as Shaun Gallagher and Yanna B. Popova have argued (Gallagher, 2014; Popova, 2014).

Why is this significant for studying gameplay experience? I propose that for understanding the position of the player, her identity *as* the player, as well as how *emotions emerge to herself during video game gameplay*,[22] we must understand that

[22] This is a widely studied subject in contemporary game studies. For instance, Jonathan Frome (2007) notes that the majority of video game scholars are interested in understanding the ways by which video games are able to induce emotions.

the conscious self is both non-reflective (minimal) and reflective (narrative). I contend that video game gameplay necessitates both *self-reflective practice* of the narrative self, and the pre-reflective experience of the experiential self. Without pre-reflective experiences, we could not distinguish the *subjectivity* of our gameplay experiences. Without self-reflective practice, we could not consciously play a game—"We cannot play if we are not conscious of playing" (Arsenault & Perron, 2009, p. 111).

Mead (2015 [1934], pp. 144–164) tracked down the differences between 'play' and 'game' by investigating the origins of the social self. In play, a person plays *at* something, such as playing *at being* a doctor or being a mother, in other words, by taking on a social role of the other. In a game, however, it is not enough to take on the role of the other. Instead, one has to take on the role of everyone else, i.e., play *as being* something. For Mead, play and game represent a continuity of the social self, from being able to take on a role to having the self-reflective understanding of the organizational dynamics and structure of different roles as a unit or community.

To adopt the position of a player, one has to be able to situate oneself as an object, as an intentional other and thereby take a *third-person* view on oneself. It is, in the words by Bernard Suits (2005 [1978]), to embrace a *lusory attitude,* which implies an intention and aboutness of *il-lusion* (literally: "in-play" and beginning of a game). In other words, a *lusory attitude* both enables and holds gameplay together (Huizinga, 2014 [1950], p. 11; Caillois, 2001 [1961], p. 19; Deterding, 2013, p. 30). Taking on a lusory attitude is oftentimes all that is needed for *license* to play, that is, for permission to interact according to a predefined set of regularities (Abrahams, 2005, p. 92).

Discussion: Metacommunicative Play?

Now that I have specified how the self of the player is understood in the enactive phenomenological stance of this thesis, let me return to Deterding's (2013, p. 140) description of play as a "form of transformation of a source activity." For if we conceptualize play in a similar way as Deterding, we postulate play as a profoundly *metacommunicative* practice, which leads us to the writings by Gregory Bateson.

In 1955, an important article called "*A Theory of Play and Fantasy"* by Gregory Bateson was published (2000 [1955]). In this paper—as well as in another article, *The Message "This is Play",* which was published a year later (1971 [1956])—Bateson famously argued that human communication operates on different levels of abstraction. The levels include the *denotative level* of the 'surface meaning,' that is, how the inherent qualities of an object are directly available for perception, the *metalinguistic level* in which the messages concern language, and the *metacommunicative level* where the subject of discourse is the communication between individuals.

Bateson (2000 [1955], pp. 178–179) gave play as a prime example of a metacommunicative practice: "This phenomenon, play, could only occur if the participant organism were capable of some degree of metacommunication, i.e., of exchanging signals which would carry the message 'this is play,'" and continued (1971 [1956], p. 265) to say, "[P]lay itself is a category of behavior, classified by context." Since the

publication of the abovementioned papers, the Batesonian idea of play as a metacommunicative frame has been discussed and endorsed by many game scholars (e.g., Goffman, 1986 [1974]; Schwartzman, 1979, p. 169; Sutton-Smith & Kelly-Byrne, 1984; Sutton-Smith, 2001 [1997]; Salen & Zimmerman, 2004, pp. 371–372; Deterding, 2013; Nachmanovitch, 2009; Stenros, 2012). [23]

In his studies of animal behavior in Fleishhacker Zoo in San Francisco, Bateson realized that the message "this is play" generates a paradox of a Russellian or Epimenides type: "These actions in which we now engage do not denote what those actions *for which they stand* would denote" (2000 [1955], p. 180). An oft-cited example by Bateson is how a nip by a dog denotes the bite but not what would be denoted by the bite. These observations led Bateson to suggest that play may have been an important phase in the evolution of communication. Bateson continued to stress that play is not paradoxical only on the usage of the word 'denote' on two different levels of abstraction, but also because the bite in play is *fictional*: "Not only do the playing animals not quite mean what they are saying but, also, they are usually communicating about something that does not exist" (ibid., p. 182).

According to these two criteria, play establishes its own paradoxical metacommunicative system of premises or expectations, that is the *play frame*, that distinguishes play from non-play; "the frame is involved in the evaluation of the messages which it contains, or the frame merely assists the mind in understanding the contained messages by reminding the thinker that these messages are mutually relevant and the messages outside the frame may be ignored" (ibid., p. 188). Thus, Bateson argued that in animal play, three types of messages emerge, the "mood-signs" that elicit automatic responses to, e.g., olfactory signs; the "messages which simulate mood-signs" or do not denote what which they seem like they would denote; and messages that communicate the 'frames' or modes of communication, e.g., "this is play" or "I am only joking." Bateson's (2002 [1979], p. 116) studies on behavior of monkeys, dogs, dolphins, river otters and other nonhuman mammals in the 1950s led him to conclude that mammals recognize play as a type of communicative activity and are thus able to classify their types of interchange on a metacommunicative level.

In this thesis, I have adopted a stance similar to Mead's (2015 [1934]) by proposing that a player of a game plays *as being something*, whereas in a non-gaming play-activity a person plays *at something*. Mead's understanding of playing *at* something may seem congenial with Bateson's well-known portrayal of play as a metacommunicative event—"This is play" (Bateson 2000 [1955], p. 180)—but I suggest that this might be too quick of a conclusion.

When Bateson argues that a playful bite denotes, or stands for, a bite but not what a bite would denote, we enter the realm of symbolic representation. In such a situation, we have a perception of 'a bite,' which posits context-dependent, or first-order, indexical meaning: "there is biting going on." We also have a second-order indexicality, which concerns the metapragmatic meanings. On this second-order level of indexical meaning, what is perceived here *re-presents* or stands in for meanings absent from the ongoing situation. To argue that something is metacommunicative for a subject is therefore to say that meanings are not only indexically present for the subject in the situation at hand but also present as absent, i.e., symbolically present. If

[23] See especially Deterding (2013, pp. 54–56) for an intriguing discussion of Bateson's theory on play as metacommunication.

this is correct and if we agree with Bateson that all play is metacommunicative, then we must thereby accept that all creatures that play are capable of operating with "ludic symbols." But is this conclusion acceptable?

In *Play, Dreams and Imitation in Childhood* (1962 [1951]), Jean Piaget examined the relationships between 'assimilative play' and 'accommodative imitation' in the development of symbolic thought and conceptual thinking. He presented a classification of games into *practice games, symbolic games,* and *games with rules*, based on their function in the development of the human mind. According to Piaget (ibid., p. 3), representation arises from the permanent equilibrium between assimilative and accommodative practices. Only through both accommodation (imitation) and assimilation (play), a subject is able to move beyond the immediate present to constitute symbolic functions. In other words, for Piaget, primordial play is not metacommunicative, but it is only through play and imitation that we *become able* to metacommunicate with concepts and symbolic relations. Play thus exists even before the 'developmental stage' in which representation becomes possible. *Practice games* put into action learned skills and behaviors without "modification of their structure." These exercises (ibid., p. 113) do not include symbols, rules or make-believe. Instead they are merely reproductions of learned behavior and play with what is immediately present and available to the subject:

> Kittens which fight with their mother and bite without hurting her are not "pretending" to fight, since they do not know what real fighting is... When a kitten runs after a dead leaf or a ball of wool, we have no reason to suppose that these objects represent mice for it. When a cat plays with her kitten, using claws and teeth, she knows, of course, that the fight is not in earnest, but there is no need to explain it by saying that the cat imagines what the fight would be if it were real… The ball that the kitten runs after is merely an objective, and when he pushes it he is merely giving himself the opportunity to go running (Piaget, 1962 [1951], pp. 100, 110–111).

I concur here with Piaget: we do not need to postulate an awareness of "playing a part" or "make-believe" to primordial play since the situation in which the activity is conducted provides the reason for the emergence of such a "practice game." Similar to animals, humans begin their personal history of play with practice games, already during the first months of their life. In their cognitive development, children begin *symbolic games* (during the second year, Piaget, 1962 [1951], p. 142), which imply representation of an absent object and make-believe. Here the connection between a play object, such as a rock, and what it represents, 'a car,' for example, is entirely subjective; this is the emergence of the *ludic symbol* (ibid., p. 119). In a ludic symbol, what is imitated is related to the *absent object* instead of the present object and is thus assimilated for play (ibid., p. 103).

Furthermore, Piaget (ibid., p. 112) argued that there is a phase of *symbol in action*, which can be understood as a transitional stage between practice games and symbolic games proper. In *symbol in action*, a child imitates, e.g., the activity of going to sleep first at the sight of his pillow and later with other objects. For Piaget, this

process of engaging freely with familiar activities (assimilation) by distancing the activities from their immediate object-relations marks the beginning of representation. However, the process begins with what Piaget (ibid., p. 163) called "indices," and what I call indexicals. Through indices, a child recognizes objects and relationships, *but not yet the distinction between 'signifier' and 'signified,'* which is enabled only through developed language skills and concepts.

When symbolic understanding is achieved, it does not replace the sensory-motor knowledge, but subordinates it instead—"Most symbolic games… are therefore both sensory-motor and symbolic, but we call them symbolic when the symbolism integrates the other elements." Finally, in *games with rules* (ages 4–7), we find the sense of regularity and social order, established by intersubjective relationships. These games are "ludic activity of the socialized being." (Piaget 1962 [1951], p. 142). Crucially, Piaget (ibid., p. 113) argued that the three classes of games, *practice games*, *symbolic games* and *games with rules* correspond with the *sensory-motor, representational* and *reflective* forms of intelligence. Here, we can return to Mead and Bateson.

I suggest that Piaget's model of three categories of games and their corresponding forms of intelligences dovetails with Mead's theory of distinguishing play and game in the emergence of the social self. However, I also propose that both of these theories contradict Bateson's view on metacommunicative play. When Mead (2015 [1934]) wrote about play as playing *at* something, he referred to what Piaget (1962 [1951]) later came to call 'symbol in action' and symbolic games. Here, the person who plays engages with play of representation in a nonreflective manner. The subject does accommodate oneself to the social rule-based order of a game, i.e, *generalized other*, but evokes the absent meanings and roles to her assimilative play. Games with rules introduce a change into this, since in these games the person must *reflect* on oneself *as being* a representative of the social reality established by the game. This becomes possible only through self-reflection and the knowledge of the position of the player.[24]

When a subject is capable of communicating about communication, the subject has acquired the skill of representation and quite possibly the skill of reflection as well. However, as was already revealed by Piaget (1962 [1951]), most of the animals do not ever enter the realm of representation. Furthermore, other than humans, no animal seem to enter the realm of reflection, where playing as *trying-out* transforms into *trying-on* different selves (see Abrahams, 2005, p. 109), and finally into trying-on different selves in a system of regulations and rules, i.e., gameplay. Consider the ruminations by philosophers Harry G. Frankfurt (1998) and Christine Korsgaard (2011).

> They (men) are capable of *wanting to be different*, in their preferences and purposes, from what they are... No animal other than man, however, appears to have the capacity for reflective self-evaluation that is manifested in the formation of [these] second-order desires (Frankfurt, 1998, pp. 12–13).

[24] In my reading of Mead, however, there is no clear correspondent for the primordial play of *practice games*.

> [A]n animal does not choose the principles of his own causality—he does not choose the contents of his instincts. We human beings on the other hand do choose the principles of our own causality (Korsgaard, 2011, p. 108).

Piaget's take on practice games and symbolic games is further supported by enactivism. In their recent article on pretend play, Zuzanna Rucinska and Ellen Reijmers (2015) argue that treating one object as another does not necessarily require more than active exploration of objects that are present in the playful situation. In this view, we do not have to postulate metacommunication to primordial play, but contextual affordances, i.e., possibilities for action, for the skillful subject. "[W]e can think of objects as affording novel possibilities in and through the play… these possibilities depend on the actor's sensorimotor skills and dispositions, as well as on the object's properties" (Rucinska & Reijmers, 2015). In my reading, this is congenial with the philosophical stance of Shaun Gallagher (2005, pp. 224, 247), who defends a view according to which we oftentimes have understanding of others' *intentions* because their intentions are embodied and expressed in their perceivable actions that make direct sense to our own skills and abilities to act. For this to happen, it is not necessary to postulate the premise of metacommunication; we are able to directly perceive our own action possibilities in the conduct of others.

In enactive, Piagetian and Meadian understanding, playing *at* something is also possible for autonomous agents who do not exhibit developed languaging skills that encompass *metacommunication.* As a conclusion, I would like to propose that perhaps primordial play is not metacommunicative. However, when we enter the realm of symbolic communication, play does arise as metacommunicative. Thus, I do not suggest that human play, or *any gameplay*, would not be metacommunicative after early childhood. Rather, the onset of play does not communicate about communication, and therefore primoridial play retains its identity primarily as an activity. This is again in contrast with Bateson (Stevens & Bateson, 1979, p. 2), who wrote: "'play,' 'exploration' *cannot* be acts or activities because they do not follow the ordinary rules of reinforcement characteristic of acts" (see also Schwartzman, 1979, p. 23; Nachmanovitch, 2009).

When Piaget wrote about how play develops from mere assimilation (practice games) towards play with the relations between assimilation and accommodation (symbolic games) and with alternative regularities or patterns of represented accommodation (games with rules), he accurately described how play retains its identity as an activity, regardless of whether it is metacommunicative or not. This is because, for Piaget, all play was assimilation over accommodation—appropriating the immediately present objects and relations by distancing them from the requirements of accommodation. In the view he held, practice games are communicative activities of assimilating the objects at hand; symbolic games are metacommunicative activities of assimilating the objects at hand as representatives of the absent; and games with rules are metacommunicative activities of assimilating oneself (reflective act) and the object at hand as representative of the absent patterns or regulations. In my reading, Sutton-Smith (2001 [1997], p. 23) agreed with this view when he stated that: "[P]lay

is both a kind of communication (a [metacommunicative] mode) and also a kind of action."

Although many animals are known to play, and some primates have even been known to play video games, I suggest that non-human play may be profoundly different from human play after early childhood. My proposal is thus that it can be misleading to assume that non-human animal play and human play, after the first year of childhood, are profoundly similar phenomena, although they do form a clear continuum. Whereas many non-human animals play *at* something, we humans also play *at being* something (symbolic games) and, in game-play, *as being* something else than we otherwise are (games with rules). As Peterson (2002, p. 291) writes: "Abstract thinking in general, and abstract moral thinking in particular, is play: the game, 'what if?' Next, I proceed to investigate what kind of modes the player's quality of "*at being something*" in settings of "what if?" may take in the dynamics of video game gameplay.

3. PLAYER PREFERENCES IN VIDEO GAME GAMEPLAY MOTIFEMES[25]

> The study of every unit of social organization must eventually lead to an analysis of the interaction of its elements (Goffman, 2013 [1961], p. 7).

Gameplay is a widely used vernacular *emic* term in gaming cultures. For game developers as well as players, "good gameplay" indicates that a specific game is worth playing. As Laura Ermi and Frans Mäyrä (2007, p. 91) observe, gameplay is used in contemporary video game cultures to characterize the essential, yet fleeting, quality that defines a game as a game. They give a description of gameplay experience as "an ensemble made up of the player's sensations, thoughts, feelings, actions, and meaning-making in a gameplay setting."[26]

The importance of the popular concept of gameplay is displayed by Graeme Kirkpatrick (2012; 2013), who has shown that, since the mid-1980s, the concept has remained constitutive for recognizing gaming as *autonomous cultural practice*. Michael Mateas and Andrew Stern (2000, p. 643) indeed maintain that, "[t]he ephemeral quality of gameplay, the experience of manipulating elements within a responsive, rule-driven world, is still the raison d'être of games, perhaps the primary phenomenological feature that uniquely identifies the computer game as a medium."

As a research concept, however, gameplay has remained elusive and difficult to define. Some researchers doubt that a full clarification of the concept is even possible (Kirkpatrick, 2013, p. 167; Shinkle, 2008, p. 909). Olli Leino (2012, pp. 58–59) argues that the elusiveness of gameplay is due to the ontological hybridity and temporality of the phenomenon; gameplay overlaps the domains of subjective experience, activity, and technological materiality.

Most typically, gameplay is referred to as the interaction that takes place between the game and the player (see Landay, 2014). Richard Rouse (2001, p. xviii) states that gameplay is equivalent to the modes of interaction in the game, including how the player can navigate the gameworld and how the game reacts to the player's choices. Game designer and researcher Ernest Adams (2014, p. 9) has defined gameplay as the interplay between "the challenges that a player must face to arrive at the object of the game" and "the actions that the player is permitted to take to address those challenges." Furthermore, Adams argues that gameplay is to be distinguished from the fictional gameworld. According to him (ibid., pp. 9, 16–17), gameplay *arises* from the fictional setup and the role afforded for the player. Scott Miller describes

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[25] The main findings of Study 1 in this chapter have been published earlier in the article, *Game Dynamic Preference Factors and Player Types,* by Vahlo et al. (2017).

[26] I return to the concept of 'gameplay experience' frequently as this thesis proceeds, as understanding both the invariant and changing experiential qualities of playing video games is indeed the very mission of the current work. At the moment, the definition proposed by Ermi and Mäyrä (2007) suffices a starting point to begin my investigation.

gameplay as being what you *do* as the participatory player (Scott Miller, in Newman & Simons 2004, p. 76; cf. Aarseth 2004, p. 48).[27]

Jesper Juul (2005, pp. 83, 88) emphasizes the importance of understanding gameplay as the way that a game is played instead of equating the concept with rules or game fiction, that is, gameplay is an interaction between game rules, the player(s) pursuit of the goal, and the competence of the player and his or her repertoire for play strategies. Alexander Galloway (2006, p. 5) has noted also that "much of gameplay, the two actions (machine actions and operator [i.e., player] actions) exist as a unified, single phenomenon, even if they are distinguishable for the purposes of analysis."

For Bonnie Nardi (2010, p. 104) gameplay "is an identifiable human activity whose structure includes both subjective dispositions, such as a sense of freedom, and specific cultural constructs such as rules." Landay (2014, p. 174) suggests that gameplay comprises the interactivity of the game system, the medium, and the user, and also deals with the concepts of user agency and immersion. Kristine Jørgensen (2008) further writes that "[G]ameplay is… an emergent aspect of interaction between the game system and the player's strategies and problem solving processes... gameplay is how the game is played." Thus, gameplay cannot be designed explicitly but rather enabled, restricted and facilitated through *game mechanics* (Jørgensen 2013, p. 33).

To date, only a few full-blown attempts to define the concept 'gameplay' for research purposes have been made. In one such undertaking, Dominic Arsenault and Bernard Perron (2009, pp. 110–119) pointed out that gameplay should not be equated with spatial usages of the metaphor of 'the magic circle,' where a certain space is argued to demarcate play activity from non-play activity. In this view, a video game can be described as a symbiosis between the game and the gamer that consists of recursiveness and its own internal dynamics.

I continue the analysis of the concept of gameplay in Chapter 5, where I develop an enactive account on the phenomenon of single-player gameplay. In the current chapter, however, I empirically examine the *modes of interaction* video games provide for players, and players' preferences in video games that consist of specific dynamics (RQ2). Also in this chapter, I analyze statistical data that was collected during the research project *Play for Reward* (see Acknowledgements).

The mechanics of a given game are defined in the rules of that game; when we act according to the rules of the game, we invoke its mechanics, which generates *effects* in the game environment. For example, if I press button X on my game controller, my character in the game picks up an item in front of him. The mechanic triggered by my action of pressing X is thus "pick up." When we play a game, we do not experience an isolated game mechanic as meaningful. A mechanic arises as meaningful only in sustained player–game coupling. When a player plays a racing video game, for instance *Forza 6 Motorsport* (Microsoft Studios, 2015), she does not experience just steering the car (a mechanic), changing its gears (another mechanic) and braking

[27] However, as several scholars such as Dovey and Kennedy (2006, pp. 89–93) have argued, the aesthetic qualities of a played character clearly have an impact on the experienced gameplay as the player both controls the character's actions and identifies herself with the given role.

(yet another mechanic), or even steering+changing gears+braking as a set of mechanics.[28] What she experiences is *driving* the car. The quality of 'driving' in this example is not a mechanic of the game but a *dynamic*.[29]

Game dynamics emerge from game mechanics (LeBlanc, 2004) when multiple game mechanics are triggered by continued player performance. "Game dynamics describe the run-time behavior of the mechanics action on player inputs and each other's outputs over time" (Hunicke et al., 2004). Emergence comes forth in complex systems when they are set in motion. Game dynamics are thus *designed to emerge* from the game artifact in gameplay. As such, game dynamics are indeed characteristics of the video game system but perceivable only when the game is conceptualized as a dynamic game-as-played. Similar to game dynamics, purposeful and motivational player performances do not emerge from player actions without the reciprocal player–game coupling, but *through* this very reciprocity.

On the level of a *game mechanic*, player participation can be described as *an action*. An action player takes has an *effect* on the ongoing gameplay. However, on the level of *game dynamics*, player participation is considered *performance.*[30] Sustained performative activity from the player causes a correspondent *event* in the gameplay. We cannot perform well or poorly if we consider just one player action or even several actions and the corresponding mechanic or mechanics. The player merely triggers a mechanic or a set of mechanics to cause an effect, or she does not. Skill and expressivity arise only through sustained gameplay. Gameplay consists therefore of player performances, game dynamics and gameplay activities, which emerge from the actions in which the player enacts interrelated game mechanics (see Figure 2). The gameplay of *Forza 6* comprises, e.g., gameplay activities of *tuning the car*, *racing at a high speed*, and *collecting rare vehicles*. Each of these activities consists of multiple gameplay practices, established by the game mechanics, frequently triggered by player actions.[31]

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[28] Sicart (2009) has discussed "compound game mechanics" as sets of game mechanics that are related to each other and thus frame a specific player–game interaction mode. However, I prefer to separate game dynamics from the "compound game mechanics" because the term 'dynamics,' in contrast to 'mechanics,' refers directly to the changes that take place through a pattern of time.

[29] A 'game dynamic' is not to be equated with 'emergent gameplay' or 'gameplay dynamics,' which are both used in literature to describe complex patterns of the player's and the game's behavior that the rules and mechanics make possible. For instance, bluffing can be regarded as a form of emergent gameplay/gameplay dynamics in poker (see Salen & Zimmerman, 2004). The *experience* of ghosts teaming up in the classic arcade game *Pacman* (Namco, 1980) is an example of emergent behavior that arises from the complexity of interactions between game mechanics (Adams & Dormans, 2012, p. 55).

[30] I return to the concept of performance in Chapter 6 and Chapter 7.

[31] According to Adams (2014, pp. 40–42, 263), video games are structured into differentiated subsets of their complete gameplay, supported and facilitated with a particular user interface and camera mode. He coins these subsets as *gameplay modes* that provide the players *conceptually related* and consistent challenges and actions. As a concept, 'gameplay mode' is closely related to my understanding of game dynamics. However, a given gameplay mode can consist of several game dynamics and enable several gameplay activities for the players, and thus the two terms are not to be equated.

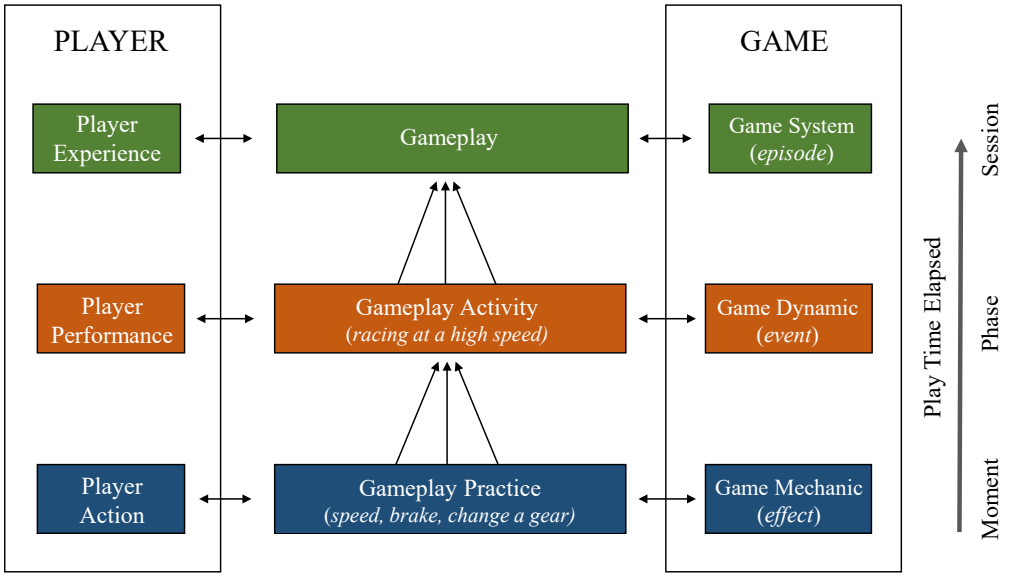

Figure 2. *Gameplay Emergence Model. A chart on how gameplay practices, gameplay activities and gameplay as a whole emerge from sustained reciprocity between a player and a digital game through time (see Vahlo et al., 2017).*

I associate the terms 'action' and 'activity' with *activity theoretical approach* as presented by Victor Kaptelinin and Bonnie Nardi (2006). A core argument of activity theory is that human consciousness is realized in practical, object-oriented activities and in our participatory agency. Activity theory understands activities as purposeful, motivated, and mediated interactions between an individual and its surroundings. Thus, activity as the basic *unit of analysis* is argued as a way to understand both the subject and the object.

According to activity theory, each activity can be analyzed as consisting of three levels: 1) purposeful activity, which is oriented toward an *object* of desire; 2) actions directed by our immediate *goals* and; 3) operations that are our routine processes by which we adjust our situated actions (Kaptelinin & Nardi, 2006, pp. 59–70). These differentiated levels of activity can transform into one another. I suggest that when a player begins to play a game, she enacts the activity of gameplay in which the gameplay itself arises as the desired object. During the gameplay, however, new activities and desirable objects may emerge from the reciprocity between game dynamics and purposeful player performance (see Figure 2). Similar to the activity theoretical account by Kaptelinin and Nardi (2006), I define gameplay activities as purposeful participatory processes from which meaningful experiences may emerge.

It is important to emphasize that in what follows, I utilize the terms 'gameplay activity,' 'performance' and 'game dynamic (*event*)' almost interchangeably. With all three of these concepts I refer to a purposeful phase in ongoing gameplay between a player and a game system. The only difference between these terms is that when I mention performance, I emphasize the player's agency and its first-personal characteristics, and when I write about dynamics, I refer to what emerges in the formal game system during gameplay. A gameplay activity is the combination of a player performance and a game dynamic, and it thus answers the question: "What is going on during a gaming session?"

I approach game dynamics as traditions to reconstruct a player's performances into rule-afforded models of vernacular imagination. In what follows, I present an empirical study on the dynamics of video game gameplay and argue that these dynamics constitute a fundamental aspect of the morphology of video game gameplay. For this to be possible, let us first consider a pathbreaking article by the preeminent folklorist, Alan Dundes.

Revisiting Alan Dundes' Game Morphology

In 1964, Alan Dundes published an important article *On Game Morphology: A Study of the Structure of Non-Verbal Folklore*. Dundes suggested that children's games are structurally similar to folktales and that this observation could be validated by conducting structural analyses on the patterns found in games and by then comparing the results with the constituents of folktales.[32] In this original study, Dundes stressed that "the application and the interrelationship of [the definite limiting rules] result in an ordered sequence of actions by the players, and these action sequences constitute the essential structure of any particular game" (Dundes, 2007 [1964], p. 156).

Dundes stated that any study on the structure of folklore must begin by delineating a *minimum structural unit*. He proposed that in the case of games this unit is *motifeme*, or "a unit of action," which was earlier utilized in structural studies of folktales. He was aware that games differ from folktales by typically offering what he called two-dimensional series of actions instead of unidimensionality found from folktales. With the concept of two-dimensionality, Dundes pointed that in children's games one can oftentimes play as the protagonist or as the villain and thus both dimensions and vantage points to act are feasible. In contrast to this, in folktales the events between a protagonist and a villain are described from a fixed perspective. Provocatively, Dundes argued that "a folktale is, therefore, a two-dimensional series of actions displayed on a one-dimensional track, or, conversely, a game is, structurally speaking, a two-dimensional folktale" (Dundes, 2007 [1964], p. 156).

Dundes' structural analysis on games was a remodeling of Russian folklorist Vladimir Propp's *Morphology of the Folktale* (1968 [1928]). Dundes, however, relabeled Propps's *functions of folktales*[33] as motifemes and allomotifs to relate these terms to motifs of folklore. In folkloristics at the time, motifs were generally considered to be the minimal unit of folkloristic analysis. Motifs are features of a product of folklore, indexed originally in the "Tale Type index" by Antti Aarne (1910) and Motif-index by Aarne and Stith Thompson (1961 [1928]). According to Simon J. Bronner (2007, p. 88), in the rhetoric of "motif" and "type," key objects and incidents, such as

[32] Dundes was not the only one making a comparison between games and folktales. John. M. Roberts, Brian Sutton-Smith and Adam Kendon (1963, p. 185) stated that: "Folk tales and games are quite different media of expression, but they are similar in that they model or represent behaviors occurring in other settings, both real and imaginary."

[33] Frog, Koski and Savolainen (2016, p. 17) have suggested that Propp's approach can be conceptualized in the light of more contemporary text analyses as "generative grammar of narration, with a limited number of structural units that will occur in a predictable organization".

a "glass shoe," were treated as building blocks or components for stories and imagination. These motifs could then be organized and reorganized into a variety of themes and tale types worldwide.

Both Propp (1968 [1928]) and later Dundes (2007 [1962]; 2007 [1964]) criticized classifications based on non-structural *component units* of a narrative, and proposed instead the usage of *functions* as minimal units in narrative. According to Propp (1968 [1928], pp. 9–10), functions are constantly occurring fundamental elements of tales, independent of who conducts them and how. A function is to be understood as "*an act of a character, defined from the point of view of its significance for the course of the action*."

Dundes illuminated the distinction between motifemes and motifs by applying Kenneth L. Pike's (1954) concepts of 'etic' and 'emic.' *Etic constructs* for Pike were the analytical categories fashioned by researchers and analysts to handle cross-cultural comparative data, whereas by *emic constructs* Pike referred to the particular events within the cultural system in which they manifest and have their specific significance. For Dundes, a motif was an etic construct since it was detached from its contexts of storytelling. A function, i.e., a motifeme, is an emic construct because its meaning is to be understood in its relation to the linear plot sequence and *dramatis personae* (Bronner, 2007, p. 27). A motifeme is a recurrent functional structure within a given genre of folklore, while an allomotif is a motif that appears in a given motifemic context. Allomotifs are thus variations of motifs which do not alter the motifeme of a product of folklore. Dundes (2007 [1962], p. 97) clarifies:

> An example of allomotifs in the folklore of a primitive culture may be found in the North American Indian test tales… In order to obtain a wife, the hero must survive any one of the following elements: a snapping door, caves which open and close, a closing tree cleft or canoe, a clam with crushing shells, dangerous animals guarding a door, or a *vagina dentata*. All these elements appear to be allomotifs of the same motifeme, which, incidentally, looks very much like Propp's twenty-fifth motifeme, "A difficult task is proposed to the hero."

Dundes (2007 [1964]) proceeded to compare the morphological qualities of games with folktales by suggesting that many games begin with a lack or insufficiency, similarly to folktales (Propp's function VIII, Villainy, or Lacking). Dundes illuminated his analysis by examining how the structural qualities of the traditional game *Hare and Hounds* compared to the Proppian morphology of folktales. In *Hare and Hounds*, a chosen participant acts as the Hare and hides from the others. Seen from the viewpoint of the participants playing as the Hounds, the game begins with a lack, i.e., the missing Hare. According to Dundes, the Hounds attempt to *liquidate* (Propp's function XIX) their initial lack, similar to the protagonist's aim in folktales. He offered that the *Hare and Hounds* includes the two motifemes (Functions VIII and XIX), embedded in a sequence of *lack–interdiction–violation–consequence*:

	Lack	*Interdiction*	*Violation*	*Consequence*
Hare	wants to go home	without being caught by Hounds	is caught (isn't caught)	loses game (wins game)
Hounds	want to catch absent Hare	before he arrives back home	do not catch Hare (do catch Hare)	lose game (win game)

Table 2. *The motifemic sequences of Hare and Hounds by Dundes (2007[1964], p. 157).*

In what Dundes (2007 [1964], p. 157) called a "motifemic sequence," the Hare hides and tries to return home (lack). If she is caught by the Hounds before reaching home, she fails to liquidate the lack and loses the game. Observed from the viewpoint of the Hounds, another motifemic sequence takes simultaneously place wherein the Hare (lack) is successfully caught (lack liquidated) and the game is won.

Dundes' (2007 [1964]) article on game morphology is not amongst his best-known papers on folkloristics. To date, it has remained almost completely unknown in contemporary game studies. The article, however, opens several intriguing views on studying game structure and morphology. Although I will not conduct a video game analysis as Dundes did, there are substantial continuities between his original work and the current study. However, I am not the first folklorist to consider video game morphology based on the approach by Propp or Dundes. In 1997, Sharon Sherman published an article called *Gender and Genre in Video Games* in which she analyses the narrative structure of *Super Mario* video games (pp. 248–249):

> In Propp's terms, after an initial lack, [Mario] has moved from childhood to adulthood and from function XV (The hero is transferred, delivered, or led to the object of his search) to function XIX (The initial misfortune or lack is liquidated). The hero provides the ultimate rebirth by eventually completing the game, and re-establishing human (or, in this case, mushroom) existence... Whether we call quest tales myth or Mädrchen, the appropriation of the folk narrative in both form and content elements by video games is obvious.

I agree with Dundes (2007 [1964]) by postulating that the *minimal unit of analysis* in gameplay is equivalent to a motifeme. A unit is, according to Dundes (2007 [1962], p. 91) a logical construct, an abstraction of measure which makes comparison possible based on a shared feature between several products of folklore. To postulate a minimal unit is to define "the smallest significant unit for a given analysis with the implicit understanding that although a minimal unit could be subdivided, it would serve no useful purpose to do so" (ibid.).

Similar to Dundes, I appropriate the terms motifeme, motif and allomotif since these terms make it easier to discuss variants of the same function (motifeme) in games and how they relate to the motif indices. I also agree with Dundes (2007 [1964]) by emphasizing that a syntagmatic and synchronic approach is well-suited for

game analyses since games are, as Ian Bogost (2010) proposes, procedural artifacts; to understand the player–game coupling, we must study games as reciprocal sequences and patterns through time, rather than as fixed forms consisting of a set of components. More important than the components of a given game (*motifs*) are thus how the relationships between these components constitute units of actions (*motifemes, allomotifs*) in relation to each other.

I differ from Dundes (2007 [1964]), however, by proposing an alternative take on gameplay motifemes. For this purpose, let us again consider the game of *Hare and Hounds*. From the dynamical stance of the current study, "lacking" (Propp's function VII) and "liquidation" (Propp's function XIX) are not units of action (motifemes) of *Hare and Hounds* but rule-defined functional relations between constituents of the game. Similarly, the sequence of lack–interdiction–violation–consequence does not describe what the players *do* during gameplay, that is, meaningful gameplay activities, but how the given relationships between the Hare and the Hounds will determine the result of the game when set in motion by player agency. What is largely missing from Dundes' approach is the agency of the player, that is, the first-person experience.

While "relations between the constituents" in a narrative sequence is precisely what Propp meant by functions and Dundes by motifemes, these cannot be directly adopted from folktales to games, because such an approach only implies the player and ignores that *the unit of action in games is not to be found from the game system nor from the player but only from the mutual dynamical relationships between them*. Thus, instead of analyzing what kinds of player positions a game affords for a player and how these positions relate to each other, we should analyze how players appropriate these positions during gameplay.[34] The approach delineated here is both dynamical and morphological, i.e., *morphodynamical*, since it investigates the structures of gameplay experience as they appear through patterns of time (see Merleau-Ponty, 2002 [1962], pp. 90–91).

If we now reconsider the rule-defined functional relationships of "lack", "interdiction", "violation" and "consequence" in *Hare and Hounds* (Dundes (2007 [1964]), we will be able to observe that "lack" does not correspond to a motifeme but to the goal of the game. "Interdiction" is equivalent to challenge, and "violation" to what I call normativity and the evaluative aspect of gameplay.[35] Only "consequence" can be still referred similarly in the context of gameplay, but I prefer to call it outcome. Thus:

[34] Furthermore, it is speculative that Proppian functions are directly applicable to game analyses, given that Propp's study was based on a randomly selected sample of 100 Russian fairy tales, and that he himself emphasized empirically observable sequential structures (see Dundes, 2007 [1962], p. 161).

[35] By normativity, I refer to how the acts taken by the player may strengthen or weaken her position within the system of the game. The normativity of an action separates a right action from a wrong one, what ought to be and, consequently, also what ought not to be (see Chapter 5).

	Goal	*Challenge*	*Normativity*	*Outcome*
Hare	wants to go home	without being caught by Hounds	is caught (isn't caught)	loses game (wins game)
Hounds	want to catch absent Hare	before he arrives back home	do not catch Hare (do catch Hare)	lose game (win game)

Table 3. *The relations of the constituent components of Hare and Hounds, revisited.*

When relabeled as "goal", "challenge", "normativity" and "outcome", we can note that the features described by Dundes (2007 [1964]) in the *Hare and the Hounds* converge to definitional criteria of any game, whether it be a children's game, a board game, or a video game. *Goal–challenge–normative evaluation–outcome* is thus arguably a sequence that will result from all episodes of gameplay. Furthermore, recall from Chapter 2 (Table 1) that "goal or purpose," "challenge for skills and abilities" and "normativity" are qualities of game-as-played rather than something we can postulate to a standalone game artifact itself.

The differences between tale functions or motifemes and gameplay motifemes can be further examined by reevaluating an example Propp (1968 [1928], p. 8) gave of fairy tale morphology by comparing tale events:

(1) A tsar gives an eagle to a hero. The eagle carries the hero away to another kingdom;
(2) An old man gives Súcenko a horse. The horse carries Súcenko away to another kingdom;
(3) A sorcerer gives Iván a little boat. The boat takes Iván to another kingdom;
(4) A princess gives Iván a ring. Young men appearing from out of the ring carry Iván away to another kingdom.

Propp argued that although the names of the dramatis personae change in the four examples, the function of the actions does not. For determining a tale function, according to Propp (ibid., p. 9), it is important to ask what dramatis personae of a tale *do* but not by whom or how the action was done, because "the questions of who does it and how it is done already fall within the province of accessory study." Also, the identified action or function must be interpreted in its place in the course of the narration.

Let us now return to games. Let the player be the hero of Propp's example number (1). It is not given that the player, as the dramatis persona of the game, will receive an eagle from the tsar. Maybe the hero reaches the tsar too late in the game and, because of that, the tsar refuses to give the eagle. This notion is similar to what Propp meant with determining a function in its relation to the other events in a tale. If the player's avatar arrives at the tsar's residence too late, the total procedure of the game has changed. However, there are also other possibilities. Maybe the hero must negotiate with the tsar to get the eagle, or maybe she must perform a dangerous deed for the tsar before he even agrees to meet the hero. If she fails in completing the deed, maybe she must find an alternative path for traveling to another kingdom. To put it

differently, in games, *how* a thing is done cannot, in principle, be separated from *what* the *dramatis persona* manages to do, or what other player personae are able to do.

We cannot distinguish the motifemes of games from how the players play the game, since to do something in a game, e.g., to travel to a distant land, becomes possible, not only when players do a set of things in a specific procedure, but also when the things are done in a specific manner. In games, how a thing is done thus converges with doing that thing. This is why I utilize the term 'motifeme' instead of 'function,' since the former, as defined by Dundes (2007 [1964], p. 156) is a unit of action that does not imply a distinction between *how a thing is done* from *doing a thing*. Thus, to determine the motifemes of games and video games, we should not ask what the functions of the player position are but rather how the player "functions," i.e., acts, in a given functional frame of the game. 'Goal,' 'challenge,' 'normativity' and 'outcome' are some of the key elements of the functional frame in which a player makes decisions and takes actions.

If "lack" and "liquidation of the lack" are not motifemes of *Hare and Hounds*, how then should we conceptualize its minimal units of action? I suggest that by asking both "how the game is played" and "what the player does during gameplay," another possibility comes into view. The Hare *hides* from the Hounds, tries to *navigate* back home, and *flees* to get there alive, simultaneously as when the Hounds *search* for the Hare, *hunt* her when she starts to run, and *catch* her before she arrives at the safe haven. The motifemes for the Hare are thus *hiding*, *navigating* and *fleeing* whereas the Hounds engage with the motifemes of *searching, hunting* and *catching*.[36]

What we are describing here are *gameplay activities* (see Figure 3), that is, motifemes of *Hare and Hounds,* made possible only through sustained player performances and game dynamics that invoke consequent events. I prefer to call these "units of activities" instead of "units of actions" since, as I mentioned earlier in this chapter, in activity theory, 'activity' is the basic unit of analysis, which refers to a sustained and purposeful object-oriented endeavor of an individual. For instance, in *Hare and Hounds*, an action would be *a step* the player takes that triggers a mechanic within the game system, that is, *a leap* by the Hare. A leap, however, is not meaningful by itself, or even as a chain of interconnected leaps, but as a pattern through time, such as the activity of *running*, which transforms again into *fleeing* when the context of the activity is taken into consideration. When brought together with the constitutive relationships of 'goal,' 'challenge,' 'normativity' and 'outcome,' we can conclude that the Hare's goal is to *navigate* home, and her challenge is to *hide* from the Hounds, and *flee* if she is discovered. If she manages to perform the motifemes of navigating, hiding, and fleeing correctly, the outcome of the game will be favorable to her.

In what follows, I use the term *motifeme* to refer to a minimal unit of purposeful gameplay, described in the form of gameplay activity, consisting of purposeful player performance and a game dynamic. Such an activity can be realized only in a reciprocal relationship between a player and the game system. Because of this, I do not appropriate the concept of 'game motifeme' but instead that of 'gameplay motifeme.' If we now revisit Propp's (1968 [1928], p. 9) definition of function, it can be

[36] Many traditional children games are, in fact, named based on their key motifemes. For example, we have the games of *Hide and Seek*, *Catch*, *Clapping games*, *Capture the Flag, Stone Skipping, Kiss Chase*, and many others, which directly refer to their gameplay motifemes.

concluded that, a *gameplay motifeme is an abstracted description of an activity enabled by game dynamics and enacted by performative play, defined from the point of view of its significance for the course of the game*.[37]

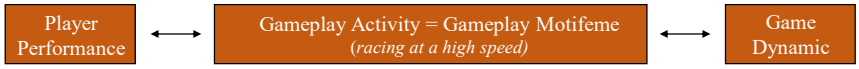

Figure 3. *A Gameplay motifeme of Forza Motorsport 6, that is, a description of a gameplay activity and how it emerges in the coupling between performative play and a game dynamic.*

The study, *On Game Morphology*, by Dundes is crucial to the current thesis since it argues for deep continuity between different forms of folklore *and* offers analytical tools for studying the structure and morphology of games. With these assets, I move forward to present the research questions and methods according to which a quantitative study on game dynamic preferences was conducted in 2014–2015. The objective of the following empirical study is to investigate the motifemes of contemporary video games and, by doing so, illuminate what kinds of performative positions players prefer to take.

As Bogost (2010, p. 4) states, video game procedures constrain what kinds of actions are possible or should be performed in a certain game state. However, gameplay activities or motifemes emerge from game dynamics and from the player's performances as she makes decisions and takes sequences of actions that string game effects and events together. During gameplay, a unique connection between the player and the game design is thus forged as the player engages with performative play within a fixed type of 'choreography' (Miller 2008, p. 267; Aarseth 1997, pp. 3–4; Murray 1997, p. 181).

[37] As noted by Frog (2016, p. 54), the unit of analysis in folkloristics are typically "textual or performative wholes, even if these are embedded in larger contexts." Thus, although it is recognized in this thesis that an item of folklore cannot be fully separated from its sociocultural and historical context of manifestation and purpose, a unit of analysis can be discussed apart from these broader contexts as long as the limitations of such a choice are also recognized.

Study 1: Gameplay Motifemes and Preference Factors[38]

A study on gameplay motifemes and players' preferences in motifeme types can be conceptualized as an investigation of *player types*. Constructing classifications and typologies of tradition-bearers, that is, the persons or groups who have a degree of experience and knowledge on the cultural phenomenon under analysis, has a long history in folkloristics. For example, Eastern European fairytale researchers classified storytellers already in the 1920s based on their personality traits and by analyzing the relationship between the storytellers and their fairytale repertoire (e.g., Asadowskij, 1926; Sokolov, 1966[1938]). Later, folklorist Anna-Leena Siikala considered, e.g., the qualities of storytellers' fairytale repertoires, narration styles, and values, as well as the social position of the storyteller, in her studies on how storyteller types relate to the essential qualities of storytelling traditions (Siikala, 1990; see also Dégh, 1969). I consider my work on player types to be a continuation of the folkloristic research tradition of identifying distinctive ways of experiencing culture.

Prior player categorizations have focused on either motivations to play or behavioral dimensions of players' play styles (Hamari & Tuunanen, 2014, p. 34). Categorizations of players by play styles (e.g., Bartle, 2003; Mulligan & Patrovsky, 2003; Tseng, 2010) and motivations to play (e.g., Bateman, Lowenhaupt & Nacke, 2011; Przybylski, Rigby & Ryan, 2010; Sherry et al., 2006; Yee, 2006) as well as by 'gaming mentalities' (Kallio et al., 2011) have mostly been formed by analyzing gaming habits or players' personality traits instead of examining playing as a form of computer-mediated designed interaction. These categorizations also do not typically include different types of digital games in the analysis. Behavioral observations of players' play styles are usually based on only one game, most typically an online game, or at least on a set game genre, whereas studies on motivations to play aim to explore the reasons for why people play, for example, mobile games, online multiplayer games or digital games in general.

In contrast, the shortcoming of genre categories as well as other design-oriented classifications, such as the design patterns approach (Björk & Holopainen, 2005) and design pattern library (Adams & Dormans, 2012), is that they imply that the player is an abstract ideal type without trying to understand the players' purposeful activity during gaming. While valuable for design purposes, these approaches do not offer a satisfactory perspective on analyzing engaging gameplay experience or game choice.

Whereas studies on motivations to play usually ask *why people play* games in general, and studies on play behavior ask *how people play* a specific game, the approach I report on in this chapter is devised to ask *what kinds of gameplay people*

[38] This study has been reported earlier in *Journal of Computer-Mediated Communication* (Vahlo et al., 2017). I was the first author of this article, responsible for the research design, content analysis and for making the descriptions of the identified factors and player clusters. The statistical analysis was carried out by Johanna Kaakinen, Aki Koponen and myself. In this thesis, I provide a more detailed description of the content analysis and provide an alternative interpretation of the results of the study by approaching the identified factors as motifeme categories instead of game dynamics categories as they were introduced in the article.

prefer. This study can be situated between studies on play motivations and play behaviors, as it focuses on identifying patterns in what kinds of player–game interaction players prefer (see Vahlo & Koponen, 2018).

The approach adopted in this study could thus be framed as a representative of a third option for player typology research, namely that of *gameplay preferences*. The main benefit of such an approach is that it enables us to consider both the *preferences of the players* and the *qualities of designed games* within a single research framework. This, I argue, is missing from other approaches, which emphasize either the general player preferences (motivations to play), game properties (design patterns), or the combination of player preferences and game properties within a single game (player behavior). Therefore, I propose that the model reported in this study provides an important addition to the current investigations of player types and game choice.

Research Questions of Study 1

In this study, with Johanna K. Kaakinen, Suvi K. Holm and Aki Koponen, I investigated the game dynamics of contemporary video games and players' preferences of taking performative agency in these dynamics (Vahlo et al., 2017). I will, however, interpret the game dynamics here as *gameplay motifemes*, based on a folkloristic approach to gameplay analysis. Seen through the lens of 'gameplay motifeme,' the overall goal of this explorative study was thus to examine the RQ2 of this thesis: "*How do players value, remember, and narrate their past experiences of video game gameplay?*" by defining more specific questions of:

RQ2.1: What are the most typical motifemes of contemporary video game gameplay?

RQ2.2: Is it possible to identify players' motifeme preferences, and do these preferences form categories, i.e., player motifeme preference factors?

RQ2.3: Can we identify player types based on players' preferred motifemes and demographic variables?

Content Analysis of the Video Gameplay Motifemes

The current study was launched with a bottom-up analysis of gameplay motifemes of contemporary video games. In contrast to folktales, motifemes are not easily recognizable from video games since games do not exist in fixed textual form. Therefore, the best methods for collecting data on gameplay motifemes would be playing the games or collecting other people's detailed descriptions on their gameplay experiences. I selected the latter approach for this study, based on the objective to investigate

a large body of video games regardless of the *game genres*[39] or technological platforms. For this purpose, I decided to analyze game reviewers' depictions of the gameplay motifemes.

Jaakko Suominen (2011) reports a content analysis he conducted on an extensive body of game review articles published mostly in the magazine, *MikroBitti*, in 1984–2010. Suominen, who analyzes how game reviews have constructed cultural identities and the cultural practice of gaming, notes that game reviews have not been studied much as a form of media critique, regardless of the fact that reviews are fundamental elements of game journalism. As he notes, game reviews are interesting in their combining role: they bring together game designers and their gaming audiences.

Suominen (2011) observes that game reviews as a form of art critique always include a subjective tone. Emphasis is on the reviewer's own personal impression and gameplay experience, including the game's playability and aesthetic aspects. Many reviewers adopt a personal style, which emphasizes first-person experiences of playing the game. This makes it easier for the reader to identify oneself with the reviewers' depiction of the gameplay. Furthermore, José P. Zagal, Amanda Ladd and Terris Johnson (2009), who have studied online game reviews, have identified gaming experience as one of the recurrent themes of game critiques. They write (ibid., p. 216): "Perhaps the most evident or obvious theme for a game review... covers the description of the features, modes and/or characteristics, and gameplay of a particular game." These notions are important for the current study since they clearly suggest that analyzing game review articles from both printed magazines and online sources should result in a body of descriptions of first-hand game experiences, including depictions of the gameplay of the game under review.[40]

The analysis of the current study was conducted by making a content analysis of a total of 700 written video game review articles from the Finnish video game magazines, *Pelaaja* by H-Town and *Pelit* by Sanoma Magazines, as well as from the entertainment websites, *IGN.com* and *toucharcade.com*. Both *Pelaaja* and *Pelit* review a versatile body of digital games, ranging from console and PC games to handheld games and mobile games. Both publish review articles about big budget games as well as indie games developed by small game companies. Similarly, IGN.com extensively reviews multiple types of games for all popular gaming platforms. TouchArcade, instead, only covers mobile games published for Apple's operating system, iOS.

The analyzed game reviews published in *Pelaaja* included 19 issues from 2013–2014 and a total of 342 review articles. From *Pelit*, a total of 224 review articles were analyzed, out of which 203 were published in 2014 and additional 21 reviews during the

[39] I return to this concept and its usages in video game cultures later in the current chapter.

[40] In 2012, Zagal, Noriko Tomuro and Andriy Shepitsen published an additional study in which they utilized Natural Language Processing (NLP), a field of computer science and linguistics, for the automated analysis of online game review data. By using this methodology, the authors clustered adjectives that modify the noun "gameplay" in user game reviews. The objective was to build an understanding of how 'gameplay' was used, discussed and negotiated by the players. For this purpose, the authors analyzed a massive amount of 397,759 user-generated game reviews, written by 111,943 unique users, and covering 8,279 individual game titles. The study conducted by Zagal et al. (2012) is, however, very different from the current one; where their study was based on analyzing the usages of the concept of 'gameplay,' my objective is to identify how the gameplay is described as a mode of ongoing activities between a player and a game.

years 1992–2004. The additional 21 review articles were chosen to cover earlier game genres and game types that were not reviewed in either *Pelaaja* or *Pelit* in 2013–2014. From IGN.com, a total of 66 game reviews published in 2014 were analyzed, and finally 68 mobile games were included in the analysis from toucharcade.com.

The 700 game reviews were analyzed with qualitative content analysis. Content analysis was utilized in this study as a systematic method for classifying data into themes and patterns by the processes of coding and abstraction, as described by Hsiu-Fang Hsieh and Sarah E. Shannon (2005). I conducted the analysis manually with the assistance of two game designer-researchers. The sample size was defined based on the saturation of the data during the process of the content analysis. The trustworthiness of the analysis was considered according to the procedures suggested by Elo et al. (2014), who contend that specifying the trustworthiness of data collection is especially important in inductive content analysis since the data is usually categorized by the researchers without a theory-based categorization matrix.

Elo et al. (2014, p. 3) propose that the trustworthiness of a content analysis process should be checked during each phase of the analysis. A content analysis consists of three main parts: 1) a *preparation phase* in which the data collection method is chosen, sampling strategy is decided, and the basic unit of analysis is identified; 2) an *organization phase* including categorization of the data, interpretation of the categories, and representativeness of the data for the phenomenon under analysis and; 3) a *reporting phase* consisting of reporting the results and the steps of the analysis.

The procedures of elucidating the trustworthiness of a content analysis include reporting each step of the analysis process accurately. Elo et al. (2014, p. 2) note that a researcher should take into account the following criteria of trustworthiness: credibility, dependability, conformability, transferability, and authenticity. Credibility means that researchers must be able to accurately identify and describe the researchers who participated in the study. The data must be stabile across varying conditions, which fulfills the criterion of dependability. Conformability denotes that the subjective interpretations by a researcher must be taken into account by letting several researchers interpret the data, following an identical analysis process to find out whether they arrive at similar conclusions. Transferability means that the study must be, in principle, generalized or transferred to another similar data set. Authenticity refers to how the researchers depict and report the data "fairly and faithfully."

Our approach to content analysis was summative, and started by identifying certain content or keywords from text data (Hsieh & Shannon, 2005). Propp (1968 [1928], p. 9) emphasized that in the case of Russian folk tales, functions are most often given in the form of a noun expressing an action, such as '*interrogation*,' '*flight*,' or '*interdiction*.' Similar to Propp's analysis, we focused on coding the review articles with a pretested categorization matrix by highlighting the descriptions that could be reliably interpreted to provide data to one of the predefined questions: 1) "*What will you be doing as the player of the game?*" (performance-based description); 2) "*What are the main activities the player will engage with during gameplay?*" (motifeme-

based description); 3) "*What are the main modes of player–game interaction the game will provide for the player?*" (dynamics-based description).[41]

We began reading the reviews and highlighting the phrases describing the *modes of activities significant for gameplay*, that is, motifemes, which I identified as our unit of analysis by following the argumentation of Propp (1968 [1928]) and Dundes (2007 [1962]). Then, the highlighted data was read again to derive initial codes. Gameplay motifemes were quickly recognized as important structures and themes of game reviews. All of the analyzed 700 reviews included at least one demonstration of the gameplay motifemes the player would enact during gameplay, whereas a typical article included four of such characterizations. This result was to be expected, since the concept of 'gameplay' has been widely used as an evaluative category in game criticism and game development since the mid-1980s (Kirkpatrick, 2012).

Next, the initial codes derived from the data were reviewed by myself and three other researchers who participated in the *Play for Reward* research project. After this phase of the analysis, dynamics-based phrases were coded again into a form similar to motifeme-based phrases. For example, a dynamics-based description, "*At its core, the game is about mastering fighting techniques and combo-attacks*" would have been re-coded into "*mastering fighting techniques and combo-attacks*." Similarly, a first-person performance-based description of "*I truly enjoyed beating foes by learning close-combat skills and techniques*" would have been re-coded into "*beating foes by close-combat skills and techniques*." More precisely, reviewers' descriptions were re-coded into *finite verb phrases* of abstracted gameplay activities, i.e., motifemes, that imply the player-subject in the head verb of the phrase and include its objects and complements.

In the next step of the analysis, indirect connections between the reviewed game and, e.g., genre conventions or previous games in the same series were singled out. Finally, the indirect descriptions were transformed into a similar finite verb phrase form as the direct depictions by following the reviewer's references to the characteristics of other games. After conducting these phases, 2900 individual characterizations in total were coded into finite verb phrases. A content analysis of a review of *Diablo III: Reaper of Souls* (Blizzard Entertainment) (published in the *Pelit* 9/2014 magazine), for example, revealed the following motifemes: "slaying demons," "leveling up and gaining new skills," "exploring new areas and villages," "selecting abilities and equipment for upcoming battles" and "joining into an endless grindfest." After identifying these motifemes, the results were compared to the gameplay descriptions of the other 699 game reviews.

In this phase of the content analysis, the syntagmatic approach to a game review article was changed into a paradigmatic approach, in which the focus was no longer on the individual 2900 characterizations of motifemes, but on whether these motifemes could be understood as *allomotifs* of a much smaller number of motifemes. For this purpose, the 2900 codings were compared and further categorized according

[41] I explicate in Figure 2 and Figure 3 how the concepts of 'performance,' 'motifeme/activity' and 'game dynamics' relate to each other. In principle, all three of these concepts describe the phenomenon of gameplay, albeit from distinguished perspectives; performance emphasizes a first-person view and player experience, game dynamics highlights the designed properties of a game system, and motifeme brings these two aspects together by focusing on the ongoingness of player–game coupling.

to the similarities in how a gameplay motifeme was described in the head verbs and the objects. Since game mechanics and game dynamics can be best described by verbs, the head verb was identified as the most important differentiating factor between motifemes. Abstractions of the recurrent objects and complements of the finite verb phrases were included in the process as secondary attributes of the identified core motifemes of video games.

The activity dynamic of "slaying demons" was, for example, combined with the findings from other game reviews that shared highly similar modes of player–game interaction such as "killing guards" and "slaughtering, hackin' and slashin' orcs." After the comparison process, these individual finite verb phrases were abstracted and finally coded as the core gameplay motifeme of "Killing, murdering and assassinating by shooting, stabbing or by other violent means" (Table 4, The Core Gameplay Dynamics Scale, item 26). The exact wordings used in the final video gameplay motifemes were selected based on the frequency of the verbs and objects mentioned in the individual finite verb phrases. Let me present an example of how allomotifs and motifemes were identified from the game review articles:

> *Tales of Xillia 2* is a Japanese counterpart for BioWare-like storytelling in which the decisions made by the player affect the relationship between characters and the destiny of the gameworld (*From the review article on Tales of Xillia 2 in Pelit 11/2014* [translated by the author]).
>
> Although the story is about finding a murderer, the job of the player is not really to reveal the mystery… Instead the player constantly makes choices by which the player creates her own interpretation of the identity of Bigby (*From the review article on The Wolf Among Us in Pelaaja 9/2014* [translated by the author]).
>
> By the finale you'll have made so many decisions—ranging from simple things like whether you play as a male or female all the way up to those governing life or death—that the result is a game that is yours and yours alone (*From the review article on Mass Effect 2 on Ign.com*).

These three short excerpts highlight different descriptions of a single motifeme, that of "making meaningful decisions that affect development of the story" (Table 4, item 27). Thus, these three games are to be taken as *allomotifs* of this recurrent motifeme in contemporary video game gameplay. Whereas phrases describing the motifeme of "acting as the protagonist and making meaningful choices" and "killing by violent means" were common among the 700 games, some of the items shown in Table 4 were only described in a few individual review articles.

Item	*Gameplay Motifeme*	*Mean*	*SD*
1	Solving problems that require logic, reasoning or analytic thinking	5.42	1.24
2	Creating your own playable character	4.62	1.78
3	Stealing, breaking in, hacking, driving recklessly and breaking the law in other similar ways	3.25	1.88
4	Hiding, fleeing and running for your life	3.45	1.90
5	Exploding, wrecking, crushing and destroying	3.55	1.93
6	Building, expanding and enhancing a city, a village or a base	4.58	1.80
7	Wild experimenting, testing and playing around in a game world	4.26	1.74
8	Building friendships between game characters and working together towards a common goal	4.07	1.83
9	Fighting by using close combat skills and techniques	3.59	1.88
10	Showing affection like flirting, hugging, kissing or making love	3.25	1.80
11	Racing or competing in sports to win	3.75	1.89
12	Developing your own character and its skills and abilities	4.78	1.91
13	Defending your own territory, city, tower, property or characters against threats	4.24	1.84
14	Collecting rare items and treasures hidden in the game	4.72	1.76
15	Managing groups, clans or cities and their residents	3.97	1.80
16	Matching three tiles or other elements together (for example: *Tetris*, *Bejeweled*)	4.27	1.80
17	Dancing, singing or playing instruments together and staying in rhythm	3.23	1.81
18	Skilled steering of a space ship, a plane, a car, an animal character or a game character	3.96	1.80
19	Jumping from platform to platform while avoiding obstacles	4.10	1.72
20	Shooting multiple enemies and evading enemy fire with fast speed	3.63	1.98
21	Considering and coming up with a strategy and choosing resources for it	4.59	1.78
22	Planning and executing a battle tactic or another tactic	4.15	1.96
23	Training and taking care of pets	3.22	1.77
24	Upgrading and improving objects, vehicles and weapons	4.04	1.86
25	Exploring the gameworld and uncovering the game's secrets, mysteries and story	4.75	1.97
26	Killing, murdering and assassinating by shooting, stabbing or by other violent means	3.38	2.01
27	Acting as the main character, immersing in the role and making meaningful decisions	4.51	2.05
28	Waging war and conquering territories, villages, towers and cities	3.67	1.99
29	Building and crafting houses, ships, items, equipment or weapons	4.08	1.85
30	Reaching an agreement, for example by trading, negotiating or making a truce	3.90	1.80

31	Surprising an opponent or enemy by sneaking, stalking or using traps	3.92	2.02
32	Acquiring food, equipment, energy or money through farming, mining or working	4.02	1.85
33	Gambling, betting and taking risks	3.39	1.78

Table 4. *The Core Game Dynamics (CGD) Scale, as identified in the Qualitative Analysis, and their mean preference sums and standard deviations in the survey.*[42]

As the result of the described content analyzing process, the 2900 coded phrases were eventually categorized into a total of 33 video gameplay motifemes (Table 4). The final number of 33 motifemes was deliberately kept large to avoid the problems of reducing the phenomenon of video game gameplay into too few categories in a similar fashion as commercial video game genre classifications arguably do. Instead of continuing to make higher-level abstractions by further interpreting the data by ourselves, we began to empirically investigate whether factors for gameplay motifemes could be revealed based on game players' gameplay preference patterns.

Survey of the Motifeme Preferences in Video Game Gameplay

A survey was conducted by the *Play for Reward* research team to examine players' preferences for the identified 33 video game gameplay motifemes. Two thousand participants were recruited via a company specialized in survey research in order to obtain representative samples from Danish (n=1000) and Finnish (n=1000) populations. Moreover, 594 participants were recruited by sending out invitations via social media and mailing lists of organizations at the University of Turku, Finland. A total of 2,594 respondents participated in the survey during December 2014.

The age of the participants ranged from 12 to 70 years. Only the data for the adult participants (age > 17 years) who reported playing more than one hour per week were included in the final sample, resulting in N=1,718. The mean age of the participants was 38.10 years (SD=14.18), and 46 percent (n=789) were women.

The gameplay preference questionnaire of the survey consisted of the 33 motifeme items identified previously (see Table 3). When responding, participants were instructed to think about themselves as players and the games that they prefer to play. They then responded on a scale from 1 to 7 how pleasant (1 = very unpleasant, 7 = very pleasant) they found each of the given gameplay motifemes, considering their own gaming experience as active players.

The survey also included questions regarding the participant's age, gender, and gaming habits and some other scales. The original version of the survey was written in Finnish. The Finnish version was translated into English with a back-translation

[42] Although the current study focuses on identifying the motifemes or core gameplay activities of video games, I chose not to relabel this scale accordingly but retain the original title "The Core Game Dynamics (CGD) scale" as published in Vahlo et al. (2017).

procedure by two of the project researchers, and the Danish version was translated from an English language version of the survey by a professional translator.

Moreover, respondents' motivations to play video games were studied by asking how important (1 = not at all important, 5 = very important) 12 general reasons to play were to the participants. The scale was constructed by a pilot study (N=50) and focus group interviews. It included items describing *Immersion*, *Social*, and *Achievement* (Yee, 2006): "I play because I want to immerse in games," "I play online games because of the company," and "I play for the experience of achieving," as well as *Competition* and *Challenge* (Sherry et al., 2006): "I play because of the competition," and "I play for the challenge."

Factor Analysis of the Gameplay Motifeme Preference Scale

The descriptive statistics of the ratings for the 33 questionnaire items are presented in Table 5. An exploratory factor analysis using principal factors extraction and varimax rotation was conducted to explore the factor structure of the gameplay motifeme preference items, using data from 1,718 respondents. As J. J. Hox and T. M. Bechger (1998) write, factor analysis is a statistical technique for investigating whether covariance between the observed variables (here: the 33 items of The CGD scale) can be explained by a more restricted number of latent variables, or factors. In exploratory factor analysis, there is no theory-bound hypothesis on the expected number of latent factors, and the relations between probable latent factors and observed variables is argued to be unknown.

Since the data were Likert-scale responses, factor analysis was computed using polychoric correlations. The number of factors to be extracted from the data was first defined using Velicer's minimum average partial (MAP) test. Factor loading > .50 was used as a criterion for defining that an item loaded on a factor. In the first solution, five items (1, 7, 11, 18 and 33) had factor loadings < .50, and they were dropped. The second iteration with the remaining 28 items produced a solution with 5 factors, all items showing loadings > .50 on at least one factor (see Table 5).

Eight items (3, 4, 5, 9, 20, 26, 28, 31) loaded on the first factor. High scores in these items indicate that the player expresses the desire to engage with the motifemes of killing and murdering; wrecking, crushing, destroying and blowing things up; shooting enemies and avoiding enemy fire; stealing, hacking, speeding and breaking the law; hiding, fleeing and running for your life; surprising an opponent or enemy by sneaking; and waging war and conquering territories, villages, towers and cities. This gameplay motifeme factor was labeled as *Assault* since all the motifemes describe aggressive or destructive player conduct.

Eight items (6, 13, 15, 21, 24, 29, 30, 32) loaded on the second factor. These items reflect that the player is attracted by modes of interaction based on acquiring food, equipment, energy or money through working; developing and expanding a city or a base and; building and crafting houses, equipment or weapons. Moreover, motifeme items on this factor indicate high interest in defending one's own territory and its inhabitants against threats; managing material resources, cities and their citizens; upgrading and improving objects, vehicles and weapons; planning a strategy and choosing resources to implement it; and reaching an agreement by trading or negotiating. This gameplay motifeme factor was coined as *Manage*.

Six items (2, 8, 12, 14, 25, 27) loaded on the third factor. These items reveal that a player is fascinated by exploring the gameworld and uncovering its secrets and mysteries; acting as the protagonist by making meaningful decisions; befriending in-game characters; collecting rare and hidden items, weapons and treasures; creating a playable avatar; and developing its skills and abilities. The factor was named *Journey*.

Two items (10, 23) loaded on the fourth factor. The items reflect that a player is attracted to performing in games by way of flirting, kissing, hugging and making love; and training and taking care of pets. The gameplay motifeme factor was labeled as *Care.*

Three items (16, 17, 19) loaded on the fifth factor. The items illustrate that a player is drawn to motifemes of matching tiles or other elements together; jumping from platform to platform while avoiding obstacles; and by staying in rhythm through dancing, singing or playing instruments. This factor was coined *Coordinate.*

Finally, the item of planning and executing a battle tactic or another tactic (22) showed cross-loadings on two factors, namely on *Assault* and *Manage*.

By calculating Cronbach's alpha, we estimated the internal consistency for each of the five scales, and how consistently the respondents replied in the survey. Generally speaking, alphas over .90 can be regarded as excellent, over .80 as good, and over .60 or .70 as acceptable (Kline, 2010, pp. 69–70). Descriptive statistics and Cronbach's alphas for the game dynamics preference categories are represented in Table 5. The internal consistency reliability for a scale is higher if there are more than a few items in it (ibid.).

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Uniqueness
2			0.5755			0.3829
3	0.7866					0.2778
4	0.7795					0.2844
5	0.8352					0.2340
6		0.7134				0.3466
8			0.5046			0.3053
9	0.7060					0.3247
10				0.6040		0.4062
12			0.6856			0.2216
13		0.6249				0.2951
14			0.5568			0.3833
15		0.6972				0.2963
16					0.6037	0.5929
17					0.5551	0.4930
19					0.5989	0.4443
20	0.8249					0.2225
21		0.6736				0.3300
22	0.5748	0.5881				0.2634

23				0.5162		0.4441
24		0.5029				0.3458
25			0.6889			0.2160
26	0.8673					0.1707
27	0.5005		0.6164			0.2013
28	0.7252	0.5271				0.1750
29		0.6601				0.2813
30		0.6441				0.3000
31	0.7586					0.2130
32		0.6920				0.3697
Mean	3.5566	4.1750	4.5728	3.2309	3.8672	
Std. Dev.	1.6724	1.4945	1.5609	1.5492	1.3743	
Alpha	0.9514	0.9411	0.9077	0.6682	0.6630	

Note: Mean, standard deviation and Cronbach's alpha are calculated using items with loadings above 0.5.

Table 5. *Factor Loadings (Loadings > .5 bolded), uniqueness for Items of The CGD scale and descriptive statistics for scale sums.*

In order to examine the discriminant validity of the scales, we computed bivariate correlations (Spearman rank-order) between gameplay motifeme preference factor scores and motivations to play variables. As a rule-of-thumb, correlations under .20 can be considered very weak, between .21–.39 weak, between .40–.59 moderate, between .60–.79 strong, and over .80 very strong (Evans, 1996).

Assault correlated positively with all five play motivations of *Social* (r=.40), *Immersion* (r=.36), *Achievement* (r=.32), *Competition* (r=.27), and *Challenge* (r=.27). *Manage* showed weak positive correlations with all play motivations (greatest r=.23, smallest r=.19). *Journey* correlated with *Immersion* (r=.41), and weakly with *Achievement* (r=.24), *Challenge* (r=.23), and *Social* (r=.11). *Care* correlated weakly with *Social* (r=.12) but not with other motivations to play (greatest r=.05). Finally, *Coordinate* did not correlate with any of the motivations to play (greatest r=.09).

Cluster Analysis of the Gameplay Motifeme Preferences

Next, we identified clusters of players who shared gameplay motifeme preferences. First, factor scores for the preference categories of *Assault, Manage, Journey, Care* and *Coordinate* were computed for each participant based on the exploratory factor analysis reported above. The factor scores were z-transformed, that is, standardized per participant, and the standardized factor scores were then subjected to a *complete linkage*[43] cluster analysis (K-Means) in order to recognize player types based on their motifeme preferences. The standardization procedure makes samples comparable, which then makes conducting a cluster analysis easier. The cluster analysis identified

[43] https://en.wikipedia.org/wiki/Complete-linkage_clustering

seven player types based on the Calinski-Harabasz pseudo-F stopping rule. Descriptive statistics of the background variables for each player type are presented below:

Measure	Player Cluster						
Gameplay motifeme category	1	2	3	4	5	6	7
Assault	1.039	-1.339	-0.194	0.419	-1.216	0.972	-0.361
Manage	0.261	0.428	1.339	-0.776	0.369	0.292	-0.043
Journey	0.319	0.371	0.264	1.323	0.948	-1.186	-0.291
Care	-1.584	0.648	-1.320	-0.727	-0.877	-0.824	-0.911
Coordinate	-0.034	-0.108	-0.089	-0.239	0.776	0.746	1.606
Mean age (years)	31.6	40.8	37.8	31.5	42.3	39.6	45.3
Proportion of women	24%	72%	27%	45%	78%	31%	71%
Play min/week	1030	640	820	910	630	650	600
Play min/session	72	47	56	77	42	44	33
n	335	137	322	178	271	249	225

Note. Play Min/week = Game play minutes per week, Play Min/session = Gameplay minutes per session, n = Number of participants.

Table 6. *Means of Factor Scores of Gameplay Motifeme Preferences and the Background Variables for the Seven Player Clusters.*

Cluster 1 (335 respondents, 19.5%) showed the highest preference for *Assault* and a low preference for *Care* when compared to the other clusters. Most of the respondents in this cluster were men (76%), with a mean age of 31.6 years. They ranked the highest in average weekly play hours (17.1) and the second highest in play session times (72 mins). Of the gameplay motifemes, they favored most sneaking, shooting enemies, killing and executing battle tactics. Other highly favored items included acting as the main character, developing its skills and abilities, and exploring the gameworld. The disliked motifemes for this player type were staying in rhythm by dancing and singing, and training pets. The player type was named *The Mercenary.*

Participants in Cluster 2 (137 respondents, 8.0%) showed the greatest dislike for the motifemes of *Assault* of the player clusters. They indicated a moderate preference for *Care* and a slight preference for *Manage* and *Journey*. A total of 72 percent of the cluster respondents were women, with the mean age being 40.8 years. On average, they played 10.7 hours weekly, with typical play sessions of 47 minutes. They reported relatively high preference scores for befriending in-game characters, creating an avatar, developing its skills and abilities, and developing a city or village. They revealed a strong dislike for killing, waging war, shooting enemies, and exploding. The player type was labeled *The Companion.*

Cluster 3 (322 respondents, 18.8%) favored the gameplay motifemes of *Manage* strikingly more than other player clusters, and clearly showed lower preference scores for all the other dynamic types, especially for *Care*. A typical participant in this player type was a 37.8-year-old man (73%) who played 13.6 hours weekly in play

sessions of 56 minutes. These respondents were highly attracted to strategizing, building and developing a city or a base, defending their own territory, and managing cities and their citizens. They disliked the motifemes of *Care* but also stealing and breaking the law, hiding and running for your life, and staying in rhythm. The player type was named *The Commander.*

As opposed to Cluster 3, Cluster 4 (178 respondents, 10.4%) displayed low scores for *Manage*, the highest score for *Journey* and a slight preference for *Assault*. A total of 45% of the participants were women, and their mean age was 31.5 years. They played 15.1 hours weekly, and 77 minutes at a time, which was the longest typical play session time of the identified player types. They showed very high preferences in creating a character, developing its skills and abilities, acting as the protagonist, exploring the gameworld and uncovering its secrets, and befriending in-game characters. They did not prefer racing and competing in sports, matching tiles, playing instruments and dancing, or taking care of pets. The player type was labeled as *The Adventurer.*

Similar to Cluster 4, Cluster 5 (271 participants, 15.8%) showed a clear preference for *Journey*. In contrast to *The Adventurer,* however, this player type strongly disliked the motifemes of *Assault*. They also appreciated *Coordinate* but not *Care*. An average respondent in this cluster was a 42.3-year-old woman (78.0%) who played 10.5 hours weekly in play sessions of 42 minutes. The player type revealed the highest preference of all the player types for collecting rare items and treasures. They enjoyed also exploring the gameworld, developing a character's skills and abilities, and matching tiles together, but disapproved of stealing, exploding, and running for your life more than any other player clusters. The player type was named *The Explorer*.

Player Cluster 6 (249 respondents, 14.5%) enjoyed *Assault* the second most of the player types, and preferred *Coordinate*, similar to *The Explorer*. When compared to the other clusters, the participants of this player type showed the strongest dislike for *Journey*, and also a clear disapproval for *Care*. Most of the respondents in this cluster were men (69.0%, 39.6 years) who played 10.8 hours weekly in play sessions of 44 minutes. They favored racing more than other player types, and also moderately exploding, sneaking and shooting. They did not show a strong dislike for any of the 33 game dynamics. The player type was labeled *The Daredevil*.

Finally, Cluster 7 (225 participants, 13.1%) differed from previous player types by showing low preferences in all motifeme types with the exception of *Coordinate*, which they enjoyed clearly more than the other clusters. A typical participant in this cluster was a woman (71.0%) of 45.3 years who played 10.0 hours weekly in play sessions of 33 minutes. They showed the highest preference score for matching tiles or other elements together as well as a moderate preference for jumping between platforms and collecting rare items, but disliked many other gameplay motifemes, especially killing, stealing, destroying and waging war. This player type was coined *The Patterner.*

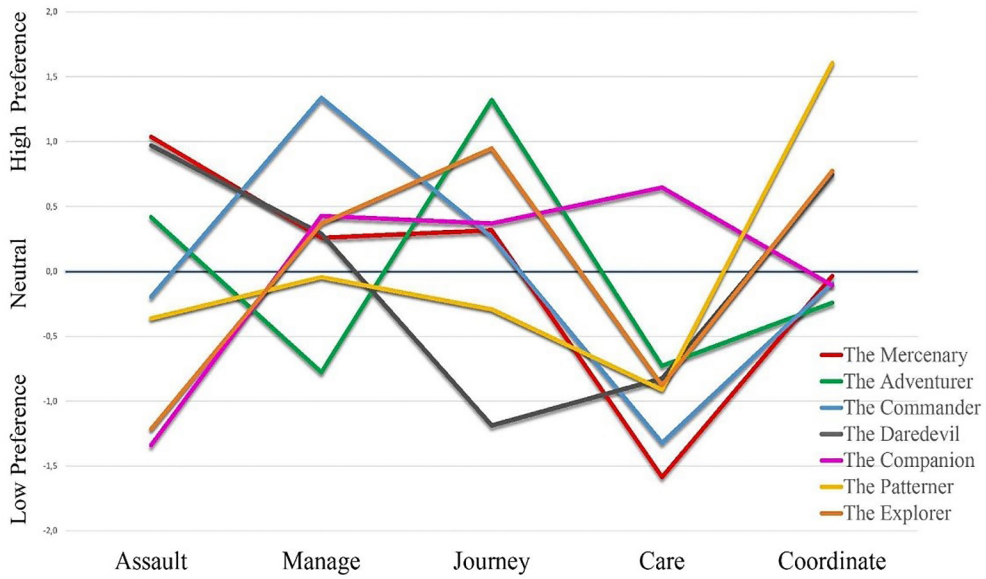

Figure 4. *Gameplay Motifeme Category Preferences (Mean Factor Scores) Separately for the seven player types.*

The identified seven player clusters suggest that player types cannot be described simply based on clear-cut differences between their favorite gameplay activities or motifemes. Thus, in Vahlo et al. (2017), we propose that player types can be identified not by classifying players according to a single most preferred gameplay motifeme category, but by examining the pattern of preferences for the five categories. For understanding player groups and gamer segments, it is paramount to also take into consideration the motifemes players find neutral or downright unpleasant. By following this principle, we coined the player types *The Mercenary, The Companion, The Commander, The Adventurer, The Patterner, The Daredevil* and *The Explorer*.[44]

Journey was the most favored category of gameplay motifemes, with the item of "Developing your own character and its skills and abilities" being the most attractive of the 28 items included in the final analysis. The second most favored motifeme category was *Manage*, only marginally ahead of *Coordinate*. Remarkably, *Assault* was either strongly favored or just as heavily despised. *Care*, on the other hand, was the least preferred motifeme category, which may be partly because relatively few players have experienced this type of gameplay first-hand. However, the player type of *The Companion* implies that there might be a consumer segment willing to play more games of this type.

The survey (N=1,718) included a question in which the respondents were asked to specify how often (1=not at all, 2=less than once a month 3=a few times every month, 4=weekly, 5=daily) they had played with particular gaming technologies during past 12 months. Of the fixed options, playing with PC had the highest mean sum (3.4), while the second highest mean sum across the data was in free-to-play mobile

[44] See Appendix 1 of this thesis for concept arts of the seven player types.

games (3.1). This was followed by browser-based games (2.4), multiplayer online games (2.4), and console games (2.4). To study whether respondents who played mobile games more than PC and console games appreciated gameplay motifemes differently than game players overall, I computed a variable for those respondents who reported playing digital games at least one hour weekly and mobile games every week or more often (n=847). I then excluded from this sub-group those who reported that they also played PC or console games weekly or more often. This resulted in a smaller group of 238 respondents (142 women, 60%) who played mobile games relatively often but PC and console games relatively rarely.

I then calculated mean motifeme category sums for the sub-group of mobile gamers. Also amongst this sub-group (n=238), *Journey* was the most favored motifeme category (mean 3.97) but *Coordinate* was equally highly appreciated (mean 3.95). These were followed by *Manage* (mean 3.56) and *Care* (mean 2.96). *Assault* was the least favored motifeme category for the sub-group of mobile game players (mean 2.70). It is notable that the mean sums for every motifeme category were much lower in this sub-group than in the entire data set of 1,718 respondents (see Table 4). Moreover, the relative sizes of the seven clusters were different. Of the 238 mobile game players, 13 (5.5%) were of *The Adventurer* type, 21 (8.8%) of *The Mercenary* type, 30 (12.6%) of *The Daredevil* type, 33 (13.9%) of *The Companion* type, 35 of *The Commander* type (14.7%), 46 (16.8%) of *The Patterner* type, and 60 (25.2%) of *The Explorer* type.

Importantly, although some of the revealed player types can be labeled typical for either men (*The Mercenary, The Commander*, *The Daredevil*) or women (*The Companion*, *The Explorer, The Patterner*), all of the clusters (N=1,718) included both male and female players. The player type of *The Adventurer* showed fairly equal proportions of men (55%) and women (45%). These results contradict gaming stereotypes, according to which gaming preferences of men and women greatly differ from each other. Somewhat similar findings have been reported earlier in a study conducted by Terlecki et al. (2011), according to which both men and women enjoyed, e.g., adventure games (cf. Hartmann & Klimmt, 2006).

The assessment of discriminant validity showed that game motifeme preference categories are not to be equated with general motivations to play. The CGD scale does not assess play motivations, but preferences in different modes of player–game interaction. Importantly for future research, however, there may be relevant unexplored correlations between motivations to play and preferences in specific game dynamic types.

The list of 33 core gameplay motifemes included in The CGD scale (Table 4) is not intended to be conclusive but to cover the most typical gameplay motifemes. In addition to the interpretation of analyzers, the list is influenced by game reviewers' ways of describing gameplay as well as what types of games are being reviewed. The survey also included an open-ended question of preferred motifemes. Responses to this question revealed three potential core gameplay motifemes: decorating, dressing up, and creating gameworlds and levels. These could be included in the next version of The CGD scale. Moreover, the item describing flirting, hugging, kissing and making love could be split into two or three individual items inasmuch as they do indeed describe distinctive types of activities rather than a single whole (see Grace 2013).

The gameplay motifemes of gambling (33), being playful (7), problem-solving (1), racing and competing in sports (11) and skilled steering (18) were not included

in the present analysis since they did not show clear loadings on the five factors. There may be several reasons for this outcome. The items of taking risks and being playful can be interpreted to describe a player's *play style*, i.e., how a game is played, more than a standalone game motifeme. Problem-solving can be argued to be an element of every digital game, as gameplay largely consists of in-game challenges (Adams, 2014). Prior research also suggests that problem-solving in puzzles does not constitute a dynamic component, since many puzzles are static and can only be *solved* instead of played (Karhulahti, 2015a, pp. 25–34).

Racing and competing in sports as well as skilled steering may indicate that The CGD scale could be complemented with items that describe different aspects of skillful maneuvering and athletic performances. These descriptions were scarce in the data of 700 game review articles since reviewers of racing, flying and sport simulation games tend to concentrate on describing singular game mechanics and technological solutions rather than game dynamics or gameplay motifemes.

Study 2: Developing the Core Game Dynamics Scale

In Study 1, we revealed that five of the 33 items of The Core Game Dynamics scale (Table 5) did not show clear loadings on any of the five factors. Furthermore, the data from open-ended questions of the survey indicated that a few additional items could be included in The CGD scale development. I report here an additional study in which I investigated whether a similar factor structure could be revealed from a new set of data when the indicated changes in the scale had been taken into account.

First, as suggested previously, items 7: "Wild experimenting, testing and playing around in a game world" and 33: "Gambling, betting and taking risks" illustrate players' play styles rather than gameplay motifemes. Thus, I excluded these two items from the second version of The CGD scale. Second, problem-solving and other items that describe the *types of challenges* players encounter in video games are not equivalent to gameplay activities but instead are of a higher-order. For instance, one can solve logical challenges, memory challenges, tactical challenges or challenges that require strategic or lateral thinking in games that include various types of gameplay motifemes. Gameplay challenges depict game dynamics, but these dynamics differ to gameplay motifemes, since they specify primarily what kinds of skills are required to successfully play, whereas gameplay motifemes are descriptions of an activity enabled by a game and enacted by a player. The observation that game dynamics may be interpreted to cover both *gameplay challenges* and *gameplay activities* further justifies the current usage of the concept of gameplay motifemes (i.e., gameplay activities) over game dynamics (Vahlo & Koponen, 2018). Based on this observation, I excluded not only item 1: "Solving problems that require logic, reasoning or analytic thinking" but also items 21: "Considering and coming up with a strategy and choosing resources for it," and 22: "Planning and executing a battle tactic or another tactic."

Third, the data of the open-ended questions of Study 1 indicated that the scale could be complemented with items describing motifemes of decorating, dressing up, and creating new levels for a game. I constructed such items and these are included in the 2nd version of The CGD scale. Fourth, in Vahlo et al. (2017), we proposed that

item 10: “Showing affection like flirting, hugging, kissing or making love” could be divided into two items. Indeed, I propose that also the original items 11: “Racing or competing in sports to win,” 17: “Dancing, singing or playing instruments together and staying in rhythm,” 25: “Exploring the gameworld and uncovering the game’s secrets, mysteries and story,” and 30: “Reaching an agreement, for example by trading, negotiating or making a truce” could be split into two items or rephrased to express a single gameplay motifeme in a more clear fashion. Finally, I decided to remove item 13: “Defending your own territory, city, tower, property or characters against threats,” because I interpret it to describe in principle the same motifeme as item 28: “Waging war and conquering territories, villages, towers and cities,” albeit from a defensive perspective.

As a result of these refinements, the 2nd iteration of The CGD scale consisted of 22 items that were very similar to the corresponding items in the original scale, 6 items that consisted of 3 original items (items 10, 17, 25), each divided now into two individual items, 2 items that were simplified to more clearly describe a single gameplay motifeme (items 11, 30), and three completely new items. The refined CGD scale therefore also consists of 33 items:

Item	*Gameplay Motifeme*	*Mean*	*SD*
1	Killing, murdering or assassinating	2.77	1.33
2	Exploding or destroying	2.96	1.20
3	Shooting enemies and avoiding enemy fire	2.68	1.26
4	Stealing, hacking or breaking in	2.78	1.25
5	Hiding and fleeing for your life	2.75	1.24
6	Sneaking or laying traps to surprise an enemy	3.13	1.24
7	Waging war and conquering	2.74	1.28
8	Fighting by using close combat skills and techniques	2.67	1.21
9	Building and developing a city or a base	3.23	1.15
10	Managing and directing cities and their inhabitants	3.07	1.15
11	Generating or gathering resources such as energy or money	3.08	1.14
12	Crafting items and weapons by combining raw materials	2.99	1.17
13	Producing vehicles, units or weaponry	2.95	1.19
14	Exploring the gameworld and its locations**	3.74	1.12
15	Developing skills and abilities	3.60	1.09
16	Acting as the protagonist and making meaningful choices	3.53	1.17
17	Creating your own character	3.49	1.12
18	Searching for and collecting rare or hidden treasures	3.58	1.06
19	Befriending in-game characters*	3.06	1.17
20	Flirting, seducing and romantic dating**	2.59	1.23
21	Taking care of pets and training them	2.71	1.16
22	Matching tiles, diamonds or other objects together	3.15	1.11
23	Jumping from one platform to another while avoiding obstacles	3.20	1.12
24	Staying in the rhythm and moving to the beat**	2.71	1.07

25	Decorating rooms or houses***	2.86	1.24
26	Dressing up and make-up***	2.66	1.27
27	Racing at a high speed**	3.00	1.27
28	Steering, piloting or maneuvering a vehicle or another object	2.99	1.19
29	Investigating the story and its mysteries**	3.62	1.12
30	Performing music, singing in tune or dancing**	2.75	1.25
31	Making out or having sexual affairs**	2.55	1.27
32	Trading items, weapons or resources*	3.10	1.12
33	Designing and creating your own game levels or gameworlds***	2.77	1.12

* Item refined to describe a more specific motifeme
** Item produced by dividing an item of the original scale into two items
*** A completely new item added to the 2nd version of The CGD scale

Table 7. *The Core Game Dynamics Scale, 2nd iteration, and the mean preference sums and standard deviations of the 33 items in the survey (N=845).*

To investigate whether the refined CGD scale would result in a similar gameplay motifeme factor structure as was revealed in Study 1, I conducted an additional survey on players' preferences in game dynamics. The research questions for the second survey were:

RQ2.4: Will the refined CGD scale result in a similar factor structure as the original scale?

RQ2.5: Could the refined CGD scale be regarded as an improvement in comparison to the original scale?

Second Survey of the Gameplay Motifeme Preferences

A survey was conducted to explore players' preferences for gameplay motifemes. A total of 845 participants from Finland were recruited via a company specialized in survey research in December 2015. The age of the participants ranged from 18 to 55 years. Similar to Study 1, the data was collected using a web-based survey tool. Answering the whole survey took about 20 minutes.

At the beginning of the survey, the respondents were asked to specify, on a scale from 1 to 5, how interested they were in video games and playing them (1=not at all, 5=very interested). If a respondent replied that she was not at all interested in games, she was thanked for participating in the study and instructed to quit the survey. This was done because I was interested in how people who were at least slightly interested in video game gameplay reflected on their gameplay preferences. The sample of 845 was representative in relation to age, gender, and regions in Finland. It is there-

fore plausible to say that the data adequately represents the Finnish game player population. The mean age of the participants was 34.57 years (SD=10.30), and 50.8% (n=429) were women.

The gameplay motifeme preference inventory of the survey consisted of 33 items (The CGD scale, 2nd iteration, Table 7). When responding, participants were instructed to think about themselves as players and the games that they prefer to play. They then responded on a scale from 1 to 5 how pleasant (1 = very unpleasant, 5 = very pleasant) they found each of the given gameplay motifemes, considering their own gameplay experience as players. As in the first study, the survey included questions regarding the participant's age, gender, and gaming habits and some other scales, including a motivations to play scale, which I report on in Chapter 9. Since Study 2 was explorative, like Study 1, I did not form hypotheses about its expected results.

Factor Analysis of the Refined Gameplay Motifemes Preference Scale

The descriptive statistics of the ratings for the 33 survey items are presented in Table 8. I decided to analyze the data (N=845) in a similar manner as I handled the original data (N=1,718), by conducting an exploratory factor analysis using principal factor extraction and varimax rotation. By doing so, I aimed to reveal the latent factors of the gameplay motifeme preference items.

This data set was also collected through Likert-scale responses, and polychoric correlations were used for computing factor analysis. The number of factors to be extracted from the data was again first defined by using Velicer's minimum average partial (MAP) test. Only items showing clear loading > .50 on a factor were accepted. Item 33: "Designing and creating your own game levels or gameworlds" did not show loading > .50 on any factor, and it was dropped. The second iteration with 32 items produced the final solution in which all items showed loadings > .50 on at least one factor (see Table 8).

Ten items (1–8, 27, 28) loaded on the first factor. Eight of these items (1–8) were identical to those that loaded on the factor, *Assault*, in Study 1. In addition to the items of killing, exploding, shooting enemies, stealing, hiding and fleeing, sneaking, warfare, and close-combat, the items describing racing at a high speed (27) and piloting vehicles (28) loaded on Factor 1. Because of the shared qualitative characteristics of these 10 items and their similarities to the items of Study 1, I retain *Assault* as the name for this factor.

Seven items (14–19, 29) loaded on the second factor. Five of these items were very similar to those that loaded on the factor, *Journey*, in Study 1. The two remaining items, 14: "Exploring the gameworld and its locations" and 29: "Investigating the story and its mysteries," were constructed by dividing the original item of The CGD scale (Table 3), 25: "Exploring the gameworld and uncovering the game's secrets, mysteries and story," into two individual items describing singular gameplay motifemes. Interestingly, these two items showed the two highest loadings on factor two (Table 7). All of the items that loaded on this factor reflect players' preferences in the motifeme type of *Journey*.

Six items (9–13, 32) showed clear loadings on the third factor. Items 9, 10, 11, 12 and 13 were all similar to those items that loaded on the factor, *Manage*, in Study 1. The additional item, 32: "Trading items, weapons or resources," which was

extracted from the original item, 30: "Reaching an agreement, for example by trading, negotiating or making a truce," (The CGD scale, Table 4) also loaded on this factor. The factor describes a player's preferences in the motifeme type of *Manage.*

Five items (20, 21, 25, 26, 31) loaded on the fourth factor. Similar to the factor, *Care*, in Study 1, these items include the motifeme describing taking care of pets (item 21, Table 7), and the motifemes that describe romantic activities (items 20 and 31, Table 7). As hypothesized, the items on this factor reveal players' preferences in the new motifeme items of decorating (item 25), and dressing up and make-up (item 26). Thus, the factor label, "*Care*," still seems fitting.

Finally, four items (22–24, 30) loaded on the fifth factor. Identically to the factor, *Coordinate*, in Study 1, these items describe player preferences in matching tiles together (item 22) and jumping on platforms (item 23). Moreover, the items describing performing music (30) and staying in the rhythm (24) loaded on this factor of *Coordinate.* Descriptive statistics and Cronbach's alphas for the game dynamics preference categories are presented in Table 8.

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Uniqueness
1	0.8283					0.2006
2	0.7557					0.3747
3	0.8659					0.2023
4	0.7067					0.3078
5	0.6787					0.3845
6	0.7288					0.2720
7	0.7034					0.2313
8	0.7634					0.3182
9			0.7793			0.2584
10			0.7394			0.2846
11			0.7367			0.2914
12			0.6442			0.3236
13			0.5306			0.4649
14		0.8164				0.2152
15		0.6683				0.3842
16		0.6871				0.2839
17		0.6462				0.3268
18		0.7006				0.3853
19		0.5294				0.3316
20				0.7950		0.2537
21				0.5528		0.4645
22					0.5821	0.6118
23					0.5797	0.4884
24					0.5584	0.5903
25				0.7053		0.3279

26				0.6456		0.4302
27	0.6460					0.4600
28	0.6696					0.4292
29		0.7319				0.3664
30					0.5262	0.5565
31				0.6142		0.3610
32			0.5892			0.3138
Mean	2.8467	3.5170	3.0698	2.6733	2.9503	
Std. Dev.	0.9818	0.8868	0.9341	0.9258	0.8121	
Alpha	0.9313	0.9003	0.8959	0.8061	0.6761	

Note: Mean, standard deviation and Cronbach's alpha are calculated using items with loadings above 0.5.

Table 8. *Factor Loadings (Loadings > .5), uniqueness for Items of The CGD scale, 2nd iteration, and descriptive statistics for scale sums.*

The factor analysis of Study 2 with another data set of 845 Finnish respondents revealed five highly similar factors to those of Study 1. With the exception of item 33: "Designing and creating your own game levels or gameworlds," all of the 32 items loaded on a single factor without showing cross-loadings on other factors. Although item 33 describes a type of player activity in relation to a game, it remains questionable whether this item portrays gameplay rather than free-form play. The practice of designing and creating, e.g., levels for a game may converge into merely playing with a digital environment instead of overcoming in-game challenges of any kind. This may be one reason why this item did not show loading on any of the five factors.

All of the other items developed for The CGD scale did show strong and clear loadings on a factor. From these perspectives, Study 2 did improve the scale. It also revealed that the five-factor structure of gameplay motifeme type preferences is repeatable. However, I did not conduct a confirmatory factor analysis to *study construct validity*, *convergent validity* or *discriminant validity* of the five-factor model, and this is indeed an important research area for future research on gameplay motifeme preference factors. Another significant subject for research would be to analyze whether cultural differences influence the motifeme factor structure.

It is important to further investigate whether items describing sports fit into the model of five factors or do they, for example, constitute a sixth factor. This is also relevant for confirming whether items 27: "Racing at a high speed" and 28: "Steering, piloting or maneuvering a vehicle or another object" load consistently on the *Assault* factor, given that both of these items cross-loaded in Study 1 between *Coordinate* and *Assault*.

In Study 1, I report a discriminant validity test in which we revealed that the gameplay motifeme categories were not to be equated with motivations to play. Since gameplay is largely about the challenges the player encounters and the ways the player manages to overcome these challenges (Adams, 2014), it is also possible that the motifeme system measures players' preferences in challenges instead of in performative player activity.

The survey of 845 respondents included a set of items inquiring about the respondents' preferences in different types of in-game *challenge types* (Likert-5 scale 1 = very unpleasant, 5 = very pleasant). The challenge-type items described: (1) *spatial puzzles*, (2) *linguistic puzzles*, (3) *memory puzzles,* (4) *logical problem-solving*, (5) *creative problem-solving*, (6) *tactical challenges*, (7) *strategic challenges*, and (8) *cause-and-effect puzzles*. Three of these challenge types (4, 6, 7) were included in the original gameplay motifeme inventory (Table 4). The additional five were mentioned in the analyzed data of 700 game review articles (Study 1), and in the open-ended data of the first survey (N=2,595). They are also supported by the literature (Adams, 2014).

	Assault	Journey	Manage	Care	Coordinate
Cause-and-effect puzzles	0.09	0.40	0.25	0.01	0.16
Creative problem-solving	0.19	0.44	0.28	-0.01	0.13
Linguistic puzzles	0.01	0.29	0.17	0.14	0.26
Logical problem-solving	0.02	0.16	0.16	-0.09	0.26
Memory puzzles	-0.07	0.16	0.09	0.05	0.43
Spatial puzzles	0.23	0.22	0.27	0.13	0.25
Strategic challenges	0.32	0.31	0.31	0.03	0.05
Tactical challenges	0.56	0.18	0.47	0.12	-0.03

Table 9. *Bivariate correlations (Spearman rank-order) between the five motifeme category mean scores and recurrent challenge types in video game gameplay (N=845).*

In order to study the discriminant validity of the gameplay motifeme categories, I calculated bivariate correlations (Spearman rank-order) between the five motifeme factor scores and the eight recurrent gameplay challenge types. I present the results of this additional discriminant validity test in Table 9.

From Table 9, we can note that preference mean scores for both *Assault* and *Manage* moderately correlate with tactical challenges, and weakly with challenges of strategy and spatial recognition. Preference in *Manage* also weakly correlates with creative problem-solving and cause-and-effect puzzles. *Journey*, instead, moderately correlates with creative problem-solving and cause-and-effect puzzles, and weakly with strategic, linguistic and spatial challenges. Preference in *Care* is not correlated with any of the eight challenge types, and finally *Coordinate* is moderately correlated with memory puzzles and weakly with spatial and linguistic puzzles, and logical problem-solving.

Although the discriminant validity test of Table 9 reveals connections between motifeme preference factors and challenge types, none of the correlations are strong (over .60) and only a few are moderate (between .40 and .59). The correlations are plausible: tactical challenges are often associated with battle tactics and warfare, which makes their correlations with *Assault* and *Manage* sensible. Games that emphasize *Journey* tend to include puzzles that require both creativity and understanding of

causation, and memorizing patterns of actions are typical for games of the *Coordinate* type. Players who prefer *Care* perhaps seek experiences of free-form play, prefer to play casually, and do not enjoy challenging games as much as the others. Since the correlations between motifeme type factors and challenge types are mostly weak, it can be concluded that the motifeme approach measures different aspects of gameplay preferences than in-game challenges. This concludes the discriminant validity test of Study 2.

Study 3: Data Triangulation

I continued the development of The CGD scale by making a data triangulation on the items of the inventory. The objective of this study was to confirm that the 33 items of the 2nd CGD scale (Table 7) gave a comprehensive portrayal of contemporary video game gameplay motifemes. Thus, I asked:

RQ2.6: Would an additional content analysis on gameplay motifemes result in a similar inventory to that of The CGD scale (Table 7), and could The CGD scale thus be developed further by such a process?

As I mentioned early in this chapter, the best data sources for motifemes are first-person characterizations of gameplay experiences. The primary data source for constructing The CGD scale consisted of game review articles. As a secondary data type for triangulation, I analyzed a sample of 166 game instruction booklets. I decided to analyze this data since, in game instruction booklets, game developers aim to describe *how to play the game*, which typically includes descriptions of gameplay motifemes of the game.

Although the game instruction data of 166 game manuals is different from game review data, both of the data types aim to communicate essential elements of gameplay, and thus the core gameplay motifemes of the game to the players. Therefore, I hypothesized:

H1: The content analysis of the game instruction manuals will result in similar results as those of the content analysis of the game review articles.

I analyzed instruction booklets for games published for Playstation, Playstation 2, Playstation 3, Playstation Portable (PSP), Nintendo GameCube, Nintendo Wii, Nintendo WiiU, GameBoy Advance (GBA), Nintendo DS, Nintendo 3DS, Xbox 360, Xbox One and PC. Since my objective was to conduct a comprehensive analysis, I analyzed booklets of a great variety of games ranging from simulation games and graphic adventure games of 1980s to recent role-playing games. The full list of the game instruction booklets included in the analysis is reported in the Appendixes.

When analyzing the data, I followed the qualitative content analysis procedure specified in Study 1. During the analysis, I observed that the contents of booklets varied significantly according to three main factors: the 'genre' of the game (whether the game was, e.g., a platformer, a strategy game, or a pet simulation game), the platform for which the game was published, and the year the game instruction booklet

was printed. Generally speaking, the instruction manuals of the games published in 1990s and early 2000s were much more detailed than the manuals for games published more recently. Indeed, many games of the current game technology generation do not include any kind of game instruction booklet, or it is only available as a digital download. Furthermore, mobile games do not usually have official instruction booklets at all. The data of Study 3 was influenced by these facts, and therefore, most of the game instructions included in the final analysis were of games published between 1995 and 2010.

While a typical instruction booklet included in the analysis (GBA, DS, Playstation 1, Playstation 2, Playstation 3) had 30–50 pages, some recent games had very short booklets. For example, the manual of *Rayman Legends* (Ubisoft, 2013) has only 8 pages, *Portal 2* (Valve, 2011) 16 pages, and *Nine Hours, Nine Persons, Nine Doors* (Chunsoft, 2009) 11 pages. In contrast to this, several older strategy and role-playing games have very long manuals: *Sid Meier's Alpha Centauri* (Firaxis Games, 1999) has a manual of 252 pages, and the game manual for *Baldur's Gate II: Shadows of Amn* (BioWare, 2000) is 266 pages long.

Typically, game instruction booklets for titles published for Playstation, Playstation 2, Nintendo DS and several other game consoles include sections such as "getting started," "game controls," "prologue/background story," "main characters," "game flow/how to play" and "credits." Under "game controls," the player is instructed about the core game mechanics of the game, that is, what kinds of actions are mapped to the different buttons of a game controller. The core gameplay motifemes are usually described for the player under the section titled "Flow of the game/ How to play."

Let me give three short examples. The instruction booklet of a dungeon-crawler game *The Dark Spire* (Atlus, 2006) for Nintendo DS includes the sections of prologue, controls, starting the game, several sections describing the game flow, and the credits. In the manual (p.13), the player is instructed on how she can join "*The Adventurer*s Guild" and "Create a new character… edit your party and adjust the party's formation… gain levels, raise stats, and learn new spells or skills… talk to Eventail the Guildmaster [who] can provide you with information about monsters, quests and other relevant topics." In the game manual of *Deus Ex: Human Revolution* (Eidos/Square Enix, 2011, p. 10) for Xbox 360, the player is instructed about 1) unlockable "Augmentations" that provide new skills and abilities for the player, 2) levelling up, 3) engaging in combats, 4) stealth and taking cover, 5) hacking systems, 6) social interaction, 7) trading items and weapons, and 8) exploring the gameworld and uncovering its secrets. In the instructions for *Deus Ex: Human Revolution*, gameplay motifemes of the game are specified for the player as subheadings, which was indeed found to be quite common across the instruction booklet data. Under the subheading of "Playing the game" in the manual of *Chrono Cross* (Squaresoft, 2000, pp. 8–22) for Playstation, the game is described for the player as a combination of gameplay activities including "moving on the world map," "gathering information through conversation," "examining things and using key items," "purchasing items from merchants," "forging more powerful weapons… by using the various 'raw materials,'" "equipping characters with weapons, armors, and accessories" and "battling enemies by attacking, defending and using elements."

I stopped analyzing game instruction booklets after 166 documents due to the saturation of the data. As a result of the analysis, I was able to distinguish 44 recurrent gameplay motifemes. All of the 33 items included in the second iteration of The CGD scale (Table 7) were supported by the data triangulation, although the data triangulation suggested minor modifications to the phrasing of several items. This confirmed the hypothesis of this study (H1). However, in addition to these slight changes, the data triangulation process suggested that eleven more items could be considered as additional core motifemes:

Commanding units or troops
Empathizing and taking on different roles
Fighting by attacking, defending and using spells
Gardening or taking care of a farm
Guiding and herding a population or followers
Hanging out with friends
Hunting and capturing creatures
Navigating in dungeons and overcoming its dangers
Performing in lifelike sports such as basketball, ice hockey, or football
Running at a fast speed while avoiding obstacles
Equipping weapons, skills, and abilities for characters

In future research, the next phase in The CGD scale development would be to conduct a theory-driven confirmatory factor analysis for data representing other cultural environments than Finland or Denmark. By doing a confirmatory factor analysis, the construct and convergent validity of the revealed five-factor construct could be investigated. Also, the discriminate validity of the five-factor model could be further examined by studying how the identified gameplay motifeme type factors are related to player behavior typologies in addition to core motivations to play, which we report on in Vahlo et al. (2017).

In the conclusions of Vahlo et al. (2017), we suggest that future research could focus on studying how The CGD scale relates to video game genre classifications, since the game industry categorizes games into genres mainly based on the type of gameplay they provide for players (Adams & Dormans, 2012, p. 7). In the final study of this chapter, I focus on this subject, which can also be regarded as a type of discriminant validity testing for the construct of five motifeme type factors.

Study 4: The Motifeme System and Genre Classifications

According to Rachel I. Clarke, Jin H. Lee and Neils Clark (2015), current video game genre definitions fail for five reasons. They: 1) do not put forward a concrete set identification, 2) offer poor collocation and retrieval, 3) inhibit creative development, 4) monopolize and/or skew sales, and 5) do not aid the players to find the video game content they seek.

Since genre classifications help individuals find the content they are seeking, it has become a central criterion for marketing, producing and distributing cultural media. Clarke, Lee and Clark (2015, p. 7) note that in the consumption of literature,

genre is the second most popular reason to buy certain books after the author (see National Endowment for the Arts, 2009 in Clarke et al., 2015). In the movie industry, genre is the most important factor for making the decision to see a specific movie. The same trend is evident in the game industry: 'genre' is a major market driver.

Clarke, Lee and Clark (2015) argue that video game genre labels appear as random rather than systematic since they are not based on a well-defined set of classification rules. While this is may be a justified conclusion, I would like to draw attention to the fact that most of the game descriptions—also including those in the data analyzed by Clarke et al. (2015)—seem to emphasize one dimension over the others, that of "in-game activities." Since game mechanics are defined as the actions available for the player in gameplay, "game mechanics" as another recurrent game classification criterion is not different from "in-game activities" but rather only in its level of abstraction, as I argue earlier in this chapter.

I would like to add that many online game databases utilize a genre system that emphasizes the criterion of "in-game activities." This is hardly surprising since games are primarily marketed as action-games, role-playing games, platformers, adventure games or puzzle games, that is, based on the primary in-game activity type they afford for the players. Ali Faisal and Mirva Peltoniemi (2015, p. 5) come to a similar conclusion based on their literature review of game genre classifications: "There appears to be a consensus on the existence of action, shooting, role-playing game, strategy, simulation, sports, racing and fighting genres." All of these widely-recognized genre labels describe the core gameplay of the games, albeit in a very general fashion.

Thomas H. Apperley (2006, p. 7) states in his analysis of video game genres that: "Interactivity—the way in which the game is played, rather than watched—is a nonrepresentational feature common to all video games." However, as both Apperley (ibid.) and Dominic Arsenault (2009) suggest, genre taxonomies should comprise both interactivity and thematic or semiotic representation. This would lead to a situation in which games could be classified according to their gameplay into a specific group, and according to their theme and representation into another group. Separately observing gameplay and representational qualities of a game does not, however, entail that the fictionality of a game can be completely separated from the gameplay. Gameplay arises from the game's fictional setting, as noted by Adams (2014, p. 9) and David A. Clearwater (2011).

As I mentioned in the beginning of this chapter, Kirkpatrick (2012; 2013) has revealed, in his extensive analysis of video game review articles, that 'gameplay' has prevailed as the most significant factor for establishing video games as an autonomous form of culture. The concept of 'gameplay' describes precisely "in-game activities" and "game mechanics," where the term 'activity' approaches the phenomenon from the vantage point of the ongoing gameplay, and 'game mechanics' from the perspective of the designed game system. Gameplay denotes what the players do during gameplay, which is simultaneously what the game designers aim to present to the players and what the players expect to experience from a game during play. In prior research, for example, Mark J. P. Wolf (2001) and Landay (2014) have arrived at the

same conclusion: game genres should be defined based on the different forms of interactivity. "Interactivity in video games is what a player can do in them—the choices and action that comprise gameplay" (Landay, 2014, p. 182).

Since the concept of 'gameplay' is adopted by game journalism, the game industry as well as the gamers as a means to search for, describe and communicate about games, it appears as the criterion with the most potential for genre classifications. The challenge here is to put forward a system that manages to describe 'gameplay' in a systematic fashion. Thus, the real question is, as Clarke et al. (2015) recognized: "What is really being described when we say 'action' game or 'role-playing game'?" They were indeed correct to note that in many games players play a character, and technically all games are action games since all gameplay necessitates taking actions (Galloway, 200 6, p. 2).

In game studies and game design literature, there have been several attempts to develop rigorous video game genre classifications. However, Juul (2014) has observed that this undertaking is still largely neglected in the study of video games. Juul notes that although genres do change in, e.g., literature and music constantly, this continual transformation happens much faster within the video game industry. Instead of pondering genre systems, according to Juul (2014), game studies discussions are more occupied with either big definitional questions or smaller units such as game mechanics and design patterns.[45]

The approach I take here is related to a genre classification model presented by Wolf (2001), who has constructed a list of game genres on the criterion of "the dominant characteristics of the interactive experience and the games' goals and objectives, and the nature of the game's player-character and player controls" (ibid., p. 116). Similar to the model I am developing, Wolf focuses on the interactivity of the player–game coupling rather than on the interactivity that can take place between players if the game supports a multiplayer setup. The genre list by Wolf appears as follows: Abstract, Adaptation, Adventure, Artificial Life, Board Games, Capturing, Card Games, Catching, Chase, Collecting, Combat, Demo, Diagnostic, Dodging, Driving, Educational, Escape, Fighting, Flying, Gambling, Interactive Movie, Management Simulation, Maze, Obstacle Course, Pencil-and-Paper Games, Pinball, Platform, Programming Games, Puzzle, Quiz, Racing, Role-Playing, Rhythm and Dance, Shoot 'Em Up, Simulation, Sports, Strategy, Table-Top Games, Target, Text Adventure, Training Simulation and Utility.

Although there are some similarities between the current approach and that of Wolf's (2001), there are also several crucial differences that must be elucidated. First, the model I present is not based on the researcher's reflection on different games but on identifying recurrent gameplay motifeme preferences by first conducting a qualitative data analysis of 700 video game review articles, and by including the list of 33 motifemes into statistical analyses on gameplay preferences (N=1,718, ages 18–70;

[45] However, there is a moderate body of literature in game studies on game genre classifications. For instance, Chris Crawford's (1982) early taxonomy of video games was based on two main categories: skill-and-action and strategy. Skill-and-action games (e.g., combat games, maze games, sports games, paddle games, and racing games) emphasize perceptual and motor skills, whereas strategy games (e.g., adventures, Dungeons & Dragons-style games and wargames) emphasize cognitive effort. The theme has also been discussed extensively, e.g., by Aarseth et al. (2003), Aarseth (2004), Apperley (2006) and Arsenault (2009).

N=845, ages 18–55). Second, since the system by which the motifemes were identified and later included in the surveys was kept rigorous, the results are also coherent. In the current model, e.g., "Artificial Life," "Board Games" and "Interactive Movie" would not be acceptable since they do not describe the modes of player–game interaction from the vantage point of ongoing gameplay, and they do not answer the question of "what the player does during gameplay." Third, and this is a critique by Aki Järvinen (2002) on Wolf's (2001) approach, the purpose of genre classifications is to make sense of a large body of works, and a list with more than forty items cannot be regarded as very successful in this regard.[46] This problem is, however, a double-edged sword: Clarke, Lee and Clark (2015, p. 6) observe that, if inexplicit definitions leave genre definitions too vague, the genre labels become applied into very large number of games, which makes the genre system so general that it is eventually rendered meaningless. For example, the genre of action-adventure games encompasses so many games that the information value of this "genre" becomes questionable.

Although the current motifeme list (The CGD scale, 2nd iteration, Table 7) includes a total of 33 items, and the content analysis of game instruction booklets suggests that eleven other motifemes could be considered to be added to the scale, The CGD scale does not face the kind of problem that the list fashioned by Wolf (2001) faces. The problem of a large number of motifeme items was overcome by including the items into surveys and by then investigating players' preferences of playing games with these motifemes. The results from Study 1 (N=1,718) revealed that players' preferences in performative play manifest in five dimensions: *Assault*, *Manage*, *Journey*, *Coordinate* and *Care*. Very similar results were revealed in Study 2 (N=845) with an improved version of The CGD scale. Taken individually or together, both Study 1 and Study 2 reported in this thesis suggest that video games could be categorized into the five main genres of *Assault*, *Manage*, *Journey*, *Care* and *Coordinate*. Two things must be immediately clarified about these five main categories.

First, it is a possibility that the five categories are too general and thus these labels can become meaningless if too many games are to be classified, e.g., as assault games. However, it must be emphasized that each of the five motifeme type categories consists of several individual motifemes. Based on this structure (see Table 7), it is possible to develop a hierarchical model of game genres, for instance, *Assault–Stealth* (1–6), *Assault–Killing* (1–1), *Assault–Warfare* (1–7) or *Assault–Surviving* (1–5), where the number "1" represents factor 1, that is *Assault*, and the following number the respective motifeme, as numbered in The CGD scale (Table 7).

Moreover, by devising a system that evaluates the priority of a particular motifeme over other motifemes in the gameplay of a given game, the classification system could be further refined into, e.g., assault games that emphasize aggressive motifemes, but also, for instance, character development (2–15) or racing at a high speed (1–27). This could be studied by dividing the motifemes as primary, secondary, and tertiary from the perspective of their significance in the course of the game. However, as I mentioned earlier in this chapter, the list of gameplay motifemes must be studied

[46] Järvinen (2002) wonders whether we must accept that video games cannot be categorized into a sensible number of genres because "game genres are complex sums of interaction and rule mechanisms, audiovisual styles, and popular fiction genre conventions."

further with additional sets of data representing different cultural backgrounds to be able to validate the factor structure and The CGD gameplay motifeme inventory.

The results from Study 1 and Study 2 reported in this chapter not only suggest that player types can be defined by utilizing the players' preferences in gameplay motifemes and gameplay motifeme factors, but also that games can be classified according to the same criteria. This proposal is *not* to say that other factors (e.g., theme of the game, the types of challenges in the game, whether the game is turn-based or not, and the emphasis put on game narrative) would not matter to players nor that these factors would not matter for identifying game genres. My argument is that gameplay motifemes manage to grasp the primary quality of video games—in-game activity enabled by game mechanics when set in motion by the player's agency—and that this characteristic is the most important single feature in developing a rigorous system of game genres that makes sense to game developers and to gamers worldwide. Just as Clarke, Lee and Clark (2015, p. 4) observe, it is of paramount importance that the genre labels map the language commonly used by both the commercial industry and the players.

Arsenault (2009, p. 150), furthermore argues that a genre model must be able to account for the transformations, reinventions and adaptations of game cultures. Folklorist Frog (2016, p. 51) similarly stresses that "'[g]enres operate as frameworks generative for the production of expressions and in relation to which such expressions are also received and interpreted when the genre is recognized." I concur with these statements and propose that an added value of motifeme-based video game genre classification could be that this system does not restrict new game genres from emerging. More precisely, the system outlined in the current study could work as a *generative framework* instead of being a collection of static ideal categories (see Abrahams, 2005; Frog, 2016). For example, survival horror platformer games would make sense within this system, as they would combine the primary motifemes of *Assault* (1–5; 1–6; 1–1) and *Coordinate* (5–23).

Since established genre models offer tools for developers to emulate existing combinations and to communicate their market potential to investors and audiences, the motifeme system could also be utilized in fashioning new sub-genres by combining motifemes under *and* across a preference factor in creative ways. The motifeme system, just as any genre classification, must remain open for changes in rapidly evolving game cultures. Genres are historical constructs, as argued by Arsenault (2014): what emerges today as an important motifeme may be absent a decade later, and new motifemes will surely arise. The current list of 33 motifemes and 11 candidate motifemes should not be seen then as a permanent result but instead as open to critical analyses with different sets of data (e.g., big-data analyses utilizing deep learning algorithms of both player-generated data and game database data). Correspondingly, the five gameplay motifeme factors should also be regarded as first findings rather than as final results. An evident question must still be asked:

RQ2.7: How different, if at all, is the list of five motifeme preferences factors from the game genre listings applied in popular game media? Could we not, e.g., just equate the factor of 'assault' with 'action games'?

I investigated this question by studying data introduced in Study 1 (N=1,718). The survey included a question that inquired about the video game genre preferences of

the respondents. The participants responded to this question by marking from a fixed list 0–5 genres that they were the most familiar with as players. The list was put together by studying the classification systems of several popular gaming websites, including Metacritic.com, Gamefaqs.com, Gamerankings.com, IGN.com as well as Wikipedia.org. The list was also piloted with a set of 50 respondents and further developed into a selection of 15 game genres:

1. *Action games (e.g., Metroid, Halo, Half-Life, Call of Duty)*
2. *Action-adventure games (e.g., Assassin's Creed, Resident Evil, Zelda, GTA)*
3. *Adventure games (e.g., Heavy Rain, Monkey Island, Zero Escape)*
4. *Driving games (e.g., Forza, Mario Kart, Need for Speed, Wipeout)*
5. *Puzzle games (e.g., Tetris, Candy Crush Saga, Professor Layton, World of Goo)*
6. *Role-playing games (e.g., Skyrim, Final Fantasy, Fallout, Pokemon, MMORPG)*
7. *Simulations (e.g., SimCity, The Sims, Flight simulators, driving simulations)*
8. *Sports games (e.g., NFL, NHL, FIFA, Tony Hawk's Pro Skater, SSX, Wii Sports)*
9. *Strategy games (e.g., Civilization, Fire Emblem, Clash of Clans, MOBA games)*
10. *Platformers (e.g., Super Mario games, Sonic, LittleBigPlanet, Rayman)*
11. *Sandbox games (e.g., Minecraft)*
12. *Arcade games (e.g., beat 'em up fighting games and shoot 'em space shooters)*
13. *Party games (e.g., Singstar, Dance Dance Revolution, Rock Band)*
14. *Pet simulations (e.g., Neopets, Nintendogs)*
15. *Serious games (e.g., educational games and health games)*

In order to study the relationships between the five motifeme type factors and recurrent video game genre descriptions, I conducted a logistic multivariable regression between a binary outcome variable of playing/not playing each of the 15 abovementioned video game genres, and predictor variables of preference in the five motifeme type factors. Regression analyses are techniques to model the relationships between identified independent variables and dependent variables (Yan & Su, 2009, p. v). In this study, the independent variables were the five gameplay motifeme categories as well as the age and gender of the respondents. The dependent variable was the frequency to play games of specific genres. By using logistic regression, I assumed that:

H1: There are linear relationships between preferring gameplay motifeme types (predictor variables) and playing games of particular video game genres (outcome variables).

I made *relative risk ratio* (RRR) calculations, which make it possible to investigate relationships between predictor variables and outcome variables from the perspective of probabilities (Acock, 2008, p. 275).[47] I investigated how an increase in a predictor variable increases or decreases the "risk," that is, the probability, of playing games of

[47] See also *Introduction to SAS. ULCA: Statistical Consulting Group by Karla Lindquist. From: http://www.ats.ucla.edu/stat/stata/faq/relative_risk.htm, Accessed 21st of February 2017 and https://en.wikipedia.org/wiki/Relative_risk.*

a specific genre. To make the analyses more robust, I included the background variables of gender and age in the regression model. I present the results of the logistic regressions in Table 10.

	Assault	*Manage*	*Journey*	*Care*	*Coordin.*	*Age*	*Men*	
Action	1.46***	1.11***	1.18***	0.96*	0.98	0.98***	1.38***	RRR
	0.03	0.02	0.02	0.02	0.02	0.00	0.09	Std. Err
Action-Adventure	1.32***	1.14***	1.36***	1.00	1.01	0.98***	1.12*	RRR
	0.02	0.02	0.03	0.02	0.02	0.00	0.06	Std. Err.
Adventure	1.21***	1.16***	1.53***	1.04	1.13***	0.96***	1.17	RRR
	0.03	0.03	0.05	0.03	0.04	0.00	0.11	Std. Err.
Racing	1.23***	1.03	1.17***	0.97	1.07*	0.98***	1.66***	RRR
	0.04	0.03	0.04	0.03	0.03	0.00	0.19	Std. Err.
Puzzle	0.91***	1.01	1.05**	0.93***	1.14***	0.99***	0.74***	RRR
	0.01	0.02	0.02	0.02	0.02	0.00	0.05	Std. Err.
Role-Playing	1.25***	1.24***	1.60***	1.03	1.00	0.96***	1.27***	RRR
	0.02	0.02	0.04	0.02	0.02	0.00	0.07	Std. Err.
Simulation	1.03	1.29***	1.23***	1.11**	0.94	0.96***	0.82	RRR
	0.03	0.04	0.04	0.04	0.03	0.00	0.09	Std. Err.
Sports	1.13***	1.13***	1.12**	0.99	1.01	0.98***	2.42***	RRR
	0.04	0.04	0.04	0.03	0.04	0.00	0.37	Std. Err.
Strategy	1.11***	1.35***	1.22***	0.91***	0.93**	0.96***	1.14	RRR
	0.03	0.03	0.03	0.02	0.02	0.00	0.09	Std. Err.
Platformer	1.08**	1.00	1.36***	0.94*	1.37***	0.97***	0.92	RRR
	0.03	0.03	0.04	0.03	0.05	0.00	0.09	Std. Err.
Sandbox	1.16**	1.33***	1.39***	1.05	0.91	0.96***	0.96	RRR
	0.05	0.07	0.07	0.06	0.05	0.01	0.17	Std. Err.
Arcade	1.15*	0.92	1.19*	0.93	1.23*	0.97**	1.38	RRR
	0.08	0.05	0.09	0.07	0.10	0.01	0.35	Std. Err.
Party	0.96	0.97	1.24***	1.11*	1.37***	0.97***	0.76	RRR
	0.04	0.05	0.06	0.05	0.07	0.01	0.12	Std. Err.
Pet Simulation	0.88	1.06	1.23	1.29**	1.22	0.97**	0.38*	RRR
	0.08	0.11	0.16	0.12	0.15	0.01	0.16	Std. Err.
Serious Games	0.90	1.03	1.01	1.07	1.17*	1.00	0.68	RRR
	0.06	0.09	0.09	0.08	0.09	0.01	0.18	Std. Err.

***p < 0.001 **p < 0.01 *p < 0.05 *N* = 1718

Table 10. *Results of the logistic regression analyses between preference in gameplay motifeme factors (predictor variables, factor scores) and playing games of a particular genre (binary outcome variable) in the data reported in Study 1 (N=1,718).*

Let's consider an example of the results. The relative risk ration (RRR) of *Assault* for playing action games is 1.46 (p < 0.001). Since the relative risk ratio is above one, it means that an increase in the preference for *Assault* increases the risk to play action

video games, i.e., playing action games is more likely to happen. In this case, we can say that a raise in the preference of *Assault* increases the relative risk to play action games by 46 percent. Indeed, preference in *Assault* did predict playing action games more than any other game genres. Moreover, *Assault* predicted the RRR to play action-adventure games by 32 percent, role-playing games by 25 percent, racing games by 23 percent, and adventure games by 21 percent. An increase in *Assault* preference, however decreased the probability of playing puzzle games.

Preference in *Manage* showed more moderate effects on the RRR to play particular genres than *Assault* did. The clearest relation was found between favoring *Manage* and the relative risk ratio of playing strategy games (35% increase). Preference in *Manage* also increased the probability of playing sandbox games by 33 percent, simulation games by 29 percent, and role-playing games by 24 percent. An increase in enjoying *Manage* did not have negative effect on playing any of the game genres.

Enjoying *Journey* had a positive effect on playing a variety of game genres. By preferring *Journey*, the relative risk to play role-playing games increased by 60 percent, which was the strongest effect revealed in this study. Also, the relative risk to play adventure games was increased greatly, by 53 percent. Preference in *Journey* also had a clear positive relation to playing sandbox (39%), platformer (36%), and action-adventure (36%) games.

An increase in the preference of *Care* resulted in an RRR of playing pet simulations by 29 percent, party games by 11 percent, and simulations by 11 percent. However, a higher preference score in *Care* had negative relation to playing strategy games (decrease of 9%), puzzle games (decrease of 7%) and action games (decrease of 4%). An increase in the preference score of *Coordinate* predicted a 37 percent growth in the relative risk of playing both platformers and party games. Also, the RRR of playing arcade games (23%), serious games (17%), puzzle games (14%), and adventure games (13%) was increased. As with *Care*, preference in *Coordinate* slightly decreased the ratio of the probability of playing strategy games.

Finally, an increase in age value had a significant negative relationship to playing all of the game genres, save serious games. This means that younger respondents reported playing games of more versatile genres than older respondents. The gender of respondents also had a clear effect on the habits of playing specific genres. This is very clear in some cases: an increase in the number of male respondents increased the relative risk of playing sports games by 142 percent, racing games by 66 percent, action games by 38 percent, and role-playing games by 27 percent. In contrast to this, being a male decreased the RRR for playing pet simulations and puzzle games in the data of 1,718 respondents.

The result of logistic regression analyses I report here (Table 10) suggest that the gameplay motifeme factors are not to be equated with common genre categories. However, the regressions reveal interesting contingencies between these two distinctive approaches on understanding game preferences. The overall result was that gameplay motifeme factor preferences (predictor variables) suggest dependencies on the habits of playing certain game genres (outcome variables) over the others, as well as *not* playing specific genres. As a conclusion, I offer that a player preferring *Assault* cannot be regarded simply as an action game player, nor can one that prefers *Journey*

only be considered a RPG player. The connections between the five motifeme type factors and game choice are more complex than that, and yet are contingent with this primary association.

This study confirms the hypothesis (H1): preferences in motifeme type factors predict habits of playing games of specific genres, and yet these two classification systems are not to be equated. Therefore, this study can also be considered an additional discriminant validity test for The CGD scale (Table 8) and the revealed five-factor structure. By itself, the motifeme approach does not account for a full-blown genre classification system, but I propose that the approach presented here could be a significant aid for fashioning such a system. Furthermore, the results of Study 4 suggest that the gameplay activity preference approach could be utilized in constructing models for predicting *game choice*. This is to propose that game players have lasting personal dispositions, interpersonal influences and habits that affect their game media choice (Webster, 2014), and that the structural and dynamical characteristics of games including gameplay motifemes constitute a significant factor in this process (see Wolling, 2009). This is indeed an important subject area for future research (Vahlo & Koponen, 2018).

Faisal and Peltoniemi (2015) have recently argued in an article on utilizing machine-learning methods in identifying game genres that genre organization should be data-driven instead of based on manual classifications. While the model outlined in the current study is based on a theoretical framework, the model remains open-ended, and thus gameplay motifemes could be further analyzed by applying data-driven modeling as well as machine-learning algorithms.

Discussion: Folkloristic Continuum of Game Classifications

I conclude this empirical chapter by returning to the theme I visited in the beginning of this chapter, by analyzing the motifemic sequences of *Hare and Hounds* (see Dundes 2007 [1964]). I propose that the way in which games alter a player's activities into in-game occurrences should be investigated carefully to highlight the possible continuities between social games and video games. For this purpose, let us consider a type index for children's games as proposed by folklorist Gareth Whittaker (2012).

Whittaker (2012) argues that there is no apparent reason why children's games could not be classified into a set of categories. Similar to folktales, games have an opening, action, and an outcome, which remains uncertain during the actual experience. Games are passed on from one generation to another, and they can be broken into recurring basic elements, which makes it possible to recognize variants of the same item of folklore. There are several major folkloristic collections of children's games, including those by Alice B. Gomme, Paul G. Brewster, Brian Sutton-Smith and Iona and Peter Opie. However, in contrast to the motif indexes of folktales, no useful classification system for children's games has been proposed, save possibly the one proposed by Whittaker (2012) himself.

Although games have structural similarities to narratives, which makes the objective of developing type and motif indexes for games feasible, Whittaker (2012) contends that games should not be classified according to similar criteria as folktales are grouped, because many games do not have dramatic or narrative content. This is

how Whittaker criticizes Dundes (2007 [1964]), Mellie Leandicho Lopez (1980) and Uta Schier-Oberdorffer (1993), all of whom have attempted to apply type and motif indexes developed for folk tales to games. Indeed, Whittaker (2012) argues that children's games that have narrative elements are typically singing games or dialogue games that *lack* a developed rule system and uncertainty of outcome, elements he takes as definitional characteristics of a game proper. Here Whittaker agrees with the Opies (1969), who divided children's games into two categories of true "acting games" with rules and an uncertain outcome and "pretending games," i.e., mini-dramas or "playlets" that have dialogue, determined outcomes and fixed plots. To an extent, this classification is congenial with Abrahams' model of Play I, Play II, and Play III (see Chapter 1).

In order to proceed to present his classification of children's games, Whittaker (2012) reviews a body of game definitions utilized by earlier folklorists. The purpose of this review is to find the essential element of games that could be applied as the focal point for devising a stable classification system. He concurs with a well-known definition by Avedon and Sutton-Smith in *The Study of Games* (1971, p. 7, see Chapter 2), according to which a game is "an exercise of voluntary control system in which there is an opposition between forces, confined by a procedure and rules in order to produce a disequilibrial outcome." In Whittaker's interpretation, this definition comes to mean that each game proper must include four elements: 1) actions taken voluntarily; 2) a contest or challenge; 3) rules; and 4) an uncertain outcome.

Whittaker states that the definition by Avedon and Sutton-Smith (1971) dovetails with both classic and contemporary folkloristic studies on children's games. The four elements of actions, contest, rules and outcomes are the "features recognised by folklorists as definitional of games" (Whittaker, 2012, p. 277). He argues that "one of these [four] elements should be chosen and used throughout the classification, thereby grouping game-types into the different kinds and sub-kinds of actions, contests/competition, rules, or outcomes" (2012, p. 278). To evaluate the adequacy of each of the proposed four conditions of games as potential features for classifying children's games, Whittaker applies a set of validation criteria for scholarly classifications, as proposed by Vladimir Propp in *Theory and History of Folklore* (1984).

Propp (1984, pp. 43–46) provides a checklist of three criteria as basic principles for making classifications. *First*, any classification must be based on a single criterion that echoes relevant aspects of the phenomenon. The relevancy is to be evaluated in relation to the inherent and constitutional features of the object of the study. *Second*, the selected criterion must remain unchanged throughout the classification. Thus, a change that takes place in the selected criterion changes one item of folklore into another within the same genre. If this does not happen, the criterion has been selected poorly. In Propp's (1968 [1928]), a change in functions of a folktale changes it into another tale type, but a change in characters does not generate such a change. *Third*, the basic criterion or feature of classification must be formulated accurately. The selected feature must thus be *relevant*, *stable*, and *unambiguous* for the classified phenomenon. Furthermore, in order to have cognitive value, a classification should be divided into basic classes (*genus*) and subordinate coordinate classes leading up to members (*species*) by precise multilevel divisions.

By following this procedure, Whittaker (2012) first evaluates the feature of 'contest/competition.' He notes that this feature is not the best option for classification because many children's games can be played, e.g., as solitary pursuits, as co-operative play, as a duel, as a group versus a group, or as an individual versus a group. The criterion of contest/competition fails the test of *stability*. A game remains largely the same game regardless of whether it is played as a duel or as a solitary pursuit.

Whittaker proceeds to assess 'uncertainty of outcome.' Here he notes that folklorists and anthropologists have classified children's games by studying how different factors of a player's skills define the outcomes of games. A game could be classified as a strategy game if strategizing were the main principle that affects the outcome; we would have a physical game if a player's sensorimotor skills would determine the outcome; and we would have games of chance if the player's skills would not matter for the outcome. This is indeed how, for instance, John M. Roberts and Brian Sutton-Smith classified games (1971 [1962]).[48] While this approach seems promising, it also fails the test of stability. For example, cheating in a game of strategy will affect the outcome, but surely it does not change the game. If a parent decides to play a game with his children, but plays poorly to let the children win, his choice of playing badly affects the outcome regardless of whether the game in question is a physical sport game, a board game of chance or, e.g., *Go*. Also, strategy games may include many elements of sensorimotor skills and physical games tend to have a strategic element as well as an element of unexpectedness. We may exhibit different styles of playing without the game changing into another type.

Further, rules fail the test of stability. As I mentioned in Chapter 2, rules are negotiable, and they can be transformed without changing one game into another. A game remains the same as long as the participants agree to the altered rules. The 'official' rules of a board game may define how the designer intends the game to be played, but the interpretation of the rules are made by the participants present in the actual gaming situation. As Whittaker notes (2012), the many forms a game may be played are known as *variants* of the same game instead of different games in their own right.

Importantly, Whittaker (2012, p. 280) arrives at the same conclusion when developing an approach for classifying children's games as I did above in the case of video games: "*actions* prescribed by the rules for attaining the outcome required to win the contest or to succeed in the challenge" is the most stable feature of games and thus primary for developing scientific classifying systems. Just as it is difficult to imagine the game Hopscotch without hopping, it is difficult to think that *Super Mario Galaxy* (Nintendo, 2007) would remain the same game without jumping on platforms. "The moves in a game, like the plot in a story, are the elements which most firmly identify it as the game that it is" (Whittaker 2012, p. 280). What is more, actions are readily observable elements of games, and thus they largely constitute what we understand an activity of playing a game to be like. Rules, and the presence or absence of the element of randomness or strategy are not as instantly obvious for an observer.

Whittaker concludes his analysis by noting that choosing the classes for actions is difficult since a game may include multiple actions. It is thus the task of the

[48] This classification of children's games is very similar to Crawford's (1982, pp. 25–26) attempt to categorize video games into "skill-and-action games" and "strategy games" (see Juul, 2014).

researcher to analyze games to identify the most central actions by which a game may be classified—since an item can only have one main place in a type-index, while retaining several cross-references to other classes and subclasses. Another challenge is that some features are on a higher level of abstraction than the others. For example, chasing and seeking consist of several first-level bodily movements such as running, leaping and touching. Whittaker's (2012) own take on classifying children's games is based on the feature of 'action' and divided into three main classes of "1. Purely intellectual activity games′," "2. Physical activity games" and "3. Willpower games." Each of these three classes includes several subclasses. As the author notes, however, the main classes of Whittaker's (2012) model are arbitrary, and there is no rigorous scientific method by which a type of activity is selected as a member of a main class.

Whittaker's (2012) article is relevant for the current study for several reasons. First, the main observation is that just as 'activity' is the most stable feature of children's games, it is also the most important element of video games. I would therefore like to propose that classifying games should be focused on identifying the core gameplay activities regardless of whether we are studying children's games, video games, board games, or card games. It is the type of activity present in a game that most reliably separates one game from another.[49] Second, the article by Whittaker (2012) demonstrates how game studies could benefit from research knowledge of folkloristic methodologies. Propp's (1984) checklist for selecting a classification principle is a potential tool for developing a solid video game genre system that could aid in interdisciplinary game studies, game companies as well as players looking to find appropriate game content. Third, the article can be argued to illuminate that *the game mechanics of video games have continuities with the action procedures of social games*.

What a player encounters when playing different types of contemporary video games is not a far cry from the action procedures of traditional children's games. Merely by observing children game classification systems by Paul G. Brewster (1952) and several other folklorists (e.g. Opies, 1969), we can readily recognize that, e.g., traditional children's gameplay motifemes of courtship games, battle games, puzzles, dancing games, dramatic acting games, treasure games, dexterity games, racing games, hopping games, elimination games and spying games are all present also in the motifemes of contemporary commercial video games (see The CGD scale, Table 7; see also an extensive list prior folkloric classification of children's games in Whittaker, 2012, pp. 285–286 and Schwartzman, 1979, pp. 61–97). There is a deep continuity between informal children's games and contemporary video games: the traditions of re-configuring players' actions into in-game effects prosper in contemporary video games in a myriad of variants without showing any signs of disappearance.

Finally, in contrast to the list by Whittaker (2012), The CGD scale presented in Vahlo et al. (2017) and further examined in this thesis is based on the results of a systematic content analysis and players' preferences to play specific types of games. Because of these reasons, I offer that the preliminary list of "video game genres" I present here is not arbitrary on the level of subclasses nor on the level of the main classes. Yet, one must mention that the labels of the factors are subjectively chosen,

[49] Peter and Iona Opie (1969) propose that, e.g., chasing, catching, seeking, hunting, racing, and seeking are to be understood as basic motifs of games rather than activities.

and that the content analysis procedure always encompasses an element of qualitative interpretation. Also, additional research should be done to confirm the five-factor structure of gameplay motifeme categories, and, for instance whether the cross-loaded items of *Racing at a high speed* and *Steering vehicles* load on *Assault* or *Coordinate*. Since these two items showed different loadings in Study 1 and Study 2, I decided to exclude from the preliminary "video game genre" list.

By following the procedure of Whittaker (2012) and the principle of fashioning a multi-level classification system, an initial video game genre classification based on the principle of gameplay motifeme appears as follows (*item included in The CGD scale, 2nd edition, Table 7; **an item revealed in data triangulation; ***removed item that perhaps should be included in the future development of The CGD scale):

1. ASSAULT
    - 1.1. Attacking, defending and casting spells**
    - 1.2. Exploding and destroying*
    - 1.3. Fighting by using close combat skills and techniques*
    - 1.4. Hiding and fleeing for your life*
    - 1.5. Hunting and capturing creatures**
    - 1.6. Killing, murdering or assassinating*
    - 1.7. Selecting and equipping weapons, skills, and abilities**
    - 1.8. Shooting enemies and avoiding enemy fire*
    - 1.9. Sneaking or laying traps to surprise an enemy*
    - 1.10. Stealing, hacking and breaking in*
    - 1.11. Waging war and conquering*

2. CARE
    - 2.1. Decorating rooms or houses*
    - 2.2. Dressing up and make-up*
    - 2.3. Flirting, seducing and romantic dating*
    - 2.4. Gardening and taking care of a farm**
    - 2.5. Hanging out with friends**
    - 2.6. Making out or having sexual affairs*
    - 2.7. Taking care of pets and training them*

3. COORDINATE
    - 3.1. Jumping from one platform to another while avoiding obstacles*
    - 3.2. Matching tiles, diamonds or other objects together*
    - 3.3. Performing in lifelike sports such as basketball, ice hockey, or football**
    - 3.4. Performing music, singing in tune or dancing*
    - 3.5. Running at a fast speed while avoiding obstacles**
    - 3.6. Staying in the rhythm and moving to the beat*

4. JOURNEY

- 4.1. Acting as the protagonist and making meaningful choices*
- 4.2. Befriending in-game characters*
- 4.3. Creating your own character*
- 4.4. Developing skills and abilities*
- 4.5. Empathizing and taking on different roles**
- 4.6. Exploring the gameworld and its locations*
- 4.7. Investigating the story and its mysteries*
- 4.8. Navigating in dungeons and overcoming its dangers**
- 4.9. Searching for and collecting rare or hidden treasures*

5. MANAGE

- 5.1. Building and developing a city or a base*
- 5.2. Commanding units or troops**
- 5.3. Crafting items and weapons by combining raw materials*
- 5.4. Defending your territory, city or base***
- 5.5. Generating or gathering resources such as energy or money*
- 5.6. Guiding and herding a population or followers**
- 5.7. Managing and directing cities and their inhabitants*
- 5.8. Producing vehicles, units or weaponry*
- 5.9. Trading items, weapons or resources*

Whittaker (2012) stresses that one should not equate a type index with a motif index. Whereas a type index of games aims to cover and classify all games according to a single feature and give them a class and a number, the purpose of a motif-index is to help one to analyze games. The units of gameplay motif-index would not be individual full-blown games but comprising recurrent elements, consisting of, e.g., performers, actions, and spatial organization. For instance, a genre analysis tool by Lauri Honko (1989) argues for including content, form, style, structure, context, function, frequency, distribution, and origin into a genre classification, and thus the proposal by Honko is to be considered as a motif-type approach. However, ignoring all but one element as the primary classification criterion does not entail losing these other important features altogether. It merely means that in order to put forward a logical classification system, the system must be developed based on a single feature. The other recurrent features can be added to the system afterwards by defining how these other elements are related to the selected one feature.

The method outlined in this chapter is similar to that of type-index since it is based on a single feature, but the motifeme classification could also be utilized in fashioning a motif-index for video games. In this latter approach, the motif-index of video games could include, e.g., aesthetic style, player perspective, gaming technology, diegetic features, and the game's spatial composition. The motif-index approach takes into consideration what Deterding (2013) has called in his thesis *gaming modes*: the different ways in which a leisure video gaming frame is organized into gaming events.

Finally, I want to emphasize that the primary objective of the studies reported in this chapter is not to develop an alternative approach of classifying games into genres and subgenres, but rather to study facets of meaningful gameplay experience by scrutinizing players' preferences in particular aspects of performative gameplay, i.e., motifemes. The presented view on game genres emerged during the analysis of the data, and thus this aspect of the analysis is reported as a result of these statistical studies. It is time, however, to return to the main subject area of this thesis and proceed to analyze the different invariant structures of the video game gameplay phenomenon and the meanings players attach to their gameplay experiences. For that purpose, let me next introduce the interview process on gameplay experiences in which I interviewed a total of 32 game players in 2015–2016.

4. INTERVIEWS ON MEANINGFUL GAMEPLAY EXPERIENCE

> To tell a story is to try to understand it (Abbott, 2002, p. 102).

There are many ways to outline meaningful gameplay experience. For instance, Salen and Zimmerman (2004, pp. 156–157) write that meaningful play arises "from the relationship between player action and system outcome; it is the process by which a player takes action within the designed system of a game and the system responds to the action." Salen and Zimmerman (2004, pp. 34–35) further describe that meaningful play has the qualities of *discernability*, meaning a player's ability to perceive the impact of her actions in the game, and *integration*, meaning that the impacts a player generates have an effect on the progression of the game as a whole. This description argues for a *relational* and *processual* understanding of, and an enactive approach to, meaning (Chapter 1).

However, there are two major differences between the current approach and that of Salen and Zimmerman (2004) when it comes to how meaningful play is conceived. The enactive phenomenological approach emphasizes embodied situatedness and an experiential first-person view of meaning rather than the design-oriented third-person view advocated by Salen and Zimmerman. Furthermore, in Chapter 3, I have adopted an activity-theoretical take on meaning, which stresses that meaningful experiences must be conceptualized on the level of a purposeful activity rather than on the level of actions and their effects (Kaptelinin & Nardi, 2006). No action is meaningful by itself or even as a series of actions, but only in relation to a sustained activity and a broader cultural context within which the activity takes place.

Thus, although Salen and Zimmerman write about meaningful game experience as an emergent quality and shortly mention second-order cybernetics, they nevertheless study a first-order 'action' as the unit of analysis rather than a second-order 'activity,' which is argued in this thesis as the core unit of meaningful play. The difference between first-order and second-order approaches can be illuminated in the framework of cybernetics, which is indeed the theoretical stance of Salen's and Zimmerman's (2004) systems analytic study.

As a representative of first-order cybernetic thinking, Salen's and Zimmerman's (2004) writings on 'meaning' are closely related to those of Bateson (2000 [1972]; 2002 [1979]). In his magnum opus, semiotician Søren Brier (2008, p. 177) stresses that Bateson unfortunately did not develop a satisfactory theory of the observer, qualia and first-hand experience. For Bateson, the core concept of 'mind' is without real subjectivity and appears instead as a cybernetic phenomenon: "the ecology of mind" of information-processing systems. Bateson's theory does not manage to explicate to *whom* information or "*difference that makes a difference*" (Bateson, 2000 [1969], pp. 271–272) matters (Brier, 2008, p. 179).

For Bateson and for all first-order cybernetics, 'minds' were systems to be observed. However, by emphasizing biological and organic systems, Bateson was also a forerunner for the development of a later theoretical framework of second-order

cybernetics and an inspiration for authors such as Heinz von Foerster (1981). Foerster and other second-order cyberneticians no longer observed systems but instead took *observing systems* as their point of departure (ibid., p. 104). To put these notions in other words, Bateson's and first-order cyberneticians' view is one of third-person, whereas second-order cybernetics considers the first-person experientiality as well.

By introducing the position of the subject, second-order cybernetics neglected investigating things *Ding an sich*. Brier (2008, p. 27) notes that although the theory of autopoiesis by Maturana and Varela (1980) is a representative of second-order cybernetics since it takes the self-referential and recursive stance on information, both second-order cybernetics and the theory of autopoiesis still leave first-person experiences and emotions largely unexplained. Brier's own strategy to overcome this lack is to combine Peircean biosemiotics with the theory of autopoiesis and, consequently, also with core arguments of second-order cybernetics. In this thesis, I have followed authors such as Di Paolo, De Jaegher, Gallagher, Noë, and Zahavi and appropriated phenomenologically inclined enactivism for a purpose similar to what Brier (2008) does with Peircean semiotics and biosemiotics.

We can conclude here that the decision to focus on actions and effects rather than on purposeful activities is to interpret human gameplay activity as a first-order mechanic rather than a second-order self-referential phenomenon. Although Salen and Zimmerman (2004) shortly discuss second-order cybernetics, their game analysis is ultimately an example of a first-order cybernetical take on games and gameplay and thus they cannot convincingly include themes such as motivations to play, affective play, or even meaningful play in their analysis. After all, one cannot adequately discuss meaningful play without postulating an intentional subject who desires to play.

Although Salen and Zimmerman (2004) do write about meanings, emotions, and player agency, these subjects are inevitably something that they can only *add* as a new layer of examination to their first-order system analytic approach. In contrast to this, from the phenomenological enactive stance, I offer that we cannot separate meanings from activities, and thus intentions, motivations and emotions must be constitutional for any theoretical framework that aims to study meanings; "Playing game for the sake of games is always playing games for the sake of games in a particular social context with its own particular social arrangements" (Sutton-Smith, 2001 [1997], p. 120).

In the following chapters (Chapter 5–Chapter 9) I ask how the invariants of video game gameplay (RQ1) induces emotions and memorable experiences. This theme is crucial for building understanding of why people play video games and why these experiences are memorized, valued and shared with other people in various cultural practices (RQ2). Remembering a gameplay situation indicates that the experience has had some emotional significance to the person. Earlier research has shown that emotional information is remembered more vividly than neutral information. Individuals are also able to give more detailed descriptions of events that had emotional relevance for them. Thus, emotional arousal enhances both the vividness and accuracy of a memory (Jeong, Biocca & Bohil, 2008, p. 193). I return to the theme of emotions in gameplay in Chapter 6.

Not all gameplay experiences are regarded as worthy of remembering or narrating to others. We can here again appropriate the distinction between experience and *an* experience, an occurrence significant enough to be set aside from the everyday life (see Abrahams, 2005, p. 76; see Chapter 1). The personal recounts and narratives that

are brought forth by the players during interviews are therefore to be understood as signifiers for meaningful gameplay experiences. A researcher must take into consideration that these personal narratives are re-presented and often constructed by the interviewees for the purpose of the interview.

Constructing narratives of prior gameplay situations is a practice by which players make sense of their past experiences and the researcher tries to make sense of the interviewee's descriptions (Jørgensen 2013, p. 13; Abbott, 2002, p. 102). Although it is plausible to assume that the described experiences are not invented in the interview but instead part of the respondent's self-narrative, the researcher should remain conscious of the fact that most of these experiences have not been narrated before the ongoing interview situation. Finally, the interviewer should remain conscious of the interpretive context and her own responses and sensitivities to the situation.

Emphasis on performances and shifts in ethnography toward more reflective reporting have increased not only descriptions of the researcher's own experiences but also of the experiences of the observees. Many contemporary folklorists pay attention to how people prepare for expressive culture, judge their experiences, and how they feel about them before, during, and after the event. Some of the experiences are recognized by the subjects as meaningful as they occur, and are remembered therefore to signify something of personal value. Personal experiences are also important for identifying oneself as a member of particular community or to separating oneself from a particular social or cultural group and its activities. The important objective of bringing together the ongoing performance of narrating experiences, the context of interpreting these performances, and the interpreter's own responses is called *contextualizing* in literary folkloristic methodology (Stahl, 2008 [1989], p. 43).

Because stories about ourselves are able to grasp both the personally significant particularity and how we establish our identity in relation to others, *experience* is indeed a core concept for any folklorist aiming to understand vernacular culture from within that culture, from the perspective of the experiencer. This brings into focus investigation of what people do, how they do what they do, and why they engage with varied forms of expressive culture. Anthropology and folkloristics of experience aim therefore to investigate cultural "experience as a way of connecting the everyday with the special and the ordinary person with the representative human" (Abrahams, 2005, pp. 118–119).

A challenge for the current study is that, although I emphasize the lived gameplay experience, the data gathered is mostly about how players re-present and narrate such experiences. In accordance with the title of this thesis "*In Gameplay*," methods such as participant observation or auto-ethnography could have been applied to analyze ongoing gameplay experience.[50] However, since the focus of this thesis is on the varieties of *meaningful* and memorable gameplay experiences, I did not find these alternative approaches to data collection very promising. In the case of participant-observation, the presence of a researcher would have had an impact on the constitution

[50] Tom Boellstorff (2008, p. 68) calls interviews and surveys "elicitation methods" since by utilizing these methods the researcher assumes that respondents are able to express the "various aspects of cultures that shape their thinking." This is in contrast to participant observation, which does not work primarily on the level of reflective consciousness.

of the gameplay experience under observation. Auto-ethnography, on the other hand, is a challenging method for analyzing gameplay experience. To analyze one's own unfolding gameplay experience is difficult since to play a game is a significantly different activity from analyzing such an experience.

Furthermore, one does not know beforehand which gameplay experiences will come to have a distinctive meaningfulness. Meaning, in this sense, is a quality we largely attach to our experiences only afterwards. Thus, it makes sense to study meaningful gameplay experience by focusing on players' self-reflection of their past experiences.

As a folklorist, my interest is largely on how cultural experiences of being the player can come to have value for the individuals, how they reflect on their experiences, and how they interpret, make sense and narrate the past events in the current moment. However, I aim to remain attentive to how these self-reflections re-construct the respondents' actual experiences of player–game coupling. From the viewpoint of this study, it is relevant to observe *what* the players remember about their gameplay experience, *how* they reflect on these experiences, and *why* certain aspects of gameplay experience are remembered clearly but the others are not (RQ2). Therefore, 'video game gameplay experience' remains at all times the unit of analysis in the following analytical and empirical chapters.

Selecting and Recruiting the Interviewees

My objective with the interviews was to cover the versatility of different video game players and their gameplay preferences, especially from the viewpoint of gameplay as a meaningful first-person experience. Because of this objective, I studied the results from the factor analysis and cluster analysis reported in Study 1 of this chapter to be able to identify different player types. Throughout the following chapters of this thesis, I analyze the empirical data using a mixed-methods approach. This means that I investigate the theoretical considerations (RQ1) I present by putting statistical and qualitative data into a constant dialogue. The purpose of a mixed-methods approach is to provide informed qualitative interpretations of the findings of statistical data analysis, and to develop the statistical framework based on these iterative data analysis processes. My approach in this sense is neither quantitatively nor qualitatively driven, but instead is dialogical.

Furthermore, a mixed-methods approach provides means for data integration; by triangulating the results from quantitative data with those of qualitative, and qualitative data with those of quantitative data, I am able to triangulate the findings with another kind of data set and thus provide a stronger case for the phenomenon under analysis. This opens the possibility to reconsider the theoretical arguments anew. As Andreas Lieberoth and Andreas Roepstorff (2015, p. 281) write, each data triangulation provides a genuine vantage point on the research subject, which enables a more comprehensive analysis on the *latent* aspects of the more readily observable phenomenon. A mixed-methods approach also makes it possible to fashion an iterative research strategy that aids in developing more efficient and accurate research tools.

In the final section of the survey reported in this chapter (Study 1, N=1,718), the respondents were asked whether they were willing to participate in possible future research. This question was included only in the online version of the survey, which

we (Vahlo, Kaakinen, Holm, and Koponen) circulated in the Turku region ourselves. This local version of the survey was marketed by us through social media channels such as Facebook and Twitter. The survey was open for three days, during which we received 594 completed individual responses from 894 people who opened the survey.

In October 2015, I began sending invitation emails to the respondents who had given me this possibility by letting me know their email addresses and by giving the permission to send emails regarding follow-up research. I did not write a separate consent letter. Instead, a description of the purpose of the study, the ethical issues and anonymity, the role of interview participants, and how both the survey data and the interview data would be handled and archived were specified to the participants in the survey form and also in the invitation email. Furthermore, I went through these issues at the beginning of each interview before I turned on the audio recorder device.

From the 594 respondents of the locally circulated survey, a total of 529 were included in the factor analysis and cluster analysis I reported in Study 1 of the current chapter. The remaining 65 respondents were excluded since they reported playing digital games less than one hour weekly, or because they reported playing more than eight hours every day. Of the remaining 529 respondents, 308 (58%) indicated that they would be interested in participating in possible future research. In the data of 529 respondents, there were a total of 148 mercenaries, 30 companions, 134 commanders, 69 explorers, 20 patterners, 18 daredevils and 110 adventurers. Of these, 94 mercenaries (64%), 14 companions (47%), 86 commanders (64%), 33 explorers (48%), 2 patterners (10%), 7 daredevils (39%) and 72 adventurers (65%) indicated an interest to participate in possible interviews, experiments and additional surveys. I considered the total number of possible interviewees (n=308) very high, and this was indeed a good situation in which to begin planning the interview procedure. Approximately half of these respondents, however, lived in other parts in Finland and were thus excluded from the list of possible interviewees. I made this decision because I wanted to keep the interviews similar to each other and conduct all of them face-to-face.

From the short-listed respondents (interested in future research, living in the Turku region), I selected respondents according to three criteria: 1) I wanted the group of interviewees to represent male and female players in similar proportions to those in the cluster analysis of Study 1 (N=1,718). For example, since 76 percent of mercenaries (n=335) in our data were men, I sent invitations to three male mercenaries for each female mercenary I invited; 2) I emphasized in the selection of the potential interviewees their factor scores on the five motifeme factors (*Assault*, *Manage*, *Journey*, *Care*, *Coordinate*) as well as how closely their response scores matched the scores of the ideal types of *The Mercenary*, *The Companion*, *The Patterner*, *The Adventurer*, *The Commander*, *The Explorer* and *The Daredevil*; and 3) where possible, I wanted to interview players of different ages so that both young and older players would be included in the study.

Only a few who received an invitation to participate in an interview refused the offer. However, I was not able to specifically reach men (M) and women (F) as efficiently as I had hoped, and thus the proportions between sexes as interviewed does not represent the results of the cluster analysis in the cases of all seven player types. Between November 2015 and September 2016, I interviewed a total of 32 players, consisting of 8 Mercenaries (6M, 2F), 7 Adventurers (5F, 2M), 7 Explorers (7F), 6

Commanders (4M, 2F), 2 Companions (1M, 1F), a Daredevil (M), and a Patterner (F). The youngest interviewee was 20 years old and the oldest was 49 at the time of the interview. The mean age of the interviewees was 29 years. I interviewed a total of 14 male players (44%) and 18 female players (56%).[51] In addition to the interviews, the qualitative data I analyze in this thesis includes the open-ended answers of the two surveys (N=1,718, N=845) and of 10 written open letters about players' most memorable gameplay experiences, which were submitted to a call I organized in 2016 after conducting the 32 interviews.

As soon as I knew which survey respondents accepted the invitation to additional interviews, I conducted an additional analysis of the survey data to identify not only the primary player type of each interviewee but also how their game motifeme or gameplay dynamics preferences related to the other six player types. The player types of the 32 interviewees are fully described in Figure 5.

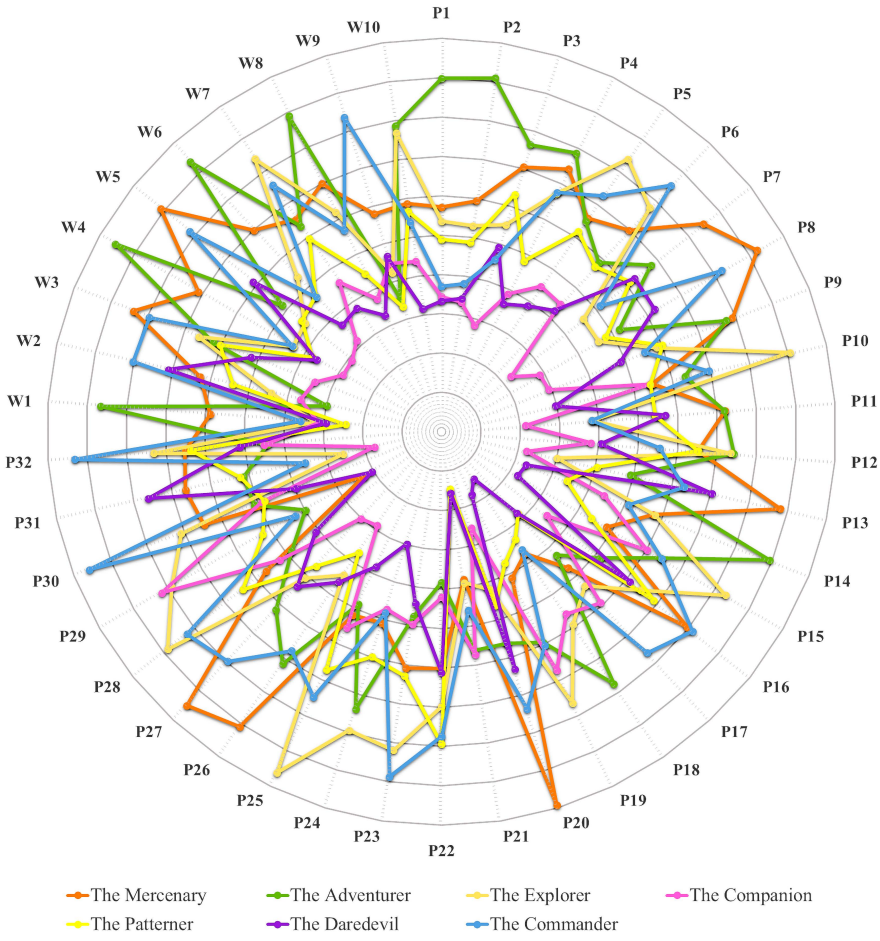

Figure 5. *The player types of the 32 interviewees (P1–P32) and 10 persons who submitted writings on their memorable gameplay experiences (W1–W10), based on their gameplay motifeme preference scores in the survey of December 2014, as reported in Chapter 3.*

[51] See Appendixes for a more detailed description of the 32 interviewees.

In Figure 5, the outermost circle represents the typical gameplay motifeme preference score for each seven player types. By calculating the Euclidean distance between a respondent's actual preference scores in the survey (N=1,718) and those of a typical player of each player type (i.e., *The Mercenary*, *The Companion*, *The Patterner*, *The Commander*, *The Adventurer* and *The Daredevil*), I was able to present a ranking order of the most similar and the least similar player types for each respondent. For example, the motifeme preference profile of the interview participant P20 matches almost perfectly to that of a prototypical mercenary in our data (N=1,718). The primary profile of P20 is thus that of *The Mercenary*, followed by secondary player type of *The Commander* and *The Daredevil*. On the other hand, the gameplay preferences of P20 differ most significantly from those of a typical player of *The Companion* type.

I chose to conduct the interviews as semi-structured for three reasons. First, semi-structured interviews were fitting for the current study since I was able to include the *themes of the survey*[52] form (N=1,718) in the interviews as subject areas. Second, in contrast to fully structured interviews, semi-structured 'theme interviews' made it possible for me to identify latent subject areas that were not covered by the survey and its conceptual framework. I put this strategy into practice by prompting the interviewees to narrate freely and in-depth about their personal experiences of video game gameplay. I then asked follow-up questions such as "Why do you think so?" and "Please tell more about that." to encourage the interviewees to describe in more detail their experiences and opinions (see Boellstroff, et al. 2012, p. 96). Third, all the interviewees had participated in the study already in December 2014 when they replied to the survey reported in Chapter 3. Therefore, the interviewees had expectations regarding the structure of the interview. I tested the interview structure and the form with two preliminary interviews before sending email invitations to the selected survey respondents.

The interviews lasted from 45 minutes to 110 minutes, a typical interview being 80 minutes long. All interviews were recorded with two audio recording devices and later transcribed by a company providing transcription services for academic purposes. The transcripts were imported into NVivo Pro, a software designed for managing qualitative data and making data analyses. The interview data and the transcriptions are archived in a password protected file. The archive file is stored on a computer owned by the University of Turku, which is also protected by a network password.

Each interview was made in the same room at the facilities of Turku School of Economics. The room casually decorated, and includes many brightly-colored bean bags, dark grey walls and a large television screen. Basically, the room has the looks and feel of a living room more than that of an office room. I met the interviewees at the main lobby of the building and chatted casually with them as we took the elevator to the fourth floor, where the interviews were held.

As we walked towards the interview room, I began to tell some details of our *Play for Reward* research project and how the interviews were related to that project and my dissertation. I also asked whether the participant played any video games currently. Many of the respondents expressed that they remembered next to nothing about the survey or how they had responded in it. I replied to this worry by ensuring that

[52] I return to these themes shortly.

they did not need to remember the survey because the interview was about how they currently perceive their video game preferences, playing habits and their personal history of playing games.

In the survey of December 2014, the respondents were encouraged to list five of their all-time favorite games. Before each interview, I went through the responses of the upcoming interviewee and pre-constructed a 40–60-minute-long YouTube playlist consisting of five *let's play* gameplay videos of his or her favorite games. Each interview was launched with a session of watching these video clips and discussing the portrayed games. The videos were muted so that the interviewee and I could discuss freely, but I typically left the video running in the background although the subject we discussed did not necessarily deal with the particular game any longer. Depending on the flow of the discussion, I changed the videos if the interviewee started to refer to other games or if I myself wanted to introduce a new subject to the discussion to keep the interview dynamic.

Originally my purpose was to make a video recording of the facial expressions of the interviewees as they watched videos of their favorite games and another video when they remembered their most memorable gameplay experiences with these games. I tested this procedure with the two initial interviews but decided to drop video recording completely from the interviews because the presence of a video camera clearly made the situation uncomfortable for the interviewees. Also, when watching the video recordings from these two preliminary interviews, I noticed that the emotional expressions of the interviewees were entangled with the ongoing interview interaction with me. This made it impossible for me to separate whether the emotional expression was due to 1) watching gameplay videos of their favorite games, 2) remembering past gameplay experiences or 3) interacting with me in the interview.

I decided to keep the element of watching the videos, since I noticed in the two preliminary interviews that watching a gameplay video of one's favorite game worked very well as the first subject area. Based on the initial interviews, I figured that these videos helped to build up trust and rapport, which made the whole interview process much more open and dialogical (see Boellstroff et al., 2012, p. 95). Also, this made it possible for me to begin the discussion by asking whether these same games were still favorites of the interviewee, and continue by asking why these games were especially valuable to him or her.

The method of including material familiar to the interviewee to encourage reminiscing is called stimulated recall. Jori Pitkänen (2015) describes that, in game research, stimulated recall is most typically utilized as post-participation. The behavior of an informant is first video-recorded in a situation in which she plays a video game. Later, the video is shown to her, and she is asked to recall her thoughts and feelings during the event. This has been found to be a useful strategy since games tend to be so engaging that it is very difficult to both play and discuss the gameplay experience simultaneously. Although the videos I showed to my interviewees were general *let's play* videos rather than videos of their own experiences, my purpose was partly similar to what Pitkänen (2015) describes: to aid the informants to recall their personal experiences when playing the specific game, to remember how they felt and what they thought during that time, and how they feel now about their past experiences.

All of the 32 interviews included four phases and areas of discussion that resembled the structure of the survey form (N=1,718). In the first phase of the interviews, I talked with the interviewee about his or her all-time and current favorite

games, and what kinds of games he or she currently played. Although the interviews were quite different from each other, in this first phase, we typically discussed the interviewee's opinions on gameplay interaction and on what kind player performance they preferred. These subjects often led us to talk about the interviewee's opinions on the qualities of a good game in general. In short, in the first phase of the interviews, I asked, "*What* kinds of games you prefer to play and why?"

In the second phase of the interviews, more attention was usually paid to *how* the interviewee prefers to play. We discussed the preferred type of attention allocation of the player, his or her desire for facing and overcoming difficult challenges or rather wandering freely in the gameworld. These subjects led us to the third theme of preferred emotional outcomes, and to the questions of *why* they play video games at all, and how they perceived themselves as players. The fourth and the final theme covered reflections of the interviewee's social relations and personal narratives of memorable video game gameplay experiences.

Each interview was launched with a talk about the participant's favorite video games and why the participant appreciated those specific games over others. The discussion encompassed themes such as what the participant prefers to do as the player, and how he or she reflects on whether a game is good or bad. I wanted to start with this theme since it was a direct follow up to the statistical study on game motifeme preferences and player types I conducted in 2014 and 2015. The participants were, at this phase of the interview, unaware that such a categorization had been made and that they were also classified into a particular player type.

I aimed the interview to develop into a type of discussion rather than remain a series of questions and answers. To be able to succeed in this, I also discussed my own game preferences with the participants and reflected on my own memorable gameplay experiences. I found this to be a good approach because several interviewees seemed at first a bit skeptical about the purpose of the interviews. When they noticed that I also liked to play games and knew quite a lot about gaming cultures, the interviews started to resemble more informal discussions, which was my objective.

The Motifeme Approach in the Player Interviews

I took the survey of December 2014 myself, and I was categorized as *The Adventurer* player type. Throughout all the interviews, I remained reflectively conscious of my own gameplay history (see Introduction) and preferences and shared these with the participants only where I thought that sharing could help the situation develop into an open discussion. During the interviews, I continued to reflect on my own sensitivities as a player. I wanted to avoid any kind of self-presentation that could direct the interview situation towards me talking through the interviewee. To the best of my knowledge and expertise, I tried to encourage the interview participants to share their thoughts, values and memories with me without leading the discussion in any particular direction.

All of the participants were positively surprised to see gameplay videos of their own favorite games, and it was easy to begin to discuss these titles with each of

the interviewees. Most of the 32 participants moved quickly to reflect on their motifeme preferences. These descriptions were contingent with what I presented in The Core Game Dynamics scale (The CGD scale, Table 7):

> Yeah, wandering around and searching for stuff, I may be the most hardcore looter ever. Especially in *Fallout 2*, I could spend many gaming sessions... for hours and hours on just looting without making any progression in the game. I did not kill any enemies, either. I just searched every place and wandered around making sure that I had certainly explored every place through and through. (P2, adventurer)

> Well *Okami* is nice, I like to be a wolf. I like animals very much, and in *Okami* I could empathize with one. And the world is beautiful, you can draw the moon, and the night begins. So, I loved to explore the gameworld, and jump around. (P1, adventurer)

> When I play single-player games, the progression is so important to me. I want to develop and grow during the game. I am not interested in merely gaining levels just to be more powerful, it has to be connected to how the game progresses. (P4, adventurer-mercenary)

After just a few interviews, I realized that players structure their descriptions of gameplay experiences by referring to their favorite gameplay motifemes. The participants P2, P1, and P4 all reflected on motifemes of *Journey* when telling me about their favorite kind of gameplay. P2 emphasized the motifemes of searching for and collecting rare items (The CGD scale, item 18), and exploring the gameworld (The CGD scale, item 14), while P1 mentioned her preference for taking the role of a character and acting it. The practice of talking about favorite kinds of gameplay experiences via motifemes was a recurrent theme across all the player types:

> I enjoy this game, and especially its story. It is full of plot-twists, and I could not anticipate how it would end. And I like the games in which I must sneak and be really careful and all. So, it is not so much about killing or shooting but remaining unnoticed and hiding. (P18, mercenary-adventurer)

> Well it could be that some players are gentleman-like, but I enjoy most playing unfairly and surprisingly as long as it does not violate the rules of the game. For me, warfare and pondering strategies for conquering are very enjoyable. And engaging in combat, well it brings the tactical dimension to the battles, too. (P27, mercenary)

> For example, *SimCity* games, I think it is fascinating to be able to construct a city as you please… but some of my friends seemed to enjoy building big cities just to then destroy them with disasters. I never understood that, I just wanted to decide which detail would go where in my city. (P17, commander)

> [Talking about the video game *Black & White* and its 'pet' character] You can command it and direct it to places. But then again it acts rather independently. For example, if you teach it to use magic to water flowers, at some point it starts to water them autonomously. I have always wanted a pet, so it was very nice for me… I always tried to treat my pet as well as I could. (P29, companion-explorer)

Since the interview participants clearly expressed that they made sense of their favorite and undesired gameplay experience types by describing gameplay motifemes, I propose that the motifeme approach is well-suited for a framework for analyzing the interviewees' views on games and gameplay experiences at large. It is my hypothesis that the desire of players to perform in games with a specific motifemic structure is connected not only to their preferred emotional outcome of the games but also to other factors they find compelling and meaningful in video games. In this sense, I presume that gameplay motifemes and the identified player types can be important organizing principles for emotional, meaningful and memorable gameplay experiences.

In Chapters 5–9 of this thesis, I cover each of the abovementioned four interview themes by analyzing the theme first from the theoretical standpoint of enactive phenomenology and folkloristics (RQ3), and then by conducting a mixed-methods analysis of both statistical and qualitative data of the subject area (RQ2).

In Chapter 6, I investigate the performative position of the player from an enactive phenomenological framework, and proceed then to analyze how the respondents of the survey and interview participants reflected on this subject and on their emotions induced by gameplay. In these two chapters I investigate the interview subject area of *how* players like to play video games. In Chapter 7, I examine the alternative environment of 'the gameworld' and how it affords a temporary spatial setting for the player's agency. I then conclude the chapter with empirical analyses to what kinds of gameworlds the players appreciate and why. This chapter is an exploration to the interview theme of *what* players prefer to play. I continue then in Chapter 8 to offer a theoretical and an empirical investigation on interactive and narrative qualities of video game gameplay and how the players make sense of their most memorable gameplay experiences in reflection. In this chapter, I consider the qualitative interview data in relation to the theoretical arguments of this thesis. The final chapter of this dissertation is a theoretical and empirical take on motivating video game gameplay experience. I conclude the chapter with mixed-methods analyses on motivations to play, that is, on *why* we play video games.

The goal of the following empirical analyses is not only to study meaningful gameplay experience and the personal gameplay narration (RQ2) but also to follow phenomenological *epoché* procedure (see Chapter 1, p. 21) and develop a conceptual framework for studying the invariants and varied experiences of video game gameplay (RQ1). Since the empirical analyses of the following chapters are based on theoretical arguments, the empirical analyses do not follow the lines of grounded theory, which aim to 'bracket' existing theoretical assumptions and generate theory inductively from empirical data. The research attitude of this study is better described as ethnographic in the sense that it does not develop the theory inductively from the data (grounded theory) nor it does rely on existing, well-established 'grand theories.'

As specified by Tom Boellstroff, Bonnie Nardi, Celia Pearce, and T. L. Taylor in *Ethnography and Virtual Worlds* (2012), ethnography is often based on theoretical work from many fields of research, and then taken as a lens through which the data is interpreted. However, rather than trying to prove whether a theoretical model works or not, ethnographers place theories in dialogue with empirical data. By doing so, the theory can inform the data analysis, but the empirical data can also offer new perspectives on understanding and developing the theoretical foundations for studying the particular phenomenon (ibid., pp. 45–46, 162–164). By following these guidelines, my objective in the following chapters is to examine the interview data from a theoretical framework while keeping the framework open for revisions by remaining 'sensitive' to the characteristics of the data. Through this sensitive attitude, new dimensions and relations in the phenomenon under analysis can still be recognized.

5. AUTONOMY OF VIDEO GAME GAMEPLAY[53]

> [T]he true gamer is the one who understands and appreciates good gameplay and the 'gamer's game' is the one that has it in abundance (Kirkpatrick, 2012).

The main objective of this chapter is to develop a rigorous enactivistic understanding of video game gameplay and analyze how players' experience the process of playing games (RQ3). In contrast to the term 'game,' which can refer to either a game as an object or a game as a process, 'gameplay' exclusively stands for ongoing interaction between a player and a game, and denotes therefore the phenomenological qualities of 'game.' The question of how 'gameplay' should be conceptualized is vital for tracking the invariants of video game gameplay experience (RQ1). Also, it is paramount to understand what goes on during gameplay to be able to grasp how players evaluate, remember and interpret their own past experiences of playing games (RQ2).

In this chapter, I pursue open research questions, including conceptualizing gameplay as a form of human–technology interchange by examining the conditions in which gameplay may appear and disappear, and building an understanding on how the game artifact may or may not dictate the continuity and meanings that emerge from gameplay. The focus in this chapter is on single-player video game gameplay, but its core arguments are applicable to all forms of video game gameplay. I propose that defining gameplay as a theoretically solid research concept may have considerable potential for both interdisciplinary game studies and game development. I also argue that 'gameplay' is a valuable concept for folklorists who aim to study any kind of game activity, or 'game' as a genre of folklore.

Graeme Kirkpatrick (2012; 2013) has revealed that the concept of 'gameplay' is applied as a shorthand for discussing the meaningfulness of playing a game. Through good gameplay, a video game validates itself as an object of *intrinsic value*. Therefore, to study the *autonomy of gameplay* is also to study how gameplay *experience* obtains innate compelling and engaging qualities. As we saw in the introduction part of Chapter 3, 'gameplay' is generally considered in prior literature as the ongoing interaction that takes between a player and a game. Similar to the metaphor of "the magic circle," the phenomenon of gameplay has rarely been analytically considered, and thus a careful theoretical consideration is called for.

I begin this chapter by presenting an enactive take on how gameplay arises as a self-sustainable autonomous organization, i.e., as a system of endogenous meaning between a player and the game (RQ1). This is followed by an analysis of three video game gameplay experiences, and an empirical investigation into how the survey respondents (N=1,718) and interview participants (N=32) perceived the process aspects of gameplay experiences (RQ2). I conclude the chapter by discussing how the enactive approach to gameplay can reveal new aspects of meaningful and compelling play as a phenomenon of social participation and vernacular imagination (RQ3).

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[53] The main arguments of this chapter have been previously published in the journal, *Game Studies* (Vahlo, 2017). In this chapter, I present an extended version the mentioned article.

Participatory Sense-Making and the Autonomy of Interaction

De Jaegher and Di Paolo (2007) have developed an enactive understanding of social cognition that I find valuable for research into gameplay experience. Their theory is based on a second-person approach and the concept of *participatory sense-making*. As mentioned in Chapter 1, a second-person approach to cognition emphasizes *reciprocity*, i.e., the mutual trust developed in sustainable social connections and ties between agents or constituents (Klabbers, 2009, p. 122). According to this view, we come to understand others' minds from the mutual interaction with intentional social agents (Zahavi, 2014, p. 247). De Jaegher and Di Paolo define *participatory sense-making* as "the coordination of intentional activity in interaction whereby individual sense-making processes are affected and new domains of social sense-making can be generated that were not available to each individual on her own" (De Jaegher & Di Paolo, 2007, p. 497).

De Jaegher and Di Paolo argue that a participatory sense-making process between two or more social agents can emerge as an *autonomous organization*.[54] According to the complex of systems theory and enactivism, in an autonomous organization the constituent processes 1) depend on each other in a recursive manner that realizes them as a network; 2) constitute a unity in their domain of coexistence and; 3) determine the possible interactions the organization can have with its environment (Varela, 1979, p. 55; Thompson, 2007, p. 44). Thus, when an individual changes itself in social interaction, this change also influences someone else. Through the changes that take place in the other, the individual again changes oneself (De Jaegher & Froese, 2009, p. 452).

In the social interaction of two or more autonomous social agents "(1) the coregulation and the coupling mutually affect each other, constituting an autonomous self-sustaining organization in the domain of relational dynamics in which (2) the autonomy of the agents involved is not destroyed" (De Jaegher et al., 2010, pp. 442–443). Di Paolo, Rohde and De Jaegher (ibid., p. 78) offer social play as a prime example of an autonomous organization that emerges from co-regulated social interaction because it engenders a network of activities that sustain themselves: "When the child becomes the regulator of the play, the activity takes off as a proper form of life... The norm [of the play] is arbitrary, invented by the child, but in allowing his or her body to submit to it, it becomes as serious as other social or biological norms."

De Jaegher and Di Paolo (2007; 2008) make an enthralling argument by stating that participatory interactions can emerge as autonomous organizations. In an autonomous organization, the coordination that arises when participants couple within a system facilitates its own continuation and modulates what kind of coordination is more likely to take place in its dynamics. Social interaction can affect individuals in ways that invite them to sustain the encounter, which thus comes to have a tendency of facilitating itself. In an enactivistic approach to autonomous interaction, the interaction constitutes a level of analysis that cannot be reduced into its constituents.
In what follows, I argue that *autonomous organization* emerges in video game gameplay, regardless of the number of the players above a single player. There is autonomy

[54] As Kyselo (2014) notes, enactivism distinguishes thus two types of autonomous organization: the identity of an individual *and* the identity of social interaction, maintained by autonomous individuals.

to gameplay, and seen from a first-personal stance, the experience of interactional autonomy *is* the gameplay—indeed, if there is even just one autonomous agent present. To rephrase this argument in relation to the theory of De Jaegher and Di Paolo (2007), I contend that an autonomous organization may emerge in an agent–environment coupling if certain preconditions are met. More precisely, I argue that since gameplay as an emergent phenomenon achieves temporary autonomy not unlike an engaging debate between two humans, gameplay is to be understood as an *autonomous form of social participation*.

Next, I analyze the two requirements for autonomy of interaction (De Jaegher et al., 2010) to emerge in relation to video game gameplay: 1) *the co-regulated coupling* and 2) *the need for two social agents*. Let us first investigate the two systems of the player and the game and how they are coupled in the real-time coordination dynamics of single-player videogame gameplay.

Player–Game Coupling

A video game is a dynamic system that can be generally described as a network of related processes that an observer would conceptualize as a single whole changing over time (Thompson, 2007, p. 39). What changes over time is the state of that system; future states of the system causally depend on the current state of the system, as Louise Barrett writes (2011, pp. 129–130).

As a dynamic system, a game is heteronomous, that is, an other-governed and state-dependent system that arises in the realm of human design. Heteronomous systems have an algorithmic constitution, and they are made for a purpose. They are unable to maintain or reproduce themselves; these systems need to be activated and sustained from outside (Thompson, 2007, p. 98). This condition can be contrasted to the autonomous, self-governed and self-producing living systems discussed in Chapter 1. The organization of a heteronomous dynamic system is defined by its input–output information flow, internal processing of the input, and the external mechanics of control (Varela, 1979; Barrett, 2011, p. 130).

A self-individuating system, such as a player, maintains itself as metastable. It has tendencies and transients rather than states. Such a system is always on the move; it focuses on an attractor for a while and changes its focus once again to another attractor. A game, instead, can be described as a *state-machine* (Juul, 2005, p. 142).[55] Whereas the model of autonomous systems is a living cell (Thompson, 2007, p. 44), the model of a heteronomous digital game-system is a binary digit, a bit.

A heteronomous system processes information, while an autonomous system is meaning-constructing: "[A]n organism, animal, or person does not process information in a context-independent sense. Rather, it brings forth or enacts meaning in structural coupling with its environment" (Thompson, 2007, p. 58). Correspondingly, and as argued by Søren Brier (2013), a bit in a computer works through *differences*, and it is not a sign by itself precisely because it does not require a living system to

[55] A 'game state' stands for the current formal status and the internal condition of a game in a given moment (Salen & Zimmerman, 2004, p. 218).

interpret it. The code of a computer exhibits dyadic proto-signs that operate without an autonomous system's perception.

In enactivism, regulation is understood as an intentional and value-laden activity by which a subject modulates its coupling to achieve meaningful goals for its own autonomy and individuation (see Cuffari et al., 2015). Since only autonomous agents are able to regulate their behavior, then the gameplay between a player and a video game is not co-regulated in the same fashion as are the social interactions between two humans. Rather, gameplay is *co-coordinated* in its own reciprocal dynamics that are sustained by its constituents. However, social play between two or more players, e.g., children's school yard play, a card game or a board game, is a co-regulated activity. In these latter cases, the rule system of the game facilitates the interaction between players but does not sustain it by itself. Between these two types of gameplay, we can situate multiplayer video game gameplay, which is sustained by both the heteronomous responsive game system and the players who intend to play. Playing a multiplayer video game is thus a co-regulated activity, facilitated by a dynamic video game system.

The player does not merely regulate the player–game coupling. She also self-reflectively regulates herself *as* the player of the game by adopting a *lusory attitude* (Suits 2005 [1978]). For the player, participating in the gameplay thus consists of regulating herself *and* her actions in relation to the coupling. To rephrase Mead's well-known words (2015 [1934], p. 147), *a person who is playing a game is also playing a game of herself, otherwise she does not know that there is a game going on*.

For a video game, "participating" is equal to coordinating its states accordingly to an external input and the rules or code. In the case of the heteronomous system of a video game, the coupling can be depicted as input–output procedures; in the case of the autonomous system of a player, we then can speak of monitoring dynamic affordances and taking effective complementary actions. From the perspective of the player, the complementary actions can often be conceived as demands for a specific kind of participation and performance. The game provides *normative affordances* that act as possibilities for both actions *and* restrictions for when and how these actions should be performed. However, the player constantly chooses to continue to regulate that coupling. Gameplay emerges from the dynamics of this reciprocity, and it is an accomplishment of the dyadic system that requires constant overcoming by both its constituents. Through this reciprocity, gameplay arises as an autonomous organization: its constituents, i.e., the player and the game system, depend on each other recursively; together, they constitute a unity; and they determine the possible interactions between each other and their environment (see Varela, 1979, p. 55; Thompson, 2007, p. 44).

The temporary autonomy and specific identity of gameplay can sustain itself only if the autonomy of its constituents, the player, and the responsiveness of the game are also sustained. Gameplay can be described as *precarious* since the tendency for both the player and the game is to stop. There is no gameplay if neither the player nor the formal game system "feeds" into the coupling: "[I]t is not possible for a precarious process in an operationally closed network to exist on its own in the circumstances created by the absence of the network" (Di Paolo & Thompson, 2014).

As a phenomenon, gameplay manifests as a dynamic *co-emergent* (see Thompson, 2007, pp. 38, 65) in which the whole "gameplay" not only emerges from its constituents, but the parts, the "player" and the "game" also arise from the whole.

The whole and its constituents mutually give each other their own identities that last as long as the coupling is reciprocal. This reciprocity means that gameplay is both an *original* and an *irreducible* phenomenon; that is, it is characterized by both local-to-global and global-to-local determination of circular causality and organizational closure (Thompson, 2007, pp. 60–62, 66). I name the player identity that arises in the dynamic co-emergence of gameplay *player proper* and the game identity *game proper* since "the primary phenomenological reality of games is that of action… it is the act of doing… that imbricates the player with the game" (Galloway, 2006, p. 83).

In contrast to De Jaegher's, Di Paolo's and Gallagher's (2010) arguments, I assert that the *autonomy of gameplay* does not require co-regulated coupling as do social interactions. Instead, the co-coordination in the dialogical relations between a player and a dynamic game system suffices because the game is designed to be responsive to the player's self-regulative and coordinative acts in ways that enable the coupling to continue. Next, I analyze the second requirement that De Jaegher, Di Paolo and Gallagher (2010) offer as necessary for autonomous organizations to emerge, namely, the need for *two social agents*.

Social Participation in Solitary Gameplay?

In individual forms of agency, an agent acts to achieve her own goals without the need to co-regulate or co-coordinate the acts. These *individual acts* are then contrasted with *social acts* that involve more than one autonomous agent. Cuffari, Di Paolo, and De Jaegher (2015, p. 1101) name the act of 'gift-giving' as an example of a social act. An act of gift-giving is initiated by a social agent, but it requires another agent to be completed. Such an act has a double nature. It is simultaneously a change initiated by a constituent, such as a person, and a move in the social encounter between the constituents.

When the acts that a player conducts in a single-player video game gameplay are compared to individual acts and social acts, an important tension is revealed. The acts in single-player video game gameplay are individual acts in the sense that there is only one agent present who aims to fulfill her own desires. However, she cannot succeed by adopting an attitude to follow only her own norms in individual acts. If she does, the gameplay may soon perish. The player has to involve the dynamic game system in her consideration. I call this choice the *performative normativity* of gameplay: The changes that take place in the game artifact as well as the actions taken by the player may or may not contribute to the self-sustaining autonomy of the gameplay. Here we can note that, similar to social acts, the actions an individual takes during gameplay are also *moves* in the gaming encounter. A "bond of reciprocal dependence" (Goffman, 1959, p. 82) exists, linking the game and the player together.

In the enactive view on gameplay, *lusory attitude* (Suits, 2005 [1978]) means abandoning the demand of individual acts in our agent–environment coupling and adopting instead patterns of social acts, or performative normativity. The player has to perform shared actions with the game system by adopting the game's 'point-of-view' in her own sense-making. Just as one cannot schedule a meeting with a friend if one does not make suggestions and consider them to find a shared deliberation, we

cannot progress in the game if we do not embrace our own social skills. Shared normative actions in gameplay are self-constitutive for the identity of the player proper, since "action is self-constitution... what makes actions good or bad is how well they constitute you," as philosopher Christine M. Korsgaard (2011, p. 25) has argued.

The dynamics of co-coordination in gameplay bear similarities to the couplings between two humans in social interaction, and precisely these aspects of phenomenal sameness render the autonomy of gameplay possible also in single-player video game gameplay. However, a game nevertheless remains invariably a heteronomous system that is unable to produce meanings in and of itself or shape the player's intentionality directly. Seen from the vantage point of the autonomous agent of the player, the game belongs to the *environment*, but as an environment, it is distinctive since it is approachable in ways that echo the dynamic patterns of social interaction. Lori Landay writes (2014, p. 177): "The difficult task facing programmers and designers is to construct games that give the experience of gameplay that has a conversation's reciprocal *feeling* of exchange of effect."

The proposed account on video game gameplay holds that human players are profoundly social creatures, and game players also rely on their social interaction skills in their encounters with game media. This view is supported by *The Media Equation* theory developed by Byron Reeves and Clifford Nass (2002 [1996]) who observe, based on the empirical evidence of more than 35 studies, that our interactions with media share extensive similarities to our human–human interactions. "[H]uman responses to media are determined by the rules that apply to social relationships and navigating the world" (ibid., p. 10). Existing neuropsychological and behavioral evidence indeed suggests that we are hardwired to socially respond to cues that suggest the presence of an intentional entity (Nowak & Biocca, 2004, p. 482).

In the case of single-player video game gameplay, we expect, for example, that *the game* we play responds to our communicative acts, that it evaluates us and praises us when we succeed, and provides us with consistent, reliable, immediate, clear and relevant information. All of these expectations of these 'Gricean maxims' are derived from the very foundations of interpersonal social interactions (see Grice 1975; Reeves & Nass, 2002 [1996]). Therefore, seen from the first-person vantage point, in solitary video game gameplay there remains two *response-present*[56] dynamical systems, albeit only one of these systems is autonomous.

During our ongoing activities, media appears to us as being social without effort. As Reeves and Nass (2002 [1996]) have shown, this effect is not primarily due to advanced AI or realistic representations the media may provide, but rather, it relies on our human way of automatically perceiving media as social. We perceive our dynamic surroundings as social individuals and respond to it accordingly (Ibid., p. 27; see Biocca, 1997). Indeed, as Landay (2014, p. 173) observes, "The persons may perceive that they are interacting with the computer [game] system in a reciprocal way as if they were participating in a conversation."[57]

[56] Deterding (2013), in his reading of Goffman, applies this term to describe whether human players are present in the same immediate environment with each other or not.

[57] Interestingly, the phenomenal sameness between games and forms of social interaction was noted already in 1972 by folklorist Robert A. Georges (p. 185), who observed that in many games players adopt a role of a strategist or a fortunist. These 'roles' are not different from what emerges in *riddling*, where the riddler is a strategist and the answerer is a fortunist.

De Jaegher and Di Paolo (2007) describe human-to-human social interaction as an activity in which a person must alter her actions contextually to re-encounter the other participant. Within this process, the person must encounter herself inasmuch as the other participant's sense-making modulates her own. We can now note that these dimensions also exist in the coupling between a player and a dynamic video game system. Playing a video game is a practice of re-encountering the other 'participant,' i.e., the game system. The player must metaregulate herself and her own sense-making as she encounters in-game situations that require self-reflection. For example, when a player must make meaningful decisions that will affect the game's story, she will often reflect on herself before taking action.

As we saw in Chapter 2, according to Mead (2015 [1934], pp. 199), we must apply the attitude of the other on oneself in order to belong to a community, to *become its citizens*, that is, to realize 'the self' in the social situation in which it arises. Goffman (1966, p. 8), furthermore, contends that "[A]ny game may be viewed quite properly as an instance of social order," in which 'social order' is defined as "the consequence of any set of moral norms that regulates the way in which persons pursue objectives." I would like to combine here the arguments by Mead (2015 [1934]) and Goffman (1966, pp., 196, 243) and propose that we can characterize rule-bound games as *social order* and a *social reality* in which we become "citizens" through gameplay. During engaging gameplay, we reflect on our identity and realize ourselves in relation to the social order of the game and its normativity to gain "the value that belongs to all members of that community," as Mead (2015 [1934], p. 217) writes.

These views dovetail well with Klabbers (2009, pp. 3, 99–116, 120), who argues that games are social systems that are also models of other social systems. Players *as* the actors of a social organization of a game constitute systems of interactions by drawing on social resources and the rules of the game in their player-performance. As argued by Jean Piaget (1962 [1951], pp. 112–113), "[R]ules necessarily imply social or inter-individual relationships… rules are a regulation imposed by the group, and their violation carries a sanction." As Piaget wrote, to play games, we must first agree to the rules. Therefore, collaboration precedes rules as the first principle of gameplay. This also renders games with rules in a sense institutional; "[T]hey are social realities which are passed on" (ibid., p. 143) from one generation to another (see Fine, 2002 [1983], pp. 182, 231; Juul, 2008; Calleja, 2007, p. 98; Deterding, 2013, p. 123).

I agree with De Jaegher et al. (2010) and postulate that a dynamic social process is required for autonomous organizations to emerge. I differ, however, by arguing that such an autonomy can also emerge in single-player videogame gameplay because single-player gaming is 1) co-coordination between an autonomous player and a heteronomous game, which can be argued as sufficient for a temporary autonomy of interaction, and 2) because the specific kind of co-coordination enabled by a game converges gameplay phenomenally to a form of *social participation*.[58]

[58] The social aspects of single-player gaming have been previously discussed, e.g., by Jaakko Stenros, Janne Paavilainen and Frans Mäyrä (2011), who argue that playing alone may increase social and cultural capital. Players of any single-player game can also be argued to be conscious of the game designer and other players playing the same game.

I also argue that single-player gameplay as a phenomenon is a form of social participation because we automatically socially perceive and respond to the dynamically changing game media. Gameplay is social participation because social interaction skills and shared actions are constantly required to progress in the game, and to sustain gameplay in general. Finally, it is a form of social participation because each instance of gameplay necessitates adopting the position of the social self *as* the player of the game, which renders gameplay a meta-regulative and self-reflective practice. Next, I consider how precarious gameplay comes forth and manages to sustain itself—or faces a breakdown.

Coordination and Exploration in Precarious Gameplay

In participatory sense-making, two or more systems are coupled in dynamic interrelations of coordination and exploration. The concept of *coordination* comes from dynamical systems theory, which analyses coordination as a ubiquitous phenomenon in physical and biological systems. Coordination means "the non-accidental correlation between the behaviors of two or more systems that are in sustained coupling" (De Jaegher & Di Paolo 2007, pp. 489–491). Coordination is interactional if two or more social agents correlate their behaviors on purpose during an ongoing situation and in the rhythm of the situation, find similarities and coherences with each other. If the coordination between two or more social agents aims to continue the interaction, it is called functional coordination (Di Paolo et al., 2010, pp. 62–69).

Bateson (2002 [1979], pp. 130–131) offers *exploration* as an example of behavior that is both self-validating and addictive. According to him, exploration is always success, whether the result is pleasant or unpleasant. Interestingly, Bateson connects exploration and play by stating (ibid., p. 128): "The game and the creation of the game must be seen as a single phenomenon, and indeed, it is subjectively plausible to say that the sequence is really playable only so long as it retains some elements of the creative and unexpected. If the sequence is totally known, it is *ritual*."

I argue that processes of both coordination and exploration are pivotal in all gameplay. In *coordination,* a participating system changes its state or regulates itself in relation to the coupling, e.g., through synchronization, anticipation, mirroring, or imitation, as Gün R. Semin and John T. Cacioppo have specified (2009, p. 114). *Exploration*, however, can be interpreted as the counterpart for rules of the game; rules of the game restrict how the gameplay can be continued, but exploration is the element of creativity to use to traverse and test, bend, and even break the rules.

A social embodied agent participates in gameplay by exploring and coordinating the contingencies between itself and the environmental other, the formal dynamic system of the game. In social interaction, these contingencies are negotiated during the encounter itself (McGann & De Jaegher, 2009). In solitary gameplay, however, the contingencies are partially predefined by the game artifact and thus only limitedly negotiable by player agency. Rather, the contingencies are enacted, discovered, and mastered by the player. A game, unlike most other worldly objects, is not available to us in a complete fashion. A game becomes more known and transparent through exploration, skill acquisition, automatization, and sustained playing (see Kaptelinin & Nardi, 2006, p. 79). However, an element of opaqueness remains in it.

More precisely, in the experience of gameplay, there is an "uncertainty of outcome" (Goffman, 2013 [1961], p. 69; see Costikyan, 2013) or an unpredictability that originates in its dynamics (Karhulahti, 2015a, p. 34).

In exploration, a player experiments with the game environment from a performative vantage point. Exploration may be object-oriented or mere curiosity in delving into the possibilities of the game. Through coordination, she regulates her coupling with the game to achieve the accord needed for producing an effect. The recursive and environmental process of exploration and coordination is *adaptive*. As De Jaegher and Di Paolo (2007, p. 496) state: "viewing interactions from this perspective is akin to understanding the growth of an adaptive system."

In the autonomy of gameplay, an adaptive player proper must be able to determine how the current events she faces are shaping her trajectory or *progression* in relation to her viability within the gameplay. Moreover, she must have the means to regulate the conditions of this trajectory and to do so appropriately. Thus, adaptivity is integrated into the capability of *evaluating the needs* and *expanding the means* for realizing and preserving one's own identity (Di Paolo, 2005, p. 445; Froese & Di Paolo, 2009). Adaptivity is how the player sustains and realizes her player identity by exploring possibilities and coordinating couplings during the gameplay. This condition cannot be achieved if the player does not *care* about her identity as the player (see Fine, 2002 [1983], p. 185). The raison d'être for game artifacts is that, during the autonomy of gameplay, players will develop an attachment to their identity *as* being the players of that specific game. This attachment keeps gameplay going as long as the player retains her autonomy and the game retains its responsiveness.

Let us next consider how the principles of coordination and exploration may manifest in first-person experiences of video game gameplay. This may be best illuminated by considering a few gameplay examples in which the *balance* between explorative and coordinative practices becomes endangered. For this purpose, I reflect on three of my own past gameplay experiences.

In *Okami* (Capcom, 2006) the player comes to face a character called Mr. Orange in an event known as *The Konohana Shuffle*. During this event, the task of the player is to use the *Celestial Brush* to rejuvenate the divine cherry-blossom tree of Konohana. After a rather long cut-scene, the player has to pause the game five times at exactly the correct moment to call up a canvas, draw five circles to rejuvenate the cherry blossoms, and succeed in this task in perfect sequence within a very limited time-frame. If she fails, then the sequence starts over, and another cut-scene is initiated.

When the player first encounters the event, she finds herself watching the cut-scene in which there is no coordination whatsoever, but only the story of the game to be explored (as in all cut-scenes in video games). As the cut-scene ends, the player may or may not grasp what to do. I did not, and thus I missed the short possibility to draw the first circle. This moment I missed was a moment of active exploration of the gameplay possibilities. Mr. Orange immediately re-appeared to announce that I had failed. After this cut-scene, which again did not include any coordination and only very limited exploration, I was prompted to try again. This time I knew what I was supposed to be doing, but nevertheless, I failed to draw a 'perfect' circle.

Figure 6. *The Konohana Shuffle in Okami (2006, Capcom)*

The remote controller of a Nintendo Wii console can hardly be described as accurate, and the little circles I tried to draw failed one after the other. It took several tries of active exploration and coordination before I knew how the circles were supposed to be drawn. During this process, my frustration started to grow, as I realized that the circles did not need to be perfect. Instead, it was more important to draw the circles in a certain rhythm. Sometimes drawings that resembled more of a spiral than a circle were accepted by the game. After dozens of tries and forced viewings of the cut-scene, I knew exactly how I must move my wrist to generate acceptable drawings. All of my exploration in the sequence had vanished. What was left was the mere coordination of my movements and, frankly, I now hardly felt like *playing* anymore.

An experience of playing the action role-playing video game *Diablo III: Ultimate Evil* (Blizzard, 2014) provides another example of the imbalance between coordination and exploration. When a player's character hits level 70 in *Diablo III*, the gameplay experience changes drastically. Quite typically, exploring the main story at this stage is only a memory, and the player is engaged in grinding character levels and, especially, in collecting endless amounts of rare loot in the procedurally generated levels. For some players, this is where the game starts. For others, its marks the end of the game.

It is up to the player to choose a difficulty level of her own liking for her constant adventures of grinding and looting. If one chooses a difficulty level lower than the current skill level of her character, then the gameplay practically has no coordination. The experience is one of mere exploration that consists of finding out whether those anticipated green and orange lights that shoot to the sky after massive killings appear or do not. If they do, you just may have found an extremely valuable weapon or amulet.

Figure 7. *Loot in Diablo III: Ultimate Evil (2014, Blizzard)*

My local co-op playing ended because the experiences of many consecutive nights of playing the game started to resemble each other too much. We decided to quit playing the game since it did not seem to *lead anywhere* anymore. We realized that the stuff we had collected did not provide any kind of growth or adaptation for us as players of the game. There was little to be explored and no coordination left in the gameplay, which then, because of this perceived lack of balance, was terminated by us. The experience was not necessarily boring, but it started to feel pointless. It did not *make sense* for us to continue, since the imaginative experience had reached its saturation point, as Donald W. Winnicott (2005 [1971], p. 70) describes it.[59]

The autonomy of gameplay suffered greatly in the episode of Konohana Shuffle in *Okami* and also in the endless looting of *Diablo III: Ultimate Evil*. Both games failed to generate the changes in the player–game coupling that I perceived meaningful for my experience as the player. In *Diablo III*, I was not able to *evaluate the need* for my efforts anymore; in *Okami*, I suffered from my lack of *expanding the means* to overcome the unfairly difficult challenge.

Finally, *Dungeon Master* (FTL, 1987) provides an example of the disappearance of both the dimensions of exploration and coordination in its autonomous organization. *Shriekers* are the second creature type that the player encounters in this classic *dungeon crawler* game. Beating these shriekers does not require much effort from the player during the first encounter and even less so when the player meets them again as she descends further into the dungeons.

[59] As Bonnie Nardi has observed in her ethnographic study on massively multiplayer online role-playing game (MMORPG) *World of Warcraft* (2004, Blizzard Entertainment), "farming" loot, i.e., repeating the same easily played in-game sequence over and over to find valuable items, and "grinding," or engaging oneself with repetitive events with low challenge to gain more experience for playable characters in order to level them up, diverge from play experience and converge into the phenomenon of *work* (see Nardi, 2010, pp. 94–95).

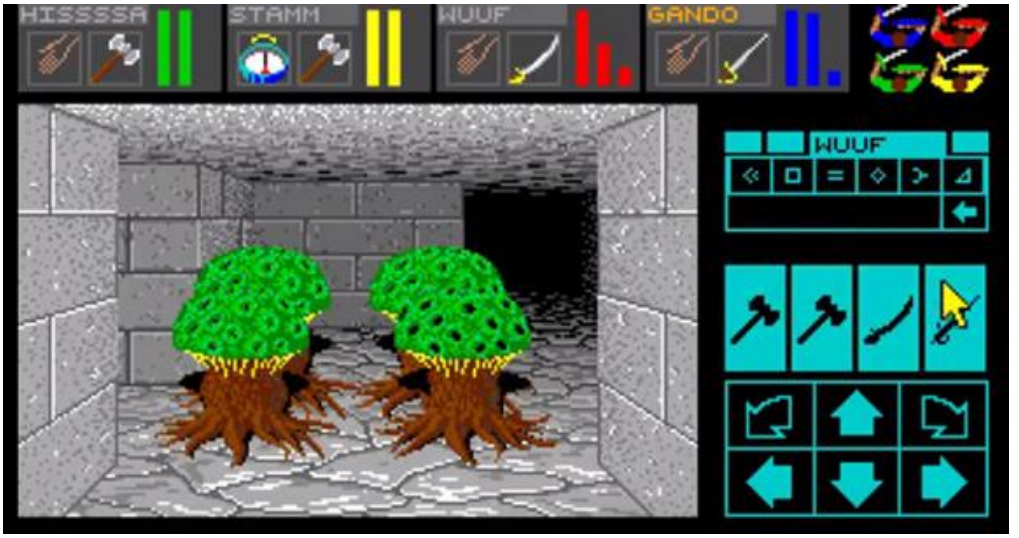

Figure 8. *A group of shriekers in Dungeon Master (1987, FTL)*

After running for my characters' life from the menace of magenta worms, I found myself in a room full of shriekers. The room had a closable iron door, so I was safe there from the deadly worms after I killed the shriekers. I decided to rest in the room. To my surprise, I was awoken by a new group of shriekers that had respawned in the room. At the time I was a 10-year old kid, so I figured this was an excellent opportunity to gain some highly needed levels without any risk. Thus, I set the mouse cursor on the icon of an empty hand that symbolized a Priest attack and figured that by connecting a *QuickShot II Turbo* joystick to the Atari ST instead of a mouse with which *Dungeon Master* was supposed to be played, I could gain priest and fighter levels automatically if I put the "auto-fire" option of the joystick on. I watched the process in action for a moment, then turned the TV set off, and went to school.

The re-encounter with shriekers did not include any coordination. It consisted of mere routine operations since there was no real need for player skills. However, when I explored the fact that the shriekers had respawned in the room according to a certain pattern, exploration also vanished. In the absence of both coordination and exploration, the autonomy of the gameplay withered, and I found myself without performativity. I was no longer a constituent in the gameplay of *Dungeon Master*. The game was not playable, because it appeared to me as fully known and mastered in *that* room.

In many games, we may find ourselves within activities that are completely known. Yet, if there is no element of exploration, these activities no longer necessarily count as *playing* the game. Moreover, there is no coordination in those activities that we have mastered. If there is no experienced effort in adjusting oneself in relation to the gameplay events, then the experience does not strike us as full-fledged gameplay since it does not demand our attention or our effort. As an experience, it is similar to riding a bike. We become self-conscious of how we do it only during rare and unexpected occasions.

Without any coordination, the player appropriates the game for what Roger Caillois (2001 [1961], p. 9) called "playing at 'playing chess,'" and what has more

recently been labeled *toyplay* (Bateman & Boon, 2006; Sicart, 2009). Correspondingly, without any exploration, a player will just be trying to *use the system*. Furthermore, as argued by Goffman in *Frame Analysis* (1986 [1974], p. 358), "an individual can be overthrown as an interactant and find himself sustaining no particular role" in interaction. This "self-removal" is indeed what happened to me when playing *Dungeon Master*. Goffman (1986 [1974], p. 509) also noted that complete knowability is not a quality of interactions proper between individuals. We can here notice again the profound social character of games: gameplay remains intriguing to us by retaining an element of unpredictability, which is a constitutive principle of social interactions.

The absence of exploration or coordination in the gameplay experience does not equal an instant breakdown of the autonomy of gameplay. Sustained lack of exploration and coordination do, however, neglect the performative normativity of gameplay. As long as the game does not provide changes that emerge for the player as novel affordances for exploration and coordination, the game artifact will deprive the self-sustaining autonomy of gameplay instead of nourishing it.

Preserving gameplay is the shared responsibility of both the game system and the player. *Game mechanics* are the tools for the player to use to fulfil this responsibility (see Sicart, 2009; Chapter 1). A player is able to co-coordinate gameplay reciprocally with the dynamic game system only by triggering game mechanics. For instance, the coordination that takes place in toyplay is not truly reciprocal, since the player appropriates game mechanics for *individual acts* instead of *normative social acts* guided by gameplay.

Some games emphasize coordinative practice, whereas others offer a plethora of possibilities for explorative activity (see Barr, 2007). Experiences of exploration can be enabled by, e.g., an element of randomness, complex story, multiple endings, an extensive gameworld, role-taking, and character customization. Also, viewing a cut-scene may be regarded an explorative practice. As long as there is something novel to be explored, a cut-scene still has value as a part of gameplay, although the player momentarily merely observes the in-game events without the possibility to generate changes (see Klevjer, 2002). Correspondingly, coordination can cover such tasks as solving logical or spatial problems, adjusting oneself to the rhythm of the gameplay and coordinating fine motor skills, negotiating and considering a strategy, and making tactical moves. To put it differently, coordinative practices are more immediately connected to the game's *challenges* than explorative practices.[60]

The relationship between the player proper and the game proper is mutual and not unlike that found in adaptive living systems; "The changes in environment that organisms produce generate new selective pressures as an integral part of this process,

[60] Jonas Linderoth (2013) has provided an intriguing take on the types of challenge a player faces in gameplay. Linderoth proposes two main categories for designed challenges in games: in *exploratory challenges* the player is assumed to know how to take actions, but the real challenge is in deciding which actions to take. In *performatory challenges* the player knows what to do, but the challenge is in how she manages to do what is required. Linderoth's concepts are related to what I mean with explorative and coordinative player practice, but not identical; both of Linderoth's (2013) concepts describe telic *coordinative* player practices, i.e., challenges, albeit coordinative practices of a different kind.

and as organisms adapt, they again, simultaneously, change the nature of their environment" (Barrett, 2011, p. 78). By exploring, our repertoire of possible actions extends. By coordinating our actions successfully, our skills develop. Gameplay can thus be described as a sociocultural practice of *growth in adaptation* achieved by the intentional processes of exploration and coordination in player–game coupling.

In gameplay, the player *evaluates the needs* for her growth in adaptation and thus the needs for making in-game progress, and then *explores* the possibilities the game offers. She then *expands her means* by *coordinating* her couplings as they relate to the challenges she encounters. By learning how to better cope with the game environment, she gains more efficient tools for evaluating any additional needs for more successful adaptation. Then she explores the environment again from her renewed vantage point (see Figure 9).

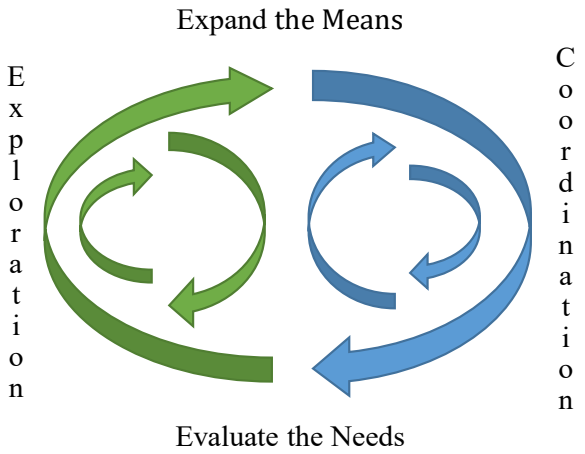

Figure 9. *Growth in adaptation in video game gameplay consists of explorative and coordinative player practice.*

The notions of exploration and coordination in gameplay bear significant similarities to the concepts of *paidia* and *ludus*, as described by Roger Caillois (2001 [1961]). Caillois (ibid., pp. 13, 27–28) articulated *paidia* as the play of free improvisation, spontaneous self-expression and carefree gaiety, whereas by *ludus*, he referred to play as an institutionalized activity that requires effort, skill, and patience from the players. For Caillois, *ludus* introduces regulations, rules, defined goals and conventions to play, and thus formalizes and enrichens explorative and open-ended *paidia*. Importantly, Caillois (ibid., p. 53) stated that *paidia* and *ludus* should be understood as *ways of playing* rather than as categories of play (see Barr, 2007, pp., 66–67, 79–80; Deterding, 2013, p. 145).

In enactivism and in this thesis, the concepts of exploration and coordination are understood as general and focal processes that manifest in all forms of social interaction. First-person experiences of gameplay entail practices of exploration and coordination not unlike other forms of social participation, but these practices are not unique to gameplay. Thus, exploration and coordination are not reducible to "ways of

playing," similar to *paidia* and *ludus* (cf. Caillois, 2001 [1961] p. 53). They are players' regulative, interactive and constitutive practices to encounter dynamic systems, whether these are autonomous humans or heteronomous games.

Constitutive principles describe the ways in which an agent directs herself in a certain activity. For example, putting one foot in front of another is a constitutive principle of walking. If you are not guided by this principle, then you are not walking (Korsgaard, 2011, pp. 28–29). *I contend that exploration and coordination are constitutive principles of gameplay*. If you are not guided by the principles of exploration and coordination in gameplay, then you are not performing game player activity.

Data Analysis: The Ludic Involvement in Ongoing Gameplay

The constitutive practice of coordination is closely related to how *skillfully* a player manages to perform in gameplay. The best-known investigation into the connections between gameplay experience and skill was conducted by Csikszentmihályi (1975; 1990; 2002 [1992]). Csikszentmihályi's theory is an examination on why people are highly motivated in activities of personal excitement and enjoyment. He studied, for instance, chess players, rock climbers, and surgeons, and concluded that their peak experiences resembled each other because each type of experience encompassed a state of being in "flow." Since Csikszentmihályi's theory has been discussed extensively in several other publications in game studies, I will consider his theory of *flow as an optimal experience* here only briefly.

Csikszentmihályi (1975, pp. 38–46; 1990, pp. 53–70) presents six aspects of the flow experience: 1) action and awareness of the action merge together, and one does not reflect the act of awareness itself; 2) the person focuses and centers her attention on a limited stimulus field and excludes, for example, sounds irrelevant to the task at hand; 3) the individual is said to experience a "loss of ego" or forget herself in the midst of the activity; 4) she consequently gains more control over her actions and her immediate environment; 5) the environment provides non-contradictory demands for action, clear goals, and unambiguous feedback to the actions the person takes; and 6) the experience is *autotelic*, or intrinsically rewarding. Later Csikszentmihályi (1990, p. 66; 2002 [1992], p. 49) added that, in a flow experience, the sense of time is also altered.

A flow experience affords possibilities for action that meet the person's skills and abilities. If a task is too demanding, it can result in anxiety; if it is too easy, she gets bored. Thus, "the state of flow is felt when opportunities for action are in balance with the actor's skills; the experience is then autotelic" (1975, p. 49). As noted by Csikszentmihályi and many authors since, games are prime examples of activities that constantly produce a state of "flow." Game scholar Katherine Isbister (2016, p. 3), in fact, suggests that the qualities of flow and choice separate games from other media:

> To the human brain, playing a game is more like actually running a race than watching a film or reading a short story about a race. When I run, I make a series of choices about actions I will take that might

> affect whether I win. I feel a sense of mastery or failure depending on whether I successfully execute the actions in the way I intended.

The central argument by Csikszentmihályi is that a precondition for flow is that the skills of the individual and the demands of the environment align. These arguments are well-known in contemporary game research, but I wish to add another perspective to the discussion of games and flow experience by remarking on what philosopher and enactivist Alva Noë has written about skillful access.

Noë (2009) argues that when we are learning any new skill, we must first pay careful attention to the *mechanics* of what we are trying to do. Hitting a baseball is, for most of us, very difficult the first time we try to do it; "Psychologists have demonstrated that, as a rule, novice performance improves with this kind of focused attention on the mechanics of the task—you improve your performance when you pay attention to yourself and what you are doing" (ibid., p. 99–100). An interviewee of mine described this kind of transformation in gameplay experience:

> In principle, you can play through this game without any other weapons than your fists. Just run naked and use your skills. If you do not level up and fight only with your fists, this is a game of pure skill like an arcade shoot 'em up. And just like in *Metroid: Prime*, you slowly grow into the character and its movements and realize that you begin to act automatically. All the blocking moves, rolling moves and attacks come naturally for you. You have to be one with your character's movements. (P13, mercenary)

The more skillful an individual is with the task at hand, the less attention she allocates to the mechanics of the task. As Noë (2009, p. 100) notes, expertise, in fact, requires an individual to turn her attention from the mechanics to, for example, the tactics and strategies to utilize the learned mechanics in creative ways, to be able to improvise. Novices and experts thus have qualitatively distinguishable manners of involvement with their immediate environment.

An expert player does not pay attention to the game mechanics but to the ways to manipulate mastered mechanics, and to improvising within the restrictions of the mechanics and the rules of the game—at least if we are dealing with games of strategy. On the other hand, if we are dealing with games that have an immersive gameworld (Chapter 7) and a complicated story (Chapter 8) to be explored, the expert player may be able to pay more attention to the narrative qualities of the game and role-playing, and empathize more with the in-game characters. Some of my interviewees expressed being drawn to play games precisely because of the experiences of *virtuosity*:

> For me the best thing is... how the progression happens and how I come to grasp the game system and its interactions… I am fascinated by how the mechanics when combined create a work of art. So, it is not only the numbers and algorithms behind the interface, not only mastering how the system works, then. This is why puzzles do not interest me, you just solve them, puzzles are so quickly experienced for someone like me… complex options [in a game] means that I can

> play it uniquely, not as most of the other players do but in my own way, expressing something singular. (P4, adventurer-mercenary)

These observations emphasize that, although flow is indeed an important and recurrent quality of gameplay experiences, it is not the only emotionally rewarding experience one can have in gameplay. Flow, as described by Csikszentmihályi, requires constant change in both the requirements of the environment and the skill development of the player. This theory strongly stresses the coordinative and *ludic* aspects of gameplay, but I argue that explorative *paidic* activity is a constitutive principle of gameplay, as well. The description of flow does not satisfactorily capture the playful aspects of gameplay that the player may experience after she has passed the novice phase of learning how to play.

Indeed, ludic accommodative play is hardly the primary gameplay experience for all players. Some players specifically seek games in which they can wander freely, which offer emotionally touching stories, fascinating characters and vast gameworlds:

> Well, for starters, I enjoy *The Sims* because I can construct an alternative reality and live everyday life and stuff. So, it is like: "What if I could live like this too?" And then I can build it to be my own little world. And take care of others. But I have to also be organized and careful or my sims [in-game characters] will die. (P25, explorer)

> If I remember anything from my childhood at all, then maybe I remember *Worms: Armageddon.* Me and my brother, we did not only play the game as you were supposed to, fighting against each other. We designed our own places and strongholds and mansions… The game was a bit like a toy for us. (W9, commander)

The emotions one feels when trying to learn to play by getting used to the game mechanics is surely different from the emotions one experiences when she navigates the gameworld, customizes her character and learns details of the mythological creatures that roam in the game's fictional setting. Players do indeed have quite different preferences on whether they enjoy the explorative or the coordinative conduct more in gameplay:

> *Minecraft* was too open for me. It can be really fun and all, but when I played it, I was like "what I am supposed to do now?" You must decide your own goal in it, otherwise it is just boring. It was quite an awful experience for me, I want clear missions and tasks, please. (P10, adventurer)

> Ok, in *Mafia* I did like to drive around, the city looks great and the cars are fun, and it was quite amusing to steal cars, shoot its owner and just drive away. It was fun for a while, but it got meaningless quite soon, so I wanted to play the game through and see the end. So,

> I do enjoy, in the end, the challenges more than free wandering without a clear goal. (P31, daredevil)

Although players differ in how they appreciate the explorative and the coordinative practice and the balance between them, a common factor between players seems to be taking interest in *making progress*. During the interview processes, it became evident to me that the pleasure in making progress is not necessarily to be equated with being closer to, e.g., winning or completing the game. Some players emphasized the importance in progressing in the game's narrative development:

> I want to experience everything that is related to the main storyline of role-playing games. I am not the kind of player who spends endless hours doing some side-missions or grinding levels. The plot development is what interests me, and the characters. If the storyline screams that "you must save the world now, hurry!" and then you ignore that and go collecting some rare mushrooms for tens of hours, what's the point of the story? (P11, mercenary-adventurer)

For other players, the most significant experience of making progress was not related to revealing the story but rather to opening new possibilities and locations in the gameworld:

> In platformers, I enjoy exploring and finding. It gives me quite strong emotions to find a new level, or gain access to new places, for me it is the best thing in gaming. As a kid, it was something really special. (P6, commander)

> These *Zelda* games have such amazing gameworlds, and you can travel to places. You can go to the desert, to the sea, and then there is a sort of dangerous moorland area and so on. Just being in the gameworld feels like an adventure. That is what draws me to play… The joy of finding out is the driving principle. To explore the strange new world. (P10, explorer)

One player-interviewee (P26, mercenary) told me that he would easily get addicted to *Spelunky* and other games in which the levels are procedurally generated, meaning that each time you play, you practically start a unique adventure since the game environment is never exactly the same. In these *roguelike*[61] games, the progression consists of never-ending exploration of unknown levels and their secrets. Some players, however, did not stress the importance of progressing in the game's narrative or in

[61] The name *roguelike* is an emic term for a subgenre of role-playing video games. In the original *Rogue* (1980, Epyx) game, players controlled a character and explored procedurally generated dungeons that changed every playthrough. If a player's character died, the game did not continue, but the players had to begin a completely new game instead. This design feature is called *permadeath* in gaming cultures. The contemporary videogames that adopt procedurally generated dungeons, turn-based combat and permadeath are called *roguelike*.

exploring its gameworld but progressing towards "a perfect completion" by finding and succeeding in every task available:

> I have played this game through three times with Playstation 3. I am a completionist, I cannot play and study at the same time, because I have to get all the achievements. (P13, mercenary)

> I loot everything rare. Sometimes I like to play games in which there is not so much rare and hidden stuff, because then I do not have to spend tens of hours on searching for them all. I am really bad at throwing things away both in real-life and in games, because then I start to think… "What if I will still need that somewhere?" (P30, commander)

The survey of 1,718 respondents (see Chapter 3, Study 1) included a question in which the participants were asked to specify what kind of *play style* they enjoyed by choosing whether they disagreed or agreed with a set of fixed statements (Likert-7, 1=disagree completely, 7=agree completely). The question included a total of 12 items, half of which described either aspects associated with *explorative play style* (1: "I want to explore the gameworld extensively and do all the side quests," 2: "I like that I can choose my own way to play and wander the gameworld freely," and 3: "I like linear play in which following the storyline of the game is the main thing") or *coordinative play style* (4: "I like that games put my skills to a real test," 5: "I like games that really test my wits," and 6: "I enjoy that I have to work hard in games.").

In order to study players' preferences in explorative and coordinative player conduct, I made an exploratory factor analysis for these six items (1–6) of the scale with principal factor extraction, varimax rotation and polychoric correlations. I decided to exclude the other six items from the analysis since they clearly described separate aspects of play styles, e.g., "I only want to play games that are very recently published" and "I only play games I am good at." The MAP test suggested two factors to be extracted. All of the six items loaded on a factor with loadings > 0.5 and without cross-loadings, and therefore I decided to retain the first solution.

As suspected, items 1, 2, and 3 loaded on factor 1 with corresponding factor loadings of 0.770, 0.681, and 0.614. I named this factor *explorative play style*. Similarly, items 4, 5, and 6 loaded on factor 2, which I call *coordinative play style*, with the loadings of 0.760, 0.754, and 0.608. The Cronbach's alpha for the first factor was 0.837 and for the second factor 0.860. These results indicate relatively high internal consistency for both of these scales. I then calculated mean preference sums for explorative and coordinative play styles for the seven player types (see Chapter 3).

From Table 11, we can note that players of *The Adventurer* type appreciate an explorative play style clearly more than a coordinative one. Also, mercenaries typically enjoy an explorative a bit more than a coordinative style of playing, but players of all the other five types enjoy ludic coordination over paidic exploration in gameplay. This is especially true for the player clusters of *The Patterner* and *The Daredevil*.

Player type	Explorative style		Coordinative style		Obs.
	mean	std dev	mean	std dev	
Adventurer	5.46	1.19	4.63	1.23	179
Commander	4.88	1.32	5.01	1.17	323
Companion	3.97	1.71	4.19	1.38	138
Daredevil	3.85	1.54	4.22	1.42	250
Explorer	4.61	1.41	4.64	1.31	272
Mercenary	5.33	1.09	5.17	1.08	336
Patterner	3.53	1.66	4.05	1.42	226

Table 11. *The mean sums and standard deviations for the seven player types and explorative/coordinative player practices (N=1,718).*

Kristine L. Nowak et al. (2008) noticed in their experimental study of violent video games that frequent gameplay reduced players' frustration and increased their sense of *presence*.[62] In their study, a greater sense of presence correlated with increases in aggression, which led the researchers to suggest that "aggression results from true involvement [i.e., presence] in the video game and not from gameplay as a means to pass time" (ibid., p. 265). It was also observed that when the participants of the study got frustrated, this interfered with their experience of presence. Since the level of frustration was reduced in long-term play, and the level of presence was correspondingly increased, the authors concluded that the familiarity with gameplay was the key element for perceiving the game as more violent.

The study reported by Nowak et al. (2008) has important implications for understanding the different emotions that may emerge from video game gameplay. Their study indicates that the level of skill and competence to play a video game has significant impacts on how the game is experienced: the more skilled players are more deeply involved in the fictional gameworld and thus experience the game contents differently than the players who are merely trying to learn how to play. If the results of the experiment by Nowak et al. (2008), Noë's observations of skill acquisition and Csikszentmihályi's theory of flow are brought together, we can hypothesize that the emotional experience of an expertise player may indeed be very different than that of a novice player. This is an important subject area, and I return to it in Chapter 6.

Discussion I: Let's Play Master and Servant

In the course of this chapter, we have seen that enactivism argues for an imbalance between a living being and its environment: a living being is able to modulate its environment because it is both autonomous and adaptive. This generates *interactional asymmetry* between a subject and its environment. Thompson (2011, p. 121) contends that "[i]f we lose sight of this interactional asymmetry, then we lose the ability to account for the directedness proper to living beings in their sense-making." When the enactivistic stance to interactional asymmetry—which it shares with many other

[62] I focus on the concepts of 'presence' and 'performance' in Chapter 6.

branches of cognitive sciences—is considered in the case of gameplay, it becomes evident that the player regulates the parameters of the player–game coupling. This view on coupling between a player and a game differs, however, from how self-sustaining gameplay has been understood in prior game studies.

Following Ihde (1990), Leino (2012, p. 59) defines computer games as a subtype of a technological artifact "which makes players responsible, in an existentialist sense, for the freedom it endows them with" (Leino, 2012, p. 59). He calls this environment the *gameplay condition*, which he argues is an invariant in the game experience. Leino states that the player's desire to play can be assumed as a given: "[I]t is only lucid to assume the player as someone who desires to remain a player, as someone onto whom the gameplay condition is imposed" (Leino, 2010, p. 147). This argument leads Leino to revisit Aarseth's (2007a) writings on the 'implied player.'

Aarseth (2007a, p. 130) states that by following Gadamer "[T]his defines the player: a person subjected to a rule-based system; no longer a complete, free subject with the power to decide what to do next." From his phenomenological first-person stance, Leino then argues that players do not subject themselves to the rules of the game, but rather they find themselves as being subjected to the gameplay condition: "In the player/game relationship... the player is fulfilling the requirements set by the game... the player and the materiality of the game are not equal partners when deciding about the nature of the relationship" (Leino, 2010, pp. 272–275).

From the framework of enactivism, the asymmetry between a player and a game appears differently than in the writings by Leino or Aarseth. In enactivism, it is maintained that our environments cannot impose a condition on us which would dictate how we act. Instead, it is the autonomous agent, the player, who *intends* to continue the activity regardless of the resistance she may encounter. "There is always an intention to the play," argues Sutton-Smith (2001 [1997], p. 198). Or, as Karhulahti (2015a, p. 16, 18) observes: "[V]ideogames can never (en)force me to act in a 'particular' way even if I salute their *gameplay conditions* by fighting resistance and maintaining my player position."

Rather than being able to shape the intentionality of the player, or dictate the continuity of the gameplay or its meanings, a game generates opportunities and possibilities for actions, i.e., affordances (see Chapter 7). This demarcation designates that in first-person enactivism the player's desire to play, and hence the autonomy of gameplay, should not be understood as a given but as precarious.

Kelso (1995) has shown that the dynamics of coupling are typically not fully determined by any one participant or an object of a situation: Instead, the dynamics emerge from their mutual influence (McGann et al., 2013). I argue this is also the case in the autonomy gameplay, where there are mutually constraining characteristics between the player and the game, and the emergent yet precarious state of gameplay is based on the intrinsic dynamics of both. Behind the wheel of the autonomy of gameplay is neither the dynamic game system nor the player, but the emergent reciprocity between these two constituents.

Discussion II: The Dialogical Gameplay

As I mentioned in Chapter 2, Piaget (1962 [1951]) analyzed how mental representation and symbolic function arise from the developmental stages of the human mind. He traced the origins of representation to sensory-motor *assimilation* and *accommodation*. He defined assimilation as a process in which an individual "takes in" new objects to existing mental schemas. In accommodation, contrastingly, one "fits" existing mental schemas to perceived worldly objects. Piaget stated that sensorimotor play is essentially assimilation over accommodation, whereas imitation is accommodation for its own sake. In contrast to accommodative imitation, assimilative play does not require "real effort" (ibid., p. 90), but it is instead the egocentric "pleasure of being the cause," as Piaget (ibid., p. 91) emphasizes, following Karl Groos (1912 [1901]).[63]

My model of exploration and coordination as the constitutive principles of gameplay is congenial with Piaget's (1962 [1951]) theory of assimilative and accommodative practices in intelligent adaptation, although exploration does not simply equal assimilation nor does coordination equal accommodation. One does not assimilate game mechanics and the objects of gameworld for the egocentric pleasure of exploration but rather one explores based on the recognized needs and within the boundaries of the game's rule system. Between the poles of purely assimilative play and completely accommodative imitation, *exploration* resides on the side of assimilation, but not at the far end of this continuum.

Sutton-Smith (1983, pp. 232–235) states that exploration is more closely connected to adaptation than play, and more directly connected to learning. Exploration has also been called *investigation* (ibid., p. 233), which further illuminates the distinction between exploration and free-form play. In the words of Corinne Hutt (1976, pp. 211–212), where epistemic exploration asks, "what does this *object* do?" ludic play asks, "what can *I* do with this object." Exploration has a tendency to be obligatory and investigative and happen in novel situations, but play can be characterized as optional and idiosyncratic activity that takes place in known environments.

Thus, explorative paidic activity emerges in gameplay in relation to the 'external reality,' i.e., to the challenges set by the game. This is so because exploration in gameplay is subordinate to the purpose of making progress in the game; as a type of activity, *exploration is directed* (see Sutton-Smith, 1983, p. 233). The same can be stated of coordination: coordination in gameplay is not accommodative imitation for its own sake but only in relation to expanding the means to make in-game progress. It can be therefore concluded that within gameplay, coordination entails accommodative

[63] "Ludic activity," for Piaget (1962 [1951], pp. 90–104), equals egocentric assimilation of exercising activities "for the mere pleasure of [already] mastering them," and thus it does not include any *game-like* qualities of normative acts or challenges.

ludic emphasis, and exploration is characterized by predominance of paidic assimilation over ludic accommodation.[64]

Let me make another remark on the dialogic relations between explorative and coordinative conduct in gameplay, which has additional value for understanding the connections between folkloric practices and gameplay. Graham H. Jensen (2013) has observed that the relationship between ludus and paidia can be interpreted as analogical to Mikhail Bakhtin's (1981 [1934]) concepts of *centripetal* and *centrifugal* forces in language. Centripetal forces are processes of unification and centralization of verbal and ideological norms. In contrast, centrifugal forces are decentralized and disunified. The centripetal and the centrifugal are not mutually exclusive but in constant dynamical and dialogic relationship in any forms of discourse (ibid., p. 279).

Jensen (2013) notes that centripetal forces can be described as analogous to ludic procedures that act on paidic restrictions (including rules of the game), and the ways by which the game persuades the player to engage herself with the game mechanics. Centrifugal forces, on the other hand, encompass the 'carnivalesque' and anarchic, open-ended *paidia* that challenges and even transforms the ludic or the centripetal forces of a game.

Similar to Bakhtin's writings on centripetal and centrifugal forces that coexist in all forms of discourse, the coordinative and explorative practices are present in all instances of gameplay. Here we can recall the writings of Mead (2015 [1934]) and the constant dialogue between the "I" and "me" aspects of the social self. For we can now note that "I" corresponds to the explorative centrifugal force in gameplay, whereas "me" is the ludic and normative component of centripetal coordination. We have thus arrived again at a position from which gameplay appears as a profoundly dialogical process between the expressivity of the individual and the *social order* of the game in relation to which this expressivity manifests. Gameplay is an attempt to adjust oneself

[64] An additional notion should be made about Piaget's theory (1962 [1951]). The theory has been criticized by several authors, most notably by Sutton-Smith (1966). In Sutton-Smith's reading of Piaget, play is reduced into an activity of repeating, which cannot originate a change. Based on this interpretation, Sutton-Smith argues that for Piaget (1962 [1951]) intelligence cannot proceed without imitation, but it can proceed without play. However, as Piaget (1966) wrote in his response to Sutton-Smith, his theory on the development of thought does not assert that knowledge would be a result of imitation, i.e., 'copies of reality,' but it instead emerges from the permanent *equilibrium* between assimilation and accommodation. In my reading of Piaget (1962 [1951]), Sutton-Smith's critique misses the mark here. George Forman (1983) arrives at a similar conclusion. He notes that in Piaget's constructionist theory of equilibration, play must have a constitutive role in the cognitive development similarl to imitation; "Imitation and play are equally important for adaptive thought… play pulls imitation away from mindless empiricism and imitation pulls play away from objectless idealism" (ibid., p. 252). However, Sutton-Smith hits another mark in his reply (1971) to Piaget (1966). In this paper, Sutton-Smith emphasizes that play does not subserve "adaptive" thought but remains as a *sui generis* expressive form that serves to express personal meanings.

to the social order that is the game by the practices of assimilative exploration and accommodative coordination.[65]

Furthermore, we can now begin to discuss how gameplay relates to folkloric practices as a whole. I would like to suggest that—in addition to the possibility to describe gameplay as a dialogic process between exploration/coordination, paidic/ludic, assimilation/accommodation and centrifugal/centripetal—the dynamics of folklore can be approached using a similar framework. Folklore, I propose, emerges in the tension between these dialogical poles. Perhaps folklore can be positioned towards the left-hand side (paidic, assimilative, explorative and centrifugal, see Figure 9) of these continuums, but it never resides only there. Instead, folklore is always about the dynamical relation between unofficial/institutional and varied/regulated. In this sense, folklore is not equal to pure play of the culture, but instead resembles precisely gameplay as a phenomenon, i.e., play within a social order of regulations, institutions and centripetal forces. In a sense, folklore is the gameplay of the vernacular.

I propose that 'gameplay' as a phenomenon can be understood as substantially folkloric because, similar to any item of folklore, gameplay combines an aspect of participatory vernacular agency in relation to the official, the institutional and the social order. In this chapter, I have argued that single-player video game gameplay is a form of social participation, regardless of the absence of other individuals. I have not yet examined whether solitary video game gameplay in particular can be understood as a folkloric practice. I return to this theme in Chapter 8.

However, it is important to note here that the possibility of single-person folklore has been previously studied in folkloristics. In 2006, Jay Mechling published an article titled *Solo Folklore* to re-visit an argument he made originally in 1989: we can have communication not unlike 'folk communication' with animals and even inanimate objects such as cars, toys or computers. As I have proposed in the current chapter from the theoretical stance of enactivism, Mechling contended that a person can be the audience for herself, and that this is indeed what happens in every performance, because performance is not only interpersonal but also a reflective practice. A person can form something similar to a *folk dyad* with her environment and develop 'relationships' with the items she finds valuable or meaningful to her.

Just as Mechling (2006, pp. 437–438) observed, our ways of interacting with appliances do not seem to differ completely from our social interactions with other individuals. Indeed, it would be troubling to presume such a total difference since, whether we are alone or in the company of others, we surely make sense of our interactions with the world *through culture*. We do not suddenly drop outside culture in solitary settings. Mechling (ibid, p. 438) himself examines, for example, solitary imaginary play by asking whether a child's 'pretend' tea party play should be called a folk event. He offers that solitary play is indeed a folk event since it very hard to

[65] Sutton-Smith did exhibit a dialogical or dialectical approach to play. In *The Ambiguity of Play* (2001 [1997], pp. 196–197) he offers that play is characterized by relationships between play and the playfulness. Here, play is contained by metacommunicative frames of communication, whereas the playful is disruptive in relation to the frames. This he calls *ludic dialectic*. The other dialectic, i.e., *referential dialectic*, deals with how the actions in play are also about the actions in the non-play world.

pinpoint which qualities, other than the lack of social interaction, distinguishes solitary play from social play; "The kids might be more interactive than the dolls, but if a child imagines the interaction, is that less real?"

Mechling argues that solitary play and gameplay trains us for social encounters with others. According to him, playing alone should be studied as *solo folklore*, folklore performed in the absence of the others. When Mechling (2006, p. 443) writes that "[T]he locus of reality of solo folklore is in the mind," I find myself agreeing with him. However, drawing on enactivism, I emphasize that the mind is relational, embodied, dynamical, and intersubjectively open. It is how we communicate with the world around us, and with ourselves as parts of that world.[66]

Folkloristics, in my view, is a discipline that studies how the vernacular renews and reforms its relation to the traditional, institutional and established. This, I suggest, is what is at stake in every instance of gameplay: the changes that a player proper triggers in a game environment force her to renew herself in relation to altered game events. Curiously, this demand to renew ourselves makes us feel like time has slowed down; "It is a tantalizing trade-off. One gives up comfort and, in a way, productivity; in return, one gets time and youth" (Noë, 2009, p. 51). Gameplay brings about disruptions in our routines that may feel afterwards like an enchanted eternity, akin to our experiences when traveling in foreign countries.

I have now argued for two invariants of video game gameplay experience. First, by reading Mead (2015 [1934]), and enactive phenomenological theories on 'self,' I argue in Chapter 2 that any instance of gameplay experience necessitates that *the person who intends to play take a third-person view on herself as the player of the game*. This is how the player realizes a lusory attitude (Suits 2005 [1978]). Second, I argue that *explorative and coordinative player practices are constitutive principles* of the precarious autonomy of gameplay. Next, I examine how we as the players renew ourselves in gameplay, and what kind of participatory access we gain to the game during an act of gaming.

[66] I am not, however, in full agreement with Mechling (2006). Mechling represents third-person folkloristics, which *observes* phenomena from an outside third-person perspective, whereas I advocate for first-person folkloristics that does not set apart that what is done from how the person participating experiences it. A person listening to an urban legend about a killer does not need to believe the story to be true to feel scared, amused or fascinated, and expected emotional responses are surely a key motivator for telling these stories (cf. Mechling, 2006, pp. 449–450).

6. PLAYER PERSONA

> The Persona... is a side of you that shows itself when you face the world around you. Perhaps you can think of it as...a facade of determination you wear to face various difficulties in life (Igor, an in-game character in the video game *Persona 4: Golden*, Atlus, 2013).
>
> When we analyse the persona we take off the mask (Jung, 1928, p. 165).

The purpose of this chapter is to examine the position of the player in relation to video game gameplay experience, and the emotions that may be induced by it. I explore how the player experiences gameplay by investigating the crucial concepts of *presence*, *performance*, and *emotion*. Similar to Chapter 5, I continue here to study the process ontology of games and ask *how* gameplay should be understood as a form of participatory practice (RQ1).

Since my objective in this thesis is to better understand how gameplay experiences come to have varied meanings for players, the position of the player must be rigorously investigated. The premise for focusing on 'presence' is that for a gameplay experience to matter for a player, the player and the game must be available to each other. The experiences of presence in gameplay are important for the emotions that can and will emerge from play, and therefore presence is presumably relevant for the many meanings players attach to the cultural practices of playing video games. 'Performance,' furthermore, is how the player is able to make sense of gameplay by *participating* in it.

This chapter consists of three sections. The first section is influenced by phenomenology and enactivism, whereas the emphasis in the second part of this chapter is on analyzing writings by Goffman, and interpreting the experience of video games from a stance that entwines Goffman together with enactivism and folkloristics (RQ3). Goffman's works, introduced to game studies by Gary Alan Fine (2002 [1983]; see Deterding, 2013, p. 25), have been deployed in prior game studies to understand both presence (e.g., Calleja, 2007) and performative play (e.g., Fine, 2002 [1983]; Pearce, 2009). I conclude the chapter by conducting empirical analyses with the qualitative interview data (N=32) and statistical data (N=1,718). In these analyses, I consider players' preferences for experience games from the vantage point of the player and propose that gameplay experiences can be argued to be inherently meaningful and emotional (RQ2).

'Presence' in Video Game Gameplay

The role of *presence* in virtual environments has been studied extensively for more than three decades in human-computer interaction (HCI), media psychology, and game studies, to which it is closely related, and is sometimes directly associated with the concept of 'immersion' (see Calleja, 2007, pp. 83–88; Ermi & Mäyrä, 2007, pp.

94–95; Murray, 1997, p. Wirth et al., 2007, p.98). In HCI research, presence is generally conceived as the sense of "being there" in mediated environments: "[T]he essence of presence is often described as the perception of nonmediation" (Tamborini & Skalski, 2006, p. 226). Presence is not understood to be a rare phenomenon. In fact, in a literature review by Kristine L. Nowak and Frank Biocca (2004), it was revealed that people experience some level of presence in most mediated environments (Nowak & Biocca, 2004; see. Reeves & Nass, 2002 [1996]; Schroeder, 2002).

Importantly, the experience of presence has been argued to be central in shaping the experience of video game gameplay (Tamborini & Skalski, 2006, p. 225), memory effects (Jeong et al. 2008, p. 197), and gameplay enjoyment (Shafer, Carbonara & Popova, 2011; Klimmt & Vorderer, 2003). Most typically, 'presence' is considered to consist of the dimensions of *spatial presence* and *social presence* (Nowak et al., 2008; Tamborini & Skalski, 2006, p. 226).

Spatial presence is characterized as the physical sensation of being transported into a mediated environment such as the *gameworld*[67] (Biocca, 1997; Tamborini & Skalski, 2006, p. 227). According to Jonathan Steuer (1992), communication technologies vary in their potential to induce spatial presence in two respects: *vividness* of sensorially rich stimuli, and *interactivity* (pp. 10–11). Wirth et al. (2007, pp. 497, 517) make a related conclusion in their review article by describing spatial presence as a two-dimensional construct of self-location portrayed by the medium, and the perceived possibilities to act.

Social presence is the perception of being with another through a medium (Biocca, 1997; Biocca et al., 2003, p. 460; Nowak & Biocca, 2004). Frank Biocca, Chad Harms and Judee K. Burgoon (2003) identify three relevant perspectives of social presence. In *copresence* (see Goffman, 1966, pp. 15–17), a person has direct sensory awareness of the availability of the embodied other.[68] In *psychological involvement*, one experiences the presence of another's intelligence and intentionality (Biocca, 1997). Furthermore, *behavioral engagement* is the interdependent, multichannel exchange of behavior in which a person can encounter another person or 'social presence' reciprocally in a virtual environment. In other words, behavioral engagement focuses on the co-coordination and co-synchronization of behavior (Biocca et al., 2003, p. 461; Tamborini & Skalski, 2006, p. 232; see Chapter 5).

Although presence is a widely studied subject in HCI sciences, these studies have two drawbacks from the perspective of the current thesis. First, HCI studies have not extensively analyzed how the active role of the player affects the experienced presence, although the current approaches on social presence focus on both the properties of the technology and the psychological questions of how humans perceive social presence (Skalski & Tamborini, 2007, p. 389). Taking a player's agency into careful consideration is important in the case of video game gameplay in which the player does not merely observe her environment but participates in constituting this very environment (see Chapter 5). Several game scholars (e.g. Salen & Zimmerman, 2004,

[67] I return to the notion of 'gameworld' in Chapter 7.

[68] Furthermore, for Goffman (1966, p. 22), copresence includes a dimension of mutual awareness wherein the other person is not merely bodily present for the perceiver but the perceiver is simultaneously available for the other's immediate perception.

p. 452; film studies scholar Elena Gorfinkel quoted in Salen & Zimmerman, 2004, p. 452; Calleja, 2007) have suggested that the player's activity in gameplay might be at least as important for experienced immersion as is a game's "sensory realism."[69]

Second, HCI studies are typically based on a different understanding of the self than is taken in the current work. In Chapter 5, I argue video game gameplay is a dynamical form of human–media coupling, which engenders perceptions of social presence. As shown by Reeves and Nass (2002 [1996]), people's social responses to media are largely *unconscious* and unrecognized by the media users themselves. Yet the argumentations of HCI presence theorists seem to focus on the narrative consciousness, that is, on how people reflect on their experiences and express these experiences when inquired about them.[70] I propose that it is important to pay more attention to how media users, such as game players, experience social and spatial presence both reflectively *and* pre-reflectively.

Whereas in a HCI framework, 'presence' is conceptualized as a quality enabled by mediated environments, in a phenomenological enactive stance, presence is taken as a general concept not reserved to mediated experiences. Rather, it is analyzed as an invariant of every agent–environment relation; "Presence is a matter of degree, things are more or less present" (Noë, 2012, pp. 19, 33–34). The concept of presence in enactivism is closely associated with the concept of *agency*, which is crucial to any gameplay experience. To illuminate the differences between these two research traditions on 'presence,' let us consider writings by philosophers Alva Noë (2004; 2009; 2012), Evan Thompson (2007; 2011) and Shaun Gallagher (2005; 2012).

Enactive View on Presence and Agency

In the stance proposed by Noë (2012), presence equals availability. To evaluate the presence of an object, we must consider how it is available to a perceiver. An object may have *perceptual presence*. A perceptually present object is accessible and available in relation to our sensorimotor skills. When we consider, for example, a character of a fictional novel, the character is not perceptually present but *thought present*, which requires, e.g., conceptual and language skills. Thought presence may be described as extended perception in the sense that "all thought is directed to its object thanks to the thinker's skillful access to the object [and] to know [what objects] are, in the relevant sense, is to have the right kind of skillful access to them" (Ibid., pp. 28–29).

Thought and perception are, according to Noë (Ibid., p. 45) merely different styles of gaining access to the world. Accessing the world requires *agency.* The sense of agency is one's experience of being able to cause or generate actions (Gallagher, 2012), and it is how *w*e make sense of our being in-the-world through narrative un-

[69] I analyze this question further in the empirical part of Chapter 7.

[70] Although Nowak, Krcmar and Farrar (2008, p. 259) state that *suspension of disbelief* required for experiences of presence can be conscious or not, they nevertheless consider presence as something the person *accepts* as "real.". Thus, they operate primarily on the level of reflective and inferential self-consciousness and do not analyze the aspects of pre-reflective phenomenal experience.

derstanding (Popova, 2015). In phenomenology, the *sense of agency* can be distinguished from *sense of ownership*, the state in which one knows that "I move." For example, when slipping on ice, a person has no sense of agency, but she still knows that the event is happening to her. Although we often reflect on our reasons to act, both *sense of agency* and *sense of ownership* are primarily pre-reflective and manifest at the level of phenomenal minimal self-experience:

> We do not attend to our bodily movements in most actions. We do not stare at our own hands as we decide to use them; we do not look at our feet as we walk; we do not attend to our arm movements as we engage the joystick… we also experience, pre-reflectively, a form of intentional feedback, which is not afferent feedback about our bodily movements, but a perceptual sense that my action is having an effect in the world. This effect is not something that we reflectively dwell on, or even retain in memory (Gallagher, 2012).

We also experience the sense of agency when we are immersed in activities without consciously reflecting on our doing. On this level, agency is sensed implicitly. We are aware of what we are doing, but the 'I' is not explicitly present as an object on which we reflect during the activity. However, Thomas Buhrmann and Ezequiel Di Paolo (2015) stress that sense of agency also exists on the level of reflective self-consciousness when we consider and reason our actions and their effects. In this *introspective stance*, we detach and distance ourselves from the ongoing activity and acquire a position in which we can monitor and plan our future actions.

There are at least two contributors to the sense of agency: the motor or efferent aspect of agency, and the intentional aspect. The motor aspect is the sense of causing and controlling one's own bodily movements. The intentional aspect is the sense of accomplishing or having an effect with the respect to intentional or goal-driven tasks (Gallagher, 2012; see Bell, 2008, p. 241). Furthermore, the experience of success in achieving a meaningful effect can fuel the experience of agency. The success of one's actions typically requires perceiving *distal action effects* in the world. The contingency between mental states and action effects must be identified to experience agency (Buhrmann & Di Paolo, 2015). Since the sense of agency is always experienced in the present agent–environment coupling, we must scrutinize how in-game contents and events are *present for the player* and for her participation to understand organization of the gameplay experience. For this purpose, let us consider the third dimension of presence studies (see Tamborini & Skalski, 2006), that of *self-presence*.

In the case of video games, self-presence in HCI literature is conceived as a state in which players experience their virtual self or *avatar*[71] as it were their actual self, which may result in a sensation of self-awareness within the gameworld. Self-presence is a concept close to spatial presence, although it emphasizes the first-person

[71] Rune Klevjer (2006, p. 87) defines *avatar* as "an instrument or mechanism that defines for the participant a fictional body and mediates fictional agency; it is an embodied incarnation of the acting subject."

perspective of active subjectivity, whereas in spatial presence players perceive themselves to *be* in a virtual environment (Lee, 2004; Tamborini & Skalski, 2006, p. 226; Biocca, 1997).

According to phenomenological enactivism, we can experience self-presence both pre-reflectively and reflectively. On a pre-reflective level, we sense ownership of our experience as we are engaged in activities or projects that direct our attention away from our own body. In contrast to this, on a reflective level, we attend to our body and reflect on our thoughts or feelings. In object-oriented perception at the reflective level, we appear differentiated from our immediate environmental activities as we focus on our ways to experience the world (see Gallagher, 2005, p. 29). This observation can be further clarified by distinguishing body-as-object from body-as subject, as proposed by Dorethée Legrand (2006). The concept of body-as-object (body image) is one's perception of one's own body, whereas body-as-subject (body schema) is the body-structure *through which* one experiences the world pre-reflectively by being-in-the-world. Thus, during our everyday first-hand experiences, body-as-subject remains transparent to ourselves (Legrand 2006; see Thompson & Stapleton, 2009; Gallagher, 2005).[72]

Presence is *how objects are available to us* from a specific vantage point (Noë, 2012, p. 19). When one reflects on herself, she emerges as an object in her own consideration. Therefore, in reflection we become available to ourselves. In this understanding, every pre-reflective experience is an experience of presence, but we pay attention to our degree of presence only in our reflective introspective practices, which inevitably separate us from our ongoing environmental projects.

I believe that an enactive approach to presence is not contradictory to HCI approaches, although the enactive stance argues presence to be an invariant of every experience rather than a quality that *may* manifest during media usage such as video game gameplay. I propose, however, that an enactive phenomenological account could enrich current research on presence by introducing 'self' as both a pre-reflective and reflective construct and 'body' as both the locus of dynamical functioning and an object of self-reflection. I contend that the conceptual constructions of pre-reflective/reflective self and body-as-subject/body-as-object are crucial for understanding

[72] The differences between HCI studies on presence and enactive stance can indeed be further illuminated by analyzing the concept of 'self' in self-presence. According to Biocca (1997), self-presence is users' or players' "mental model of themselves inside the virtual world." He further describes that in virtual environments the user who is embodied in an avatar's virtual body may acquire an alternative mental model of her body, and that this virtual body may have a dissimilar social meaning than the user's own body. Here Biocca (ibid.) adopts the concept of 'body schema,' which he equates to 'body image.' The main argument in Gallagher's philosophical, enactive and phenomenological book, *How the Body Shapes the Mind* (2005), is that *body image* and *body schema* are two separate systems. Following Merleau-Ponty (2002 [1962]), Gallagher (2005, pp. 24–25; see Legrand 2006) defines body schema as "a system of sensory-motor capacities that function without awareness or the necessity of perceptual monitoring," existing *below* self-referential intentionality; whereas "a body image consists of a system of perceptions, attitudes, and beliefs pertaining to one's own body." Thus, these two concepts are related to our capacity to move, act and accomplish (body schema, or body-as-subject) and our intentional perceptions and reflections of our own body and its affective states (body image, or body-as-object).

the player position, player–character identification, experienced presence and gameplay experience.

Presence of the Video Game Player

Drawing from Noë (2012) and the enactive stance, *spatial presence* is the extent to which our surroundings are perceptually present to us, i.e., available and accessible to our sensorimotor skills in agent–environment couplings. *Social presence* is our readiness to interact in a given situation, based on our interactive experiences, abilities and skills to act. The extent of social presence depends on our interactive skills and the perceived social relevance of the situation (See Di Paolo & De Jaegher, 2012). In an enactive approach, *self-presence* is constitutional for both spatial presence and social presence. Self-presence is the degree and type of *involvement* that entails preserving and nourishing pre-reflective first-person position towards the unfolding environmental events and reflecting on one's feelings and thoughts about that which has happened or that which we expect to happen.

After making a self-reflective decision to take up the position of player, the player involves oneself into gameplay and its activities. According to Goffman (1966, p. 36), to be involved entails being both *committed*, i.e., liable and responsible for one's decisions and actions, and *attached*, i.e., vesting one's identification and feelings in the immediately present object. Similar to Goffman (ibid., p. 37), by *involvement* I mean "situated involvements, those sustained within the situation." By allocating our involvement towards the game, we can note that we acquire participatory presence in relation to the in-game events, which, in turn, present themselves to us during gameplay. To continue gameplay, one has to be able to conserve the lusory attitude even in the *presence* of disturbances, as argued by Sutton-Smith (1967).

To clarify these delineations, we can investigate situational presence as:

Involvement, where a person enacts in a situation as a subject committed and attached (Goffman, 1966, pp. 36–37) to the unfolding events. Involvement defines how present *the person* is in a situation.[73] This is the dimension of both pre-reflective and reflective self-presence.

[73] Calleja (2007) has suggests the term 'incorporation' instead of 'presence' or 'immersion.' In his PhD thesis, he proposes a 'digital game experience model' consisting of six modes of involvement that build experiences of incorporation: performative involvement (ability to exert agency), narrative involvement (formation of meaningful personal narrative during gameplay), tactical involvement (knowledge of possible actions and their consequences), shared involvement (interaction with others), spatial involvement (the mapping of habitable space), and affective involvement (the usage of representational media to induce emotions). While I find these six aspects of involvement relevant, Calleja's approach to game experience is based on different theoretical grounds, and therefore I do not consider it extensively here.

Availability, where the person's perceived possibilities for action, that is affordances, define how present the environment, including its objects and intentional agents, is in that situation. This is the dimension of both spatial and social presence.

Experience, where *involvement* and *availability* together constitute a sense of "being there," where this sense refers to social presence, spatial presence, and self-presence.

Finally, I consider 'immersion' as a self-reflection of an elapsed experience of heightened presence. To describe an experience as immersive requires yet again a third-person reflective view on oneself. An experience that is perceived by the subject as immersive entails a situated agent–environment relation to which (1) the person allocates involvement and which (2) is widely available for her and her skills. [74]

I argue that, as a form of cultural experience, video game gameplay is more present for us than reading a book, browsing pictures, listening to music or watching a movie. First, in addition to the fact that all gameplay requires active participation form the player, I propose that most *video games demand that we allocate our main attention to this activity*. Goffman (1966, p. 43) stated that both men and animals are capable of dividing their attention into main and side involvements; "A main involvement is one that absorbs the major part of an individual's attention and interest, visibly forming the principal current determinant of his actions." It is my suggestion that adopting the player position brings about the cultural expectation to allocate one's main involvement to the gameplay activity, although this expectation is not as clear in casual mobile gaming as it arguably is in more immersive PC and console gameplay.

Second*, video games make comprehensive use of our access spaces*. As Noë (2012, pp. 34–36) argues, presence is a matter of degree and quality. Objects may be more or less present to us depending on how near they are to our *access space*—the combination of our skills and know-how. During gameplay, our intention is directed to the *game environment*,[75] both in how things are within the game, and, importantly, also in how we relate to the game. Games utilize mostly visual, auditory, and sensorimotor modalities, and objects that emerge in gameplay may become accessible to us in all of these manners simultaneously. An object is perceptually present, that is available or accessible, when the perceiver understands the relation between herself and the object from the perspectives of *movement-dependence*, i.e., how the movements of the agent change her perception of the object, and *object-dependence* in which object movement produces sensory changes (Noë, 2004, pp. 172, 240). Thus, things are present to us not only how they are but also in our relation to them (Noë, 2012, pp. 22–23).

In contrast to, e.g., photographs, video game contents may be both movement-dependent and object-dependent. If I, as the player, move towards an in-game object, my relation to that object changes. Furthermore, in-game objects may dynamically change "by themselves," and thus my perception of them can vary. Importantly, what

[74] Notably, McMahan (2003, p. 69) has argued that immersion may occur in video games if the conventions of the game align with the player's expectations, if the game affords meaningful things to do for the player, and if the game presents a consistent gameworld to participate in.

[75] I return to this notion in Chapter 7.

is presented in gameplay to the player can be accessed by engaging with *game mechanics,* which both enable and restrict experiences of object-dependency and movement-dependency. Since game mechanics determine the modes of interaction available for the player as well as the behavior of those in-game entities that change (relatively) independently from the player's input, game mechanics precisely define how in-game objects, including the spatial gameworld as a whole, can become perceptually present to us during gameplay.

Third*, video games trigger our social readiness to interact*. Di Paolo and De Jaegher (2012) have developed an "interactive brain hypothesis" to investigate the dynamics of social interaction and enactive cognition. They argue that our participation in socially meaningful situations can be evaluated by our *readiness to interact*. The dispositions of socially meaningful situations vary from face-to-face interactions to perceiving contextual stimulus, e.g. a photograph, a voice, or a film, that present another intentional social agent. The authors suggest that the closer a situation is to a full-blown embodied social interaction, the higher our readiness to interact is in that situation. I propose that our readiness to interact with video games and in-game entities, such as the characters of the game, is significantly higher than it is with movies, books or photos, and that video games are, in this sense, closer to social interactions than other media. Games make use of a broader range of our social access spaces by introducing entities that we readily, but often pre-reflectively, perceive as intentional (Nass & Reeves, 2002 [1996]), and challenges and events that require fine motor skills, perception skills, and cognitive control (Dale & Green, 2016). Finally, *I contend that all video game gameplay inevitably alters the player's self-presence*. Since this argument is central to my thesis, let me elaborate on it in more detail.

Wirth et al. (2007, p. 506) suggest in their HCI article that spatial presence is media-bound and that it can occur only if players accept the mediated *egocentric reference frame* as their primarily frame.[76] Otherwise the media-users remain located in their everyday environment. Spatial presence would, then, require the player to willingly adopt a character's viewpoint as the dominant vantage point for her first-hand experiences to be able to experience 'being there' in the virtual environment. In other words, a change in a player's self-presence enables a change in her spatial presence. However, if spatial presence requires that the player's primary egocentric frame of reference is positioned within a game, does this mean that spatial presence requires a playable character, an avatar, with which the player can identify herself? Or is it possible to experience spatial presence in, e.g., real-time strategy games, city-building games or social simulations such as *The Sims* (Electronic Arts, 2000) in which the player acquires a seemingly bodiless *omnipresence* over the unfolding events? This question is related to a more general question: does the player have to be reflectively self-conscious about the change in her primary egocentric reference frame to experience spatial presence? I propose that 'no' is the correct answer to the latter question.

[76] In the condition of "primary egocentric references frame", a person self-locates oneself in the mediated environment and pays attention to her action possibilities within that environment instead of the environment where her body resides.

When a person begins to play a video game, she adopts a third-person view on herself *as being* the player of the game, that is, as the object of the game session. When gameplay has begun, or continues, one experiences the events through the vantage point of 'the player proper.' Here, play becomes *activity*. I argue that within the activity of play, *gameplay* inevitably emerges as the primary egocentric frame of reference for the player. The player's attention is on the present game events and on her agency and possibilities for taking actions within the game.

During a video game gameplay experience our constitutional sense of agency, or "primary egocentric reference frame" is not to be understood in relation to how we press the buttons of the game controller but instead in relation to the distal action effects in the game environment. Since our actions have an effect within the game, the intentional aspect of our agency resides in that environment and in its regularities. However, we continue to perceive the actions we take during gameplay crucially as *ours*. Because we pursue making changes in the game, we evaluate our efferent or motor aspect of agency primarily by ourselves in relation to the in-game events. In video game gameplay, self-concept and agency are not experienced as separated by the player, but rather the 'player position' is appropriated by the subject into her self-concept (see Ganesh et al., 2011; Pearce, 2009). Although a player can identify herself with an in-game avatar and experience a change in her self-presence in this way, an in-game avatar is not necessary for a change in self-presence to occur.

Gallagher (2012) argues that, phenomenologically, there is no awareness of action without awareness of the agent. Therefore, in video game gameplay, whenever we initiate an action, *any action*, we perceive ourselves as intentional agents in relation to the game. More specifically, the game can be a first-person shooter, a third-person role-playing game, a strategy game, a simulation game or an abstract puzzle game such as *Tetris*, and still we view ourselves as intentional agents in relation to the game environment since our sense of agency, i.e., the "I," relies on the player–game relation during the gameplay. This is not to say that we would *reflect* ourselves in, e.g., *SimCity* (Electronic Arts, 1989) as some well-defined character who has a personality, and that we would role-play that imagined personality whenever we play SimCity. It is to say, however, that just as we pre-reflectively sense the social presence of an agent when we perceive intentional behavior, we also sense the presence of such an agent in the intentional activities that we take as players of any game.

To play a game is to adopt an alternative and temporary primary egocentric frame of reference, or an I-position. Players themselves make this evident when they speak aloud during gameplay and frequently use the first-person singular pronoun "I" when they refer to the play activity and their player–game relations. Thus, I argue that *self-presence is the third invariant of the gameplay experience*. Precisely as Abrahams (2005, p. 104) writes, "A transformation of self emerges directly from the playing situation, in which players get outside of themselves or more deeply into themselves."

Consider Merleau-Ponty's argumentation (2002 [1962], p. 102): "[F]ar from my body's being for me no more than a fragment of space, there would be no space at all for me if I had no body." How I experience my body is directly linked to how I experience the world; the body is the source for spatiality, and an egocentric framework is required for all action. We are organized by an implicit reference to our bodily being (Gallagher, 2005, pp. 39, 137). In phenomenological enactivism, "the body functions as the 'zero point,' 'null point of orientation,' or absolute indexical 'here' in relation to which things appear perspectivally" (Thompson, 2007, p. 248).

During video game gameplay, we easily seem to forget that we are constantly pressing the controller's buttons. Similar to the experience of driving a car, the routine operations remain recessive. We are not reflectively self-conscious of how we change gears and steer the car. However, we remain pre-reflectively conscious of these actions at all times (Gallagher & Zahavi, 2008, p. 73). If either of the efferent or intentional aspects of our sense of agency fails, or if we do not perceive reinforcing feedback, we get disruptions. In these situations, we often rely on a reflective sense of agency and re-evaluate our reasoning and the causes for the failure. In video game gameplay, both succeeding and failing may encourage us to self-consciously reflect on our agency and actions and re-forge the *lusory attitude*; "[W]hen the body appears in consciousness, it normally appears clearly differentiated from its [*game*] environment… when I am immersed in [*gameplay*] experience, however, the limits of the body and environment are obscured" (Gallagher, 2005, pp. 36–37).

How does the proposed invariant change in self-presence embedded in the vantage point of the player relate to changes in self-presence due to identification with an in-game avatar? Klimmt et al. (2009, p. 354) argue that video games facilitate monadic user–character relationships in which players perceive playable in-game characters as merged with their own self as the protagonists of the game. They suggest that this nondyadic understanding of a user–character relationship is closely related to the concept of *identification.* As Klimmt et al. (2009) correctly note, their explication of video game identification converges with role-playing. They argue that the act of simulating an agent's identity is different from a person's normal identity. In this way, video games allow players to try on ideal selves (Przybylski et al., 2012).

Although the approach by Klimmt et al. (2009) is related to that of the current research, the two must be seen as alternative investigations into player–game relations. The authors of the former suggest that the relationship between media users and in-game characters is not dyadic but monadic, which entails the possibility to identify oneself with the playable protagonist. I suggest likewise that a monadic "I"–"I" relationship emerges in gameplay, but I argue that this relationship is invariantly present in all gameplay and that it arises in the relation between a person and the person-as-the-player of a game. In other words, whereas Klimmt et al. (2009) devise a framework for studying modes of *person–character* relationships, my primary attention is on building a systematic understanding of *person–player* relationships. The relationship between a person and a player is the focus of my investigation in the latter half of the current chapter. First, however, let me illuminate the arguments I have made so far with an example.

How Excessive Presence Declines Gameplay

We do not completely "lose ourselves" in video games, we are still sitting in front of the screen and manipulating the game controller. Instead, what happens is that ongoing gameplay becomes a genuine first-person experience. When we are living an experience, we are not reflectively aware of ourselves but of that very activity and our participation in it (Gallagher & Zahavi, 2008, p. 221). Again, however, a gameplay

experience is not fully understandable without the capability of stepping back and reflecting on the experience and our position *as* the player.

As an example, consider the movie *The Game* (1997), directed by David Fincher. In this thriller movie, Nicholas Van Orton (Michael Douglas) is a successful and busy businessman who is emotionally detached from his friends and his family. For his 48th birthday, Nicholas receives a game as a present. The game is an *alternative reality game* designed to integrate itself directly into the player's real life. The game is, in other words, supposed to be played by living it *as if* it were real.

Figure 10. *Michael Douglas in the thriller movie The Game (1997).*

Nicholas is not fully aware of when the game has begun. It is hard for him to identify whether what he experiences are genuine real-life experiences or part of this pervasive game that has now integrated into his life. As the story unfolds, the game does not seem to be an alternative 'game reality' for either Nicholas or for the movie viewer, but rather it becomes impossible to separate the game from the Nicholas' real life anymore.

In the first part of the movie, Nicholas tries to figure out which of his experiences belong to the game. Later, he is certain that nearly everything he faces is part of it, but the game has so tangible and real consequences that it does not feel like a game anymore. In the ending scenes of the movie, the game becomes perceivable again as it is revealed for Nicholas that the game was not real after all, although it included many of Nicholas' real-life friends and family members and was based on important events from his life. Nicholas' brother, Conrad, had organized the game to shake Nicholas back to reality and to cause him to pay more attention to the people close to him instead of his career.

Drawing from Noë (2004; 2009; 2012), I have proposed that situations in which we experience more intense readiness to interact are more present and thus more accessible to us. In the movie *The Game*, the events of the game are exactly as present to Nicholas as any of his real-life events, and exactly as accessible for his skills to interact with. Since the unfolding events are fully present for Nicholas, they

become experientially real. The movie watcher is not capable of perceiving what is game and what is not, and the same happens to Nicholas. When this happens, is it even a game anymore? If we consider the question from the viewpoint of Conrad and other organizers of the game, we can conclude that it truly was a game all along. However, if we ponder the same question from Nicholas' viewpoint, this conclusion does not make sense. Nicholas does not perceive himself *as being* the player of the game. Regardless of his efforts, he is not able to take a third-person stance on himself as the object of the game. Instead, he lives through the game exactly as he lives through his everyday life.

To put it differently, Nicholas is not the player of the game regardless of the fact that there is a dynamic game system present. At first, he does not manage to adopt the player's position because he cannot identify that there is a game system present that would provide such a position. Furthermore, when he is sure that such a system is in place, he cannot retain the position of the player or a lusory attitude because the game has real consequences that directly affect his person rather than him as the player of *The Game*.

Fritz Redl observed already in 1955 that a game breaks down if it is no longer safe and "when the 'as if' character cannot be maintained, or when the reality proximity is too great… if one comes too close to reality, then the activity may lose its game character, as do some games that are too far from reality" (Redl, 1956, cited in Goffman, 2013 [1961], p. 71). Thus, as media scholar Kristine Jørgensen (2013, p. 35) notes, the idea of complete transparency is indeed a fallacy of game design; "Creating the impression that interacting with the game is an unmediated activity is neither desired nor achievable if one wants the experience to remain a *ludic* experience." If Nicholas was aware of the game, he could have adopted the position of the player and played the game from that vantage point. Since he does not take on the lusory attitude of the player, however, no player emerges, but rather only his person, who does not even know what is real, i.e., what is really happening to his person, or what is supposed to be part of the game, i.e., what is real only for his person as being the player, or *persona*. It is this notion of 'persona' that I will further examine next.

Performative Player

In *Frame Analysis* (1986 [1974]), Goffman proposes two formulas for role-taking activity: *person–role formula* and *role–character formula*. The person–role formula refers to the inevitable distinction between an individual and her participation in an episode of activity in which she realizes certain capacities or functions. Goffman (Ibid., pp. 269–270) argues that the relationship between an individual and a role is never fully free nor completely restricted. In other words, there is an inherent aspect of expressivity entangled with every role-taking activity.

The person–role formula differs from role–character formula, which is not only about functions or capacities but rather "transformed versions of the whole" person. In the person–role formula, we assume that there is a continuity of subjectivity beyond the performance of each role that is compatible and consistent with the role in

question (ibid., p. 286); "[I]n taking on a role, the individual does not take on a personal, biographical identity—a part or a character—but merely a bit of *social categorization*, that is, social identity, and only through this a bit of his personal one."

Goffman speculates (1986 [1974], pp. 294, 298) that there is a distinction between the role–character formula and in the person–role formula. He suggests that, e.g., by reading a book we learn about the author (role), but this is to be differentiated from the writer (person) who wrote the book. We can familiarize ourselves with the writer by, e.g., reading magazine articles about him, listening to him at book fairs or watching his interviews on television. To put the distinction in other words, we learn about roles from mediated environments, whereas we learn about the person in actual dealings with him or her.[77]

For Goffman, 'role' is fundamentally social, and he discusses it almost only in relation to face-to-face interactions between at least two humans. However, since I am not restricting my argumentation to social play or multiplayer online video game gameplay, I find the term 'role' confusing in the context of this study. Furthermore, 'role' has evident connotations of 'role-playing,' which makes the concept even more difficult to appropriate in the context of this thesis. Instead, I propose the player position, i.e., the vantage point a person adopts in gameplay, to be coined as the position of *persona*. Hence, I consider the formulas in the context of game sessions as *person–persona* and *persona–character*, respectively.

Dramatized Self of the Player Persona

When we take on various social roles in our everyday activities, two factors remain unaltered. First, "no matter how inconsequential and insulated an individual's moment is… he must be there in the flesh if the moment is to be his at all, and this is the selfsame flesh he must leave with and take wherever he goes" (Goffman, 1967, p. 166). Second, our agent–environment relation remains highly contingent with our expectations. In each of our moments, there is a first-person perspective to our environment, there are social and psychological regularities, and events unfold according to our *folk psychological narratives*, that is, the practices of making sense of a person's actions in terms of foundational beliefs and desires (Hutto, 2012, p. 3). In video game gameplay we still have "our flesh," the actions we take remain ours in absolute similarity to all of our experiences. However, I argue that our agent–environment coupling inevitably transforms in all instances of gameplay.

Player persona is the presentation of the self in gameplay, it is how 'I' arises as the player identity within the in-game events. This is what I mean by stating that an experience of gameplay is an experience of altered self-presence; *player persona* is the first-person experience of acting through the position of the player proper (Chapter 5) in gameplay. It is my person(ality) and *performativity* as the player of a

[77] Note that Goffman (1986 [1974], p. 395) contends reflexiveness to be destructive practice for both the role-character formula and the person-role formula. If an individual performing as a character makes comments on his role as the character, an interruption will result. The same is true if a person acting as a doctor suddenly makes comments on her role as the doctor.

game.[78] It is the dramatized self; there is a distinction between it and the 'real' self, yet we are both ourselves and not ourselves during gameplay, as is also argued by Abrahams (see Abrahams, 2005, p. 85; Abrahams, 1982).

I concur with Pentti Hakkarainen, Milda Brėdikytė, Kaisa Jakkula and Hilkka Munter (2013), who argue that an activity becomes play only if the player is able to perceive the situation and herself simultaneously from an internal and an external perspective. G.G. Kravtsov and E.E. Kravtsova (2010) label this condition "double-subjectivity" and argue that it is necessary for all play. In this, they follow psychologist Shlomo Ariel (2002, p. 140) in his assertion that "[A] player has to be both inside of the play and outside it, a self-observer." Indeed, Lev Vygotsky observed this condition already in the 1930s, when he wrote about the dual-position of the player being simultaneously both "inside" and "outside" the play activity (Vygotsky, 1967 [1933]; Vygotsky, 1986 [1934]; see Kratsov & Kratsova, 2010).

Whereas a 'writer' is a person who writes, a 'player' is a person who plays. Whereas an 'author' (a writer persona) is the presentation of the self in written text, the 'player persona' is the presentation of the self in gameplay. One writes through the position of the author by enacting a storyworld; one acts, i.e., plays, through the position of the player persona by enacting a gameworld. Since gameplay encompasses an invariant change in self-presence, it also introduces a *distinction* between the person and the player persona. Although one may engage with gameplay very seriously, indeed as one is expected to do, this seriousness is realized with the understanding that the person who plays is present as the player, not as the person. One can play board games with his children seriously without being serious about it.

As a concept, 'persona' has been adopted by many renowned authors, including Jung, Goffman, Butler, and Foucault. Folklorist Elizabeth Tonkin (1992, pp. 225–232) notes that the term originates from Latin and ancient Greek, in which 'persona' was conceptualized as a mask that was worn in performances and acts. It referred to the public identity of a person such as a politician who clearly separated his or her private self from the public one *as being* a politician. In terms of origins, persona thus implies performance and self-presentation. For Jung, persona was a "mask of the collective psyche, a mask that is a substitute for individuality, intending to make others as well as oneself believe one is individual" (Jung, 1928, pp. 164–165). In the Jungian tradition, persona is thus how an individual *appear*s to herself and to the world; it is "a function of relationship" (Jung, 1946, p. 209) between the subject and her surroundings, as Ann Casement (2014) notes. Whereas persona is for Jung a semblance of an individual but not who the individual is (Jung, 1928, p. 165; 1968, p. 123), in the tradition of Goffman, persona comes to mean everyday performance of the self in social occasions (Barbour et al., 2014).

In contemporary research, 'persona' denotes *identity construction* in various forms of social and cultural participation, including construction of self in social media, in celebrity culture and in online gaming communities. In the studies by, e.g., Kim

[78] My notion of persona has affinities with Korsgaard's (2011) concept of contingent *practical identities*. Korsgaard argues (ibid., pp. 23–25) that being a person necessitates that one constitutes oneself as a particular person by endorsing practical identities (ibid., p. 42).

Barbour and P. David Marshall, persona-creation is typically understood as a conscious process of fashioning a consistent self-presentation. Indeed, the idea of intentional presentation of a desired identity in social networks underlies most of the current persona studies (Barbour & Marshall, 2012). Marshall (2014) has suggested that persona-constructing practices are characteristic of *presentational media.* In contrast to representational media, which is merely observed by the people, presentational media is at least partly self-performed, self-produced and self-exhibited by individuals and collectives.

Although most of the contemporary persona studies investigate how individuals self-consciously and intentionally produce narratives of themselves in different media, I define persona in a broader fashion: persona is how we constitute ourselves by enacting a perspective to the world around us. A persona can be self-consciously produced, but, importantly, persona is constituted in our activities whether we consciously produce it or not; in all of our social participation, we participate by self-constructing ourselves (Korsgaard, 2011). When reflecting on their own experiences, preferences and habits, individuals may easily speak of themselves as *personae* rather than as a single person. We can reflect ourselves, e.g., as 'I, the music listener,' 'I, the professional worker,' 'I, the storyteller,' 'I, the diner,' 'I, the tourist' and so on.

From a stance of enactivism, Noë has proposed (2015) that human beings are organized and integrated by social and environmental activities. Organization is for Noë, as it is in this thesis, a biological concept (see Chapter 1). Living beings are organized wholes, and it is the activities, the phenomena, in which we participate that organize us. *Organized activities*[79] are "natural" for us; they are arenas for exercising attention, and they exhibit a certain structure in time. They are also emergent, functional, potentially pleasurable, and not governed by the deliberate control of any individual. Dancing is an organized activity (ibid., pp. 11–18), and I would like to suggest the same for gameplay. Dancing and gameplay are examples of activities that constitute, realize and structure us as humans. They are not only what we do but also how we become what we are; "Active experiencing subjects do not remain unaffected by the objectivity they help to constitute, but are rather reciprocally affected and constituted by it" (Thompson, 2007, p. 83).

For Noë, the arts are practices for bringing our organization into view. Choreography is not dancing but engagement with dancing as a phenomenon; it is important to us because *we are dancers*. Similarly, the practices of 'game choreography,' or game design, are meaningful to us since we are also organized as players—we conceive ourselves as player personae. "The intimate connection between person and action does not rest in the fact that action is caused by the most essential part of the person, but rather the fact that the most essential part of the person is *constituted* by her actions" (Korsgaard, 2011, p. 100).

Instead of approaching the term 'persona' from a third-person view as a medium-specific condition (Bucher, 2014) or as a method to model ideal type users or

[79] As philosopher Eugen Fink stated (1968, p. 19): "Play is an essential element of man's ontological makeup, a basic existential phenomenon—not the only such phenomenon, to be sure, but still a clearly identifiable and autonomous one that cannot be explained as deriving from other existential phenomena."

players based on archetypical traits of behavior,[80] I study persona in this chapter as an activity-specific condition from a first-person centered phenomenological framework. A crucial trait of 'persona' is that it is not to be understood as a role one plays but *a position* from which one experiences the world. Such an *I-position* may very well include a role that the person takes in a social setting, but not necessarily. A person can dance in various situations and adopt several social roles *as being a dancer*, e.g., being the father of the bride or being a professional ballet dancer.

If 'role' describes our expected conduct in social situations (Biddle, 1986, pp. 67–72), then 'persona' describes our self-presentation in activities that constitute social situations. It is unlikely that a change in a social role would significantly change our persona. Similarly, it is unlikely that a change in our personae would change our reflection of ourselves as a specific person. Social roles and personae are *robust*; they both have the capacity of maintaining themselves in the face of situational changes.

How does the understanding of the person–role formula as a person–persona formula relate to Goffman's other formula, that of person–character? Here we can utilize the French term for character, *personnage*. As argued by Marshall (2014), the two variations of the word 'person'—'persona' and 'personnage'— gives us the concepts for "understanding the particular and integrated configuration between a public persona and the fictional role that an actor inhabits", i.e., the character. In contrast to persona, character—or personnage—is a fictive construction designed and intensified for specific purposes. In this sense, characters are scripted and dramatized versions of personae; characters are fictional persons within the frame of specific activities.

Now that I have introduced Goffman's two formulas in role-taking activity and the concept of persona, I move forward to analyze the player's position and the player persona in relation to Goffman's dramaturgical stance of the performative self. The main objective of this thesis is to better understand the constitution of the gameplay experience as a phenomenon (RQ1) and how players reflect on their memorable and meaningful game encounters (RQ2). For this purpose, it is crucial to investigate how players participate in games through the position of the player persona.

In what follows, I analyze participation in gameplay by first reviewing Goffman's approach and then by combining it with a phenomenological and enactive approach to 'self,' presence and agency. I especially pay attention to the *performative* qualities of the position of the video game player.

[80] In human-computer interaction studies, 'persona' is primarily understood as a method to model behavior of individuals based on their usage of a specific medium, and then create different designs for identified 'user types': "Each persona represents a significant portion of people in the real world and enables the designer to focus on a manageable and memorable cast of characters, instead of focusing on thousands of individuals" (Canossa & Drachen, 2009). Although I approach 'persona' here from a different angle than Canossa and Drachen (2009), I return to the theme of 'user types' and personae in the conclusion of Chapter 9.

Keeping the 'Self' Together

Goffman introduced his dramaturgical approach to social life in *The Presentation of Self in Everyday Life* (1959). Especially in this book, Goffman considered everyday life and patterns of interpersonal communication to be practices of performative endeavors (Marshall, 2010).

The dramaturgical approach by Goffman (1959) and symbolic interactionism to the self has been criticized for separating one's 'true' self from the many personae she may exhibit in social roles. In 1986, an excellent critique of Goffman's dramaturgical theory of self (1959) was published by Thomas G. Miller. In his article, Miller argues that Goffman (1959) did not offer an unambiguous account of the self but presented the self as nearly analogous to the roles one takes in social life. According to Miller's critique, the dramaturgical approach by Goffman dissolves the self into a bundle of role activities. The self emerges as a thoroughly social construct and the enduring self and personality appear as an "illusion of person-perception, a fiction of common sense and psychology" (ibid., p. 178).

Indeed, the self is for Goffman "the moments and their men" rather than "men and their moments." It remains unclear how a social performance is, or even can be, generated or produced by the autonomous performers themselves. According to Goffman (1959, pp. 252–253), "The self… is not an organic thing… it is a dramatic effect arising diffusely from a scene that is presented," and, "self, then, is not an entity half-concealed behind events, but a changeable formula for managing oneself during them" (Goffman, 1986 [1974], p. 573).

Goffman's view remains as a *third-person approach* to social interaction and situations, in which the role of the active, embodied and purposeful subject is blurred. Because Goffman largely standardized the active subject into a role-position within a given activity, he did not only approach subjectivity from a third-person viewpoint but also allegedly utilized a positivist view on social life; situational and situated activities are observed from a bird's eye perspective as objective phenomena. For Miller (1986), this approach brings Goffman close to behaviorism, which overestimates the properties of the social environment and ignores the active agency of the individuals.

Although Goffman's (1959) approach to the self as a social construction was developed based on Mead's understanding of the self as a social process, in my reading there is a crucial difference between these two approaches and how they conceptualize the self. For Mead (2015 [1934]), the process of self as constant dialogue between 'I' and 'me' constitutes the self-preserving and sustaining character of one's own individuality and subjectivity. Mead therefore endorses a view in which the process of the self pivots around the core of the dialogical I–me. Goffman, however, does not explicate such a centripetal understanding of self.

If we now return to the notion of persona, a Meadian understanding could be that the process of the self, and its I–me dialogue, outlives any of the person's personae, i.e., presentations of the self. Although Mead did not recognize the existence of the pre-reflective minimal self (Chapter 2), his writings are nevertheless closer to an enactive phenomenological understanding of agency and subjectivity than those by Goffman.

Based on this observation, I have adopted Mead's concept of the self and discuss it in relation to an enactive phenomenological approach in the previous chapters.

Furthermore, as Miller (1986) noted, Goffman's individual did not seem able to perform self-defining acts but only acts that have a definitional purpose for the social activity at hand. This emphasis seems to be opposite to that of phenomenology, in which participations by an autonomous agent are seen as constitutive to its precarious identity and continuity (Di Paolo, 2005; see Chapter 1).

However, a phenomenological enactive account to self as an enduring biological organization and as a social process is not without challenges, either. Miriam Kyselo (2015) has noted that the self as both enduring, coherent individuality *and* a socially open construct is not easily conceptualized in enactivism regardless of the strong notions of pre-reflective/reflective self-consciousness and *adaptive autonomous organization*.[81] She observes that in the theory of participatory sense-making by De Jaegher and Di Paolo (see Chapter 5), the self appears as relational and as acquiring its individuality from social interactions. This would mean that the individual needs to adapt to an external norm to be an individual. As a result, her identity presents itself as heteronomous—not unlike in the writings by Goffman—instead of being autonomous, the latter of which is the key argument of enactivism.

Kyselo (2015) observes that Mead's (2015 [1934]) writings of the social self seem to be congruous with an enactive stance since Mead envisions the self as both a social process and as an enduring process of (social) individuality. Furthermore, Kyselo (ibid.) argues that Hans Jonas' (2001 [1966]) concept of *needful freedom* is important when we strive to understand individuation both as a biological principle and as a social process. An individual and its identity depends on how it relates to the world (needful) and how it differentiates itself from the world (freedom). We as persons have a striving to be autonomous individuals in our own right, separate from the others, while also remaining closely connected to the others, to affect them and to be affected by them (Weber & Varela, 2002; Kyselo, 2015).

The idea of needful freedom by Jonas builds on the principle of *through and from a world.* Kyselo (2015) then builds on this further by arguing that the autonomous and coherent self is constituted in acts of emancipation (distinction) *and* acts of openness and readiness for perturbations by others (participation). Both of these tendencies are rooted in the fundamental goal to realize and generate identity through participation and individuation. Where the sustained experiential self can be described as *for-me-ness*, the continuity of social self is the *openness* to the world. By accepting the notion of *needful freedom* (Jonas, 2001 [1966]), I continue in this chapter to interpret Goffman's writings through the lens of an enactive phenomenological stance.

Let me now revisit the person–role and person–character formulas by Goffman (1986 [1974]) and label them instead as the *person–persona–character* continuum. In the approach that I am presenting, the character-taking activity always includes both the person and a persona. Thus persona, in itself, is not *role-played* but rather an enacted position, a vantage point to make sense of the agent–environment relation crucial to our identity. As Abrahams stated (1977, p. 11), a player is both himself and not himself while playing. Eugen Fink, a German philosopher and Husserl's pupil, subtly described (1968, p. 23) the very difference between a person and a player persona:

[81] See Chapter 1 for definitions of these concepts.

> [H]ere we find… peculiar "schizophrenia," a kind of split personality that is not to be mistaken for a manifestation of mental illness. The player who participates in a game executes in the real world an action of a familiar type. Within the context of the internal meaning of play, however, he is taking over a role. Here we must distinguish between the real man who "plays" and the man created by the role within the play. The player hides his real self behind his role and is submerged in it. He lives in his role with a singular intensity, and yet not like the schizophrenic, who is unable to distinguish between "reality" and "illusion." The player can recall himself from his role; while playing, man retains a knowledge of his double existence, however greatly reduced this knowledge may be. Man exists in two spheres simultaneously… because this double personality is essential to play.

Let me illuminate the aspects of *person*, *persona* and *personnage* using a gameplay experience of a Japanese role-playing game *Shin Megami Tensei: Persona 4* (Atlus, 2008). In Persona 4, the player plays the role of the protagonist, who moves to a fictional rural town of Inaba, goes to the local school, makes friends with his schoolmates, and starts to get involved with strange murder mysteries. As he and his friends investigate the murder mysteries, the characters come across magical personae, which the characters can summon to help them in the battles they encounter.

When in battle, the player controls the actions of the protagonist and she can direct the actions of the other party members. Each of these party members may appropriate personae, the "party's other selves." Whereas the other party members have a unique single persona, the protagonist can hold many selves, or personae. Once a character takes on or invokes a persona, his skills and abilities change, and thus he experiences the unfolding events from that vantage point, while retaining his enduring self to which he returns when the battle ends, at the latest. The personae are illustrated in the game as tarot cards that represent different aspects of human personality as forms of mythical figures, familiar mostly from Japanese folklore.

In *Persona 4*, personae are manifestations of the protagonist's inner self. Each persona has certain strengths and limitations, which represent the fact that we cannot present ourselves in a uniform fashion regardless of the sociocultural situation at hand. The personae in *Persona 4* are specific vantage points to the world, which bring about extended skills and abilities valuable for the situated self.

Shin Megami Tensei: Persona role-playing games demonstrate what happens when we sit down to play video games. In the *Persona* series, the 'person' equals the protagonist of the game, who has different personae. These personae are related to the activities the protagonist takes. The personae are not *characters*, the protagonist of the game does not role-play the in-game personae he enacts. They are precisely positions through which he acts and identifies himself in (game)worldly activities.

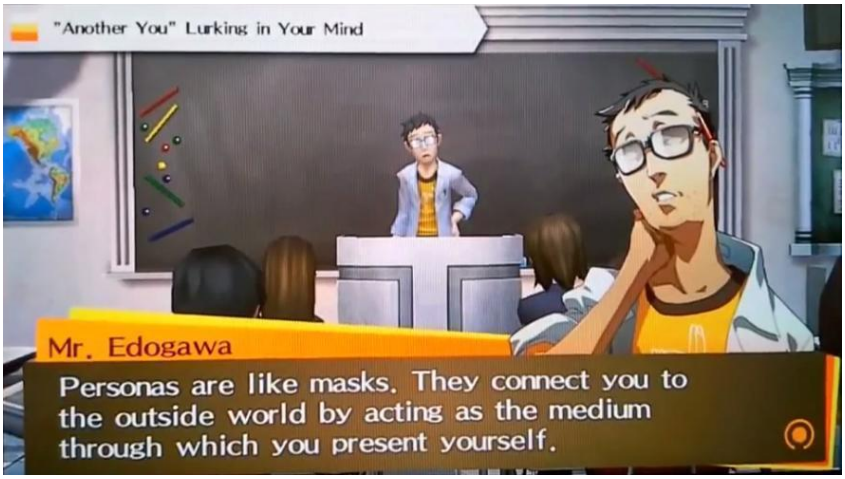

Figure 11. *An in-game lecture of Jungian theory of a Persona archetype in Persona 4 Golden for Playstation Vita (Atlus, 2013)*

Similar to how we as individuals experience the world from different *I-positions*, such as I-as-the-dancer or I-as-the-player, the protagonist of the *Persona* games constitutes his identity as I-as-the-tactician and I-as-the-fighter. When playing *Persona* games, the player thus engages with nested, albeit certainly simplified, experience of identity construction; the protagonist is not brought forth for the player as a monolithic individual that remains the same from one social interaction to another but rather as an individual that experiences the immediate world from different positions that constitute his perspectives towards himself and the world around him. Yet, he retains his *needful freedom*, the enduring self (distinction) that outlives the activity-bound aspects of himself as a social participant (openness).

The idea of the *person–persona–personnage* continuum in adopting the player position (*persona*) and the role of a character or an avatar (*personnage*) has similarities with Gary Alan Fine's (2002 [1983]) well-known ethnography of pen-and-paper fantasy role-playing as a form of social reality. Fine studied the process through which players orient themselves to these games and enact an orderly gaming world. Fine (2002 [1983], p. 60) does not offer a definition for the concept of 'persona' but utilizes the concept rather interchangeably with the role of a playable character and its *personality traits*, noting that "[g]aming… is a means by which… science fiction fans feel that they can overcome their shyness-by adopting alternate persona… these personae have attributes that many players believe they lack" (ibid., p. 215).

Fine examines the fantasy game as a social world by exploring Goffman's theoretical writings and by presenting his own rendering of frame analysis. He introduces both a two-level and a three-level model to study pen-and-paper role-playing gaming. For a two-level model, he suggests (2002 [1983], p. 144) that role-playing gamers can be described either as individuals who play the game with their real-world interests and values or as *animators of persona* in which only the interests and values of the played character matter. Later (ibid., pp. 186, 194, 205) he suggests three trans-

formations or frames that occur in the activity of role-playing: "Fantasy gaming comprises three interrelated systems of meaning: commonsense reality, the gaming rules, and the content of the gaming fantasy".

Like the current study, Fine (2002 [1983], p. 204) conceived persons as collections of selves and identities yet retaining the unavoidability of the real: "The 'real world' will always intrude, for the gaming structure is not impermeable to outside events" (ibid., p. 197). Second, the realization of multiple selves led Fine (ibid., p. 205) to suggest that all games require *role-taking* activity from skilled players. This is to be differentiated from *role-playing* activity in which the player adopts a character's attributes, fears, and goals.

Deterding (2013, p. 181) has criticized Fine's (2002 [1983]) frame analytic study. Deterding contends that Fine's three transformations or levels of meaning in pen-and-paper role-playing (Deterding calls these laminations), *primary framework, gaming frame* and *fantasy frame*, are inconsistent with Goffman's theory. He holds that, contradictory to Goffman's approach (1986 [1974]), Fine appropriates Alfred Schütz's notion of a 'finite world of meaning' and of a 'paramount reality.' Deterding finds Fine's approach to the 'primary framework,' i.e., the *reality*, problematic: "[A] central argument *Frame Analysis* makes is that there is no one primary framework, no one unframed 'ultimate reality of events'... what Fine considers the 'real world' of 'people' for Goffman is the gaming encounter of participants as either players or onlookers" (Deterding, 2013, p. 181). Deterding states (ibid., p. 182) that we do not need to posit a transformation between 'gaming frame' and 'primary framework' since, in principle, there is no 'primary framework.'

Deterding's (2013) critique precisely stresses the reasons why the current study steers away from being a representative of frame analytic studies. The *postulate* that there is no 'real world' positions frame analytic strongly in the tradition of social constructionism, in which the enduring self is threatened to dissolve into social encounters without an enduring core. As a result of this process, the realness of 'reality' is rendered virtually meaningless. As I have argued throughout this thesis, this is neither a position of phenomenological enactivism nor the stance I advocate.

Now, a few concluding remarks must be made. I am in general agreement with Fine's (2002 [1983]) model which introduces the primary framework, gaming frame, and fantasy frame. But I do not approach these transformations as different laminations or frameworks. Instead I parallel the former with the proposed *person–persona–personnage* continuum and first-person approach to gameplay experience.

Here 'person' represents the primary framework of the autonomous agent. Recall that person is the self-reflective embodied agent, and to be self-reflective always entails the pre-reflective self-consciousness of *for-me-ness* (Zahavi, 2014; Zahavi & Gallagher, 2008; see Chapter 2). Although our *access* to the 'primary framework' is mediated by reflection and therefore social and cultural 'frames,' we do not need to deny the existence 'primary framework.' Pre-reflective phenomenal experience and enduring self-experience comes *prior* to reflection as Thompson (2007, p. 250) writes.

The 'persona,' as argued earlier, comes forth as our activity-dependent vantage point to experience the world. It parallels with Fine's "gaming frame," inasmuch as the "gaming frame" refers to the organized activity type of *gameplay* as a form of human experience. However, I differ here also from Fine; I do not equate persona to

role-playing activity in which the player would identify herself with an in-game character's viewpoint. My understanding of *persona* is closer, yet still different, to what Fine suggests *role-taking* activity to be. Finally, 'personnage' arises on the level of 'fantasy frame' as a possibility to take on a character's identity.

On each of these three levels, we *act through* the position in which we find ourselves. Within the 'primary frame,' we pre-reflectively act through our body schema, which underlies all self-referential intentionality, and enter the domain of self-reflective persons. Within the 'game frame,' we act through the player position as personae *and* as reflective and pre-reflective subjects. Within the 'fantasy frame,' we act through a character by identifying with it, *and* we act through our player persona *as well as* our person in a self-reflective and pre-reflective sense.[82]

By acknowledging that the self does not dissolve into the social constructs but retains its autonomous adaptive organization in its openness in the continuum of *person–persona–personnage*, we can proceed to analyze the player persona and its performative characteristics in more detail.

The Seven Facets of Performative Gameplay

In *The Presentation of Self in Everyday Life* (1959, p. 15), Goffman does not explicitly define the term 'performance' but instead offers a general description of it: "all the activity of a given participant on a given occasion which serves to influence in any way any of the participants." Although he does not clearly state here that "by any participants" he means other individuals than the performer himself, this becomes evident from the sentences that precede the definition. However, Goffman also states (ibid., p. 81) that a person may arise as the audience for oneself, which suggests that a performance does not necessarily include more than one *self-reflective* performer.

Goffman discusses 'performance' under the broader notion of face-to-face interaction. Furthermore, by a 'part' or a 'routine,' he refers to the "pre-established pattern of action" that is presented or played through during a performance (Goffman, 1959, p. 16). A few pages later (ibid., p. 22), Goffman returns to his definition of performance and offers a clarification of it as "all the activity of an individual which occurs during a period marked by his continuous presence before a particular set of observers and which has some influence on the observers."

Goffman (1959, p. 17) associates seven qualities or dimensions to performances. First, the person playing a part asks his audience to *believe* or take seriously his presence and the impression brought in front of them. At one extreme, the individual performing the act may be taken by it fully. At the other extreme, she can be cynical about it. Regardless of how the performer posits herself on this continuum, her audience should retain a sincere belief in the performance.

[82] Linderoth (2004; 2005) has arrived at a conclusion that is akin to what I am developing. By reading Goffman and conducting an interaction analysis process on empirical data consisting of 36 children (ages 6 to 11) playing video games, Linderoth suggests that three manifestations of "I" may emerge in a gaming situation: 'a role' of a fictive character, 'a tool,' which extends the player's agency in gameplay, and 'props' the player can utilize when presenting herself.

Second, performance has a *social front* (Goffman, 1959, pp. 22–30). *Front* is the wholeness of different techniques or "equipment" by which the performer expresses the act to be a performance. These include the *setting* or the physical environment and the stage on which the performance takes place, and the *personal front*, consisting of the dimensions of *appearance* and *manner*. Appearance expresses the social statuses of the performer, whereas manner expresses aspects of the continuous style the performer puts forward. For example, one could exhibit an aggressive manner (ibid., p. 248).

Third, Goffman (ibid., p. 30) writes: "For if the individual's activity is to become significant to others, he must mobilize his activity so that it will express during the interaction what he wishes to convey." This, Goffman labels as *dramatic realization* of the performance. Dramatic realization thus marks the decisions the performer takes and the utterances he emphasizes to express himself. Fourth, when presenting oneself to others, one tends to *idealize* the performed role. That is, performances usually present readily recognizable values and expectations of the society. These idealized expressions put forward "a reality" of the performance (ibid, pp. 35–36).

Fifth, the performer makes efforts to maintain the performed role with *expressive control*. The performer must take the audience into constant consideration in order to provide experiences of consistency, coherence and believability. The impressions of performative reality are to be considered delicate and precarious (Goffman, 1959, pp. 51–58). Sixth, the performer can be misunderstood, and thus he has to put *care* into how he skillfully expresses himself in the performance. The audience of a performance is sensitive for evaluating whether the performer seems genuine, valid, or even authorized to perform before the audience. Finally, seventh, the performer calls attention to certain matters and enshrouds others. The performance *conceals* itself to give an impression of mysteries and secrets behind the act.

Note that when Goffman describes performances as acts of *belief, staged front*, *dramatic realization*, *idealization*, *expressive control*, *carefulness* and *secrecy*, he does not only scrutinize the performer's position but the situation in which the performance takes place between the performer and the audience. He discusses the constituents of a self-performance and the reciprocity between the subjects in the immediate environment or setting.

Drawing from Goffman's description of performance and the act of performing, I suggest that the player position in video game gameplay can be understood as *performance of the self* by replacing the word "performer" with "self-reflective player subject", "audience" with "game system", and "setting" with designed game environment and the *gameworld* (see Chapter 7).

The player must *believe* in his own position as the player. The player does this by embracing a *lusory attitude*. This entails a self-reflective vantage point through which the game is experienced. In social gaming and multiplayer video game gameplay, the player in question must also believe that the other players have adopted and realize a lusory attitude. All the players ought to care about the outcome of the game and play for the win, and thus players are expected to allocate their attention to the gameplay (Goffman, 1969, p. 143).

The social front as the physical, spatial and temporal *setting* is the gameworld in which the player participates from his first-person vantage point. Depending on the design solutions, the player may participate in the constitution of the setting very much or very little. In some games, such as in the city-building video game, *Cities: Skylines*

(Paradox Interactive, 2015), the gameplay is about building a setting. Another example could be the trading card game, *Magic: The Gathering* (Wizards of the Coast), in which players construct their own decks (i.e. settings) from a vast number of possibilities and then duel with other players with their personalized decks.

As for the personal front, again depending on the game design, the player may have many options to influence his *appearance*. For instance, in the video game series, *Fallout,* the player can choose from various character skills and attributes (strength, perception, endurance, charisma, intelligence, agility, and luck) when she creates a playable avatar. The *manner* in which the person presents oneself in gameplay is similar to the play style a player adopts in gameplay. In the point-and-click adventure game, *Indiana Jones and the Fate of Atlantis* (LucasArts, 1992), the player can select from three paths emphasizing different manners of play, i.e., a cooperative manner, an aggressive manner, or an analytic manner. Choosing the appearance for gameplay and the manner in which the player plays together can be relabeled as *style*, which is realized in relation to the overall setting provided by the game system.

Each decision a player takes is part of his *dramatic realization* of the performative play. The player chooses the way she acts, and depending on the game, her decisions and actions may or may not affect the storyline or the destiny of other in-game characters. Although some games put much more of an emphasis on dramatic realization than others, each instance of gameplay may be viewed as a continuum of decisions that have an impact on how the game unfolds. As Adele. H. Bealer (2012, p. 32) writes: "Within the constraints of any game's coded parameters, multiple performances take place, performances that vary individually even as they ultimately coalesce around a desired end." Observed from the first-person viewpoint, dramatic realization can be designated as the *responsibility* incorporated into the position of the player.

The player often expects certain elements from different types of games, and she anticipates that her role as the player remains contingent with these expectations. Furthermore, the player is likely to assume that a game that adopts, e.g., in a science fiction theme, does not suddenly drop all of these characteristics. She also anticipates that in-game persons will behave according to the personality traits that fit their social status. Typically, the role of the player as the protagonist of a game is also archetypical in a given, partly scripted way. To put it differently, video games offer an *idealized* gameworld to the player, *and* the player exhibits an idealized role for his performative play. However, in gameplay the position that the player acquires is not only idealized but heightened; the character the player plays with, or the position the player adopts, is an opportunity to arise as praised, idolized and *glorified.*

In performances of everyday life, to maintain *expressive control* is to "stay in the character" and express oneself contingently for the audience. In gameplay, this equals staying "in player position." Expressive control comes to mean the skillful adaptation to the normativity of the gameplay. To express oneself in relation to a game is restricted by the need to take performative normative acts (see Chapter 5) that further constitute the player's identity as the player of the game. Goffman called this *normativity* "shared dramatic contingencies" (Goffman, 1959, p. 66). One must also pay attention to the events that take place in the game, i.e., remain fully involved with the gameplay, and regulate one's actions accordingly.

Misrepresentation marks the evaluative aspect of a performance. As Karhulahti contends (2015b), a video game constantly evaluates the performance of the player who has to skillfully coordinate her actions towards a desired end. If the player's performance is evaluated as unacceptable, the endeavor is a failure and can result in terminating the gameplay. The player must remain careful, attentive and focused to avoid such misrepresentations of his player activities; she must show *skill*.

Finally, performative video game gameplay include*s* an element of *uncertainty* not unlike other everyday performances of the self. The outcome of the game remains uncertain in gameplay (Costikyan, 2013). In social play, the player keeps her strategy and next moves hidden from the other players whereas in video games the game itself retains a *noncommunicative* (Bateson, 1988, pp. 80–81) aspect. In story-driven games, the plot of the game is kept hidden from the player as it unfolds in relation to the player's decisions and undertakings.

Presentation of the Self in Daily Life	—	*Presentation of the Player Persona in Gameplay*
Belief	—	Lusory attitude
Social front	—	Style
Dramatic realization	—	Responsibility
Idealization	—	Glorification
Expressive Control	—	Normativity
Misrepresentation	—	Skill
Secrecy	—	Uncertainty

Table 12. *The seven facets of presentation of player persona in gameplay, compared to the original items of Goffman (1959) and the presentation of the self.*

The seven facets of presenting performative player persona in gameplay (Table 12) are not properties of the game system or the player, as such. Instead they result from dynamic couplings between a player and the game system during situated gameplay activity. The seven facets of performative gameplay are not by any means new notions of a player's activity during a game session. Rather, the facets are recognized by many game scholars as definitional elements of playing games. What is novel in the current approach is that these facets are brought together and are argued to be thoroughly reciprocal, expressive and performative.

I have analyzed the general characteristics and *interaction constraints* (Goffman 1959, p. 65) of gameplay as a performative activity by comparing the first-person player vantage point, i.e., *persona*, to Goffman's (1959) approach on presentation of the self in social situations. The analysis of the seven facets of performativity reveals an extensive phenomenal closeness between the position of the player and a dramaturgical stance on self-presentation in everyday life.

Let me now propose the fourth invariant of video game gameplay experience. We have seen that one must adopt and sustain a lusory attitude (Invariant i, Chapter 2) in order to acquire the position of the player, which invariantly alters one's self-

presence (Invariant iii, Chapter 6) in the constitutive practices of explorative and coordinative conduct (Invariant ii, Chapter 5). I argue now that such a position is that of a player persona—*performative presentation of the self in gameplay* (Invariant iv).

When a subject takes a third-person perspective on herself and embraces the position of player persona, she acquires a relation of *reduced personal responsibility* for what her actions are. Goffman (1986 [1974], pp. 512–520) argues that reduced personal responsibility manifests, for example, when one repeats the words of someone else or tells a joke whose creator is not expected to be present. The notion of "reduced personal responsibility" brings us back to consider the genre of game.

In Chapter 1, I presented Abrahams' model (2005), according to which genres of folklore can be divided into four categories based on how much emphasis is given to conflict or resolution and whether the individuals present can be regarded as closely involved or more or less distant to enacted folklore (Figure 1). Abrahams divided the genres of folklore into conversational genres, play genres (play I–III), fictive genres and static genres based on the level of interaction and involvement the genres require from their participants (Abrahams, 2005, p. 45).

In conversational genres of face-to-face interaction, such as prayers, boasts or greetings, the individuals involved encounter each other and the item of folklore as being persons. The close involvement within the situations means that the conflicts that takes place are considered as really happening to the people involved. For instance, there would be little sense in praying if the desired effect would not have real consequences. However, in play genres the participating people are not supposed to act as being persons but as player personae. Although the player is the cause of events that take place within a game, these events do not happen to her directly, but through the *mask of the player*. Finally, when participating in fictive genres and static genres, e.g., listening to fairy tales, a person's relation to the events enacted in storytelling is not that of a person or that of a persona, but rather vicarious involvement, which induces sympathetic and empathic responses.

In conversational genres, the participator does not typically assume a role or a function different than her own; in fictive and static genres the situation is the opposite. However, all play genres (e.g. riddles, jokes, games) include an expectation of a participating 'player' or 'joker' who does not take the events too seriously, who is willing to take on the challenge of a riddle regardless of its absurdity (or maybe because of it), and who plays seriously without being too serious about it or taking losing *personally*.

Here we can note that Murray (1997, pp. 112–114) observes that the gameplay experience is structured through a mask of the player. However, similar to Fine (2002 [1983]), Murray associates the mask and the 'shared reality' it provides with role-play and acting through an avatar. This is a narrower understanding of the mask of the player than I am advocating in this thesis. A relation of reduced personal responsibility is implied in all gameplay. What a player decides and does is supposed to matter in that relation and that relation only. A player may enjoy massacring thousands in a video game, but she is responsible for this action only within the agent–environment relation of the gameplay.

Recall that the term 'persona' in its original Greek meaning referred to the masks worn in performances, rituals and acts. As a social construct, player persona,

or mask of the player, is a situational unity between traditional, representative and individual interpretation. By generating both paradigmatic meanings via its representativeness and syntagmatic meanings in its contextual performances, the mask of the player is rendered inherently compelling. Let me conclude this section by citing Eugen Fink, who investigated the cultic origins of play in his magnum opus, *Play as Symbol of the World* (2016 [1960]). When examining cult-play and the performance of the medicine-man as a mask-dancer, Fink (ibid., pp. 156–158) wrote:

> [O]ne does not play with the mask, one plays in the mask… As someone who is elevated in a superhuman manner in the mask, the medicine man is, to be sure, not himself taken to be a daemonic being by his tribesmen; they know who is concealed under the mask, but they also know that the person concealed there is not the genuine truth of the mask… The medicine man has extraordinary powers and abilities—yet not from himself, insofar as and to the extent that he is a member of the horde, the tribe, the clan; he has them thanks to the mask, by means of which he can touch and move the daemonic sphere.

By describing the characteristics of cult-play, Fink perfectly illustrates my argument of all gameplay; the game provides the person who plays with a mask, that is, a position for a persona with special elevated skills and abilities. A person conceals herself in this position and function, which opens up the game for the player. The crucial notion is, as expressed by Fink (ibid., p. 162) that "Every spectator knows that a human being is behind the mask, but this knowledge does not disillusion; the point is not that a human being has disguised himself but rather that within a human disguise the daemonic itself comes into view." I argue that this "coming into view" is precisely what happens in all gameplay. A perspective of a person as being an in-game function surfaces as a vantage point, *as an access* for experiencing the game; "The mask is here not so much concealment for the masked one as it is rather human access, the door to the realm of daemons" (Fink, [2016] 1975, p. 221). Intriguingly, this portrayal brings us back to the writings of C. G. Jung.

As noted, for Jung, persona is collective, a kind of situational mimicry of cultural representations; a change in the milieu brings about a change in one's persona. A man led only by his personae "has no real character at all: he is not individual but collective, the plaything of circumstance and general expectation" (Jung, 1946, pp. 589–590), and the persona becomes "the individual's system of adaptation to, or the manner he assumes in dealing with, the world" (Jung, 1968, p. 122). When considered in the context of gameplay, to become one with one's player persona would mean total immersion into the gameworld, but as I argue earlier in this chapter, total immersion is not possible in gameplay, because it would stand for a condition in which the individual is unable to make any distinction between herself and herself-as-the-player. Yet, one requires a player persona proper since this is how an individual demonstrates a *lusory attitude* and gains access to gameplay. These Jungian notes render gaming as a playfield of situational personae.

In the next chapter, I turn my attention to the playfield, where the person gains access and focuses her intentionality during in gameplay, *the gameworld.* Let me next,

however, present how acting through the position of the player may generate emotional experiences for the players. For this purpose, I first specify how emotions are understood in enactivism and return then to analyze the qualitative interview data.

Enactive Account of Emotion and the Empathic Player

Giovanni Colombetti (2014) investigates affectivity as a *primordial quality* tightly connected to the ways by which we make sense of our being. In Chapter 1 and Chapter 5, I write that 'sense-making' in enactivism is defined as an inherent dimension of all autonomous living systems. Such systems are intrinsically purposeful since they generate their significant point-of-view within their own operationally closed autonomy; "[S]ense making… refers to the capacity of all living systems to enact a meaningful world from a point of view" (ibid., p. 15).

Colombetti argues that the activity of sense-making is not only an act of cognition but also always affective since an individual enacts a world of meaning for its own continuity. At this primordial level of affectivity, a living system becomes sensitive to what matters to it in the world. This establishes an asymmetry between the living system and the world; things acquire meaningfulness from the vantage point of the living system and in relation to its adaptive autonomy (see Chapter 5). An enactive approach resonates with Spinoza's notion of *conatus* as the endeavor to preserve one's being. Similar to Spinoza, the concept of enactive account argues that we do not first evaluate how desirable or undesirable situations are for us, but we are instead oriented to the world by our fundamental striving to sustain our autonomous identity. According to Colombetti (ibid., p. 5) this view contradicts mainstream affective sciences, which state that our evaluations of situations engender emotions.

As incorporated directly into cognition and the sense-making procedures of a living system, affectivity in enactivism is seen as a structure that underlies and precedes moods and emotions. The primordial capacity to be affected that derives from our purposeful way of being in the world makes emotional experiences possible. By sense-making, a living system assess its conditions and relations to its environment either as good or bad. Adaptive agency brings forth a more fine-tuned system of a graded scale of values. As mentioned, this fundamental sense-making process is not an evaluation made *afterwards* but is instead implicitly present as a function of the organization of the system (Colombetti, 2014, pp. 16–19). Here, we can note that an enactive account of an adaptive autonomous system (Di Paolo, 2005) already encompasses two key elements of affective science: the evaluation between good/bad for the continuity of the system (positive/negative valence) and a graded value system (high/low arousal).

Colombetti (2014) presents a model of *dynamical affective science* for understanding emotions, which is based on enactive framework and principles of biological organization. Building on neuropsychological evidence, she criticizes the three main 'schools of emotion research' (pp. 26–52): the *basic emotions model*, the *psychological constructionist* model and the *component process model*, which is also known as the *appraisal model*.

Briefly stated, the basic emotions model argues that our basic emotions occur rapidly and independent of intention or meaning and do not thus involve beliefs about the world. They are seen automatic, bodily responses that are essentially separate from higher-order cognitive processing (Tomkins, 1962; Ekman, 1994; see Leys, 2011, p. 437). The basic emotions model is criticized for, e.g., its building-block view on emotions, according to which there is a *discrete set* of genetically determined instructions or *affect programs* that produce distinctive emotional changes in the brain as well as in behavior.

Whereas researchers supporting the basic emotions model emphasize that the affect programs are *natural kinds* and thus independent from language, the *psychological constructionist model* takes a completely different stance. According to this more recent model, which is also known as the dimensional model (e.g. Russell, 2003; Barrett, 2006), emotions—including the so-called 'basic emotions'—are not genetically predetermined internal causes but rather cultural and psychological constructs. These constructs are *learned mental models* by which we make sense of our state of *core affect*, the always present affective state consisting of dimensions of valence (pleasure–displeasure) and arousal (ranging from sleepy to frenetic excitement) (Russell, 2003). In contrast to the basic emotions model, these theorists generally ignore the role of biological organization in emotions, regardless of the fact that there is neuropsychological evidence of language-independent patterns in emotional episodes (Colombetti 2014, pp. 48–49).

Finally, *the component process model* by Scherer (2009) is a recent development of *appraisal theories* in affective sciences. The Appraisal approach is a cognitive approach to emotion research since it emphasizes the evaluative processes and perspectives of emotional experience. In general, the appraisal approach stresses that individuals do not respond to 'naked' stimuli but to appraised stimuli. In this view, emotions are directly related to a person's aims and goals, to their *relevance* to the individual. Most appraisal theories have identified *novelty*, *intrinsic pleasantness* or *valence*, *certainty* or *predictability*, *goal significance*, *agency* and *control* as key dimensions of emotion appraisal, i.e., the constituents of an emotional experience (Moors et al., 2013). In short, emotions are seen as *relevance* detectors (Fridja, 2007; Ellsworth & Scherer, 2003). Although the body plays an important role in current appraisal approaches, there are still important differences between these theories and the enactive and dynamical approach to emotion suggested by Colombetti (2014). Recent appraisal theories still characterize *appraisal* itself as a cognitive process detached from embodiment and the bodily aspects of emotion. This is regardless of the fact that current experiential evidence demonstrates that the state of one's body influences the appraisal and the emotional experience in general.

In the enactive model that Colombetti (2014) proposes, emotional episodes, or *emotion forms*, are conceptualized as rapidly forming and self-organizing *dynamical patterns* of the organism. Although the dynamical model builds on biological organization, it differs drastically from the basic emotions approach by arguing that emotions do not exhibit distinctive configurations because of internal instructions, i.e. *affect programs*, but because "they result from a history of mutual influences between evolutionary and developmental factors that shape the organism in a certain way" (Colombetti, 2014, pp. 70–71). This historical emphasis from the viewpoint of enacting organisms introduces emotional episodes as context-dependent and flexible, yet

rooted in biological organization and of adaptive autonomy of the individual. The dynamical model sees the "emotional topology" as affected by both genetic and environmental constraints. Furthermore, in enactive stance the organism remains affectively (primordial affectivity) engaged in between the emotional episodes since it continues to care about sustaining its own autonomous identity.

I find the enactive approach by Colombetti (2014) to be valuable for understanding gameplay experience as a whole and the emotions induced from it. Similar to appraisal theories, enactive framework offers a well-founded theory on *emotions as sense-making episodes*. In the enactive view, individuals constantly evaluate how the ongoing events—and the world at large—emerge in relation to their purposes, goals and needs. However, sense-making is not a set of cognitive appraisal processes separable from embodiment but patterned processes of the *embodied mind* in its environment.

In a phenomenological enactive account, which I have adopted in this thesis, emotions can be generally conceptualized as a subclass of feelings, i.e., *value feelings,* which mark importance to us; "we experience emotions only in regard to that which matters" (Donaldson, 1992, p. 12). This means that with emotions we attain values to the things we encounter in the world. In fright we perceive something as frightening, in joy we experience something as joyous (Stein, 1964). Feelings such as anger or pain become understandable by attaching values or emotions to the situations in which these feelings emerge. Emotions emerge from embodied appraisals *immanently*, we do not first evaluate the world and then respond to it emotionally as distinct processes. Thus, in an enactive view the process of 'appraisal' can be characterized as an organismic activity (Colombetti, 2014, pp. 109; 112):

> [M]y fear comes *as* such a conscious evaluation; the conscious evaluation is not 'add-on' to my experience of fear—I do not feel scared and, as a separate experience, evaluate [something] as dangerous. The experience of fear *is* at the same time an experience of danger, which is world-oriented and evaluative.

Emotion is thus not regarded as a distinct phase that follows perception and precedes action as a separable 'cognitive' appraisal. Rather, and in line with Noë's (2004; 2009; 2012) theory of actionism, it is integral and embodied to the constitution of perception *as* a way of acting (see Noë 2004, p. 1). Therefore, emotion can be conceptualized as ongoing *goal-oriented intentionality* that motivates the organism to act. Emotion and intentionality appear to be close concepts; both connote motivated movement beyond oneself toward the world (Thompson, 2007, p. 364).

In phenomenology, intentionality is a fundamental principle of the lived body and consciousness. Consciousness is analyzed as intentional in the sense that it intends something beyond itself. In a narrow sense, consciousness is intentional as being *object-directed*. In a broader sense, it is intentional by being open to the world, that is, by pointing in a broad sense to what is other than itself. In object-directed experiences, we are conscious of something such as a worldly object, another agent, or our own thoughts and memories. However, in *absorbed skillful activities*, our experience is not

directed towards objects. In activities like gameplay, dancing or writing, the intentionality "is *at* its object rather than positing it" (Merleau-Ponty, 2002 [1962], pp. 518–519). Skillful coping lacks a subject–object structure yet retains the experience of *for-me-ness*. As I have argued in this thesis with the case of first-person gameplay experience, it takes a breakdown or a disruption for such an experience to take on a subject–object structure (Thompson, 2007, pp. 15, 22–24, 313–315).

There is thus continuity between intentional behavior and *emotions*; emotion as the Latin verb literally means an outward movement (Thompson, 2007, p. 363). In the context of the current study, Freeman's (2000, p. 14) proposal of emotions as "the intention to act in the near future" is especially intriguing since in reflective practice, our intentionality is directed towards ourselves, but during gameplay our intentionality resides in our agent–game environment relations instead.

In Chapter 5, I offer that a player who desires to continue to play a video game must also *care* about her identity as being the player of that very game: "If the player does not care about his character then the game is meaningless" (Fine, 2002 [1983], p. 185). I take 'care' as a precondition for emotional and meaningful gameplay experience. A person has to care about her continuity of being the player of a game to experience emotions in gameplay.

When one cares about being the player, video game gameplay may bring about emotions ranging from frustration to satisfaction and from pride to fear. Crucially, the emotional experiences of gameplay manifest for the player primarily as first-hand experiences. They happen in relation to her, as player persona, instead of merely to a fictional character that the player observes on a screen. As I have argued, in video game gameplay experience, the player's sense of self-agency remains embodied but its environment-relation changes from immediate surroundings to player–game relations. All gameplay is first-person activity that requires a third-person view on oneself, that is, the cognitive ability of *perspective switching* (Chapter 2). Perspective switching entails *empathic understanding*.

Empathy involves understanding of the other in specific circumstances; empathy is other-directed (Zahavi, 2014, p. 115). Empathic understanding—like imagination, recollection, and reflection—can be described as a 'self-displacing' or 'self-othering' act (see Zahavi 2005, p. 150; Thompson, 2007, p. 251). The suggestion that empathic understanding is paramount for taking another's position does not equal to *feeling empathy*; I do not mean to propose that a person would feel empathy for herself as the player of the game. In fact, she cannot since "in the case of empathy… the subject who is empathizing is not the same as the subject empathized" (Thompson, 2007, p. 388). What I mean to say is that the player's position as an alternative *viewpoint* to make sense of unfolding events becomes comprehensible only through empathic understanding. The ability to empathize thus underlies all intentional gameplay experiences and the emotions that may and will emerge from gameplay. It is a precondition for *persona*, the person's identity and self-expression as the player, that is, "I-as-player."

Shaun Gallagher (2012) proposes narrative understanding on empathy. He emphasizes that an empathic attitude is context-dependent and other-directed and that it requires narrative understanding of the other's situation rather than simulating the other's affective states. Experiencing empathy does not necessitate that the target is in an affective state or that the possible affective state of the target is similar to the empathizer's state. Empathy results from our understanding of the situation in which

the target is, but it is not reciprocal in the same sense than solidarity is. In feeling empathy, we *care* about the other and take interest in the other's experience.

Empathy depends on having "the right story" about the other's situation; we can relate ourselves to the other when we can place the other in a narrative framework (Gallagher, 2012, p. 377). "Empathic reactions are stronger when we understand the personal situation of an individual than if we have abstract, detached, or merely statistical information about the plight of others" (Gallagher, 2012, p. 374). In empathy, however, the affective state that is empathically understood remains that of the other. There is a distance, i.e. a *narrative distance*, between the situation of the empathizer and the target (Gallagher, 2012).

S. G. Shamay-Tsoory et al. (2009) have further argued that empathy consists of two separate systems that arguably work autonomously: *emotional empathy* and *cognitive empathy*. Emotional empathy is considered automatic and developmentally basic, and it involves emotion recognition and empathic concern, whereas in cognitive empathy we take the perspectives of the others. According to the authors, every empathic response evokes both systems to an extent depending of several variables. Adopting a player's position thus requires empathic understanding, which Shamay et al. (2009) argue is *cognitive empathy*. Only by empathic practice are we able to perceive ourselves from a third-person view in which we emerge as an object to ourselves (Mead, 2015 [1934]) *as if* we were the other.

I offer now that a *gameplay experience is inherently emotional*, and that this marks *the fifth invariant* of a gameplay experience. A gameplay experience is necessarily emotional because 1) taking the player position entails perspective switching enabled only by empathy. In gameplay, as long as the player intends to play, she 2) cares about her identity as *player persona*. Thus, although what happens in gameplay happens to an individual through the mask of the player, the events in gameplay are innately meaningful because they matter to her continuity as an autonomous agent, the player proper.

Data Analysis: Emotional Participation of the Player

The meanings one attaches to gameplay experiences may vary from a very loose bond to true embracement. Goffman (2013 [1961], pp. 106–107) describes embracing engagement as a relationship in which an individual 1) expresses an attachment to the role (here, to the position of player persona), 2) has the capacity for a full performance in that position, and 3) invests her full attention to the activity. "To embrace a role is to disappear completely into the virtual self available in the situation, to be fully seen in terms of the image, and to confirm expressively one's acceptance of it" (ibid.). The subject of whether one's relation to the player position is embracing or loose is closely connected to three invariants of gameplay experience, those of *the position of the player* (Invariant i), *self-presence* (Invariant iii), and *presentation of the self in gameplay* (Invariant iv).

As Goffman (2013 [1961], p. 108) writes, to take a greater participatory distance is not to reject the role or the position itself but to deny "the virtual self" implied by that position or role. Although there is always a discrepancy between the self and

the player position, in an embracing relationship the player aims to minimize the discrepancy, whereas in a loose relationship the discrepancy is either intentionally sustained or at least not intentionally diminished. To put it differently, players looking for embracement are willing to be fully involved and emotionally *attached*[83] to their position as the player—and often to their in-game avatar—and to skillful performance in that position (see Goffman, 2013 [1961], pp. 106, 119).

In this section, I examine how players relate themselves to the position of the player and playable characters in first-person and third-person video game gameplay experiences. I call this factor *participatory distance*. By analyzing my interview data, I ask how different forms of participatory distance may influence the emotional qualities of gameplay experience. Let us first consider the forms that participatory distance can take in gameplay. Following Goffman, I call different forms of participatory distance *performative nodes of functioning.*

In *Frame Analysis* (1986 [1974]), Goffman introduces three positions that an individual can acquire in relation to the act she causes to happen: *principal*, *animator*, and *strategist*. These positions are "functional nodes in a communication system" rather than social roles (Goffman, 1981, p. 144), and they illustrate the functional *distance* one has in relation to the act. A person who is the source, the originator and the owner of an activity, is the *principal* of it. As being the principal of an activity, a person is "held responsible for having willfully taken up the position to which the meaning of the utterance attests" (Goffman, 1986 [1974], pp. 517–518). She does not only originate the activity, however. She also *animates* it in her bodily being. A person's body is not, however, the only thing one can animate by participating.

Goffman (1986 [1974], p. 522) suggests that the distance from which animation is done may vary. An actress animates a character with her own bodily movements and voice, i.e., with her own embodied configurations, but a puppeteer works from a distance and animates the dolls by pulling strings behind the curtain. A person does not always directly animate characters but nevertheless causes an action to be taken and, by doing so, she remains as the principal of the activity in question. Such a position is called *a strategist*; "the person in whose name [an act is taken] need not to be the person who decided what [was done]" (Goffman, 1986 [1974], p. 524). The position of strategist is given to an individual for conducting special tasks such as making decisions that affect other individuals. For example, a person who organizes how people are seated in a meeting exhibits a position of the strategist. She does not animate the individuals who then sit down according to the preconfigured order. Strategist thus makes plans, models and assessments, which other individuals later animate.

When considered in the context of video game gameplay and player persona, performative self-presentation in gameplay entails being the owner (principal) of the actions, and typically being either the animator *or* strategist of in-game events. To be the source of an in-game activity, a person is both the principal, i.e., the owner *who*

[83] By reading Goffman (2013 [1961], pp. 88–90), one could argue that a person may also become *committed* to her recurrent player position if the position enables other highly valued possibilities in her life. For example, a person involved in an esport team may feel committed to that player position since it is both recurrent and valuable also from the perspective of social relatedness to the other players of the same team.

intends to act, as well as the animator or the strategist, i.e., the one who enacts the act in the afforded manner.

In various video games the player appropriates a playable character and acts from that in-game position. Action games and shooter games, adventure games, action-adventure games, role-playing games, and platformer games are prime examples of those video game genres that typically introduce this kind of position to the player.

In many strategy games and simulations, the player often controls troops, people, animals, tribe members or units from an above *godlike* position by directing the movements, activities and development of the others indirectly. The player commands the units to take actions, but she does not animate those actions as being an embodied being within the gameworld. She thus adopts the position of being the *principal* and the *strategist* of the activity. We can consider *Chess* as an example where one is the strategist. The player makes the decisions to act (principal), and then acts as the animator *in the gaming situation* by moving a chess piece, e.g., a knight, according to the rules. However, when we consider the position of the player *from within* the semiotic system of chess, the player does not animate the knight but acts as the strategist and commands the knight to capture a bishop. The player, instead of being an animator, is an entity referred to as "White" or "Black."

However, many games seem to lack the dimension of animating something altogether. Consequently, the positions of the animator and the strategist do not seem sufficient in these cases. Does the player animate something in the tile-matching game *BeJeweled* (PopCap Games, 2001), for example? A while ago I witnessed a gameplay situation in which my 14-year old boy played with a *Perplexus Epic* sphere (Figure 12), which is a 3D transparent plastic sphere containing a ball-in-a-maze game. In this game, the purpose of the player is to turn and twist the sphere carefully to maneuver a small ball within the sphere and try to avoid it dropping from its track. My son, focused to keep the ball on its track in a difficult phase of the game, failed and uttered immediately to himself: "I fell." What is the "I" in the "I fell" if nothing is animated when playing *Perplexus*? Clearly, my son did not animate the ball, nor did he act as a strategist in relation to it. If he animated anything, then he animated the game environment itself.

The enactive approach argues that the experience of agency is not an inner quality of a person but *a relation* that results from active exploration of the world (Buhrmann & Di Paolo, 2015; Chemero, 2009, p. 201; Kyselo, 2015). When we refer to ourselves and to our endeavors with the pronoun "I," we thus refer both to ourselves *and* to our embodied couplings with the environment. I propose in this chapter that it is not sufficient to think that only specific video games, such as role-playing games with an identifiable avatar, could alter our self-presence (cf. Klimmt et al., 2009). More profoundly, and indeed inevitably, games arise as ephemeral, alternative environments for our situated agency.

Let me suggest a fourth functional node in addition to the principal, the strategist and the animator. This fourth node is to be positioned in-between being the principal and being the strategist or the animator of an activity. Recall that, for Goffman (1986 [1974], pp. 517–518), the principal is *the owner* of an activity, and that, in enactive phenomenology, the sense of ownership can be differentiated from the sense of

agency. In the sense of ownership, we experience that whatever is happening is happening to me or by me. The sense of agency, in contrast, is the experience of *initiating changes* (Gallagher, 2012). Thus, we can distinguish being the principal who owns the action from *the enactor* who initiates it.

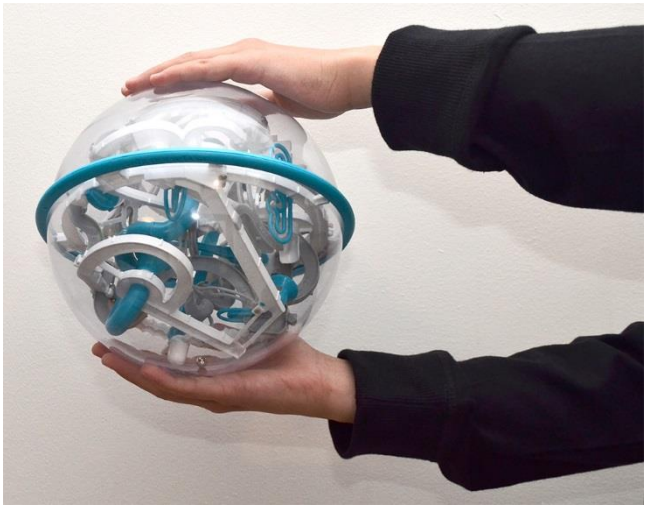

Figure 12. *My son holding a Perplexus Epic sphere.*

In any instance of gameplay, we remain the principals of every action we take. We retain the pre-reflective *for-me-ness* of each of our experience, whether we identify ourselves with a griffon flying over a magical landscape in a gameworld or turn a *Perplexus* sphere in our hands. I argue, though, that just as inevitably as our node of being the principal remains unchanged, our node of being the enactor is transformed.

In all games it is "I" who enacts the game environment and makes in-game events happen. "I" is an intentional agent, whose embodied pre-reflective self remains on the couch although her agent–environment relation necessarily changes since this change is an essential quality of all gameplay. What does the player of *Tetris*, then, enact? She exhibits an alternative intentionality, alternative in the sense that its world-relation is changed. The player does not need to reflect on this intentionality or imagine any characteristics it may or may not have. It suffices that she herself remains as the principal (owner) of the actions taken and that she has a sense of agency (enactor), which emerges in the player–game relation.

At one end of the participatory distance, the player identifies herself with an in-game character. Whereas especially in role-playing games the player may craft her own in-game personnage, i.e., avatar, and thus play through a personalized and identifiable vantage point, in many games (e.g., simulation games, mobile games, strategy games) the player plays through an intentionality that is only implied or left completely abstract by the game. At this other end of participatory distance, the game does not present any kind of narrative identity for the player to identify herself with.

Participatory Distance of the Animator Node

I discussed the theme of participatory distance with the 32 interviewees during the first phase of the interview, because watching gameplay videos of the interviewee's favorite games typically indicated player preference on specific participatory distances over the other options. I noticed quickly that many of the participants associated this theme with expectations of specific emotional outcome of gameplay:

> Sure, immersion is stronger in first-person games. And in those sneaking games it is much more frightening, which makes the experience much better since you have to constantly look around you to stay on top of things. (P20, mercenary)

> I enjoy more the third-person view. Or even the above view, like in *The Sims*. I do not want to identify with the characters too much. I easily take the other's perspective, and seeing things through another's eyes can be too terrifying. It is not enjoyable to be too deeply involved in the gameworld. If something then jumps in front of you, you just get frightened too badly [laughs]. (P29, companion-explorer)

Several players stated that a first-person animator view offers a more immersive experience, whereas the playable character seen from a third-person point-of-view was seen as "a proxy between the player and the gameworld" (P24, explorer), "a viewpoint to the game's story" (P19, adventurer) or as a "narrator who opens the gameworld to the player" (P31, mercenary). This was also observed by another interviewee (P21, companion-adventurer) who pondered whether he preferred the functional node of a first-person or third-person animator: "It depends completely on whether I want to *be* the character or merely observe and control it. So, it is about whether being the character is the main thing or is it rather what the character *does*." Another interviewee described the differences between first-person and third-person distance in a similar fashion:

> For me, it is nicer to see the character since the first-person view makes me feel like I was *supposed* to be the character and identify myself with it. To be it, really. But to me, the character's story is more interesting than being that character. (P9, mercenary)

A functional neuroimaging study by Shanti Ganesh et al. (2011) studied players' identification with their in-game characters. It was revealed that the identification long-time gamers had with their avatars resembled the type of emotional involvement we have with a close human, such as a family member or a long-term friend. Based on this study, experiencing through an avatar's perspective can create emotional experiences greater than we feel when interacting with distant others, yet weaker than those that concern ourselves directly. It has been suggested in prior literature that long-term players who play avatar-based online video games gradually build an avatar-centered autobiographical narrative (Yee, 2006; Miller, 2008).

Although Hefner, Klimmt and Vorderer (2007) correctly emphasize that non-dyadic models are required for studying players' emotional identification with their avatars, dyadic models are also needed. It may be that one cannot empathize with oneself, but do the players really think about *being* their in-game avatars, and if they do, what kind of thinking we are dealing with? Let me consider this question by comparing self–avatar relations and an empathy model proposed by Frédérique de Vignemont and Tania Singer (2006).

De Vignemont and Singer (2006, p. 435) approach empathy from a *simulation-based* theory of mind. They propose that there are five necessary conditions for human empathy. *The affective condition* states that empathy requires an affective state from both the empathizer and the target. *The interpersonal similarity condition* argues that the empathizer's and the target's affective states are similar to each other. *The vicarious state condition* postulates that, in empathy, the empathizer adopts an "as if" state by taking on the perspective of the target. According to *the ascription condition*, empathetic understanding necessitates that the empathizer know that the target is the source for her own affective state. Finally, in the *caring condition*, one cares about the target's affective life and position.

In those video games in which a player plays a character from a third-person perspective she is given a viewpoint to visually observe her own actions as they happen. In non-gaming situations, a third-person view of the self is a self-reflection and, as such, a detachment from the ongoing activity. One can, of course, observe one's mirror image during an activity, but these situations are exceptions and observing one's image greatly restricts the activities that can take place. Curiously, in video games, the player may acquire a third-person view of 'oneself' in a non-reflective fashion. This means that the player-subject is able to perceive herself as the animator of the events in the instant in which she acts as the principal or the owner of the action. In these situations, our first-hand experiences become perceivable for us *as we act*.

Thus, third-person games (and first-person games to an extent) provide for the player a unique position in which she acts through the avatar but also perceives herself to do so since the character she animates is directly observable. This became evident in a very interesting interview I had with a companion-adventurer:

> I really like to empathize with others and take on their perspective of the events. For example, in *Life is Strange*, you acquire the role of a high-school girl in seemingly everyday life. I take games as journeys to another world, like a virtual reality of a kind. So, some kind of empathy comes with it. And in *Tomb Raider*, I remember thinking aloud: "Lara, you can do this, you can do this!" and then there is later a sexual harassment kind of event, and I again empathized: "Lara, stop him, you can do it!" and it made me happy to be able to help Lara, although I played her myself. It is a bit funny: at the same time, you are the character but also empathize with her. (P21)

The configuration of avatar-based video games has a peculiar quality of being both a first-person experiential experience that we live through and a third-person experience in which we observe "us" as an intentional object. Our avatar is deeply involved with the in-game events and we are involved in his or her endeavors, which fulfills *the affective condition* of empathy. As our character is, e.g., wounded and expresses pain,

we may empathize with it and "feel her pain." This is *the interpersonal similarity condition*. As I argue throughout this thesis, the position of the player is the position of being something else than one is. This equals to *the vicarious state condition* of "as if" in empathy. We are fully aware that we feel the painfulness of the situation because we perceive our avatar's suffering, i.e., *the ascription condition* is fulfilled. Lastly, similar to the *caring condition,* we care about the well-being of our in-game character as long as we care about our identity as being the player of the game. This care may develop into real attachment to characters, a phenomenon called *parasocial interaction* by Horton and Wohl (1956).

I would thus like to propose that identification with an avatar and then acting through that position does not mean that we could not empathize with our in-game avatar. We do not feel empathy for our avatar as we act through it, but whenever we observe our avatar rather than act through it, we regain the perspective in which empathy becomes possible. For example, we can perfectly well feel interpersonal emotions toward our avatar when we enter a graphic menu that portrays our avatar's wounded body. To feel empathy for a position that arises as the position through which we enact is a curious feature of video game gameplay experiences (Figure 13).

Zahavi (2014, p. 126) contends that "[W]hat is distinctive about empathy is precisely that the empathized experience is located in the other and not in oneself," and continues later (ibid., p. 192), "when I empathically understand the other, the other is given to me not as a pure nucleus of experience, but as a centre of intentionality, as a *different perspective* on the very world that I also inhabit." In gameplay we precisely experience the actions of the avatar through which we act as mine (first-person view) and from a different perspective than that of our own (third-person point-of-view).

Figure 13. *In the classic shooter video game, Doom (id Software Inc., 1993), the player enacts from the first-person view but simultaneously perceives "his" face on the game's WIMP interface. The painful state of the protagonist is presented to the player from a third-person perspective that the player can empathize with.*

It is my intention to highlight that empathic understanding is required for us to be able to appropriate the player's position as being someone else, and that we can empathize our avatar as well as other in-game characters we encounter during video game gameplay. Thus, I suggest that empathy may be a significant factor for the emotions we experience during video game gameplay in which we experience distinct *closeness*.[84]

Interestingly, studies on episodic memories have revealed that our memory for self-referent information is superior to our memories of events about others (other-referent information). The closer the other person is to us, the better we remember the events that happened to these close others. Intersubjective closeness thus enhances our memory of the others (Ganesh et al., 2011). This observation is relevant for the current study for two reasons. First, it indicates that interviewees may remember mostly their personal gaming events but also events that happened to individuals close to them. It could also mean that memories of social gameplay that include both the interviewee *and* people close to her might be remembered even more vividly.

Second, the study conducted by Ganesh et al. (2011) offers another intriguing hypothesis for the gameplay memories. Since long-term players in their study remembered avatar-based gameplay experiences as clearly as their interactions with their close others, such as family members or friends, a player who has played avatar-centered video games and other types of video games equally as much may remember her experiences of playing through an avatar more vividly than the other gameplay experiences. This could also indicate that the personal narratives of the players who play single-player avatar-centered games are more elaborated and detailed than the narratives of the players who have equally played single-player games but not avatar-centered games. One could also speculate why avatar-centered gameplay memories are memorized better than other single-player gameplay experiences.

In sum, although both the first-person viewpoint and third-person viewpoint are animator participatory nodes, they do not necessarily elicit similar experiences of presence and emotion. From a first-person viewpoint, the player may more easily identify with the character, as the interview data of this thesis suggests. However, a third-person vantage point may bring along a deeper sense of *avatar presence*, including a perception of a virtual body and fictional identity, which the player can not only identify herself with but also empathize with.

I appropriated in Chapter 2 a phenomenologically inclined stance, which argues that self-consciousness consists of minimal experiential pre-reflective self and narrative reflective self-consciousness. I consider next how these two forms of participating may affect the emotions that are induced from video game gameplay. This theme is related to the proposed invariants of *coordinative and explorative practice* (Invariant ii, Chapter 5) and *self-presence* (Invariant iii, this chapter).

[84] Katherine Isbister (2016, pp. 11–13) has suggested that the closeness between a player and her avatar can be evaluated on four levels. The *visceral level* is how the player's body participates in making progress in the game by learning skills that are reflected in the new abilities her in-game character learns. The *cognitive* level is how the player is rewarded because of correctly chosen strategies and actions. On the *social level*, the player takes on the avatar's social point-of-view. Finally, on the *fantasy level* the player can explore alternate identities through actual in-game performance.

Pre-reflective and Reflective Access in the Player Position

In gameplay we act through our performative position either by being fully and pre-reflectively engaged with the activity or by stepping back from it while still paying attention to our player position. In both of these possibilities, our intention stays in the player–game coupling. Only in the latter, though, are we reflecting *in* the player position.

To play pre-reflectively typically entails adopting the player position as an animator or as an enactor. In video games that encourage pre-reflective play, the player may, e.g., pilot spaceships, engage in fighting, perform in sports games, participate in races, jump on platforms, fire enemies at fast speed, quickly manipulate falling blocks, or dance to the beat of music. All games in which we act as the animator or enactor are not pre-reflective, however. Here, we must note that the pre-reflective experiential self is closely related to time-consciousness and the experience of temporality (Zahavi, 204). In real-time games that progress continuously according to an in-game clock, players must perform actions in a timely fashion without the possibility to ponder over, e.g., strategies or cause-effect relations, or to reflect on their own thoughts on the events. Although games do not factually have freely flowing in-game time, but rather discrete time units, in "real-time games" the intervals between these units can be so small that we as the players cannot perceive them.

Similarly, reflectively self-conscious video game gameplay is often turn-based, and the player's position is that of the strategist, although this is not always the case. Turn-based gameplay consists of perceivable turns during which the player can consider her actions before making decisions. Many strategy games are turn-based, and although classic adventure video games are not similarly based on turns, the player of these games may take her time when trying to solve the in-game puzzles she comes across. When I am trying to solve an in-game puzzle or ponder my attack strategy, I am fully playing the game, but I am doing it from a reflective perspective. However, and this is a crucial point, the self I am reflecting here is not some general "I" that persists unchangeable from one activity to another. This "I" is my experience of myself in relation to the game.

The distinction between the position of *the pre-reflective animator stance* and *the reflective strategist stance* can be further explored by studying emotional experiences. Gerald L. Clore (1992) has suggested that feelings can be categorized into affective, bodily and cognitive feelings. Affective feelings refer to emotional episodes in a related fashion to appraisal theories discussed earlier. These feelings include emotions, moods and affective experiences, and they typically arise from ongoing agent–environment relations. Bodily feelings are reflections of proprioceptive feedback, i.e., of the movements of one's own body as well as of physical states such as hunger, dizziness or pain. Cognitive feelings, however, are associated with thinking and memory processes (Clore, 1992; Greifeneder et al., 2010; Schubert, 2009).

Cognitive feelings are "nonaffective" in the sense that they appear in situations that do not deal with direct evaluations of the situation as favorable or unfavorable for the person, but rather refer to feedback from one's own cognitive processes. Cognitive feelings, such as a feeling of certainty or a feeling of confusion are "not assertions primarily about the state of our goals, or the state of our body, but about our state

of knowledge" (Clore, 1992). However, they do participate in our situated decision-making.

Figure 14. *In the role-playing video game, Final Fantasy VII (Square, 1997), the player mostly plays the protagonist, Cloud, from a third-person vantage point. The game includes an "Active Time Battle (ATB)" system, which blends together real-time action and turn-based decision-making. The player has a bit of time to think about her next actions while waiting for her character's action/time meter to be filled. Thinking too long may be costly since enemy characters also act according to their action/time meters.*

Whereas anger, fear and happiness are examples of affective feelings, the *feeling of knowing* is a primary example of a cognitive feeling or a cognitive experience. In addition to the feeling of knowing, *memory retrieval*, *familiarity*, *easiness and difficulty, expectation*, *distraction and boredom* and *uncertainty and understanding* have been proposed as examples of cognitive feelings (Clore, 1992; Greifeneder et al., 2010, p. 109). Furthermore, Wegner (2005) has suggested that the *feeling of doing* is also a cognitive feeling. The feeling of doing arises if we think about the consequences of our actions before we engage with the action. Alternatively, the feeling of doing could be conceptualized as the *feeling of planning*.

I would like to suggest, then, that when we adopt the reflective strategist stance in gameplay, we engage ourselves primarily with cognitive feelings. These include, e.g., the feeling of knowing while we try to solve puzzles, feelings of planning and expectations while we ponder our strategy to surprise our enemies, and feelings of memory and certainty while we are getting ready for another level of a platform game. Indeed, in many games, we do not just play through the pre-reflective animator stance or through the reflective strategist stance, but rather appropriate both in turn.

For example, when playing a fast-paced first-person shooter game, we may open a character menu screen, save the screen or just pause the game to engage with the reflective strategist stance before jumping back into the action. Furthermore, in real-time strategy games (RTS) the player has the position of the strategist; she does not animate the actions directly but initiates them indirectly, typically from an isometric

perspective. However, the gameplay is fast and requires the player to focus on the unfolding events by using her intuition rather than only her skills of planning and strategizing. Consider the following interview excerpts:

> If you think about it, the required skills in turn-based games are quite different from the ones in which you must react fast and precisely to deal with whatever comes your way… Like playing *Super Smash Brothers* online. Your heart races as you squeeze the controller, but turn-based games are more, like, laid-back. In both you must think quite much, but in turn-based games you can take your time and focus differently. (P23, commander)

> I was just thinking that I enjoy most games in which I do not have to be really fast and have great reflexes. I want to think and ponder. It is not nice that some zombie comes running towards me and I must shoot it down quickly and then the next one is already approaching, you know. (P19, explorer)

Experiences of being completely focused on fast events that require intuitive acting are prime examples of being *engrossed*. As Goffman (2013 [1961], p. 80) writes: "Something in which the individual can become unselfconsciously engrossed is something that can become real to him." In such skillful activities, for instance, "the experience of fear *is* at the same time an experience of danger" (Colombetti, 2014, pp. 109; 112), suggesting to the player to act accordingly if she desires to sustain her identity as the being the player.

For Goffman (1986 [1974], p. 346), games are designed for providing engrossable experiences, in which the player is not fully aware of "the direction of his feelings." Such a state of experiencing cannot be self-consciously maintained since maintaining engrossment is a different activity from being engrossed. What Goffman describes here is thus what I have called, building from a phenomenological stance, pre-reflective consciousness and skillful acting in which the object-orientedness of intentionality becomes absent. In Deterding's (2013, p. 51) reading of Goffman, to be engrossed requires "letting go," which becomes possible when "our spontaneous needs, wants, emotions, interests and involvement [are] aligned with the properties of the situation."

If we approach gameplay according to my suggestion as a *person–persona–personnage* continuum, every gameplay situation is in principle a situation of the reflective strategist because we enact the gameworld as a persona rather than as a person. Thus, a distance is invariantly present in all gameplay. This becomes evident if we, e.g., become frightened of an in-game monster while being in the pre-reflective mode of the animator. We may scream in horror for an instant but immediately after that we easily step back from this position as we become again observers of ourselves *as being* the person who plays, i.e., persona. From this reflective vantage, things do not appear as scary anymore, since it suddenly is evident that they did not after all happen to ourselves—but then again, we may fear to re-enter to the gameplay since the monster is still waiting for us there.

Discussion: Social Emotions in Solitary Play?

Karhulahti (2015a) has recently argued that mutual agreement between at least two players is required in order to be able to talk about 'winning' or 'losing' a video game. Postulating 'winning' and 'losing' in a single-player game entails for Karhulahti that the game would have to be assumed as a reasoning opponent (ibid., p. 19). In contrast to Karhulahti's argumentation, I suggest that one can have meaningful experiences of winning and losing even in single-player gameplay—when we consider gameplay from the experiential first-person stance of the player. To acknowledge this, we do not need to presuppose the game as an intentional agent or as our opponent, nor do we have to conclude that you can only "beat yourself" in single-player gaming. We experience 'winning' and 'losing' always in reciprocal dynamic relations between ourselves and our environment. We win or lose *in that relation.*

The recurrent experiences of social copresence, psychological involvement and behavioral engagement in single-player gameplay can be suggested to support the argument that participating in any kind of gameplay practice is profoundly sociocultural. Although Di Paolo and De Jaegher (2012) state that social emotions make only little sense in the absence of the other, in video game gameplay the situation is arguably different due to the internal dynamics of gameplay (see Chapter 5). Solitary gameplay does evoke social and self-conscious emotions such as envy, pride, shame and guilt.

Di Paolo and De Jaegher also state that *recognition* is manifested in social interactions between two or more people—alongside neglect, admiration, desire, pity, love and hatred. Consider, then, how the interview participants of the current study described their most memorable gameplay experiences:

> In the best RPGs, you can develop a personal relationship with your character and the companions of your character. I think it is an essential thing for RPGs… In *Fallout* I felt bad because I could not befriend mutant 'cause I chose something wrongly in the dialogue… I do not, somehow you start to feel attached to the characters, maybe even more than to your own avatar… I do not know how to compare it to the real-world relations, they are like loyal companions, you have seen and experienced so much together, after all. (P2, adventurer)

> In *Dragon Age Origin*, just before the final battle, you must choose who will go with you, and who you will leave behind. And honestly, I spent in that moment more than 15 minutes thinking, "damn it, this woman is my life partner, so I should take her with me, but what if she then dies in the battle?…" Afterwards, I got a feeling of longing. It is about missing the characters and the whole world. You like too much of the place, too much of the gameworld, and too much especially of the characters and their stories. It feels like an end of a friendship, too. You have had a group of people you have spent time with, saved the world and all, and then all of them go their own directions. At that moment, they feel like your good friends in real life. (P21, companion-adventurer)

> I really liked the characters in *Persona 4*… I felt real companionship and friendship. Like we trusted each other, and we knew that we would be alright when we were together… It was very nice to be able to spend time with the characters and choose your closest friends. I felt bad when the game was over. I do not really like to cry, but if I do, I know that the game has really meant something to me. (P18, adventurer)

> You can be a good or a bad guy in *Black & White*, you know. I was always the good one, but sometimes I had to be harsh to my pet ape. Sometimes, it ate a human, so I had to slap in order to remain a good master. If I had not hit it, I would have accepted its bad behavior. So, I hit it, just once, and felt guilty and bad. One fair slap was fortunately enough to teach it a lesson [laughs]. (P29, companion-explorer)

By reading these passages, one can concur with what Katherine Isbister (2016) has recently written about the ability of video games to elicit socially relevant emotions. She states (ibid., p. 8) that games are, in fact, the only form of media capable of evoking, e.g., feelings of guilt from experiencing fiction. Isbister (ibid., pp. 13, 20, 44–45) also describes the proudness one can experience when a virtual crowd applauds one's performance in, e.g., a snowboarding contest or a race (ibid., p. 13) and the amusement the player feels when participating in a witty and funny dialogue between the player and a dynamic non-player character (ibid., p. 20).

The notion that solitary gameplay induces emotions we associate with social interactions is not to state that the emotional experience of single-player gaming would be similar to social play.[85] Rather, it is to argue that "our embedding in social contexts and social interactions from the very beginning of our lives means that we develop within, and are integrated with, a social world just as completely as any physical world" (Di Paolo et al., 2013, p. 205). Thus, engaging with the world of cultural objects converges towards social participation. Furthermore, video game gameplay as a form of dynamical agent–environment coupling brings this participation to yet another level, where social self-conscious emotions such as empathy may also be elicited.

According to Thompson's (2007, pp. 383–385) reading of Husserl, three kinds of intersubjectivity emerge in our participation in the world. First, we have the intersubjectivity of face-to-face experience and other direct encounters with the self and the other. Second, we have 'generative intersubjectivity' of norms, traditions and

[85] I do not claim that the emotions in single-player gaming and in multiplayer gaming are identical. Instead, as shown, e.g., in an fMRI experiment by Kätsyri et al. (2013) as well as in the experiments reported by Isbister (2016, pp. 43–45), social interaction context matters very much indeed in our emotional responses to gaming.

conventions that shape our experience while the others are absent.[86] Third, our intentionality is not closed upon itself but is intersubjectively open in advance to any actual encounter with another social agent. We are dealing with cultural artifacts, not with indifferent physical objects; physical objects appear to us as perceivable also by other subjects. Objects have, in Husserl's language, *hidden profiles*, i.e., how they might be perceived and experienced from a different perspective that one presently exhibit. According to Husserl and Thompson (2007), these hidden profiles are to be taken "as the correlates of the possible perceptions of other subjects, who could perceive the object simultaneously with oneself, though from a different vantage point… for one to be able to *appresent* the hidden profiles of an object, no other subjects need be actually present" (Thompson, 2007, p. 384).

Whereas the first kind of Husserlian intersubjectivity actualizes only in social gaming and in multiplayer online gaming, the second and the third kinds of intersubjectivity are also present in solitary gameplay. Games present us with norms, regulations and traditions, and we approach them as sociocultural systems. We also pre-reflectively know when we engage in solitary gameplay that a game we play can be played and experienced by others differently, and this knowledge shapes our own presentation of the self, i.e., persona, in gameplay.

As a phenomenon of social self (Mead 2015 [1934]), gameplay adds to self-awareness through reflective and dialogical inner speech consisting of at least two self-positions: "me, the agent who enacted the gameplay and exists after the play session," that is the person, and "me, as the performative player of the game," or persona. Just as Deterding (2013, p. 141) observes: "Even if we are fully alone, we still make sense of what we are doing to ourselves… we can feel embarrassed or proud alone with ourselves and a mirror, though maybe less emotionally intense than under the judging looks of response-present others."

When we win or lose in a single-player game, we win or lose in our relation to the game environment. It depends on the game design as well as on the dimensions of self-participation, i.e., our pre-reflective/reflective stance, participatory distance, motivational relevance, and the level of skillful access, whether we *feel like winning* when we finish first, destroy the enemies, complete a level, watch an ending movie or end up holding a gold trophy after an in-game tournament.[87] Indeed, we do not have to self-reflectively postulate the game system as an intentional opponent even when we "compete" against artificial intelligence in computer chess. Still, many of us would describe the moment of calling "checkmate" winning, even in solitary play.

[86] This form of intersubjectivity is congenial with how Mechling (2006) describes 'solo folklore' (see Chapter 5), and it is also noted by Goffman (1986 [1974], p. 81): "When a performer guides his private activity in accordance with incorporated moral standards, he may associate these standards with a reference group of some kind, thus creating a non-present audience for his activity… In other words, an individual may be his own audience or may imagine an audience to be present."

[87] It must be noted, though, that Karhulahti (2015a, p. 19) approaches winning and losing by postulating a condition of "mutual agreements to rules." According to this view, a player cannot lose or win a single-player game since, for Karhulahti, there is no mutual agreement between an intentional player and non-intentional video game.

Player Preferences in Emotional Valence and Arousal in Gameplay

We have now seen that both participatory distance and playing in a pre-reflective or reflective manner have an impact to the emotional characteristics of a gameplay experience. I conclude this chapter by exploring how players representing the seven player types considered their preferred emotional valence and level of arousal in the survey of 1,718 respondents.

The survey (see Study 1, Chapter 3) included an inventory that described emotions that may be induced by gameplay experience. The scale was influenced by The Positive and Negative Affect Schedule (PANAS), which is a 20-item self-report scale for measuring positive and negative affect (Crawford & Henry, 2004).

In the survey of 1,718 participants, the included scale consisted of 28 items, 12 of which were similar to the PANAS scale (marked with '*' in Table 13). Other items were included based on a literature review on games and emotions. The scale was tested in a pilot study of 50 participants and open feedback from these participants was taken into consideration when constructing the inventory. In the survey, the respondents were asked to specify how pleasant they considered the following feelings (Likert-7, 1=very unpleasant, 7=very pleasant) during video game gameplay:

Item	*Feeling*	*Mean*	*SD*	*Item*	*Feeling*	*Mean*	*SD*
1	Distress*	2.51	1.61	15	Happiness	5.51	1.37
2	Exaltation	4.82	1.62	16	Fear	3.08	1.77
3	Despise	2.42	1.49	17	Determination*	5.01	1.45
4	Shame*	2.24	1.44	18	Relaxation	5.49	1.36
5	Relief	4.68	1.51	19	Sadness	2.73	1.65
6	Amusement	5.44	1.36	20	Guilt*	2.54	1.56
7	Passion	4.37	1.69	21	Attentiveness*	4.98	1.47
8	Disgust	2.66	1.58	22	Activeness*	5.03	1.45
9	Enthusiasm*	5.45	1.49	23	Frustration	2.63	1.55
10	Excitement*	4.69	1.79	24	Satisfaction	5.39	1.36
11	Shock*	3.17	1.77	25	Curiosity	5.31	1.46
12	Interest*	5.45	1.41	26	Anger*	2.69	1.63
13	Pleasure	5.52	1.42	27	Surprise	4.98	1.49
14	Embarrassment	2.62	1.50	28	Pride*	4.86	1.61

Table 13. *Preferences in emotional valence and arousal scale, and the mean sums and standard deviations in the survey of 1,718 respondents*.

From Table 13, we can see that feelings of happiness, pleasure, and relaxation were the most preferred by the respondents, whereas feelings of shame, despise, and distress had the lowest mean preference sums. I then conducted an exploratory factor analysis to investigate latent factors of the scale described in Table 13. The analysis

was made by using principal factor extraction with polychoric correlations and varimax rotation. Velicer's minimum average partial (MAP) test indicated that two factors were to be extracted. By using factor loadings over .50, the first solution resulted in the following final factor structure:

Item	*Factor 1*	*Factor 2*	*Uniqueness*
Distress (1)		0.781	0.390
Exaltation (2)	0.665		0.493
Contempt (3)		0.829	0.313
Shame (4)		0.850	0.265
Relief (5)	0.635		0.543
Amusement (6)	0.733		0.462
Passion (7)	0.559		0.603
Disgust (8)		0.862	0.254
Enthusiasm (9)	0.813		0.339
Excitement (10)	0.579		0.523
Shock (11)		0.800	0.303
Interest (12)	0.837		0.300
Pleasure (13)	0.783		0.384
Embarrassment (14)		0.802	0.357
Happiness (15)	0.766		0.400
Fear (16)		0.801	0.310
Determination (17)	0.766		0.386
Relaxation (18)	0.679		0.520
Sadness (19)		0.811	0.323
Guilt (20)		0.871	0.241
Attentiveness (21)	0.718		0.469
Activeness (22)	0.768		0.395
Frustration (23)		0.727	0.470
Satisfaction (24)	0.794		0.362
Curiosity (25)	0.816		0.333
Anger (26)		0.836	0.294
Surpise (27)	0.716		0.425
Pride (28)	0.693		0.475
Mean	5.1164	2.6624	
Std. Dev.	1.0823	1.2731	
Alpha	0.9636	0.9485	

Table 14. *Factor loading (> 0.5), uniqueness and descriptive statistics for emotional valence and arousal scale (N=1,718).*

A total of 17 items loaded on the first factor. All of these items generally describe positive emotions and feelings that one may experience during gameplay. I label this factor *Positive Valence*. The remaining 11 items, which loaded on the second factor, denote negative and generally aversive emotions and feelings. Therefore, I call the second factor *Negative Valence*.

The two factors of *Positive Valence* and *Negative Valence* describe in a very general way that the emotions in gameplay can be divided into two basic categories of being unwanted and wanted not unlike our other everyday experiences. However, I was interested to explore whether experiencing emotions of positive and negative valence in gameplay can be further divided into sub-categories or factors. Thus, I repeated the exploratory factor analysis independently first with the items that loaded on the *Positive Valence* factor and then with the items that showed > .50 loading on the *Negative Valence* factor.

Item	*Factor 1*	*Factor 2*	*Uniqueness*
Exaltation (2)		0.6663	0.4445
Relief (5)		0.5325	0.5462
Amusement (6)	0.6882		0.4292
Passion (7)		0.5691	0.5927
Enthusiasm (9)	0.5873	0.5532	0.3491
Excitement (10)		0.7025	0.4675
Interest (12)	0.6882		0.3068
Pleasure (13)	0.7389		0.3495
Happiness (15)	0.7683		0.3473
Determination (17)	0.5638	0.5405	0.3900
Relaxation (18)	0.7257		0.4459
Attentiveness (21)		0.5816	0.4464
Activeness (22)	0.5394	0.5696	0.3846
Satisfaction (24)	0.7507		0.3332
Curiosity (25)	0.6423		0.3391
Surprise (27)		0.6449	0.4071
Pride (28)	0.5136		0.4909
Mean	5.3715	4.7541	
Std. Dev.	1.1127	1.2074	
Alpha	0.9446	0.8862	

Table 15. *Factor loading (> 0.5), uniqueness and descriptive statistics for the items loaded on the Positive Valence factor (N=1,718).*

The MAP test suggested that two factors should be extracted from both the *Positive Valence* and *Negative Valence*. The second-order exploratory factor analysis for the items of *Positive Valence* resulted in a solution in which all of the 17 items showed

higher than .50 loading on a scale. I retained the first solution as specified in Table 15.

Eight items loaded on the first sub-factor of the *Positive Valence* scale. These items describe that the player appreciates the positive emotions and feelings of happiness, satisfaction, amusement, pleasure, relaxation, interest, curiosity and pride. These items all characterize occurrences in which an individual experiences ease and is certain that her skills and abilities are sufficient. In such a situation, one may feel relaxed and safe enough to be curious about trying new things. An experience of self-pride may follow from such a situation. I label the first sub-factor of *Positive Valence* as *Comfort*.

Six items loaded on the second factor that further specify the positive emotions and feelings players attach to gameplay. These items were excitement, attentiveness, passion, surprise, exaltation and relief. In contrast to Factor 1 (Table 15), the items of Factor 2 signify a higher level of focus, concentration and attention allocation, and the possibility to be surprised in a gameplay. The items further stand for the relief that may follow from such a situation. I call this sub-factor of positive emotions *Thrill*.

Three items cross-loaded between the two factors. These were the items of enthusiasm, activeness and determination. This observation indicates that three emotions are relevant for all positive emotions and feelings players perceive to be related to gameplay experiences.

I then continued to repeat a similar factor analysis for the 11 items that loaded on the *Negative Valence* scale (Table 14). Again, I retained the first solutions since all the 11 items showed a loading over > .50 on a factor:

Item	*Factor 1*	*Factor 2*	*Uniqueness*
Distress (1)	0.5605	0.5384	0.3959
Contempt (3)		0.8219	0.1951
Shame (4)		0.8449	0.1562
Disgust (8)	0.5893	0.6327	0.2524
Shock (11)	0.7447		0.2908
Embarrassment (14)		0.6805	0.326
Fear (16)	0.7701		0.2765
Sadness (19)	0.7820		0.2559
Guilt (20)	0.6867	0.5446	0.2318
Frustration (23)		0.5934	0.4593
Anger (26)	0.6856	0.5004	0.2796
Mean	2.8420	2.4767	
Std. Dev.	1.4376	1.2764	
Alpha	0.9134	0.8872	

Table 16. *Factor loading (> 0.5), uniqueness and descriptive statistics for the items loaded on the Negative Valence factor (N=1,718).*

From Table 16 we can note that five items clearly showed higher loadings on the first factor, whereas four items loaded on the second factor. The items distress (1) and disgust (8) cross-loaded between the two factors and those emotions cannot therefore be regarded as distinctive to either of the identified dimensions of negative emotional valence in gameplay.

The five items that loaded on the first factor stand for the perceived emotional states of shock, fear, anger, sadness and guilt. I interpret that these items describe experiencing a threat and then the misfortune that may follow from such an experiential episode. Intriguingly, the items of the first factor may be understood as an experience of thrill that went bad. This could connect the first sub-factor of the *Negative Valence* with the second sub-factor of the *Positive Valence*, i.e., *Thrill*. When an exciting situation leads to shock and fear, and goes badly, experiences of loss may occur. I call this sub-factor *Disaster*, and hypothesize that it could be the counterpart for the sub-factor of positive *Thrill*.

Finally, the four items that loaded on the second sub-factor of *Negative Valence* denote emotional experiences of embarrassment, frustration, shame and (self-) contempt. These items can be interpreted to denote that the emotions one feels when she is incapable or unable to achieve what she desires. She may feel frustrated in the situation or embarrassed and ashamed. In contrast to the sub-factor *Comfort*, these items describe feelings of being uncomfortable, and emotions associated to feeling let down and *Disappointment*. I propose that based on the data of 1,718 respondents, the most common feelings in gameplay as perceived by the players can be divided into two main categories of positive and negative valences, and further into the four subcategories of *Comfort*, *Thrill*, *Disaster*, and *Disappointment*.

I conclude this chapter by studying how the identified seven player types differ from each other in relation to how they appreciate emotional qualities of gameplay experience. For this purpose, I calculated mean preference sums of the four factors of emotional valence for each of the seven player types, male and female players and those players who play mobile games relatively often but other games relatively rarely (see Chapter 3, Study 1).

The results shown in Table 17 suggest that, in general, players appreciate emotions associated with positive valence much more than those associated with negative valence. The player types of *The Mercenary*, *The Adventurer*, and *The Commander* find gameplay experiences of high arousal more pleasant than the player types of *The Patterner* and *The Companion*. Importantly, Table 17 shows that weekly play time has an evident impact on the preference to experiencing strong emotions in gameplay. The more time a player allocates to videogames, the more emotions she desires to experience in gameplay. This observation seems to support the argument made by Nowak et al. (2008): an expert player may find games more emotionally rewarding, and this may be result of an experience of heightened presence and involvement (see Chapter 3).

	Positive Valence	*Negative Valence*	*Level of Arousal*	*Play/week (mins)*	*Obs*
Mercenary	5.52	3.16	4.59	1027	336
Adventurer	5.51	2.86	4.47	911	179
Commander	5.28	2.63	4.24	819	323
Daredevil	4.56	3.52	4.15	648	250
Explorer	5.27	1.93	3.96	629	272
Companion	4.91	2.14	3.82	635	138
Patterner	4.54	2.08	3.58	604	226
Male	5.16	3.00	4.31	807	928
Female	5.06	2.26	3.97	731	790
Player/Mobile	4.82	2.29	3.83	465	238
Player/Non-mobile	5.16	2.72	4.20	821	1480

	Positive Valence		*Negative Valence*		
	Comfort	*Thrill*	*Disaster*	*Disappointment*	*Obs*
Mercenary	5.70	5.22	3.50	2.76	336
Adventurer	5.73	5.20	3.33	2.27	179
Commander	5.53	4.89	2.88	2.39	323
Daredevil	4.71	4.35	3.58	3.50	250
Explorer	5.61	4.80	1.96	1.93	272
Companion	5.28	4.42	2.22	2.09	138
Patterner	4.87	4.14	2.09	2.11	226
Male	5.35	4.86	3.24	2.74	928
Female	5.40	4.62	2.38	2.16	790
Player/Mobile	5.17	4.31	2.36	2.24	238
Player/Non-mobile	5.40	4.82	2.92	2.52	1480

Table 17. *The mean preferences sums for Positive Valence, Negative Valence, and the four sub-categories of Comfort, Thrill, Disaster, and Disappointment for the seven player types, male and female players, and mobile game players.*

All of the seven player types appreciated the *Comfort* dimension over the *Thrill* dimension in *Positive Valence*. However, the difference between favoring *Comfort* and *Thrill* was highest in the player types *Companion* and *Patterner*. The data of the 1,718 respondents suggests, then, that players generally enjoy the feeling of ease and certainty more than that of continuous excitement and attentiveness.

From the dimensions of *Negative Valence*, we can note that feelings of *Disaster* were regarded more acceptable than those of *Disappointment* and letdown. The player types of *The Daredevil*, *The Mercenary*, and *The Adventurer* had neutral opinions of feeling *Disaster* in gameplay, whereas *The Explorer* especially found both the feeling types of *Disaster* and *Disappointment* very unwelcome. Only *The Daredevil*

had a neutral opinion of *Disappointment*. For all the other six player types, the feelings of self-contempt, shame, embarrassment and frustration were ill-favored.

According to the data, both male and female players appreciate positive emotions clearly more than negative emotions. However, female players dislike gameplay experiences of negative valence much more strongly than male players. Female players desire *Comfort* slightly more and *Thrill* slightly less than male players. Between the two genders, the difference of preferred emotions is largest in feelings of *Disaster*; while male players have an almost neutral opinion about fear, anger and other emotions of *Disaster*, female players clearly dislike these emotions. Similar to female players but unlike male players, mobile game players enjoyed *Comfort* much more than *Thrill* and showed a clear dislike for emotional experiences of *Disaster*. The results I report in Table 17 suggest that, in general, male players enjoy a higher level of arousal in gameplay than female players, and that PC and console gamers enjoy emotional experiences more than mobile game players.

These results indicate that different player types do not differ greatly from each other but instead have consistent similarities in what kinds of emotions are considered pleasant in gameplay. However, I continued to investigate this question by calculating the multivariable linear regression between players' preferences in *gameplay motifeme factors* and the proposed four factors in emotional gameplay experience. In this final analysis, I assigned the four emotion factors of *Comfort*, *Thrill*, *Disaster* and *Disappointment* as dependent variables and the five gameplay factors of *Assault*, *Manage*, *Journey*, *Care*, and *Coordinate* as independent variables.

A linear regression analysis is utilized to estimate *the effect* that a change in an independent variable may have on a dependent variable. By conducting theory-driven linear regressions, a researcher studies to which extent an independent variable *predicts* an effect in the dependent outcome variable. However, linear regression analyses do not by themselves imply causal relationship between an independent variable and a dependent variable (Schneider et al., 2010; Yan & Su, 2009). By following this procedure, I studied with linear regressions how a positive change in the preference for *Assault* and the other four gameplay motifeme factors predicted a change in the preference for the four factors of emotions in gameplay.

In Table 18, the first number signifies the coefficient or the strength and direction of the relationship between an independent predictor variable and a dependent output variable. The asterisks next to these numbers indicate the p-values or the statistical significance of each effect. The numbers in brackets are values for robust standard errors for the coefficient. Finally, values of the R-squared stand for the amount of variance of the outcome variable is explained by the five motifeme factors, and the additional control variables of gender and age of the survey respondents.

The regression analyses in Table 18 reveal that *Journey* is the main predictor for both *Comfort* and *Thrill*. This means that a higher value in a player's preference in *Journey* predicts a higher value in the emotional sub-factors of *Positive Valence*. Enjoying exploration, collecting rare items, developing a character, and the story elements of a game are thus connected with favoring feelings such as pleasure, happiness, and excitement in gameplay.

	POSITIVE VALENCE		NEGATIVE VALENCE	
VARIABLES	Comfort	Thrill	Disaster	Disappointment
Assault	-0.069***	0.060***	0.468***	0.359***
	(0.019)	(0.020)	(0.027)	(0.024)
Manage	0.120***	0.072***	-0.062*	0.082**
	(0.027)	(0.028)	(0.037)	(0.032)
Journey	0.408***	0.393***	-0.017	-0.288***
	(0.030)	(0.028)	(0.034)	(0.032)
Care	-0.121***	-0.031*	0.179***	0.245***
	(0.020)	(0.019)	(0.024)	(0.022)
Coordinate	0.083***	0.112***	-0.018	0.065***
	(0.021)	(0.021)	(0.025)	(0.023)
Male	-0.108**	0.073	0.354***	0.228***
	(0.051)	(0.050)	(0.064)	(0.061)
Age	0.003	0.001	-0.004	0.005**
	(0.002)	(0.002)	(0.002)	(0.002)
Constant	3.274***	2.034***	0.921***	0.822***
	(0.167)	(0.157)	(0.163)	(0.160)
Observations	1,718	1,718	1,718	1,718
R-squared	0.345	0.463	0.412	0.287

*** $p < 0.001$, ** $p < 0.01$, and * $p < 0.05$

Table 18. *Results for regression analyses between the predictor variables of preferences in five gameplay motifeme categories and the outcome variables of four factors in emotional gameplay (N=1,718).*

In addition to *Journey*, a preference in *Manage* was also connected to enjoying *Comfort*, although this effect was weak. Preferring *Care* and being male predicted a lower preference for *Comfort*, but this negative effect was also weak. Preferring *Coordinate* weakly predicted an increase in the preference for excitement and *Thrill*. *Assault* was clearly the main predictor for both *Disaster* and *Disappointment*. Enjoying killing, shooting, warfare, destroying and surviving were significant predictors for a higher preference of e.g., shock, fear, anger and shame in gameplay. Also, being male predicted a higher approval for emotions of negative valence, and favoring *Care* predicted a higher preference in both *Disaster* and *Disappointment* with a weak positive effect. Finally, desire for *Journey* indicated a dislike for emotional experiences of

Disappointment. Interestingly, age had no positive or negative effect on the players' preferences in emotions in gameplay.

Based on these regression analyses, the data of 1,718 respondents suggests that an appreciation for *Journey* is a main predictor for wanting a gameplay experience to bring about positive emotions and feelings, whereas a preference for *Assault* is a main predictor for a higher preference for experiencing emotions of negative valence. These results indicate that female players prefer gameplay experience to bring about mostly positive emotions while male players tolerate emotions of negative valence.

Although these statistical studies indicate that players desire gameplay to bring about mainly positive feelings of certainty and ease, and those of excitement and thrill, it cannot be concluded based on this data that feelings of *Negative Valence* would not be important for memorable and engaging gameplay experiences. Oftentimes, the most meaningful gameplay experiences may combine feelings of *Positive Valence* and *Negative Valence*, and perhaps also *Comfort*, *Thrill*, *Disaster*, and *Disappointment*.

As a conclusion of this chapter, we can observe that gameplay motifemes or "*abstracted descriptions of activities enabled by game dynamics and enacted by performative play, defined from the point of view of its significance for the course of the game*" and emotions are closely interrelated. Whereas emotions are current, intentional and goal-oriented activities that motivate an individual to act, gameplay motifemes are characterizations and representations of specific types of goal-oriented activities. By preferring one game motifeme over another, a person therefore indicates a motivation to participate and perform in specific kinds of emotional episodes. For example, we would have certain expectations of the range of emotions that we would probably encounter in the event of training a pet dog (Table 7, item 21). This emotional spectrum differs significantly from the range of emotions we would expect from a situation in which we would search for and collect rare items (Table 7, item 18) or when we would try to knock our enemies unconscious by hitting and kicking them (Table 7, item 8).

Anyone who has played video games is very likely to agree that gameplay induces emotions. Although emotions may manifest themselves differently in social play than in solitary play, we begin gameplay with a strong expectation to feel a range of emotions. As the analyses of this chapter reveal, we do not expect or enjoy a similar range of emotions in every instance of gameplay. I return to the theme of emotions in Chapter 8, in which I approach the research subject of meaningful gameplay by analyzing players' qualitative descriptions of their most memorable experiences of playing video games.

7. GAMEWORLD AND THE GAME ENACTMENT

> We are involved with the world around us. We are in it and of it (Noë, 2009, p. 82).

In Chapter 6, I investigated the position of the player, which I argue to be profoundly performative and emotional. In the current chapter, I return my focus to the coupling between a player and a video game by asking whether the phenomenon of gameplay can be considered a performance. This is a crucial question to be asked since examining this question opens new horizons for understanding 'gameplay' as a form of cultural expression and experience.

I begin this chapter by first considering how 'performance' has been appropriated in prior game research literature, and proceed to analyze how the term has been conceptualized in folkloristics. By doing so, I aim to examine what the folkloristic understanding of the concept adds to game studies (RQ3). In the second half of the chapter, I will introduce another important concept, that of 'the gameworld,' and I cogitate how the player participates in it during video game gameplay. I conclude the chapter with an empirical analysis on how players perceive and appreciate various qualities of video game gameworlds and their fictionality (RQ2).

The questions of whether the phenomenon of gameplay can be understood as a type of performance, and what is 'the gameworld' that the player enacts in gameplay, are paramount when investigating the invariants of the gameplay experience (RQ1). To rephrase these questions, I ask: 1) "What is the 'gameplay' like as a cultural phenomenon? Is it best described and analyzed as a type of cultural performance?" and 2) "When the player engages with a game and participates in it, what kind of participation we are dealing with?"

Gameplay—a cultural performance?

Brian Sutton-Smith (2001 [1997], p. 192) wondered in his influential book *The Ambiguity of Play* why there was no appropriate ludic performance theory with which to study gameplay. He stated that: "existing folklore performance theory emphasizes performance as aesthetic communication… that theory should be promising for understanding the centrality of the actions in play." However, to date there is no folkloristic performance theory for examining gameplay regardless of the fact that 'performance' has evolved into a key concept in game studies.

Michael Nitsche (2011, p. 110) observes that performance as an inclusive concept has been applied in a wide range of game studies during past two decades. He sees 'performance' to have affinities with, e.g., the ergodic interaction (Aarseth, 1997, p. 1) of gameplay in which "non-trivial effort is required… to traverse the [cyber]text," the approach of "computers as theatre" (Laurel, 2004), and role of the player in computer-player interaction (Murray, 1997).

Indeed, the concept of 'performance' is far from unfamiliar to game scholars. To mention but a few, Fine (2002 [1983], p. 4) argues that the players must "bracket"

their selves and enact a fantasy self to perform in tabletop role-playing games. In *Cybertext* (1997, p. 4), Aarseth describes the player's position in relation to a cybertext as "personal improvisation." Mäyrä (2008, p. 14) states that the basic characteristic of playing games *is* performance. Nardi (2010, p. 93) writes "participation in virtual worlds is not simulation but performance." Roger Travis (2012, pp. 239–241) approaches gaming as manifestations of re-compositional processes in which "the player chooses how he or she will re-compose the performance materials of the game to produce his or her current performance."

From the many essays, articles, theses and books that describe gameplay or player participation as performance, two main traits can be identified. To present the traits, let us consider how Thomas Malaby (2007) and Jaakko Stenros, Janne Paavilainen and Frans Mäyrä (2011) have utilized the term 'performance.'

Malaby (2007, pp. 103–104) defines performance as one of the four contingency types found in games. For him, player performance comes to mean contingency of correctly performed actions that always risk a failure. Here player performances are understood as *skillful acts*, which Malaby identifies mostly with sports games and action-oriented games.

Stenros, Paavilainen and Mäyrä (2011) describe player performance in a very different way. In their view, performance requires an element of aesthetic expression which is essentially social: "the player is playing for an audience" (ibid., p. 347). In contrast to Malaby's understanding of player performance, the authors state that, e.g., often in *SingStar* (2004, Sony) "the performance is scored not for points in the game but social capital." For them, player performance includes *expressive and creative quality* intended for audiences; "brilliant performances may have little to do with playing the game properly or to win" (ibid., p. 348).

It should be observed, that Malaby's (2007) take on performance as execution of the player's skills discusses the player's endeavors on the level of individual actions whereas Stenros et al. (2011) interpret player performance to be fundamentally social, something that *exceeds* the actual gameplay dimension in a gaming session. Furthermore, Malaby (2007) defines performance as something that the player *does* during gameplay whereas Stenros et al. (2011) discuss performance as something that a gaming event *can become*. In other words, 'performance' can refer to a constituent of player-game interaction (Malaby, 2007) or to the whole social situation in which player-game interaction takes place (Stenros et al. 2011).

It should also be noted that gameplay is paramount for both of the approaches; a player cannot be skillful only by executing a skillful operation. She must perform a series of well-timed and well-thought-out actions, which becomes possible only in the dynamics of gameplay. Similarly, performing in, e.g., *SingStar* in front of the others is not just aesthetic expression but aesthetic expression encompassing normative acts that enable the video game gameplay to go on. As argued in the activity theoretical approach by Victor Kaptelinin and Bonnie Nardi, an activity becomes purposeful on the level of the activity as a whole (here: gameplay) instead of the level of singular actions or operations (Kaptelinin & Nardi 2006, pp. 59–72). Indeed, as Kiri Miller (2008, p. 264) contends, research that aims to study meaningful play should focus on play sessions and gameplay rather than on the game writ large.

Related earlier research describes player performance mainly as either *skilled execution* (Malaby 2007; cf. Jenkins 2004, p. 125) or *aesthetic expression* (Stenros et al. 2011; cf. Pearce 2009, p. 59). It should be observed that these studies argue that performance is a recurrent characteristic (Stenros et al., 2011) or a necessary quality (Malaby, 2007; Karhulahti, 2015b) of playing video games.

In addition, there are also a few studies in which the gameplay has been argued to be a performance of its own right. In these views, performance is not something the player does or something that gameplay may become in a social setting, but something that gameplay is as a phenomenon. For example, Bealer (2012, p. 31) urges game scholars to conceptualize gamespace as an "imaginative place of performance and presence where behaviors generate immediate and material consequences." Nardi (2010, p. 93) states that "participation in virtual worlds is not simulation but performance." Miller (2012, p. 5) takes a similar stance in her ethnographic analysis of *Grand Theft Auto: San Andreas* (RockStar Games, 2004): "Grand Theft Auto is primarily a single-player game, but no one ever plays it alone; each player collaborates with the game designers to turn code into virtual performance, while remaining aware that millions of other players have engaged in the same endeavor.

I argue in Chapter 6 that video game gameplay is, when considered from the first-person viewpoint of the player, a *performative practice of self-presentation*. When we play a video game, however, is the activity that emerges to be understood as a performance? To analyze this question further, let me introduce how the concept of 'performance' has been defined in folkloristics and performance studies.

Richard Bauman (2012), who has studied, e.g., performative communication, ethnography of speaking, intertextuality and language ideologies extensively for four decades, has characterized performances as situated communicative acts of doing in which a subject claims to have special skills or expertise and seeks the limelight. When performing, one takes a stance, accepts responsibility and puts oneself forward, knowing that a performance includes a risk of failure. Performance is an interactive event that aims to elicit participative energies of the participants. It intensifies experience and heightens affective engagement. Formalization, intensification, enhanced self-consciousness, and the call of attention to the style of interaction makes a scene more performance-like (Abrahams, 2005, pp. 89, 91). Dell Hymes (1975, p. 18) offers another useful take on 'performance' by contrasting it with everyday 'behavior' and 'conduct': "[T]here is *behavior*, anything and everything that happens; there is *conduct*, behavior under the aegis of social norms, cultural rules; there is *performance*, when one or more persons assume responsibility for presentation."

In *Theories of Performance* (2008), Elizabeth Bell reviews a large body of definitions of 'performance' from, e.g., anthropology, art history, folkloristics, ethnography, linguistics and philosophy. She notes (ibid., pp. 12–18) that existing theories account for performance mainly as a process and a product "doing and a thing done." Performances can reflect and imitate (*mimesis*) the world of values, make and create (*poiesis*) value-laden worlds, as well as break the worlds and remake them anew (*kinesis*). As a result of her literature review, Bell offers three overarching themes that she argues that performances include and that are paramount for understanding performances: *constitutive*, *epistemic* and *critical* dimensions.

Performance is *constitutive*. It is created, given form and established through enacting. Identities and even cultures are argued to be constituted in performances in

which we create and recreate ourselves, e.g., as family members, citizens, professionals, and hobbyists. Second, performance is *epistemic*, since it arises as a distinctive way of knowing ourselves, others and the world around us. A performance epistemology is grounded on immediacy, involvement, and intimacy (Conquergood, 1998, p. 26). Finally, performance is *critical*. It is about the power to sustain or transform by taking a reflexive stance that entails responsibility for one's actions; "Performance holds possibilities to imitate a life-world, to create a life-world, to transform a life-world, and to stake claims about that life-world" (Bell, 2008, pp. 18–25).

One can note that Bauman's (2012) characterization of performance has many similarities to my approach on the player's performative participation in gameplay. First, where a performer takes a stance, she adopts the player position by embracing a lusory attitude. Second, a performer claims to have special expertise and skill. Similarly, a player must navigate skillfully in a game environment in order to proceed in the game. Third, a performer acknowledges the risk of failure. A player knows this risk and aims to take normative acts to continue the gameplay. Both forms of participation are expressive and communicative, both are affective, and both tend to elicit participative energies for those who are present.[88]

When compared with Dell Hyme's descriptions of 'behavior,' 'conduct' and 'performance,' we can again note that the position of the player is similar to that of performance since the player is quintessentially responsible for the presentation. Yet, performances also entail "openness of presentation," which makes it possible to evaluate the activity as aesthetically and morally significant (Abrahams, 2005, p. 84). This latter quality seems to be incomplete in the position of the player for two reasons: 1) the openness is held down by the rules of the game and the game mechanics, and 2) the position of the player encompasses "reduced personal responsibility" according to which the decisions made and the actions taken by the player matter only *within* the ongoing game. Players are, indeed, "relieved of accountability for their actions and motives" (ibid., p. 85).

Furthermore, and similar to Bell's description of performance, gameplay is *constitutive*. A main argument of Chapter 5 is that video game gameplay as a form of activity co-constitutes *the player proper*, i.e., the person who plays, and *the game proper*, i.e., the dynamic system of the game as played. I also argue for player persona, a first-person presentation of the self in gameplay which is, again, constituted in the acts of gameplay. Gameplay is *epistemic* since each gameplay activity arises as a way of knowing the player–game relation, the rules-system of the game, and contingencies of the game; gameplay is a conduct of knowing. Inasmuch as the player can express her values in explorative and coordinative conduct, gameplay is *critical*. In gameplay, we make statements by participating. Adopting the player's position requires a reflective stance that can become a *reflexive* stance in which we examine how we are involved in creating decisions in gameplay and what kind of values we express in our activities.

[88] However, as Brian Sutton-Smith (2001 [1997], p. 193) reflects, Bauman probably would not have included gameplay in his performance theory since he emphasized verbal communication relationships in social groups.

However, there are also differences between performance and performative gameplay that must be taken into careful consideration. First and foremost, performances are, in many theories (e.g. Goffman, 1959; Bauman, 1975; Schechner, 1988 [1978]; Abrahams, 2005; see Bell, 2008, p. 30), defined as interactive acts between social agents, such as performers and partakers, or performers and audiences. As Bauman describes in his influential article *Verbal Art as Performance* (1975), such an interactive act entails special competence, heightened experience, and audience evaluation. "Performance makes one communicatively accountable; it assigns to an audience the responsibility of evaluating the relative skill and effectiveness of the performer's accomplishment" (Bauman, 1992, p. 44).

Although uploading a series of artistic photos that one has taken onto her profile page in a social media website does not necessarily have an immediate audience of which the "performer" would be aware, the act of uploading a photo is done *because* of the others. In other words, the *intentional object* of uploading such photos is another subject, granted that one can upload photos to social media allegedly for just oneself, for example to produce an online photo gallery for one's own purposes. In most situations of gameplay, however, there is no audience present, only a player-participant or several player-participants.

Second, and even more importantly, performance as a form of event is about re-presenting rather than presenting. Goffman (1959, p. 65) characterizes performance by and large as idealized communication that accentuates certain traits and conceals others. A performance requires from the performer sufficient self-control and maintenance of expressive coherence; "Instead of merely doing his task and giving vent to his feelings, he will express the doing in his task and acceptably convey his feelings… the representation of an activity will vary in some degree from the activity itself and therefore inevitably misrepresent it." Bauman (1992, pp. 46–48) argues along similar lines that performances are reflexive, that is, performances have a feature of doubleness to *comment upon experiences* (see Bell, 2008, p. 10). Now, if we conceptualize performance similarly as Goffman did, we must pay attention here to two remarks, "express the doing" and "representation of an activity," since here ultimately lies the reason why I argue that gameplay as a phenomenon is not to be regarded a performance.

Gameplay is an expressive act of doing. As a phenomenon, however, it is not an activity in which the player necessarily would intend to *express doing*. Instead, gameplay remains an activity that *is* this doing in its own right. Although adopting the player's position entails a third-person view on oneself as being another intentional agent, gameplay itself is not intrinsically *re-presentation* of an activity but a *presentation,* a realization of it. "Video games are actions," as argued by Galloway (2006, p. 2). In contrast to Goffman's take on performances as being something else than "merely doing," gameplay preserves itself just as doing, *praxis*, and enacting a performative perspective on the gameworld. Whereas "a representation of an activity will… inevitably misrepresent it" (Goffman, 1959, p. 65) and thus be something else than the activity itself, gameplay as a presentation converges with that activity and therefore cannot misinterpret itself.

In the Husserlian tradition of phenomenology, perception is presentational, whereas imagination and memory are re-presentational. In a perceptual experience, an object, for instance an in-game dragon, is experienced as present and accessible to us, thanks to our sensory awareness of it and the game mechanics that define the

modes of interaction we can have with the dragon. The dragon appears in front of us in its digital 'bodily' being and its pre-reflectively perceived intentionality. However, when we think back to our encounter with that dragon or when we imagine what it could be like to ride that dragon, we are dealing with a re-presentational experience. In a re-presentational experience, the dragon is not there but phenomenally *absent*; "[A] re-presentational experience intends its object precisely as both phenomenally absent in its bodily being, and as mentally evoked or brought forth... in this way, the object is said to be mentally re-presented, rather than perceptually presented" (Thompson, 2010, p. 164; Thompson, 2007, p. 25).

The dragon we encounter during gameplay is presentational in relation to its presence; it is a question of how we can gain access to it by making actions (*movement-dependence*) and how our perception of it changes when the dragon acts (*object-dependence*) (see Noë, 2012). In contrast to the movement-dependent and object-dependent dragon, which we may encounter in the flow of the gameplay, a picture of the dragon has very limited accessibility. Whereas perception is presentational, picture-viewing not unlike imagination is re-presentational. Thus, in gameplay, we encounter the dragon as presentational inasmuch as it is immediately and directly accessible to our skills and abilities. However, when the player is, for example, returned to a position of watching a cut-scene of that dragon during a gaming session, the dragon does not appear to us as present but approaches again a more re-presentational form of experiencing.

Sartre writes (2003 [1957], pp. 83–84): "The attentive pupil who wishes to *be* attentive, his eyes riveted on the teacher, his ears open wide, so exhausts himself in playing the attentive role that he ends up by no longer hearing anything." Based on this passage, Goffman (1959, p. 33) suggests that individuals must often choose to *either* express *or* act: "Those who have the time and talent to perform a task well may not, because of this, have the time or talent to make it apparent that they are performing well." Here we can note again the two dimensions of performativity: the act of performing something and the act of making that performing available to others, i.e., staging it in front of an audience. The position of the player is that of performing something rather than staging the performance for the others. Furthermore, I would like to suggest that sports also converge with the former, although sports events are staged *as* performances before audiences. Similarly, we can argue that this is case for electronic sports, or *esports*, as well. In competitive esports competitions, e.g., with the game *Counter-Strike: Source* (Valve Corporation, 2004), the players cannot focus on re-presenting their skillful moves for the audience. Focusing on anything but the ongoing frantic gameplay would surely mean instant death.

The tension between expressing something and living through it did not escape Goffman's study on presentation of the self as a performance. He emphasized (1959, pp. 77–79) that "performance serves mainly to express the characteristics of the task that is performed and not the characteristics of the performer." What is of paramount importance in performances is *the manner* by which the task is brought forth by the performer. Furthermore, the personal front of a person is not to be interpreted single-mindedly as the way the person would like to appear but also as a tool for influencing others and the person's immediate environment. Finally, performances are co-constituted and co-sustained activities rather than personal or individual efforts.

Here we can see further synergies between the position of the player in reciprocal gameplay and presentation of self as a performance as argued by Goffman. In gameplay, the player embraces a position through which he makes decisions and acts. In this position, the player precisely expresses "the characteristics of the task that is performed" and oneself in that relation. This is done by the means of enacting and realization rather than by re-presentation. For compelling gameplay experiences to arise, the *manner* in which the player adopts to conduct this "performance of a task" is crucial.

In gameplay, the player does not have intentions for the others, i.e., an audience, or even oneself but for that of her participation in the gameworld. Although gameplay can be easily staged as performance by, e.g., posting dramatized *let's play* videos on youtube, intending something beyond the very activity of gameplay is not to be taken as a definitional quality of gameplay. In contrast, gameplay has its purpose in itself; gameplay is both *praxis*, doing, for its own purpose and *poiesis*, making, creating and establishing one's own perspective by doing and participating. Fink (2016 [1960], p. 114) argued: "The image is essentially a product, play essentially the act of producing." As such, gameplay is not re-presenting but presenting and bringing forth a perspective.

The play within a performance has the distinctive character of *dis*play. A performance states: "This is just pretending" as it is built on the relationship between the original and the imitation that is staged in the performance (Abrahams, 1982, p.6). As Abrahams (ibid.) observes, to witness something that is *dis*played is to observe the shown rather than the unknown. Play and gameplay, however, are never just pretending, representing, *dis*playing (*unfold*), or showing— they are, above all, revealing, presenting, playing (*folding*), and doing. This argument is to be contrasted with that of Richard Schechner (1988 [1978], p. 30), who argues that games and play are performances that include "the [definitional] function of audience," although such an audience would not be actually present. Instead, "a game is still a game, not a performance," as Abrahams (2005, 83) contends. In my view, Fink (1968, p. 21) was indeed correct to argue that play is in this sense *autonomous*; "[P]lay is characterized by calm, timeless 'presence' and autonomous, self-sufficient meaning."

The Game Enactment

If gameplay is not to be characterized as performance, how it should be conceptualized? I suggest that we could turn our attention to a closely related folkloristic concept, '*enactment*.' In 1977, Roger Abrahams published an article entitled *Toward an Enactment-Centered Theory of Folklore* in which he attempted to put forward a theory for studying how expressivity manifests in practices and materials of folklore.

At the heart of Abrahams' (1977) endeavor is the realization that expressions of tradition mark the moments of cultural, personal and social meaning-making. He situated his theoretical article into the discourses of *folklore as process* and *folklore as performance*, both of which had gained much folkloristic academic attention in the 1960s and 1970s. Abrahams' article was a response to the recognition that a number of vernacular events, including games and rituals, were difficult to understand as performances, which threatened to stretch the concept of performance out of its shape.

Abrahams introduced the term 'enactment' as a broad category that includes performances as well as games, play and sports; rituals; and festivities. In short, for him, enactments were cultural events of potentiated and encouraged participation. Activities performed in enactments have a sense of realness and unrealness— "[U]nreal because of the felt departure from the ordinary toward the more heightened, self-conscious and stylized behaviors of named and framed activities-in-common; more real because the events take the motives and scenes of the everyday and bring them into some new perspective, allowing us to see them as part of some larger patterns of existence" (Abrahams, 1977, pp. 80–81). In enactments, ordinary objects, scenes or motives may be transformed into another, while retaining their *mimetic* connectedness and *verisimilitude*, i.e., the sense of truthfulness, to everyday life. Through this continuity, or *making-strange* as described by Abrahams (ibid., p. 89), the events that take place within an enactment appear to us as patterned, marked, and intensified.

When describing the realms of enactments, Abrahams followed Alfred Schütz by positing a "paramount reality" that both precedes and follows our participation in any enactment. Abrahams contented that one must postulate a paramount reality because we, without effort, can separate what is a heightened experience and what is not. That what is not heightened is the paramount reality "against which all other realities appear as finite and circumscribed provinces of meaning" (Abrahams, 1977, p. 92). The other realities he described as 'enclaves,' areas of rules and authority.

Importantly, Abrahams noted that enactments constitute *genres of interaction*, that is, "set patterns of interaction with developmental expectations" (ibid., p. 98). He suggested that enactments are marked and restricted by tools and devices that foreground movement and form for the participants. Enactments differ from others and from everyday experiences with regard to the regularity, predictability, redundancy and preparation. To put it differently, enactments arise as patterned scenes of cultural behavior. Because they are patterned, they are available for re-enactment, and so we have strong expectations, responses and sensibilities for them.

Abrahams thus emphasized (1977, pp. 99–100) the significance of patterned experience in all enactments, but he also noted that such patterns emerge in paramount reality, e.g., in courtship. This observation led him to suggest that there is no clear-cut distinction between finite worlds or enclaves and that of paramount reality. Instead, formality, regularity and social rules that are definitional qualities of enactments are pervasive in our everyday experience of paramount reality. An enactment, however, increases this everyday experience and *dramatizes* it into a stylized experience. Between enactments and paramount reality there exist both continuities and dialectic relationships. Therefore, any scene, ordinary or not, can be turned into a performance, a game, a ritual or a festivity (Abrahams, 1977, p. 108).

Abrahams argued (ibid., pp. 100–103) that the types of enactments, i.e., artistic performances; rituals; festivities; and play, games and sports are discrete because each are situated culturally differently by identifiable codes of participation and expressivity, conventions, occasions and conducts. We readily recognize what is a sport event, what is a festivity and what is a ritualized ceremony.

Where rituals are "obligatory or compulsory patterned behavior attached somehow to the larger movements and processes of life" by fixed sequences, which are supposed to have transcendental effects beyond the enactment, performances stage

individuals to take skillful responsibility of an enactment. Games, in turn, do not stage an individual but garner a license to participate, in principle, for everyone and remain as immanent without continuity beyond the enactment. Festivities tend to enhance and intensify everyday roles. Although these forms of enactments can be treated as discrete, they are oftentimes related and interlocked with each other. A ritual may very well include performances, and a festivity can consist largely of games.

Abrahams' theory of enactments has received only modest attention in folkloristics and in other fields of research. Abrahams himself rarely returned to this theme with the same enthusiasm that is evident in the article *Toward an Enactment-Centered Theory of Folklore* (1977). To my knowledge, the article has not been widely discussed, and it has remained unknown in contemporary game studies, although Brian Sutton-Smith underlines the potential importance of the article (2001 [1997], p. 193).

Similar to Sutton-Smith, I find Abrahams' considerations very useful, and thus I suggest the appropriation of the concept of 'enactment' for both game studies and folkloristics. However, and again similar to Sutton-Smith (ibid., p. 195), I do not postulate paramount reality in the same sense as Schütz and later Abrahams (1977). Sutton-Smith suggests that we could rather speak of mundane reality/virtual reality than of real/unreal as explicated in the categories of paramount reality/finite provinces of meaning.[89]

As Abrahams writes later (2005, p. 122), ludic activities depart from the ordinary, not by being less real, but by calling our attention to the stylistic, focused and intensified qualities of the enactment. Such an activity in which we participate and act "at a high pitch" may become valued by us because of its ability to touch both "higher and deeper registers of feeling." In this sense, gameplay may be experienced as *very* real indeed. Perhaps instead of utilizing the concepts of real/unreal to gameplay experience, we could name it '*extra*ordinary,' an expression appropriated by Abrahams (ibid., p. 124) for expressive enactments.

In the vocabulary of Goffman (2013 [1961]), enactments can be called *encounters consisting of focused interactions* (pp. 7, 17–18). In contrast to unfocused interactions that consist of unstructured social interactions that take place in regular face-to-face gatherings, focused interactions occur when participants of a situation agree to focus their attention on a particular object and give it, therefore, a heightened situational relevance. In such encounters, the participants maintain the focus of the activity, which encourages or even demands attention from the persons involved in the situation.[90] In *Behavior in Public Places* (1966), Goffman introduced an alternative concept of 'social occasion' that is also highly contingent with the term 'enactment': "When persons come into each other's immediate presence they tend to do so as participants of what I shall call a *social occasion* … These occasions, which are commonly programmed in advance, possess an agenda of activity, an allocation of management function, a specification of negative sanctions for improper conduct, and a pre-established unfolding of phases and a highpoint" (Goffman, 1966, pp. 18–19).

[89] I consider this subject more in the final chapter of this thesis.

[90] Here Goffman (2013 [1961], p. 11) essentially wrote about *autonomy of interaction* as an achievement of interpersonal efforts and gave gaming as a prime example of such an activity. This view is contingent with my argument of the autonomy of gameplay, albeit I argue that this autonomous organization can be achieved also in solitary gameplay (Chapter 5).

I propose that by bringing together the writings by Abrahams (1977) and Goffman (2013 [1961]; 1966), 'enactment' can be described a focused cultural encounter in which the persons present emerge as participants rather than as audience through the dynamic and reciprocal character of the event at hand. By this, I want to emphasize that in artistic performances the 'audience' is not made up of passive receivers of the artistic expression, but rather inseparable subjects of the situation—which the performer must take into her constant consideration. Enactments are, similar to social occasions in Goffman's writings, spatiotemporal structured and patterned events that include "an agenda of activity" and a set of sociocultural regularities that specify the proper conduct for the participants. According to Abrahams (1977, p. 106), enactments are modes of experiencing,[91] and as Noë writes (2015), organized activities through which we constitute ourselves and are constituted as the persons we are (see Korsgaard, 2011).

Just as Abrahams argues in *Everyday Life* (2005, p. 83), there is a need to develop a folkloristic methodology for analyzing games, similar to how there is a folkloristic methodology for studying performances. Although all enactments share the quality of expressivity; games, festivities and rituals are not artistic in a similar fashion to how performances are. This is not to say that a game cannot be a piece of art, but it is instead to emphasize that gameplay is not an artistic event regardless of its inherently aesthetic qualities. Just as games have certain similarities to performances, they have a close relationship with rituals and festivals, structurally speaking.

Most enactments are interpersonal in the sense that the immediate situation includes more than one autonomous actor, but this is not mandatory. Goffman (1966, pp. 21–23) called the events in which there is only one social agent present *situated activities* to contrast them with social interactions proper. Single-player gameplay is a situated activity but remains a cultural enactment consisting of a specific patterned mode of experiencing and expectations of an emotional structure. Solitary play is merely situated but still a form of cultural activity and social participation (see Chapter 5 and Chapter 6). Thus, we may call solitary gaming *situated cultural enactment* and social gaming *situational cultural enactment*.

In conclusion, game enactment is a type of focused participation in which *gameplay* takes place. Game enactment is not a performance, but the participating individual, *the player*, remains performative within gameplay; there is a performance to the player's participation in gameplay, indeed *player performance.* More precisely, an expectation of performativity of the player is a constituent of a game as a cultural enactment. From this position, the player makes decisions and expresses herself by making sense of the *gameworld*.

[91] Abrahams (1977, p. 106) wrote: "I differ from most folklorists and literary critics in viewing rites and play as unique types of interactive experience and modes of experiencing. They are *types of experience* in that they both are general terms for a range of specific and situated interactional events. They invoke unique *modes of experiencing,* for they involve the active engagement of our form-making abilities, the forms suggested by the type of event as seized upon by the enactors."

Umwelt, or Making Sense of the Gameworld

Now that I have suggested that gameplay as a phenomenon is not a performance but rather a cultural enactment of performative social participation, I move forward to explicate what this participation means in a player's relation to the video game system as an (game)environment and a '(game)world.' In what follows, I argue that *'game-world' is to be understood as the sixth invariant of the phenomenon of gameplay and our experience of playing games*.

In Chapter 6, I propose *availability* as a perspective to understand situational presence. Together with a player's involvement and agency, availability constitutes an experience of "being there," or rather an experience of a transformed agent–environment relation, which invariantly changes the player's experience of self-presence. In what follows, I ask what becomes available for the player during gameplay. The focus in this section is thus on how the game arises as the environment in which the player participates during video game gameplay. To consider these questions, I return yet again to phenomenological enactive framework (RQ3).

In 1934, an important research article by Estonian-born biologist Jakob von Uexküll was published. In the article entitled *A Foray into the Worlds of Animals and Humans,* Uexküll studied animals' perceptual life-worlds, and coined the term *Umwelt* (literally: 'environment'). The key argument by Uexküll was that even the simplest forms of life, such as insects, have their own holistic *Umwelt*, an original and enduring way to encounter the reality. By developing this argument, Uexküll emerged as a forerunner for biosemiotics, ethology, cybernetics, systems biology, complex systems studies, bioconstructionism and posthumanism. In philosophy, his notion of *Umwelt* has inspired many renowned scholars, including Heidegger (*Dasein*), Derrida, Sebeok, Deleuze and Guattari (Sagan, 2010; see Uexküll, 2010 [1934]).

It is crucial to note that, for Uexküll, as well as for enactivism and for this study, the 'world' is always a world for someone, for a subject. With the perception of the world comes the presupposition that this perception is made by someone, from a vantage point of one's biological *and* sociocultural existence (von Uexküll, 1926, p. xv; Thompson, 2007, p 153). *Umwelt* is the world as constructed from an experiential perspective of an autonomous agent. As such, *Umwelt* is the semiotic[92] world of an organism, affected both by its biological organization and its history of interactions with the world (Kull, 1998). It is "the *phenomenal world* or the *self-world* of the animal" (Uexküll, 1957 [1934], p. 5; see Sutrop, 2001, pp. 452–456; Winthrop-Young, 2010, pp. 216–217; Barrett, 2011, p. 80).

> We begin… a stroll on a sunny day before a flowering meadow in which insects buzz and butterflies flutter, and we make a *bubble* around each of the animals living in the meadow. The bubble represents each animal's environment and contains all the features accessible to the subject. As soon as we enter into one such bubble, the previous surroundings of the subject are completely reconfigured. Many qualities of the colorful meadow vanish completely, others lose

[92] Meaning-making could be alternatively called *semiosis*, which comes from the Greek word *semeion* (Sagan, 2010, p. 14).

> their coherence with one another, and new connections are created. A new world arises in each bubble (Uexküll, 2010 [1934], p. 43).

Now, it is my argument that what happens in gameplay is precisely *a reconfiguration* parallel to what Uexküll described above. To better understand what kind of reconfiguration we are dealing with in gameplay, let me introduce Uexküll's theory in a bit more detail.

According to Uexküll (1957 [1934], pp. 6–13), we humans live surrounded by perceptual tools and effector tools. Perceptual tools are the devices that aid our senses to perceive things otherwise beyond our perception. For example, spectacles, speakers and monitors are all perceptual tools. In turn, effector tools are the machines that extend our ways to act and have an effect on the world. Cars, computers, weapons and factories are examples of effector tools. However, in addition to these tools, we humans—indeed all life-forms—have perception organs and effect, i.e., *operation* or acting (Kull, 2001, p. 7), organs.

Together with perceptual and effector tools, our perception organs and effect organs bring about our *perceptual world*, or the 'world of senses,' and our *effector world*, or the 'world of action' (Uexküll, 1923, p. 127). "[A]ll that a subject perceives becomes his perceptual world and all that he does, his effector world… perceptual and effector worlds together form a closed unit, the *Umwelt*" (Uexküll, 1957 [1934], p. 6).

The functional cycle (or *semiotic cycle* as described by Kull, 2001, p. 4) by Uexküll (Figure 15; see Uexküll, 1923, p. 126) shows how subject and object are coupled with each other and constitute a holistic orderly whole. A simple organism may perceive only few aspects of the environment relevant for its meaning-making, but we humans as highly complex organisms live in an environment of manifold possibilities.

By postulating not only the environment-relation (*Umwelt*) but also the inner world of the subject (*Innenwelt*), Uexküll's approach concurs both with cybernetician views and with the theory of autopoiesis (Maturana & Varela, 1980), and the phenomenological and Husserlian notion of 'life worlds' (Brier, 2008, p. 148). In these views, the environment, or 'reality,' does not have a stream of information as such, but rather information and meanings arise from the couplings between subjects and their environment. Environment is conceptualized as having constraints, or structure, for the possible ways for the organisms to exist in it (Ibid., p. 339). "The environment (*Umwelt*) emerges from the world through the actualization or the being of the organism" (Merleau-Ponty, 2002 [1962], p. 13).

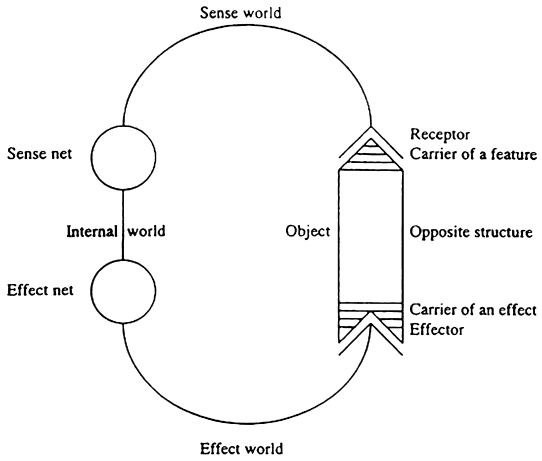

Figure 15. *The functional cycle of an organism in its environment (*von Uexküll, 2010 [1934], p. 49).

I suggest that gameplay introduces a change, a reconfiguration to the *Umwelt* of the player. Within gameplay, the perception signs of the environment, previously insignificant for the person, now come to have salience for her and for her continuity *as the player proper*. As they do, a perception sign observed by the player transforms into a *perception mark*, i.e., into a feature, which the player may perceive as desirable or undesirable. A feature that a person perceives can also afford action possibilities for the person, and thus become an *effect mark* with a pragmatic *tone* (Uexküll, 1957 [1934], p. 125). According to Uexküll (ibid., p. 49), living organisms have *functional tones*, i.e., "the use they need to make of certain stimuli if they are to do what they need to survive" (Sagan, 2010, p. 5). Functional tones of an organism constitute *fitting-in*, a pragmatic and functional way to couple themselves with their environment.

For example, a rectangular object that appears in the gameworld may be just perceived as such and nothing more. If the player desires to reach the rectangular object it arises as a perception mark and an effect mark. By reaching the object and using it, the object gains an "entering tone" and is recognized as a door through which the player can enter to another level in the game. 'Tone' for Uexküll is how subjects see things in different light according to their intentional acts, moods and motivations (Brier, 2008, pp. 319, 344–345). The door, for instance, can receive a "fighting tone" if an in-game monster can be hit with it.

Uexküll (2010 [1934], pp. 99–101) goes on to give an example of a blind man and his guide dog. The guide dog must learn perception marks relevant to the blind man, although many of these marks would not otherwise bear any significance to the dog's *Umwelt*. The position of the guide dog has similarities with that of the player. The person playing a video game, too, must learn new perception marks relevant not for herself but instead for her *player persona*, i.e., her situated self as-being-the-player. Through this process, she creates a path of her own through the game environment. This is how the player enacts the gameworld.

If we especially seek for a perception mark, we call this search image; if that what we seek is an effect mark, we call this search tone. I can, for instance, try to see a rainbow after it rains (search image), or I can try to find a chair on which I can sit

on (search tone) (Uexküll, 2010 [1934], p. 117). Here we can note that the Uexküllian understanding of 'tone' converges to the concept of 'game mechanics,' which *also* are best described by verbs (Järvinen, 2008; Sicart, 2009). However, 'tone' includes a motivational dimension, which has not been explicitly connected to the definition of game mechanics, although game mechanics are often defined as properties of the game system *and* as qualities of player–game interaction. Typically, 'game mechanics' describe the modes of player–game interaction from an objectivistic third-person stance, whereas 'tone' emphasizes from a first-person vantage point how the subject experiences the interaction.

As both Brier (2008) and psychologist Louise Barrett (2011, p. 98) have observed, Uexküll's notion of organism-dependent action possibilities ties the theory of *Umwelt* to the discussions on *affordances* in ecological psychology, granted that it is not clear whether James J. Gibson knew about Uexküll's original theory (Brier, 2008, p. 319). Affordances, as introduced by Gibson (1986 [1979]), are environmental, directly perceivable opportunities for actions. According to Anthony Chemero (2009, pp. 98–99, 110), perception is understood in ecological psychology as *direct* in the sense that it does not presuppose inferences performed on sensory representations. The purpose of perception is to guide actions, and the actions are, for their part, also for perception and cognition. "[P]erception and action are tightly intertwined, and… perception is, in part, action" (Chemero 2009, p. 127).

However, affordances as environmental situational opportunities to action are available only to those agents that have supporting abilities that allow the agent to make use of them. In other words, affordances are particular *relations* between the experiencer and the situation in which the experiencer acts. They necessitate abilities from the perceiver and features from the environment; "[E]nvironmental relata in affordances must be features, not properties" (Chemero, 2009, p. 143). You cannot find any affordances from any situations without postulating a subject who has corresponding abilities. Furthermore, affordances elicit appropriate *actions* instead of representing an object's determinate properties (Thompson, 2007, p. 247). When enactivism and 'affordance' are brought together, it can be stated that situational meanings emerge when a subject acts upon affordances and, by doing so, enacts a world of significance (see Chemero, 2009, pp. 152–154). Based on this observation, I consider both '*Umwelt*' and 'affordance' congenial with phenomenological enactivism.

'Affordance' is a widely used concept in game studies, and especially in game design literature. Instead of using 'affordance,' I have decided to investigate the player–game relation using the concept of *Umwelt* because, in my view, affordances as situated action possibilities fail to grasp the first-personal vantage point of how things appear to the subject. Furthermore, *Umwelt* stands for a higher order phenomenon than affordance; whereas affordance denotes that a knife has an action possibility of cutting for a subject, *Umwelt* stands for all the action possibilities and other relations the context in which the knife appears has for the subject. Since *Umwelt* includes multiple possibilities for action for an individual, it is better suited than affordance for describing the environment and, consequently, the gameworld-relation.

A key argument of Chapter 6 is that all video game gameplay transforms a player's self-presence by introducing a new agent–environment relation. The theory of *Umwelt* precisely describes this change. A person who plays a game is still the

same individual, but gameplay brings about a situational environment, a reality of a kind, in relation to which the player gains a new ephemeral identity as a player proper. She cannot remain the same during the gameplay since this new agent–environment relation inevitably, albeit temporarily, changes the *Umwelt* that partly constitutes her identity in that situation.

Uexküll (2010 [1934], pp. 54–113) introduced several dimensions of how we participate in the environment. First, we have the *effect space* or an operational space, which equals to how we generate changes in ourselves and in our environment by movement. The effect space is the basis of all spatial determinations. Second, we have the *tactile space*, where "locus is the elementary unit, not a motor magnitude as is direction" (Uexküll 1957 [1934], p. 19). In other words, tactile space does not deal with directional movement but with the fixed perception of being in a place. In my view, these notions are compatible with how Gallagher (2005) describes body schema as the grounds for spatial experience. Third, objects may emerge in our *visual space*, which also has the *farthest plane* or the horizon in which objects do not appear closer or farther away but only smaller in size. The effect space, tactile space and visual space are all made of subjective perception signs; "there is no space independent of subjects" (Uexküll, 2010 [1934], p. 70).

I suggest that a game environment that a player encounters during gameplay alters that player's everyday *Umwelt* in all of the dimensions described by Uexküll. The change that takes place does not give the player new abilities as a person but as a player persona. In the game environment, we still have the same sensory organs as ever. While we as players have the same biological organization as we do as persons, our *effect space* is, during gameplay, aligned with our in-game effect space. Our effect space movements in the environment are re-configured, or *mapped*,[93] into player actions in game environments by game mechanics; our tactile space or being in a place is presented to us as the vantage point through which we take in-game actions; and visual space is how the game environment becomes our primary focus for perceiving marks, i.e., features, and affordances in our in-game surroundings.

According to Varela (1987, p. 63), the concept of 'enaction' can be described as the practice of '*laying down a path in walking*' as we traverse through the environment. I suggest that this is also what happens in gameplay: we establish a path of our own in our *Umwelt*, which now comes to mean traversal through the gameworld from the vantage point of the player (see Aarseth, 1997). This traversal is a performative practice, and one's path through it is unique. There are no two gameplay experiences exactly alike since each player's self-experience is different, and thus their self-worlds or phenomenal gameworlds differ from each other. An in-game object or an event acquires meaning in relation to the subject who plays; designed game is not the path, but an environment, a dwelling-world, for the player's *path inborn* (see Uexküll, 2010 [1934], p. 125).

The proposal that a game environment arises as a situational *Umwelt* for the player in gameplay complements the arguments made earlier in the current thesis (RQ3). *Umwelt* offers a broad interdisciplinary theory that illuminates how games-as-played are "geared to the world," as Goffman (1986 [1974], p. 248) expressed it. If the player presents herself in gameplay through performative practice, this practice is nevertheless restricted by the qualities of the game as an environment. Only in the

[93] Mapping is how the player's actions are related to the events that take place within the game.

reciprocity between the player subject and the dynamic game system, gameplay emerges as meaningful and comes to have the thickness of reality.

I propose that Uexküll's theory of *Umwelt* provides an intriguing account on how a game encounter presents "a world for its participants" (Goffman 2013 [1961], p. 80). Just as Goffman wrote later in *Frame Analysis* (1986 [1974], pp. 455–456, p. 292): "When a set of individuals plays at a game, a real world can be generated for them, a complete psychological habitat." In 1968 (p. 26), philosopher Eugen Fink illustrated the world-generating quality of play beautifully albeit rather romantically:

> Play is a creative act, a production. The product is the play-world, a sphere of illusion, a realm whose reality is open to question... The play world contains both subjective imaginary elements and objective ontic elements... But what is an objective, ontic illusion supposed to be? [A] tree at the edge of a lake is reflected in the surface of the water… As an image it is real—it is a real reflection of the original tree existing in reality. But a tree is also represented in the image; this tree appears on the surface of the water, yet in such a way that it exists only through the medium of the reflections and not in reality.

Because consciousness is tied to the ongoing being-in-the-world, for enactivism "consciousness isn't something that happens inside us: it is something we do, actively, in our dynamic interaction with the world around us" (Noë, 2009, p. 24). As argued by Noë (2009, pp. 69–71, 82), what we are as subjects depends on *where we are* and *what we can do*. To a relevant extent, we are of the places in which we find ourselves. This does not lead to a conclusion that the self would dissolve into social and cultural practices. Following Kyselo (2015), I suggest that individuation happens through and from a world according to the principle of needful freedom by Jonas (2001 [1966]). As players, we gain our identity by participating in the gameworld *and* by emancipating ourselves from it. The player does not have to *pretend* to accept the game environment as her world-relation during gameplay because the game environment arises as such through the actions the player takes—*through the medium*, in the words of Fink (1968, p. 26).

Thompson (2007, p. 147) writes: "Sense-making changes the physiochemical world into an environment of significance and valence, creating an *Umwelt* for the system." Recall from Chapter 1 that minimal sense-making is how the environment arises as viable for the continuity of the organism; it matters to its identity and thus has an intrinsic emotional relevance, meaning and normativity. In gameplay, in-game events become value-laden to our identity *as* players proper: "[I]t is not possible to separate moves in games from their value, from their point" (Noë, 2012, p. 144). This is how a person as the player, persona, has an *Umwelt* different from the person by herself. In a sense, then, each game is both a game of you (Chapter 5) and 'a game of *Umwelten*,' a game of meaningful environment. Correspondingly, *each game as played comes to have a gameworld in the gameplay experience*. This marks the *sixth* invariant quality of video game gameplay experience.

A gameworld is established by putting forward a system of regularities and normative rules that the player must take into account if she desires to continue to

play. As Goffman stated (2013 [1961], pp. 27, 41), games, *by definition*, are world-building activities that present us with game-generated realities. Furthermore, play has been argued to bring about an alternative world, a *playworld* (Fink 2016 [1960], pp. 112–114) which ”creates a world of ’rule-governed’ fantasy—in episodic or imagistic representation—in which behavior can be rehearsed and mastered, prior to its expression in the real world, with real world consequences”, as Peterson (2002, p. 71) writes.

I argue that every game-as-played comes to have a gameworld since a game arises as a significant environment for the player through her participatory agency. Questions remain, however: how should the gameworld be understood, and what constitutes the ‘worldness’ of the gameworld in gameplay? In what do we, in fact, participate when we participate in a gameworld?

Discussion: Interacting with the Gameworld

Media scholar Kristine Jørgensen studies video game gameworlds as informational spaces designed for specific kinds of activity. In *Gameworld Interfaces* (2013) she asks how the information provided by a game is made available for the player in ways that builds up worldness for the game. She defines gameworlds as “world representations designed with a particular gameplay in mind and characterized by game-system information that enables meaningful player interaction” (ibid., p. 3).

Jørgensen’s main argument is that gameworlds are not traditional fictional worlds like we find in literature, tales or movies, but instead they are interfaces for the formal game system. Gameworlds are guided and held together by coherent and consistent game mechanics rather than by fictional coherence. They are mediating interfaces between players and game systems (ibid., p. 20), which means that gameworlds are primarily ludic rather than fictional constructs. This is, in fact, an argument Juul made in *Half-Real* (2005, p. 200).

As a concept, ‘interface’ is quite complicated to define. In this thesis, I appropriate a description that concurs with systems theoretical understanding: interface is “the point of transition between different mediatic layers within any nested system” (Galloway, 2008, p. 936). It is how two or more systems, whether autonomous or heteronomous, are able to interact with each other. Through this interaction, the two interacting systems become connected and mixed for a period of time. Jørgensen (2013, pp. 22–23) sees the user interface of a game as all the properties of the game that are revealed for the player and the information that aids the players to interact with the game system (ibid., p. 20). These elements contain the *physical hardware* such as the game controller; the *window, icon, menu,* and *pointer* (WIMP) information provided for the player on the screen; and “*the gameworld environment*” itself.

For Jørgensen (2013, p. 4), gameworlds as interfaces to the game system are also content of the games since a gameworld is both “informational and interactive environment.” In gameworlds, video games merge fiction and game system information together and thus a game creates a unique form of world representation of the abstract game system that is to be understood primarily as a technology-enhanced activity space for gameplay (ibid., pp. 5, 56–57, 143).

Drawing from Goffman, Jørgensen (pp. 113–123, 133) suggests that video games oscillate between a ludic frame, in which the game system information is addressed to the player, and a fictional frame, which addresses fictional information to the player as a character of the game. She sees this quality as a distinctive characteristic of video game gameworlds. For her, the understanding of gameworld as an interface explains why players do not experience a break in *the fourth wall*, that is, in the illusion that separates the 'audience' from the 'staged action.' Although *superimposed* overlay information, e.g., in-game minimaps or health bars, does not make sense from the perspective of the fictional gameworld, it is indeed understandable, even intuitive, for the player of the game if the gameworld is conceptualized a ludic interface rather than a narrative world of its own right.

Although Jørgensen's (2013) study on video game gameworlds is indeed very valuable, a few notions must be made from the perspective of the current thesis. Most importantly, the main argument by Jørgensen—that gameworlds are interfaces to formal game systems—does not seem completely satisfactory from the phenomenological stance of first-person gameplay experience.

If, as Jørgensen (ibid., p. 24) suggests, "the gameworld interface indeed *is* the actual game itself," what is the relevance of introducing the gameworld as an interface to the formal game system when studying gameplay experience? When I, as the player of a game, take actions and, e.g., move my character in the game, I do not experience any underlying abstract game system *as such*. Instead, I experience the gameplay of the game. I cannot experience the game system separated from my *persona–gameword* relations, and thus the formal game system is rendered meaningful only through play. Inasmuch as we are interested in studying meaningful gameplay experience, we do not need to postulate the gameworld as an interface to an underlying formal system. This is so, because players are able to make sense of the regularities and normativity of the gameplay by participating in the gameworld rather than by trying to understand a formal digital code that underlies it. Relatedly, a car's wheel can be argued to be on the interface between a driver and a car system. However, from the first-person perspective, steering the wheel, changing the gears and speeding are not how we interact with the underlying car system but our experience of driving the car (Chapter 3).

When an individual begins to play a video game, she starts to operate a game controller. This controller is an interface between two systems: the autonomous person and the heteronomous game system. When she turns on the screen, she sees the game's start screen. Again, here she acts as a *person* who wishes to adopt the player's position. The start screen is an interface between the person and the formal game system. The same is true when the game is paused or when the person operates, e.g., a game options menu; for when she does, she is no longer player proper.

During gameplay, the player may operate in-game WIMP menus, including information that is external to the game's fictional world but internal to the gameplay of the game. As noted by Jørgensen, this information is addressed to the *player*. Jørgensen, however, misses the difference between being a person and being a person who plays since the ludic information of a game is not directed to the individual as being a person, but precisely for her player persona. Here we find an interface between a persona and the 'gameworld' since the information is ludic and thus directly related

to in-game regularities. From an experiential first-person perspective, it would be misleading to say that WIMP menus of ludic information are interfaces to formal game systems since we are here already dealing with ongoing gameplay dynamics, and these *ludic interfaces* refer to observable rule-bounded in-game regularities the player encounters during play. Ludic interfaces are indeed necessary in all gameplay ranging from social play to board games and from card games to video games.

Finally, we may face ludic interfaces that are internal to the fictional setup of the game in a fashion that enables us to conceive them as consistent to the fictional coherence of the game. Here, the information, as Jørgensen noted, is fictional. However, these interfaces remain ludic, and thus I call them *ludonarrative interfaces* (see Aarseth 2012 for another interpretation of 'ludonarrative model'). Ludonarrative interfaces are how the in-game entities, and the player's avatar as one such entity, act by being-in-the-gameworld. These interfaces emerge between personnage, a persona who animates a figure or a character, and the gameworld. However, from the perspective of the personnage, the interface is supposed to appear as transparent.

The argument is that just as we play every game by retaining ourselves as persons, we also retain ourselves as player personae, regardless of the possibility that we also play as being personnage, a character within the fictional gameworld. Interfaces may appear on each of these planes of being. As a person, the physical game hardware is the interface to make the gameplay possible. As a person and a persona, the in-game WIMP menus or other forms of ludic interfaces are presented for the player to play the game. As a person, a persona, and a personnage, we may encounter ludonarrative interfaces, which are ludic interfaces that make sense from the perspective of the playable fictive character. Finally, we may encounter *narrative interfaces*, such as cut-scenes, which are fictional interfaces without any ludic component that appear only within the diegetic structure of the gameworld.

As a person, an interface connects me with the game technology; as a persona, a ludic interface connects me with the in-game regularities, rules, and the normativity of the game; as a personnage, a ludonarrative interface connects me with the in-game regularities *and* the diegetic construct of the gameworld. On the level of narrative interfaces, I fall back from the participatory position of the player proper into a position of a mere observer of unfolding fictive events in which, e.g., a character uses a computer or engages with another responsive system (Figure 16).

Celia Pearce (2009, p. 20) suggests that the worldness of virtual worlds consist of a "sense of coherence, completeness, and consistency within the world's environment, aesthetics, and rules." The accessible, sustainable, explorable and robust in a world representation build up a feeling of a gameworld that makes sense as a spatial and temporal environment. According to Jørgensen (2013, p. 56), the worldness of a gameworld results from the world representation and the forms of interaction within the world and its agents, including the experiences of expressivity and performativity provided for the player. In contrast to Lisbeth Klastrup (Klastrup, 2003, p. 104; Klastrup, 2008), Jørgensen proposes that 'worldness' should not be understood as a quality reserved only for multiplayer social online games, but that it may emerge in solitary gameplay, where the player interacts with the game system and its dynamic environment. However, Jørgensen suggests that not all video games feature a gameworld, "mostly because they do not add a fictional layer of representation on top of the game system." In her view, games, such as *Candy Crush Saga* (King, 2012), that operate only on the level of WIMP interface are worldless.

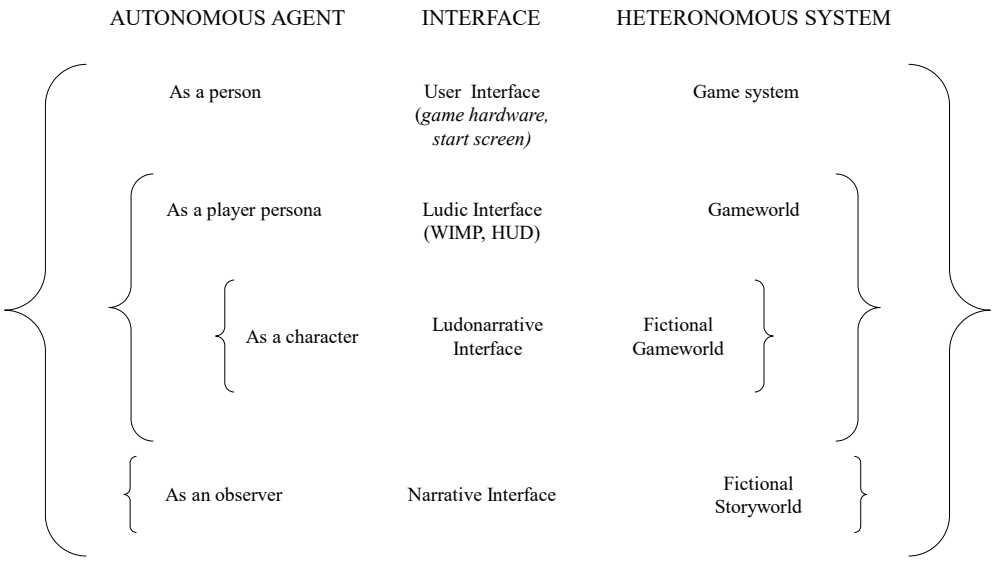

Figure 16. The nested interrelations between an individual and the game system on the levels of lusory attitude, ludic activity/narrative activity, and ludonarrative activity.

I differ from Jørgensen by arguing that each game has a game environment, which arises as *Umwelt*, a significant world-relation for the player during gameplay. In the sense of first-personal participation, each game comes to have a gameworld, although only some games make extensive use of this invariant quality. I am in agreement with both Klastrup and Jørgensen in that the world representation, modes of interaction, as well as the experiences of expressivity and performativity, all build up a sense of worldness. However, in contrast to Jørgensen (2013), who argues that "the gameworld is the information system that provides access to and represents the game system" (ibid. p. 57), I approach the gameworld as the first-person experience of a player's agent–game environment relations. I agree here with Espen Aarseth (2004, pp. 47–48), who states that, "[a]ny game consists of three aspects: (1) rules, (2) material/semiotic system (a gameworld), and 3) gameplay (the events resulting from application of the rules to the gameworld)."

Goffman (1986 [1974], p. 573) wrote that the relationship between person and role (persona, in the current study) "answers to the interactive system—to the frame—in which the role is performed and the self of the performer is glimpsed." Exactly in this fashion, the relationship between a person and a game in gameplay is constituted in that very interaction, and thus the only direct passage for us to the gameworld is through the ludic interaction. Through gameplay, a gameworld appears; "[T]he world shows up thanks to our mastery and exercise of skills of access. We achieve the world by enacting ourselves. Insofar as we achieve access to the world, we also achieve *ourselves*" (Noë, 2012, pp. 12–13). Or as Peterson (2002, p. 291) writes: "A game… is played by constructing an image of 'the world' in imagination, in accordance with certain presuppositions – which are the rules (the 'environment') of the game—and then by acting in that imaginary world".

In Chapter 6, I compare Goffman's (1959) dramaturgical dimensions of presentation of the self to those of the player's persona in gameplay. I also indicate that the seven facets of performative gameplay, i.e., *lusory attitude*; *style*; *responsibility*; *glorification*; *normativity*; *skill*; and *uncertainty*, should be understood in relation to the corresponding dimensions of a dynamic game system, since the player and the game are in dialogical relationship in gameplay (Table 19).

Approached from the perspective of the game environment and the gameworld, a game constantly provides (1) *affordances*, i.e., possibilities for actions for the player who embraces a *lusory attitude*. These affordances constitute what is known as *space of possibilities* (Salen & Zimmermann, 2004, p. 66). A game has (2) *a setting*, which, according to Goffman (1959, pp. 22–24), is the wholeness of the scenic parts of expressive equipment. The equipment includes the personal front of the performer, the *style* and manner in which she performs, and the items (e.g. gender, age, clothes) that we identify with the performer. I define the setting of the gameworld similarly to how Goffman defined the setting of a performance, but I also include temporal perspective and non-player characters in the setting.

The player expresses herself by taking actions and by making *responsible* decisions. These actions and decisions have (3) *consequences* in the gameworld. The consequences are not a kind of consequences, however, but (4) *contingent* with the in-game regularities, that is, with the social, cultural and 'natural' rule-order of the game. Through these contingencies the player is able to make sense of her heightened, highlighted and *glorified* performative participation in the gameworld.

Furthermore, the actions the player takes must be *normative* in the sense that they do not break the (5) *rules* of the game in a way that would terminate the gameplay. Game mechanics provide the vehicles for taking such actions. If the player does not show expertise and execute her actions *skillfully*, the game (6) *evaluates* her efforts as faulty and the gameplay may be terminated. Finally, all gameplay can be argued to include an element of (7) *uncertainty*; the player cannot be fully sure how the game will resolve. This is because every game includes an element of *noncommunication*.

I propose that the seven dialogical relations between the player and the game—i) lusory attitude/affordances; ii) style/setting; iii) responsibility/consequentiality; iv) glorification/contingency; v) normativity/rules; vi) skill/evaluation; and vii) uncertainty/noncommunication—not only illuminate the performative position of the player, but also the *worldness* of the gameworld. The game environment gains qualities of worldness by providing *affordances* or possibilities for taking actions. It further endorses these characteristics by presenting a spatial and temporal *setting* in which *consequential* and *contingent* events take place based on the decisions and actions of the player and the 'social order' of the gameworld, including its inhabitants, and its normative *rules*. Just like in any of our activities, the gameworld lets us know if our level of skill does not meet the set requirements. Thus, our conduct is *evaluated*, which we can perceive from the responsiveness or "feedback" that is generated. Finally, there is the ever-present element of *uncertainty* in everyday life.

Performativity of Player Persona	—	*Dynamic Video Game System*
Lusory attitude	—	Affordances
Style	—	Setting
Responsibility	—	Consequentiality
Glorification	—	Contingency
Normativity	—	Rules
Skill	—	Evaluation
Uncertainty	—	Noncommunication

Table 19. *Seven facets of player performativity in gameplay and their correspondents in dynamic video game system.*

A full-blown gameworld, then, affords versatile possibilities for taking actions and interacting in a rich spatio-temporal environment. The actions one takes have clear distal effects on the gameworld, and because the effects are contingent with both the player's actions and the internal logic of the game, the player is able to experience growth in adaptation, skill-development, and progress (see Chapter 5). However, the quality of unexpectedness persists; the world does not seem to communicate to us what will happen next, and there is always some room for surprises and chance.

As with the seven facets of performative player position, which I introduce in Chapter 6, I emphasize that the corresponding aspects of dynamic game systems (Table 19) are not by *any* means new. Mark J. P. Wolf (2014, p. 125), for instance, contends that a video game gameworld necessarily consists of a kind of geography, inhabitants, actions and consequences of those actions. Murray (1997, pp. 71–90) describes digital environments as *procedural*, entailing a set of rules; *participatory*, since the user or the player is provided with an agency to induce these procedures; *spatial*, because they represent a navigational space and; *encyclopedic*, for computers are able to process, store and retrieve extensive quantities of information. However, the current study remains original in its arguments because it compares the qualities of games with those of the player participation under the concept of performative play and phenomenological enactivism (RQ3).

Data Analysis: Elements of a Good Game

Most aspects of gameplay experience discussed in the current chapter describe player preferences in games as ongoing processes. However, as we know from Chapter 1, "game as process" is only one of the two ontologies of games. What I present as players' gameplay motifeme preferences and desired participatory distance do not fully describe how players valuate *games as objects*. To consider how players evaluate games from this perspective, I analyzed how the participants of the first main survey (N=1,718) specified the qualities that make a game a good game. The theme of how a player experiences a game as a good game is a facet of an invariant of gameplay experience, that of *gameworld-relation* (invariant vi), discussed in this chapter. Since the first survey (N=1,718) was conducted and partly analyzed before the interviews,

the results I report here worked as my guideline for making the 32 interviews. I analyzed the data according to a similar process as reported in Chapter 3 and the game motifeme analysis. The research questions for this statistical analysis were:

RQ2.8: What are the core qualities of games with which players separate a good game from a bad game?

RQ2.9: Is it possible to identify players' game quality preferences, and do these preferences form categories, i.e., factors of a good game? If so, can we identify how similarly or differently players of the identified seven player types valuate a game as a good game?

For studying these questions, I developed an inventory consisting of 16 items describing various qualities of video games as objects. It was my intention to keep these items clearly separated from the gameplay motifemes reported in Chapter 3. The items of the inventory were developed based on a literature review and what I had learned by reading the 700 game review articles in the content analysis reported in Chapter 3. Especially important in this regard was the study made by Ermi and Mäyrä (2007, p. 99), in which the authors present a set of keywords that the interviewed children used to describe pleasurable gameplay experience. The inventory was further tested by a pilot group of 50 respondent before it was included in the survey analysis (N=1,718). The respondents were asked to reflect on "*How important are the following qualities for a good game?*" (5-point Likert: 1 = Not at all important, 5 = Very important):

Item	*Element of a good game*	*Mean*	*SD*
1	There is a lot to do in the game	3.52	1.16
2	The game has an interesting and impressive story	3.56	1.26
3	The game has good and mood-appropriate music	3.16	1.33
4	The game has good controls	3.68	1.22
5	The game has believable characters I can identify with	3.12	1.30
6	The game has technically top-level graphics	3.07	1.21
7	The game has good humor	3.36	1.12
8	The game progresses in a proper way and at a good pace	3.61	1.06
9	The game has an impressive gameworld	3.49	1.24
10	The game has an appropriate difficulty level	3.80	1.03
11	The game has wonderful movie-resembling video scenes	2.53	1.21
12	The game awards succeeding and progressing	3.58	1.12
13	The game has unique, creative and inventive features	3.50	1.14
14	The game lets me set my own goals and succeed in them	3.35	1.13
15	The game manages to provoke strong feelings	3.15	1.28
16	The game's graphics are realistic and not, e.g., cartoon-like	2.55	1.32
17	The game requires luck rather than skill	2.77	1.11

Table 20. A scale designed for studying players' reflections of the elements of a good game, and their mean preference sums (and standard deviations) in the survey.

Similar to the studies I reported in Chapter 3, I conducted an exploratory factor analysis using principal factor extraction, varimax rotation and polychoric correlations. I also defined the number of factors to be extracted by the MAP (Velicer's minimum average partial) test, and accepted only factor loadings greater than > .50. The first solution resulted in a promising structure in which only the item 7, "The game has good humor," had < .50 loading. I dropped this item and repeated the process. As a result of the second iteration, all the remaining 16 items showed loadings > .50 on at least one factor. The results are reported in Table 21.

Seven items (1, 2, 3, 4, 5, 9, 15) loaded on the first factor. These items indicate that a person appreciates games with a fascinating story and beautiful in-game music. A good game also includes an impressive gameworld that offers extensive play, and in-game characters the player can identify with. Such a game manages to induce strong emotions for the player. As a whole, the items on first factor describe the *fictional* qualities of a game, and how the player can relate to these qualities. I label this the *Diegetic* factor of a good game.

Five items (8, 10, 12, 13, 14) loaded on the second factor. According to these items, a good game has an appropriate level of difficulty. It is equally important that the game progresses properly, smoothly and at a reasonable pace. A good game rewards the player for making progress and reaching in-game goals. A good game also includes creative and inventive solutions and lets the player to set her own achievable goals. Since all the items for factor two describe qualities of player–game *interaction*, I label this factor with good game of *Ludic*.

Four items (6, 11, 16, 17) loaded on the third and final factor. Based on these items, players appreciate that a game has realistic graphics and a coherent design. A good game has top-level quality graphics, and it manages to feel authentic, reasonable and plausible within its own logic and physical modelings. The audiovisual quality of a good game is not unlike movies with a high production value. There is a cinematic feeling to a good game, and room for mere luck as well. I name this factor *Verisimilitude*[94] since it is perceived as important that the game manages to feel real-like, believable and reasonable within its logic and appearance. Rich details, precise presentation, intuitive controls and camera angles, and plausible and consistent game design enhance the verisimilitude of the gameplay experience.

Item	Factor 1	Factor 2	Factor 3	Uniqueness
1	0.6419			0.3784
2	0.7967			0.2298
3	0.7972			0.2810
4	0.6221	0.5123		0.3392
5	0.7726			0.2828
6			0.7038	0.3592
8		0.7254		0.3032

[94] From Latin *vērīsimilitūdō*, from *vērī similis, vērīsimilis* "having the appearance of truth" (Merriam-Webster).

9	0.6467			0.2705
10		0.7360		0.3805
11			0.6387	0.3509
12		0.6729		0.3439
13	0.5023	0.6137		0.3064
14		0.5542		0.4441
15	0.7329			0.3588
16			0.7819	0.3548
17			0.5412	0.6292
Mean	3.3825	3.5699	2.7311	
Std. Dev	1.0309	0.8976	0.9510	
Alpha	0.9191	0.8778	0.7870	

Table 21. *Factor Loadings (Loadings > .5), uniqueness for Items and descriptive statistics for scale sums (N=1,718). Mean, standard deviation and Cronbach's alpha are calculated using items with loadings above 0.5.*

The identified three factors of 'a good game' helped me discuss this subject with the interviewees. I asked the interview participants first to freely describe what qualities make a game a good game. After their own reflections on the subject, I typically presented the three factors and asked whether the interviewee could put the three factors in an order starting from the most important. With some of the interviewees, this subject area was brought forth as we watched gameplay videos of their favorite games:

> The plot is important, and what I can do in the game. But I do not want to spend eternity in a game, I want to experience how it ends. All things that open the backstories of the characters are interesting. In *Final Fantasy* games all the characters seem to be flawed somehow, and I like it. And the game music, it is so immersive. I can forgive many elements of bad game design if the music is amazing. (P11, mercenary)

> *Monument Valley* was really nice. I study arts history, and this has a really Escher-like design, which I liked. I have liked Escher since I was a kid. The symbolism, ambient music, stylized characters, I liked them all... I do not really care about missions and tasks in games. (P3, adventurer)

> For me it is more important that the characters and world are interesting. I can continue to play although the game is crap if I want to know what happens next to the characters. It is not so fun, but I can take it [laughs]... I also like to play visual novel games in which your decisions matter for the story development. (P18, adventurer)

Some interviewees reflected on how the game narrative is experienced. I observed that there were two main ways to describe this. A few participants emphasized how they enjoyed the ways in which the story unfolded through their actions, as *enacted*.

In these descriptions several players told how the character was "thrown into" the gameworld without a pre-fixed storyline that one could relate with:

> Good games throw you into the gameworld. You have to figure out what is happening and how it all relates to yourself… In the beginning, the gameworld does not rotate around you, you are just one of the people living there. Nobody seems to care a shit about you at all… But all the things, the sounds, the armor types, are little pieces that build up… a coherent story. And you start to realize it little by little, what it all means. Without this experience, playing would be like just running around randomly and punching monsters in the face. (13, mercenary)

Some players, however, expressed that they enjoyed games more as existing narratives and stories, without the need to identify oneself as one of the main characters of the game. As I discuss earlier in this section, these players typically preferred the third-person animator node over the first-person animator perspective. To put it differently, they preferred to retain a participatory distance, although simultaneously remain close to the events and the in-game characters:

> I like games as stories. I like to experience them from a bit outside. I do not have to experience myself "being there." So, if I create a character, it does not resemble me. It is its own thing and it has its own story and emotions... I want to play games in which the story matters and I can get to know the characters. And if then some character dies, it can really hurt. (P14, adventurer)

All the excerpts above describe game preferences that emphasize *Diegetic* over *Ludic* and *Verisimilitude*. However, in almost as many cases, the ludic qualities were perceived by the interviewees as the primary quality for a good game:

> Yeah, the story matters, but I do not know whether the game must be story-driven as achieving the goals also matters, and winning also... I want to understand the logic of the game... and the strategies players have, why they do as they do, what's their mindset, so that you may guess their next move. (P22, patterner-commander)

> Well, the most important thing is the complexity of game mechanics, so that I can do things in many different ways and find my own way to play. And it should be challenging and get me really thinking. Really, I do not care much at all about the plot of the games. (P23, commander)

> The mechanics and progression are the things for me. When I think about it, when I play games of the same series, the plot is quite similar between the games. So, it is probably the game system that keeps me

> engaged. But the high-level graphics, those do not matter much at all to me. (P1, adventurer)

Although some interviewees emphasized the *Diegetic* aspect over *Ludic* when evaluating whether a game was a good game, none of the interview participants thought that *Ludic* would be the least important of the three factors. There was, however, a smaller group of interviewees who did not regard the *Ludic* or the *Diegetic* as the most important aspect of a good game. Instead, they emphasized the importance of *Verisimilitude* in the gameplay experience:

> It is very important that there are no inconsistencies. You cannot illogically get somewhere because it instantly makes you realize that you are watching a screen rather than playing the game. Some games manage to present a very lively world with citizens and all, it is truly amazing. The atmosphere can be truly impressive. (P26, mercenary)

> I am a really visual person, I enjoy a game that looks great. But the graphics must be logical. There must not be any bugs or glitches, because they break the illusion of the game. For example, in this one game, the character does not carry any kind of bag. So how come he still has tens of weapons to choose from in a battle? I hate it so much if the realism in graphics suddenly disappears. (P20, mercenary)

The disappointment when anthropomorphically plausible characters do not act according to their human-like appearance has been noted also in prior research. Nowak and Biocca (2004) observed in their experiment that human-like characters were more attractive and engaging to players, but they also set higher expectations, which were more easily violated if the design or, e.g., the AI was not consistent. This is indeed what several players who preferred verisimilitude aspects of games described to me in the interviews. Other interviewees, however, emphasized the audiovisual cinematic and photorealistic 'wow' effect good games are able to present to the player:

> In this game by Bioware, there are graphically stunning events. For example, there is an event in which an end boss lands on a space station, and you have some gravity shoes, which enable you to walk on walls. Then you begin to see the biggest enemy in the world in front of you, and you run towards it guns blazing. Then you get the *wow* feeling, this is amazing! (P30, commander)

> In good games, I am drawn to... graphics and the action. The thing that pulls me to play is the photorealistic graphics in sports games and first-person shooters. It is the main reason why playing is fun. The mechanics and the progression are surely also important, and the difficulty level, too. I do not care about the story. *Max Payne*, for instance, is like a book, but I mostly just skipped all the story parts and went directly to the action. (P31, daredevil)

In the beginning of this section, I ask two research questions. We have now seen that, based on an inventory of possible dimensions a player may appreciate in a game (RQ2.8), players evaluate the elements of a 'good game' based on the three factors of *Diegetic*, *Ludic*, and *Verisimilitude* in a video game (RQ2.9). Although the interview excerpts above do indicate a certain connection between the seven player types (see Chapter 3) and how players appreciate elements of good game, a statistical analysis is required to be able to reveal the connections between these two constructs. To study these connections, I calculated the mean scale preference sums for the three factors of a good game for each player type (N=1,718).

From Table 22, we can conclude that *The Adventurer* clearly appreciates *Diegetic* over *Ludic* and especially *Verisimilitude*. Although the mean sums of *The Mercenary* for *Diegetic* were relatively high, this player type held the *Ludic* aspect of a game in even higher regard. In fact, *The Adventurer* was revealed as the only player type to appreciate something else over *Ludic* in a good game. Especially the player types of *The Patterner* and *The Explorer* reflected that *Ludic* was by far the most important aspect in a good game. Finally, *The Daredevil* was the only player type to appreciate *Verisimilitude* almost as highly as *Ludic* in a 'good game.'

Whereas the *Diegetic* factors in games denote the explorative practice of gameplay, the *Ludic* qualities in games draw the attention to the coordinative practice, the game's challenges, and the *progression* enabled through coordination, as I discuss in Chapter 5. Finally, the *Verisimilitude* factors in games specify what kind perceptual believability the game enables for the player in its visual, spatial and auditory design.

Player type	Diegetic		Ludic		Verisimilitude		Obs.
	mean	std dev	mean	std dev	mean	std dev	
Adventurer	3.49	1.09	2.99	0.81	1.49	1.08	179
Mercenary	3.13	0.87	3.27	0.74	1.98	1.14	336
Explorer	2.30	1.20	3.37	0.89	1.81	1.00	272
Commander	2.77	1.04	3.26	0.89	1.67	1.13	323
Patterner	1.64	1.11	2.94	1.12	1.82	0.92	226
Companion	2.30	1.17	2.89	0.98	1.95	1.01	138
Daredevil	2.17	0.97	2.47	0.91	2.33	0.91	250

Table 22. *The mean sums and standard deviations for the seven player types and their preferences in the Diegetic, Ludic, and Verisimilitude factors (N=1,718).*

To study whether mobile game players appreciate the dimensions of *Diegetic*, *Ludic*, and *Verisimilitude* differently than players in general (N=1,718), I calculated the mean factor sums for the sub-group (n=238) of players who reported playing mobile games at least once each week but PC and console games less than once a week (see Chapter 3, Study 1). In this group, *Ludic* was appreciated (mean 3.4) more than *Diegetic* (mean 3.0) and *Verisimilitude* (mean 2.6) dimensions of 'a good game.'

Importantly, the results of this study are similar to what Ermi and Mäyrä (2007) observed in their examination on fundamental components of the gameplay

experience: children describe pleasurable gameplay experience through three dimensions of audiovisuality, fantasy, and challenge. The current study supports these observations and offers that all video game players structure the elements of a good game with the three factors of *Diegetic* (i.e., fantasy, fiction), *Ludic* (i.e., challenge, interaction), and *Verisimilitude* (i.e., audiovisuality, sensorial authenticity).

A remark must be made. Although many players quickly stated that specific qualities of games were more important to them than others, a few interviewees emphasized that what they understood to be 'a good game' was more complex:

> Well, if I reflect on my own game preferences, so in *Final Fantasy*, the story and narration is what matters and keeps me engaged. I have always thought that it is like I was playing a really long and really good movie. But then again, more competitive gaming is all about the player-game interaction, the controls, what happens when you act… When you speak about 'a good game,' there is this thought that people have only one opinion of a good game. But… it is possible that one enjoys many kinds of games, which means that a person can have many *kinds of* good games, not only one. (P6, commander)

What this interviewee (P6) highlights is that, not only do different players have distinctive preferences in gameplay and gaming, but crucially also in different *modes of gaming*. Whether a player appreciates a gameplay experience primarily for its diegetic, ludic, or verisimilitude qualities is not to be analyzed without taking into consideration the mode of gaming that the game enables, and that the player is willing to embrace. Whereas I analyze the statistical and interview data from a framework based on the eight invariants of gameplay experience—and the gameplay motifemes in particular—Deterding (2013) concentrates on different modes of gaming in his frame analytic dissertation. Deterding argues that these distinctive forms of play arise from the interrelations of a player's desires, material qualities of the situation and the game artifact, and the social norms. I will return to this theme in Chapter 9.

The diegetic, ludic, and verisimilitude dimensions of the gameplay experience can be further elucidated by asking how these qualities may enhance experiences of presence (Invariant iii). In Chapter 6 I argue for an enactive understanding of presence and suggest that presence should include: 1) *involvement* that specifies how the player allocates her attention in relation to gameplay; and 2) *availability*, including how in-game objects are perceptually present and available to be interacted with.

Understood together, the two dimensions of involvement and availability facilitate the experience of self-presence, spatial presence, and social presence (see Ermi & Mäyrä, 2007). In their study on video game engagement, Andrew K. Przybylski, C. Scott Rigby and Richard M. Ryan (2010) further argue that in addition to spatial presence of 'being there,' immersed players may experience *emotional presence* in which the game events acquire real emotional weight, and the *narrative presence* of being personally connected to the storyworld of the game. These notions led me ask the following question:

RQ2.10: How are the three elements of 'a good game' associated with gameplay experiences that are perceived immersive—given that I have delineated 'immersion' in this thesis as the player's self-reflection of an elapsed experience of a heightened sense of presence (see Chapter 6)?

If we now consider the three dimensions players appreciate in a good game, we can observe that *Diegetic* is connected to both emotional presence (Item 15: "The game manages to provoke strong feelings") and narrative presence (Item 2: "The game has an interesting and impressive story"), as proposed by Przybylski, Rigby and Ryan (2010). Furthermore, the diegetic dimension emphasizes self-presence and social presence (Item 5: "The game has believable characters I can identify with") and a spatial presence of experiencing a rich, alternative world-relation (Item 9: "The game has an impressive gameworld").

The *Ludic* is clearly related to how a game affords possibilities to act through its interactivity, and to perceive oneself to be the cause for the distal effects. As we see in Chapter 6, the possibilities to act engender experiences of spatial presence and social presence if we are interacting with another intentional agent (see Steuer, 1992; Wirth et al. 2007). The interactional aspects of presence are represented in the ludic dimension of a good game (Item 14: "The game lets me set my own goals and succeed in them," Item 12: "The game awards succeeding and progressing," Item 8: "The game progresses in a proper way and at a good pace," and Item 10: "The game has an appropriate difficulty level"). Finally, the *Verisimilitude* in a game is connected especially to its vividness or sensory realism (Item 6: "The game has technically top-level graphics", Item 16: "The game's graphics are realistic and not, e.g., cartoon-like," Item 11: "The game has wonderful movie-resembling video scenes"), which, with interactivity, has been argued as an important enabler of spatial presence together (Steuer, 1992; Wirth et al. 2007).

My hypothesis (H3) is that the three main dimensions that players (N=1,718) appreciate in video games all facilitate experiences of *presence*, which in enactivism is understood broadly as how something is available to the skillful experiencer. As I mention in Chapter 6, previous research suggests that experiences of presence are likely to enhance memory effects, and that what is more present to us may also be experienced as more meaningful. Building on these arguments, it is imperative to ask if the three qualities of 'a good game' similarly contribute to the wholeness of presence? Przybylski, Rigby and Ryan (2010), for example, argue that in contrast to what many game designers and even players assume, immersion is not mainly based on high-quality graphics and authentic sounds (here: *Verisimilitude*).

I analyzed this question by computing bivariate correlations (Spearman rank-order) between the three factors of 'a good game' and a play motivation variable describing players' desire for immersion—"I play because I want to immerse in games"— which is also included in Study 1 in Chapter 3 (see Vahlo et al., 2017). Appreciating the *Diegetic* dimension in games correlated with *Immersion* (r=.52). *Ludic* showed a weak correlation (r=.17), but *Verisimilitude* did not show a significant correlation with *Immersion* (r=.03).

These results support the arguments by Przybylski, Rigby and Ryan (2010), as they indicate that the role of verisimilitude, including realistic graphics, may be

quite insignificant for engendering presence. However, the moderately strong connection between *Diegetic* and *Immersion* may be partly influenced by the fact that players associate the concept of 'immersion' [in Finnish: "uppoutuminen"] with a specific kind of narrative presence (diegetic dimension) rather than with interactive (ludic dimension) or sensory presence (verisimilitude dimension). Therefore, it cannot be concluded based on this analysis that appreciating and experiencing diegetic qualities would be the main contributor for sense of presence and what players describe as immersive. What this analysis shows, however, is that *Diegetic*, i.e., appreciating diegetic qualities in a game, is more strongly *correlated* with immersion as a motivation to play than *Ludic* or *Verisimilitude*.

If we accept as a general principle that 1) the more presence we feel in a situation, the more salient the experience is for us, and that 2) *Diegetic* elements are more strongly correlated with experienced immersion than *Ludic* and *Verisimilitude*, we can hypothesize that 3) players who appreciate diegetic experiences may find their gameplay experiences more meaningful than other players. Although additional studies are required to analyze whether *Diegetic* predicts *Immersion* and whether *Immersion* contributes to meaningful gameplay experience, the qualitative data of this study suggests such an interpretation: the player types that prefer the diegetic qualities the most (*Adventurer*, *Mercenary*, *Commander*) were most likely to indicate an interest to participate in follow-up research when responding to the survey in 2014, as I report in the beginning of the current chapter. Of all the player types, *Adventurers* were most eager to share their thoughts on gameplay experiences, and they also were the ones who submitted 50 percent of the writings in the call for memorable gameplay descriptions. I had difficulties arranging interviews with both *Daredevils* and *Patterners*, the two player types who appreciated the *Diegetic* in games less than the others.

8. THE STORY MACHINE

> If things are happening right now for the first time, do we call it narrative? (Abbott, 2002, p. 32)
>
> [D]igital gameplay should be regarded as a form of performance practice with the capacity to invoke traditional folkloric genres and engender new traditions (Miller, 2008, p. 255).

I have investigated the invariant qualities of gameplay by examining the dynamics of player–game coupling (Chapter 5), the performative position of the player (Chapter 6), and the game enactment and its world-like characteristics (Chapter 7). The purpose of this chapter is to study the phenomenon of gameplay as an *elapsed experience*, and especially its narrative characteristics. A gameplay experience as a whole must make sense to the player, it is after all how we are able to communicate about gameplay, share our gameplay experiences with the others, and consider gameplay as an autonomous form of expressive culture. Thus, I ask: how do gameplay experiences become sensible for us, and what kind of invariant qualities can the elapsed experience of gameplay be argued to consist of (RQ1)?

The experience of a game and its world-like quality arises not only through performative and participatory play but also from the fiction of the game. In order to examine how a player experiences the fiction of a video game, the concepts of *diegesis* and *mimesis* should be considered. *Diegesis* and *mimesis* were first brought together in Plato's *Republic*, where diegesis meant story as narrated or told and mimesis story as shown or enacted. The concept of *mimesis* has been later associated with "imitation," "representation," "enactment," "mimicry," and "simulation" (Oatley, 1999), whereas diegesis has been connected to practices of "explaining," "narrating" and "giving an account of" (Halliwell, 2012).

The concepts of *diegesis* and *mimesis* have been widely applied in studies of literary fiction, film theory, film music and, more recently, in game studies.[95] However, these concepts have not been utilized in the same way across these fields of academic research. I appropriate the concept of diegesis in this study according to the definitions made by Christian Metz (1974) in film theory. Yet, I recognize that this approach to diegesis is not compatible with diegesis as narrated and mimesis as enacted ways of storytelling. I revisit this discussion later in the current chapter.

Kristine Jørgensen (2013, pp. 65–67) suggests that gameworlds are not primarily diegetic but ludic constructs. This is allegedly so because diegesis, as understood by Jørgensen, refers to the narrative act of storytelling and thus to the fictional world as it is recounted. For Jørgensen, the logic of gameworlds is not that of narratives but of the game system. In her opinion, forcing the concept of diegesis to cover

[95] In game studies, for example, Galloway (2006, p. 7) adopts the terms *diegetic* and *nondiegetic*. He defines diegesis of a video game as "the total world of narrative action," and nondiegetic correspondingly as the elements that are external to the "narrative action."

gameworlds would lead to a situation in which the original meaning of the term would be lost. Thus, she proposes dropping diegesis from gameworld analyses (ibid., p. 66).

As Jørgensen (2013) notes, adopting diegesis in investigations of gameworlds would necessitate a reformulation of the concept, but I am not convinced that this is an argument strong enough for discarding the concept from gameworld analyses. After all, contemporary film theory or film music studies hardly appropriate the concept in its original meaning, either. In contrast to Jørgensen (2013) who emphasizes the ludic qualities of the video game gameworld, I focus on meaningful first-person gameplay experience as it arises in and from the dynamics of gameplay. From this stance, it is necessary to try to bridge the gap between the fictional and the ludic in the gameworld since many gameplay experiences are not only experiences of ludic but rather experiences of ludic in a fictional, and often in a narrative, setting.

Drawing from Étienne Souriau (1951)—who used the term diegetic to refer to unique *filmic universes* of distinctive rules, belief-systems and settings—as well as from semiotician Christian Metz (1974, p. 98), for whom 'diegetic' meant "the narration itself, but also the fictional space and time dimensions implied in and by the narrative, and consequently the characters, the landscapes, the events, and other narrative elements, in so far as they are considered in their *denoted* aspect," Ben Winters (2010) approaches diegesis as a narrative *space* or narrative universe. In this view, the fictive world is not reducible to a work of art; rather, it resides in the process of experiencing and interpreting a narrative product.

The confusion between diegesis as defined, e.g., by Metz (1974), where the term refers to everything that belongs to the projected, designed and implied *world*, and the "original" meaning of diegesis, i.e., recounting a story, originates from the writings of Gérard Genette (1980 [1972], pp. 27, 280; 1988 [1983]). Richard Walsh (2007, pp. 90–91) notes that Genette derived the adjective "diegetic" from the French word *diégèse*, and thus it does not have a direct relation to Plato's distinction. Genette's approach is instead based on the distinction between the diegetic story-universe of a film (signified) and the screen universe (signifier). Porter H. Abbott (2002, p. 16) and Stephen Halliwell (2012) suggest that, in the terms of ancient criticism, Aristotle's pair of terms *praxis,* or action as depicted, and *muthos*, the dramatic and narrative structuring of the depicted activities into a plot, come close to this more recent definition of diegesis (*diégèse*).

If we recognize that there are two schools of established definitions of diegesis, and we position ourselves clearly with the film studies school represented by e.g. Metz (1974), diegesis no longer refers to the act of narrating but to the narrative space as it is experienced by a subject. We can note, therefore, that the problem introduced by Jørgensen (2013) disappears; it is plausible to appropriate the concept of diegesis to the discussions of the fictional gameworlds since the concept does not stand for "telling a story" but rather for "experiencing narrative spaces and multiverses." This leads us back to Aristotle's terms of *praxis* and *muthos*, and their correspondents in Russian formalism, that is, *fabula* and *syuzhet* (Walsh, 2007, p. 52).

Fabula, *Syuzhet*, and the Storyworld of the Video Game

The concepts of *syuzhet* (сюжет) and *fabula* (фабула), which originated in Russian formalism, have been adopted in studies analyzing the experience of diegesis (Winters, 2010). The relationship between the concepts of *syuzhet* and *fabula* is still under discussion in narrative theory (Walsh, 2007, p. 52; see Popova, 2015, pp. 27–28). In the context of film theory, David Bordwell (1985, pp. 49–54) describes *fabula* and *syuzhet* as follows:

> The imaginary construct we create, progressively and retroactively, was termed by Formalists the *fabula*... The fabula embodies the action as chronological, cause-and-effect chain of events occurring within a given duration and a spatial field… The fabula is a pattern which perceivers of narratives create through assumptions and inferences.
>
> The *syuzhet* is the actual arrangement and presentation of the fabula in the film. The syuzhet... arranges components—the story events and states of affairs—according to specific principles… The syuzhet embodies the film as a "dramaturgical process."

Fabula is oftentimes translated as a 'story' of "what happens" and what *events* take place, whereas *syuzhet*, that is, 'plot' but also '*narrative discourse*' (Walsh, 2007, p. 54; Abbott, 2002, p. 16), refers to "how the events are told or presented" (Oatley, 1999, p. 440; see Jenkins, 2004). Similar to Bordwell (1985), Winters (2010) conceptualizes the *fabula* of a film as the "abstracted narrative constructed by the spectator". *Syuzhet* and *fabula* together engender not only understanding of a given narrative but also a *storyworld* in which the events of a story occur. According to David Herman (2009, pp. 106–107, 570), a storyworld is "the world evoked implicitly as well as explicitly by a narrative… narrative artifacts (text, films, etc.) provide blueprints for the creation and modification of such mentally configured storyworlds." In contrast to *fabula*, a storyworld highlights the *ecology* of narrative interpretation.[96]

Storyworld refers to grounding or to the *world-making activity* based on inferences triggered by medium-specific semiotic cues (text, visuals, audio) of a narrative. It is how an individual makes sense of a broader spatiotemporal and sociocultural setting only implied in the discourse. Thus, in addition of constructing the story (*fabula*), individuals also tend to imagine the surrounding context and environment in which the events take place (Herman, 2005, p. 570). Understood from a first-person

[96] Katharine Young's (2004) frame analytic concepts of *storyrealms* and *taleworlds* is a related yet also significantly different take to what I develop in this chapter. First, I distinguish my approach from Goffman's frame analysis, because Goffman did not provide a satisfactory view on 'the self' (see Chapter 6). Second, Young's terms, 'storyrealm' and 'taleworld,' are only partly consistent with the terms *syuzhet*, *fabula* and 'storyworld' as discussed in this chapter. Because of these reasons, I do not further discuss Young's interesting take on the layers or laminations of communication in storytelling in this thesis.

perspective, storyworld converges to "what it's like to be in the fictional environment and to interact with its objects, inhabitants and institutions."

Drawing from Herman (2002; 2005), Erin James argues in *The Storyworld Accord* (2015) that narrative understanding requires modeling and "inhabitation" of the storyworld in an ecological and environmental fashion. In this process, "readers come to know… a space and time different from that of their immediate reading environment… reading—or any type of narrative comprehension—is a virtual form of environmental experience." James (2015) suggests that through their world-building capacities, narratives can facilitate *storyworld accords*, that is, cross-culturally shared perspectives of environmental imagination.

I propose that, although video games are ludic rather than narrative constructs, the concepts of *fabula*, *syuzhet* and 'storyworld' can also be understood in the framework of video game gameplay. Furthermore, I suggest that applying these concepts in an examination of video game gameplay experience helps us to better grasp the relations between ludic and narrative in gameplay. Crucially, for understanding how *fabula*, *syuzhet* and storyworld manifest in video game cultures, we must consider both the experience of the ongoing coupling between a player and a dynamic game system, that is, gameplay, as well as practices of re-presenting such an experience in remembering, personal narration and, for example, writing game-based fan-fiction.

In contrast to narrative products such as novels or movies, video games do not present preconstructed *syuzhet*, or the how events unfold, for the individual to observe. Instead the player co-constitutes the *syuzhet* in the dynamic couplings with the game system and its fictional narrative setting. Only through gameplay does the game acquire its "actual arrangement and presentation as a dramaturgical process," as Bordwell (1985, pp. 50–51) describes *syuzhet*. The *fabula*, or "the action as a chronological, cause-and-effect chain of events occurring within a given duration and a spatial field" (ibid., p. 49), is the player's experience of *what happens* in the game. Inasmuch as she is the initiator of what happens in the game, the player's own actions become a crucial part of the game's *fabula*. In other words, *fabula* in video game gameplay experience includes not only the fiction of the game but also the interactivity facilitated by the game mechanics and realized through player–gameworld contingencies. The *fabula* of a game is what makes a variety of *syuzhets* sensible by offering an intelligible *canon*, the materials (locations, characters, objects etc.), procedures and regularities, in relation to which all instances of dramatic gameplay are realized.

Bordwell's (1985) description of *fabula* illuminates how gameworlds make sense to us as imaginary planes, storyworlds, although a game does not include a well-defined narrative but consists instead of, e.g., a single locale and a set of rules. The storyworld of a game equals to the world of stories that take place and can be imagined to take place in the spatiotemporal and sociocultural setting denoted by the video game. The gameworld, in contrast, is the wholeness of the interactions that take place and can be imagined to take place in the setting presented and implied by the video game (see Chapter 7). For instance, any participatory event a player encounters during gameplay is part of the game's gameworld, and any story that emerges from these encounters is part of its storyworld.

Video game gameworlds vary greatly from each other in how they encourage us to imagine them as worlds of stories. Tile-matching video games such as *Tetris* or strategy board games such as *Chess* hardly inspire a large number of players to imagine the stories that can take place in their environmental and interactional setting. On

the other hand, role-playing game series such as *Pokemón*, *Final Fantasy*, *Legend of Zelda*, and *Mass Effect* have inspired thousands of players to write their own fan-fiction. For example, in a large online archive, *fanfiction.net*, there are currently almost 88 000 fan-made stories inspired by the *Pokemón* franchise, and 40 000 fan-fiction entries on *Final Fantasy* gameworlds and storyworlds. Yet, there are also more than 100 fan-made stories based on the gameworld of *Tetris* as well, including horror stories, dramas, poems, and stories about *Tetris*-themed dreams.

By appropriating the concepts of *fabula*/*syuzhet* to the ongoing experience of gameplay, new horizons come into view. First, these concepts make it possible to relate elements of interactional gameplay to the narrative contents of the game. This is because a player's performative participation together with the procedurality of the game constitutes the dramatic *syuzhet* of the game-as-played. As a cultural practice, gameplay converges with *emplotment*, which we may understand as enacting the gameworld. This quality of gameplay has been earlier discussed by Brenda Laurel (2004, p. 21; see Aarseth, 1997), who contends that the player has authorship to the game's plot, and that she contributes to it materially by realizing "patterns of choice" in gameplay. Second, the player's actions in the gameworld become endeavors in its fictional storyworld and are thus to be understood to belong to the *fabula* of the game. During a gameplay experience the narrative contents of a game's storyworld collapse together with the player's participatory agency, which again is facilitated by the game mechanics of the gameworld.

When the game *diegesis* is interpreted through the lens of *syuzhet*/*fabula*, the fictional elements and the ludic elements of the game are not separable from each other but constitute instead an experiential whole. This notion is crucial for envisioning a gameworld as a construct that appears to the player not only as a traversable spatiotemporal and responsive setting but also as an imaginary construct that makes sense to the player as a fictional world of locations, intentional characters, and a "canonic" storyworld. From this stance, I am not in an agreement with Jørgensen (2013, p. 66), who argues that "diegesis does not… tackle the fact that players interact with the world and that game avatars as well as other characters function in a different way than diegetic characters." I argue that although the gameworld is not to be equated with the storyworld of the game, the gameworld crucially facilitates not only the ludic elements of gameplay but also the experienced fictionality of its storyworld.

Taken together, what do *fabula* and *syuzhet* constitute? According to Abbott (2002, pp. 12, 16), they bring about a *narrative*: "the representation of an event or a series of events." In this definition, 'story' equals the event or the series of events (*fabula*) and 'narrative discourse' is the representation that conveys the story (*syuzhet*). Since I argue that a game as an object does not have a narrative discourse (*syuzhet*) or a story (*fabula*)—a game acquires these qualities only through its ontology as a process, i.e., as played—I therefore also propose that a game is not a full-blown narrative artifact but that it arises as a narrative experience through gameplay. But does this mean that a game-as-played necessarily generates a new first-person narrative?

From Emergent Narratives to Emergent Stories in Gameplay

Richard Walsh has investigated the question of whether gameplay produces narrative in his insightful article, *Emergent Narrative in Interactive Media* (2011). When discussing gameplay, the focus is on the emergent phenomenon that has no direct counterpart in the game system nor in the player. What we identify as meaningful when playing belongs to a higher level of organization than the game system itself (Chapter 5). As Walsh writes (ibid., p. 75), emergent phenomena, including narratives, do not persist as entities but as patterns in time.

The notion of an *emergent narrative*[97] was first introduced in digital media by Tinsley Galyean in 1995 who argued in her dissertation (ibid., p. 27):

> We all construct narratives out of our daily activities to help us remember, understand, categorize and share experiences. It is this skill that many interactive systems exploit. They give us environments to explore. We, by combining the elements of these spaces with our goals (the user's goals), allow a narrative to emerge. If any narrative structure (or story) emerges it is a product of our interactions and goals as we navigate the experience. I call this 'Emergent Narrative.'

Whereas for Galyean, an emergent narrative results from the interactions between a subject and a virtual environment, Ruth Aylett (1999) and Sandy Louchart (2007), approach emergent narratives as products of the interaction between the subject and 'intentional' digital characters. In this latter view of an emergent narrative as an "emergent character-based generative system" (ibid., p. 11), the importance of interactions between characters exceed the authored narrative types.[98]

Walsh (2011) tackles the question of whether the emergent qualities of interactive media can be regarded as emergent narratives, and what criteria. For this purpose, he introduces the term 'simulation' as offered by Gonzalo Frasca (2003): "[T]o simulate is to model a (source) system through a different system which maintains to somebody some of the behaviors of the original system" (ibid., p. 223). Frasca (2004, pp. 85–87) suggests that simulation is to be separated from *semiotic representation* of a narrative since 'simulation' is a medium of exposing rules for producing different outcomes rather than description or re-presentation of what happened. Walsh (2011, p. 77), however, emphasizes that simulation *is* nevertheless a form of representation since it re-presents a system by specifying a set of rules and regulations.

Walsh's understanding of 'simulation' as a semiotic artifact (rather than as a narrative artifact), which represents the operating system it is modeling, is compatible with Jan H. G. Klabbers' (2009, p. ix) apt definition: simulation refers to how a reference system is re-presented as a model and to the running of that model. Thus, the events in a simulated virtual environment are actions rather than only products of se-

[97] This concept is to be distinguished from the notion of 'games of emergence' by Juul (2002). According to Juul (ibid., p. 328), emergence is how simple rules of a game may lead to complexity in its gameplay. The game Go is a prime example of game of emergence.

[98] Also Henry Jenkins mentions the concept of an 'emergent narrative' in his article *Game Design as Narrative Architecture* (2004, pp. 128–129).

miotic representation; "Simulation and narrative, as modes of representation, are different in kind: a simulation represents a system, globally, while a narrative represents a discrete temporal sequence" (Walsh, 2011, p. 78). According to Walsh, what results from a particular run of a simulation is not an emergent narrative but *emergent behavior*, ready to be narrativized by the person who participated in its creation. Just as our daily activities are not narratives by themselves, neither are our experiences with systems that simulate activities. Instead, both kinds of experiences are objects of our narrative sense-making.

Walsh (2011), furthermore, suggests that because simulation is both a representation of a system it models and the running of that system, it also produces two types of interactivity: behavioral and semiotic. In *behavioral interactivity* the system is a domain for actions, whereas in *semiotic interactivity* it is a domain of communicative acts of representation.[99] When these two aspects are brought together, for instance, in a video game gameplay session, "the representational elements of the simulation can... interact with representational interventions by the user, conceived now not as a behavioral participant but as a communicative dialogist; and the interaction between these communicative acts can produce the appearance of a higher-degree representational intentionality, irreducible to the level of the interactions themselves" (Walsh, 2011, p. 79). This, according to Walsh, may produce emergent narratives, that is, *systemic representations*, which result when the behavioral interactivity and semiotic interactivity come together in the domain of experience and interpretation—"emergent behavior is narratable; emergent narrative is legible" (Walsh, 2011, p. 80).

The main argument by Walsh (2011, p. 82) is that emergent narratives may arise from the usages of interactive media (including games) only if players simultaneously maintain their performance as action and as communication: "*behavior as representation*." If gameplay is regarded exclusively as action, or presentation, without also being representation, emergent stories do not result from it directly, only in retrospect when the player evokes and thus re-presents her experiences as a player. As Murray (1997, p. 43), Abbott (2002, p. 32) and Walsh (2011, p. 82) note, the possibility of maintaining the duality of performance as both presentation and representation is everyday business for improvising actors.

I argue in this thesis that the duality condition of "behavior as representation" is not only possible but a precondition for all instances of gameplay, because in gameplay, the player presents herself through a re-presentative position of the player *as being something*. To be a player, one has to take a stance in both presentation and representation or, in the words of Goffman (1981, p. 83), we must "briefly split ourselves in two." Inasmuch as maintaining this position is a necessary condition for emergent stories to come into being, it is not enough to simply take a third-person stance on oneself—one must preserve this duality through the gameplay. We can speak of presentations in situations in which the object of an intentional act is present. When we *talk about* an experience, we are engaged with a mentally evoked or re-evoked (remembered) and phenomenally absent intentional object, which can

[99] Here we can shortly note that Ian Bogost's theory on procedural rhetorics has some similarities with the conclusion of Walsh (2011), since Bogost (2010, p. 5), similar to Murray (1997), emphasizes that video games and computers in general create *representations of processes*.

thus be said to be re-presentational (see Thompson, 2007, p. 25). However, during gameplay we gain agency in relation to the gameworld; the events we experience and the entities we perceive as intentional are primarily presentations, not representations. As long as I am involved with the gameplay that co-constitutes myself as the player, an object within a game appears to me primarily as present, and only secondarily as absent, i.e., as a re-presentation.

The activity of gameplay is that of performative participation in a game enactment. Can we, though, regard that what is generated by player–game coupling as a standalone narrative, as Walsh (2011) proposes? According to Abbott (2002), narratives are stories conveyed by a narrative discourse, which includes the designed game artifact and the player's participatory agency. Abbott (ibid., pp. 32–33) writes that, since narratives are re-presentations of events, i.e., a story, a narrative *seems* to come after a story and, correspondingly, a story *seems* to pre-exist a narrative. This definition leads Abbott to contend that "neither life nor role-playing games qualify as narrative since there is no pre-existing story… [i]n this sense, role-playing games, like theater improv, are like life itself." A game, similar to life, seems to "make itself up" as it goes on rather than pre-exist before our experience. Because stories are always mediated and encountered through narrative discourses, games and life cannot be considered as stories either.

There are at least two arguments that make it possible to further analyze the close connection between games and stories/narratives. First, *gameplay is both about that which is present and that which is absent*. Although most things that happen in a video game happen by our immediate agency, they are nevertheless mediated and thus experienced both as presentations *and* as re-presentations. One can follow here the writings of Bateson (2000 [1955]; 1971 [1956]) and contend that gameplay, by definition, "does not denote what those actions for which they stand would denote" (Bateson, 2000 [1955], p. 180; see Chapter 2). In a Batesonian view, then, gameplay in itself is for that which is not immediately present.

Second, a central argument of this thesis is that a person who plays a game must embrace a third-person view of herself *as being something*, and thus whatever happens in a game does not happen to her as being a person, but to her player persona; the position of the player is itself re-presentative. Both of these theoretical arguments suggest that, in gameplay, the actions the player takes and what these actions denote are not only about the present situation, since they are also about what is absent, and they happen to relate to someone who is not to be simply equated with the person that exists beyond gameplay. Thus, a game does not present itself similarly to how life does.

Games, therefore, have a narrative discourse of the game media, which includes a view of that which it conveys, a story. This narrative discourse (*syuzhet*), however, remains incomplete without player participation. Because a game is not "a representation of an event or series of events," as Abbott (2002, p. 12) defines a narrative but rather a presentation of a re-presentative event or a series of re-presentative events, I do not find it plausible to consider games as narratives. Since, as Abbott (ibid., p. 16) argues, stories (*fabula*) should *feel like* they would pre-exist the narrative discourse, a game cannot be considered a story either; it is a constitutional quality of a game that the story emerges from the player's participation and thus *feels like* your own making rather than fixed. My stance is, in principle, akin to that of Aarseth's

(2004, p. 50) who writes: "A story-generating system does not have to be a story itself… while life and games are primary, real-time phenomena, consisting of real or virtual *events*, stories are secondary phenomena, a revision of the primary event."

We can shortly revisit here the writings by Abrahams (2005) on *play genres* (see Figure 1). Recall that Abrahams divides play genres into Play I, Play II and Play III, where Play I consists of those genres that are spontaneous, occur in a back-and-forth manner and take place frequently in everyday life (e.g., joking, riddling, most gaming). Play II includes more organized and formalized and less spontaneous sport events, and I would like to add esport events—games that require referees and judges, and events that separate players from the audience. Finally, Play III contains folk plays and role-playing where the progression of narrative or movement is already more or less predetermined.

We can now observe that Play I, although already structured and set aside from conversational genres, is primarily a group of *presentational* genres, or "present reenactment" (Abrahams, 2005, p. 67), whereas in Play III, we enter into the realm of semiotic *representation* of fated and predefined events. The closer we steer towards Play III, the more story-qualities we may identify in the unfolding game encounter. Video game gameplay, I offer, is often movement between the presentational and the representational. Although we may play a game with a strong linear storyline, the gameplay element of coordinative/explorative practice (Chapter 5) draws us from the representation towards the presentation; otherwise, we would not be *playing* the game.

Let us now return to the argument made by Walsh (2011, p. 80): a game may result in emergent narratives when the behavioral interactivity and semiotic interactivity become entangled in the gameplay experience. Just as the autonomy of gameplay emerges from the dialogical relationship between a player and a game, new emergent narratives may also come into being, "arising out of the distributed communicative agency of representational interactions at the level of the simulation itself" (Walsh, 2011, p. 79). I have suggested that playing a video game creates its *syuzhet*, its arrangement as a dramaturgical process. If this *syuzhet* makes sense to us both progressively during the gameplay and retroactively in reflection by *inviting narrative interpretation*,[100] we can speak of a first-person emergent narrative.

The emergence of a narrative from gameplay is only a possibility, not a necessary quality of a gameplay experience. The main objective of this thesis is not to investigate what might result from first-person experiences of gameplay but instead to track down the invariants of the gameplay experience as a phenomenon (RQ1). Thus, I will not linger any further with the concept of emergent narrative but introduce another perspective on the changes brought forth by any elapsed session of video game gameplay.

[100] Inviting narrative interpretation necessitates that the form of behavior is communicative and intelligible according to a narrative paradigm such as a stereotype, cultural convention, genre or plot structure (Walsh, 2011, p. 81).

The *Enacted Narrative Experience* of Gameplay

I return now to the concept of narrative experience and argue that *the experience of gameplay has a narrative structure*. Although a gameplay experience would not result in what Walsh (2011) calls an emergent narrative, it remains a distinctive object for our narrative sense-making. This is so regardless of whether we are dealing with mobile gaming, solitary video game gameplay, multiplayer video game gameplay, social gaming such as board games, competitive esports or sport events. For instance, a tennis match is also a dramatic realization, a *syuzhet*, of the *fabula* of tennis as a game.

The vantage point, or *footing*, through which a game is experienced is nothing but irrelevant. If I watch a tennis game and experience the emergence of a dramatic organization through the actions of the players and how their actions represent the semiotic system of 'tennis' at large, I have a position in which I do not have to maintain the duality condition of both enacting and representing. I merely observe the events unfolding before my eyes. If, however, I hold the tennis racket myself, I acquire the dual position of presenting and representing, that is, acting within the semiotic system of tennis, or enacting the gameworld of tennis.

I argue that in cases where the game does not invite us to interpret what we experience as a story, our encounter with the game is not just 'emergent behavior,' as suggested by Walsh (2011), but instead emergent trajectory, which consists of patterns of emergent behavior. Goffman wrote in *Encounters* (2013 [1961], p. 26): "A matrix of possible events and a cast of roles through whose enactment the events occur constitute together a field for dramatic action." Later in *Frame Analysis* (1986 [1974], p. 558) he observed that the game-like character of scriptings is to work with closed resources, "a set of characters that makes an early appearance and that provides a sufficient and necessary source for what will prove to occur… that what turns out to happen could theoretically have been divined from the initial array of figures and forces, as in a riddle."

In games, no interaction that happens is irrelevant to what will become. Events in a game lead up towards a conclusion, and thus the wholeness of this trajectory, or traversal through the game, will make sense at the end of play. Just as Goffman notes (1986 [1974], p. 559), everyday life is not organized in a similar fashion. However, "[T]ales told about experience can (and tend to) be organized from the beginning, in terms of what will prove to be the outcome… what is developed in the tale can be phrased as having resulted totally from the interplay of figures within the tale, all of which interplay, and only which, is needed to accomplish this development."

Games must make sense by definition; they are systems of sense-making, and the main job of the rules of the game is to guarantee that what happens in gameplay is, in principle, sensible. A game's closure occurs when its structure as a whole makes sense (Murray 1997, p. 174) and when the expectations become satisfied and the raised questions answered (Abbott, 2002, p 188). In my view, whether this structure should be referred to as 'a plot' or 'a narrative discourse' depends on whether this quality is defined as a property of an existing game object or as an emergent quality of experiencing a procedural artifact. Since I conceptualize 'a plot' and 'a narrative structure' according to this understanding, I propose that an experience does not have to be explicitly narrated to be experienced as dramatic, hence: a narrative experience.

According to Jerome Bruner (1991), narratives are *durative* since they cover a pattern of events through time. They are of *particular* contextual occurrences rather than of general circumstances. Narratives entail a dimension of *intentionality*; they are intelligible. They are also in some relation to the canonical behavior that they typically challenge, breach or violate. Since narratives introduce a *breach*, they encompass a norm, which is thereby challenged. For Bruner, the intrinsic normativity of a narrative renders it *tellable*. The meaning of a narrative should not be separated from the interpretative practice of its experiencer which would render the narrative *hermeneutic*. When we experience a sensible course of events, a trajectory, that fulfills these criteria (Bruner, 1991), we can say that we have a *narrative experience*. According to Bruner (1991), stories and narratives are always "account[s] of events occurring over time" (ibid., p. 4, emphasis added), but I propose that this is not the case with all narrative experiences. We have narrative experiences of that which is not about accounted events but of events that take place in our immediate presence. To say that a trajectory of unfolding events is subject to our narrative sense-making is to emphasize the experiential structure of a narrative over its textual form.

Matti Hyvärinen (2008) argues that, for Bruner, we live through narratives as well as make sense of ourselves through narrative understanding. To put it differently, since we make sense of our being through folk psychological narratives (e.g., cultural schemas, models and scripts) and what Abbott (2002, pp. 6–9) calls narrative perception and narrative time, we readily construct our everyday experiences *as* narratives. Hyvärinen (ibid., pp. 272–275) writes that making sense of unfolding events by relying on folk psychological narratives renders the current experience *canonical*, which is to be contrasted with the necessary "breach" quality of a "real" narrative. Not every experience, then, acquires a quality of specific narrative-like tellability. We may postulate this quality as "*an experience*" (see Abrahams, 2005, p. 117; see Chapter 1) in which the ordinary, the norm, and the routine becomes challenged or violated. A breach is required—one that highlights the ongoing experience as a singular rather than canonical, and as special rather than typical (see Bruner 1991; Bruner 2002; Hyvärinen, 2008).

I offer that, in contrast to most of our everyday experiences, a gameplay experience always involves a challenge and conflict, a breach, if you will. Many scholars have argued 'conflict' or 'contest' to be a definitional quality of all games (e.g., Crawford, 1982; Parlett, 1999; Avedon & Sutton-Smith, 1971; Salen & Zimmerman, 2004). The outcome of gameplay is not fully certain (Costikyan, 2013). The canonical norm of the experience in gameplay encompasses the rule-structure of the game, and the individual performance and the experience of gameplay bring along a necessary breach to the game's ontology as a process.

I argue that an experience of gameplay has the inherent quality of an *enacted narrative*. Since we are the dramatis personae (Propp, 1968 [1928]) of gameplay, and quite typically enact the gameworld as the protagonist of a game's fictional world, a gameplay experience has a first-personal vantage point to the events that occur, and the player has some agency over how the events will unfold. In the dynamic couplings between a player and a game, these elements together give the gameplay experience a structure not unlike recounted narratives, but yet a game-as-played cannot always be regarded as an emergent narrative in its own right. Rather, it is an experience of

creating a narrative structure, an *enacted narrative*. Tok Thompson (2010, pp. 399–400) made a similar observation in his analysis of folklore and narratives of non-human animals. As Thompson contends, not only are play and stories similar in that both have an intrinsic quality of 'make-believe,' but play behavior converges with the enactment of a narrative: "Play behavior… is an *enacted narrative*, although this is still not enacted story, as it lacks story's reference to an external situation."

In contrast to an 'emergent narrative,' which is still to be conceived as a form of a narrative object, an 'enacted narrative' designates how a new narrative is organized in our first-person experience; every gameplay experiences produce a *syuzhet*, which necessarily makes sense as an emergent trajectory through the normativity of the game. If the conclusion of a game does not make sense in reflection, and if the progression of the game does not make sense during the actual play, there is something amiss either in the game or in our attitude or capability to play the game. A gameplay experience is not "ready to be narrativized" like our canonical everyday experiences, but it has instead a built-in dramatic composition. 'Enacted narrative' refers thus to the *sense of story* we may sometimes feel in everyday life when we feel that events we encounter have a distinctive dramatic structure and heightened personal relevance and meaning. I propose that a gameplay experience invariantly has this kind of structure, albeit, it is relevant primarily for our situated identity as player personae. Let's consider the concept of 'enacted narrative' and the narrative structure of a gameplay experience further by examining what elements constitute a prototypical narrative.

Cognitive narratologist David Herman (2009, pp. xvi, 77) suggests that a prototypical narrative consists of elements of *situatedness*, the context of telling; *event sequencing*, structured time-course of the unfolded events; *worldmaking/world disruption*, the sequence of events will cause disequilibrium in the storyworld involving its intentional agents or characters; and *what it's like*, "the experience of living through this storyworld-influx, highlighting the pressure of events on real or imagined consciousness by the occurrences at issue."

A gameplay experience, is not, of course, situated from the viewpoint of a narration since it is *untold*. However, every gameplay experience consists of sequences of events, that is, of the decisions made and the actions taken by the player, the game mechanics triggered thereby, and the game's scripted events. During gameplay, these events are organized as challenges and conflicts that take place in the gameworld, and thus these conflicts are to be considered as *world disruptions*. "The defining element in computer games is spatiality. Computer games are essentially concerned with spatial representation and negotiation, and therefore a classification of computer games can be based on how they represent—or, perhaps, implement—space," as Espen Aarseth argues (2001, p. 154; see Aarseth, 1997, pp. 101–102). In fact, to confront the presented challenges by taking actions afforded by the game is, for some, a suitable description of 'gameplay' (Adams, 2014).

At the heart of any gameplay experience is the sensation, *qualia*, the subjective experience of living through the gameplay experience from the orientation to the resolution, whether it is a feeling of triumph over an adversity, *fiero*, or a frustrated stare at the text "game over" that appears on the screen. Gameplay experience has what Abrahams (1982, p. 6) calls performable social construction; *a drama is played out*. Such an experience has an intrinsic dramatic interest for becoming memorized and reportable and thus reconstructed into a story.

Building from a stance of enactive cognitive science on narrative understanding, Yanna Popova (2015, pp. 25, 40) suggests that a simple narrative includes 1) at least two causally linked events, 2) acknowledgement of intentional agency conducting the events, and 3) the reader's enaction, i.e., the living through, of that intentionality. When considering the gameplay experience, we can note again that playing games fulfills the first criterion since games consist of causally interrelated occurrences. Gameplay also invariantly has an intentional agent, but this agent is not necessarily found within the game object. Rather, it is the player herself who brings the intentional aspect into gameplay. Thus, gameplay combines the second and the third criteria proposed by Popova; the player recognizes her own agency within the game by enacting this intentional vantage point that has relevance within the game.

Not unlike narratives, a gameplay experience tends to reach a state of equilibrium or *closure*, i.e, "the sense of completion and fulfillment of expectations that have driven the particular course of events," as defined by Popova (2015, p. 33). Finally, instances of gameplay and narratives alike regularly include what Roland Barthes (1982, pp. 53–56) calls *cardinal functions*, or turning points of events (e.g., so-called boss-fights in role-playing games) as well as *catalyzers*, which either delay or accelerate the main course of action (e.g., grinding more levels, taking on optional missions, finding hidden treasures, playing mini-games within the main storyline, or farming loot in repetitive tasks). Cardinal functions are constitutional for a story to be the story it is, but although catalyzers are merely supplementary events for the story, they are nevertheless relevant to the *impact* and the meaning of the story, as Abbott (2002, p. 20) writes. I believe that every game player would agree that the experience of gameplay is often as much or even more about engaging with catalyzer events as it is with cardinal functions.

To put my argument more precisely, *gameplay experience has the structure of a prototypical narrative,* save the element of situatedness, which is achieved only through narrating. Participation in gameplay produces emergent trajectories that call attention to the ludonarrative crux of all gameplay experiences. This I label 'enactive narrative' and offer as the *seventh invariant* of the video game gameplay experience.[101]

In solitary video game gameplay, the enacted narrative that results from gameplay experience is a property of the person who played the game, and to an extent it remains as such unless the person engages with broader game cultures. Again, this is not to be equated with an argument that the player would be the sole author of a game's story. As Murray (1997, pp. 152–153) contends, authorship in games is procedural, which means creating the rules for interaction and descriptions for those interactions. Like a choreographer, a game designer sets the rhythm, possible sequences of movements, and the composition of the gameplay as a whole. What the player brings along is *performative authorship*. Not unlike a dancer, the player expresses herself in relation to the designed choreography. Indeed, when an experience comes

[101] The common denominators between games and stories have been recognized before by Espen Aarseth (2001; 2012), who argues that every game and every story [here: narrative] includes a world, objects, agents, and events, although these elements are configured differently between the two media. However, Aarseth's interest is on games as artifacts rather than games as experienced processes, which is the stance of this thesis.

to have narrative value for us, this value arises from our unique performance in relation to a procedural environment. In this sense, the narrativity of the first-person gameplay experience is generated in the reciprocity of procedural authorship by the game designer and performative authorship by the player.

Even if the player does not share her own gaming experiences with others, the experience may live as a narrative of the self and thus as a memory of cultural participation.[102] This understanding of gameplay experience has significant affinities with how McNeill (2013a, p. 9) describes folklore: "Considering that folklore is being slightly adapted and molded every time it's passed on, after a while it's quite representative of the group as a whole rather than of a single individual." The following excerpt from an editorial article (November 24, 2011) on gameinformer.com (GI) illuminates this rather nicely:

> I've been playing a borderline unhealthy amount of Skyrim since it launched. Not once has another player entered my world, and yet it has been a hugely social experience for me. While playing, I'm constantly chatting electronically with my friends about the game: sharing tips, asking questions, bragging about how awesome my sword is (so awesome), and swapping stories about our adventures... By any reasonable definition of the word "social," Skyrim has been a social experience for us despite never connecting to a multiplayer server.

My notion of the enacted narrative has profound similarities to Celia Pearce's (2004, pp. 144–153) interpretation of narrative structures in video games. According to Pearce, and similar to what I argue, the necessary *experientiality* in games produces emergent narratives (here: enacted narrative experience) "that develops out of the inherent 'conflict' of the game as it is played, as experienced by the players themselves." Pearce also writes about the *performative* level of narratives in gameplay, that is, the narrative constituted by the spectators and the commentators (or *let's play* players) of the ongoing game; the *augmentary* level of narration including contextual information about the game, which can be, for instance, journalistic reportage available to the player and for spectators before, during or after gameplay; and the *descriptive* level of recounting and narrating elapsed game events to third parties and participating in emergent cultures that are encouraged by the past game events.

Calleja (2013) has recently criticized Pearce's model of narrative elements in games as being too general. In his view, Pearce's strategy to apply her model to games ranging from basketball to Tic-Tac-Toe and from Battleship to *EverQuest* (Sony Online, 1999) is vague, and that she and others "fail to make the distinction" between these different forms of games. Calleja argues that there is next to no reason to discuss the narrative of Tic-Tac-Toe.

From the phenomenological first-person vantage point adopted in this study, I do not agree with Calleja (2013). Again, what I mean with 'enacted narrative' is not to be equated with standalone textual narratives but to the invariant structure of *gameplay experience*. As an invariant of a gameplay experience, an enacted narrative precisely aims to cover games ranging from informal games to collectible online card

[102] Stahl (2008 [1989], p. 59) calls this kind of folklore private folklore and *personalore* in contrast to communal folklore.

games. In the framework of studying gameplay experience, it would be erroneous to try to force a distinction between different types of games.

I also disagree with Calleja (2013) when he argues that a framework that aims to study the story elements of game environments needs not to be able to investigate what he calls "the secondary narrative." The "secondary narrative" is how a person remembers, depicts and recounts to herself and to others her past experiences with a game. This, according to Calleja (2012), is not relevant to a study focusing on narrative qualities of games. My disagreement with this argument is based on the view that gameplay experience is a form of social and cultural participation. No gameplay experience emerges in a vacuum. The enacted narratives that arise from gameplay are entangled with our social and cultural values, intersubjective relations, current state of mind, and our reflective understanding of ourselves. For example, the enacted narrative that emerges from a session of Tic-Tac-Toe involving a parent and his child is inseparable from the actual gameplay of Tic-Tac-Toe, the parent's perception of his child, the parent's understanding of himself, and the sociocultural situation.

Furthermore, "the secondary narratives" we tell ourselves and to others are still very much influenced by both the ludic and the fictional elements we have encountered in gameplay experiences. This is to say that both experiences and memories of gameplay are ludic; there is no clear dichotomy between ludic and narrative in game objects or in gameplay experiences. From a folkloristic perspective, the relationship between ludic and narrative is a *dialogical continuum*; how one remembers, feels and narrates her past game experiences of playing Tic-Tac-Toe is still related to the original experience of unfolding gameplay, and thus these "secondary narratives" fall within the framework of studying the gameplay experience.

Recall from Chapter 1 the distinction between the two ontologies of games: games as objects and games as processes (Aarseth, 2014b). In the treatise by Calleja (2013), narratives in games are reduced into the game object, although these narrative qualities would be revealed only through ergodic play. I encourage an alternative view, which maintains that each gameplay experience is first-personal, and the emergent trajectories, i.e., enacted narratives, which are brought forth in gameplay, cannot be scaled back down to the game object. This is because the enacted narratives result not from a game nor from a player but from experiencing the reciprocity of the two.

With the concept 'enacted narrative,' I also differ from Murray (1997, pp. 108–109), who has compared the structural similarities of experiencing electronic environments with that of experiencing a *visit*. Although I concur with Murray that a gameplay experience can be regarded a visit, gameplay is a very specific type of sojourn, one that intuitively makes sense to us as a "path we lay down in walking" (Thompson, 2007, p. 218). Surely a visit to any place tends to make sense to us, but a gameplay experience always entails a breach and an active first-personal viewpoint of the "visit" since it relates directly to ourselves as autonomous agents who have a tremendous impact on the surrounding (game)environment. As a type of visit, a gameplay experience has similarities with the experience of being a performer who takes responsibility for her actions, stands in the limelight, and faces a constant possibility of failure. For instance, the experiences of holding a keynote presentation or performing stand-up before a live audience have these structural similarities with that of a gameplay experience.

We can here shortly revisit the concept of *mimesis*. In the beginning of this chapter, I mention that mimesis has been interpreted in literature, e.g., as imitation, enactment, mimicry, and simulation (see Oatley, 1999). Paul Ricoeur (1984–1988, 1: pp. 53–76), however, offers another interpretation of *mimesis*, associating it with "configuration." According to Richard Walsh (2007, pp. 46–49), this approach renders *mimesis* as the structural foundation of all narratives. Ricoeur's account includes three levels of *mimesis* in the narrative process: preconfiguration ($mimesis_1$) is our practical knowledge, expectations and social competencies we bring to narrative; configuration is the creative production of making the plot ($mimesis_2$); and transfiguration or refiguration ($mimesis_3$) refers to the interpretative vantage point of the reader.

The three-level model by Ricoeur is noteworthy in the context of gameplay experience because it draws attention to the configurative practice of the player. It was Markku Eskelinen (2001) who, by reading Aarseth's *Cybertext* (1997, pp. 62–65), suggested that "the dominant user function in literature, theater and film is interpretative, but in games it is the configurative one" (Eskelinen, 2001). Although Eskelinen equates configurative practice with "manipulation" (2012, p. 277) to precisely *contrast* it with the reader's practice in narrative understanding, or what Ricoeur calls refiguration ($mimesis_3$), Eskelinen's usage of the term 'configuration' nevertheless opens an interesting connection to the terminology of Ricoeur. What I wish here to illuminate is that if we consider the trinity of preconfiguration–configuration–refiguration from the perspective of the *player practice*, we can note that preconfiguration is how we as being players bring our expectations and sociocultural competencies to a gameplay situation; and configuration collapses together with transfiguration.

By appropriating Ricoeur's description of configuration as making the plot, we can thus conclude—based on what I present earlier in this chapter—that *the configurative practice of the player converges to create the* syuzhet *for the gameplay experience*. This renders *mimesis* as 'configuration,' a significant concept that points both towards the ludic enactment of gameplay and the narrative structure of the elapsed gameplay experience. Perhaps there is an irony to the conclusion: the practice that is at the foundation of ludological approach is the one that makes first-person gameplay narrative experiences possible. Although the argument has been made by many game scholars before (see Aarseth, 2012; Aarseth, 2014a), it is worth repeating: we need not drop the ludological or the narratological approach when analyzing meaningful game experience.

During gameplay, a diegetic effect elevates the understanding of the gameworld as a narrative space rather than being a narrative in its own right. Yet, after a game session, the diegetic effect of the game becomes reconfigurated by the experience of our contribution in its *syuzhet* and *fabula.* In a crucial way, therefore, *diegesis* has a threefold existence in the video game gameplay experience. First, it is the fictional layer of the video game product (*narratives within a video game*). Second, it is how a game as played makes sense to us during gameplay (*sense-making of a narrative* and *narrative sense-making of an experience*). Third, it is how we may look back on our gaming experiences as personal narratives of participating in the gameworld and its *fabula* (*enacted narrative experiences* and *emergent stories*).

Abbott (2002, p. 33) writes that "[s]tory… is our way of organizing time according to what is important for us," and continues to state that, although role-playing games and life itself are not stories, they act as "seed-ground of stories" or "untold stories," which can be formulated into narratives. I argue in this chapter that, unlike

life, gameplay experiences invariantly have the structure of an enacted narrative; games are *story machines*, regardless of the fact that most of the enacted narratives remain untold. The untold narrative experiences of video game gameplay are shared by players who have experienced the same game, and yet, because of the first-person vantage point, each gameplay experience remains varied, unique and personal.

Discussion: Video Game Gameplay and Folkloric Practice

In *Playing Along* (2012), Kiri Miller suggests that an episode of video game gameplay could be regarded as a *folkloristic text*. A 'folkloristic text' is a term coined by Titon (1995). Instead of referring to 'text' as finite, stable and bounded, a folkloristic text is varied and intertextual; "[A] folkloristic text exists in multiple versions and variants, similar to one another and thereby referencing one another… the instability of a folkloric text is the result of its emergent, processual character, stressing the dialectic of innovation and tradition within community-based expressive culture" (ibid., p. 439).

Miller (2012, p. 11) argues that, for example, the "story collection" of *Grand Theft Auto: San Andreas* (Rockstar North, 2004) is uniquely realized in gameplay through individual performances. What is more, she proposes that folkloristic *oral-formulaic* theory could be utilized to model the player's expressive play as players combine actions into performative play of the same video game. Oral-formulaic theory as well as ethnopoetics offer tools to analyze how performance renders relatively stable text into creative expressions. Both approaches are especially interested in the poetic aspects of performance (Shuman & Hasan-Rokem, 2012, pp. 64–66),

While I am in general agreement with Miller (2012), I think that describing experiences of gameplay as text is justified only to a limited extent. I stress that gameplay experiences are above all ludic enactments of participatory culture, which in my view cannot be reduced to text. I also argue that, although participating in gameplay is a performance of the self, the situation of gaming is not a performance but rather a cultural enactment. More importantly, however, I contend, not unlike Miller (2012), that any episode of gameplay is indeed folkloric.

I propose that video game gameplay is a *folkloric enactment* regardless of the fact that video games are often, but not always, commercial and mass-produced artifacts. Just as 'folkloristic texts' as understood by Titon (1995), folkloric enactments exist in multiple versions and variants and are similar to each other and thus interconnected. What results in a folkloric enactment of video game gameplay is an enacted narrative experience or possibly even an emergent narrative of its own right. Maybe instead of referring to oral-formulaic theory we could speak of a *ludo-formulaic* approach, which brings together the performative playfulness of ludic accommodation and paidic assimilation, and the constraints of the rule-bound video game. Such an approach would focus on how players express themselves in gameplay, how the enacted and emergent narratives induced by gameplay relate to each other and to the game system, and how past gameplay experiences are remembered and constructed as personal and cultural narratives.

Sharon R. Sherman argued already in 1997 that the situation of playing video games begs for further folkloristic analysis. Similar to what I argue in this chapter,

she suggested (ibid., p. 244) that "computer games, such as *Mario*, fit within the study of both narrative and game, albeit a genre constructed not to be folk narrative but to model it." Sherman also recognizes that the players of, e.g., *Super Mario* games are simultaneously acting as the protagonist of the game and yet remain individuals. This observation leads Sherman to suggest that players come to have a role not unlike that of a storyteller in multiplayer video game situations (ibid., p. 251):

> In the world of his peers, the expert player exhibits a supremacy which he may not otherwise enjoy. While playing, he may become a hero within his social group... The video player acts as a storyteller, taking his audience to new worlds of adventure… These communicative roles illuminate the similarities between gamers and storytellers, especially when seen through the frame of both individual and group.

Although I do not equate the position of the player with that of the storyteller, I agree with Sherman (1997) that the player indeed takes participators "to new worlds of adventure," not unlike a person who posts a *let's play* video on YouTube. This adventure, however, is an adventure that unfolds during gameplay; it is something the player lives through rather than narrates to others—or to herself. The role of the player is thus that of a maker and an improviser of an enacted narrative rather than that of the teller of a story. It is not necessary to try to equate the roles of the player with that of the storyteller, although there are indeed several structural and functional similarities to be analyzed. During the actual course of playing games, we are engaged with vernacular enactment of gameplay in which the lived-through narrativity crucially arises from how the game is played.

If the "how a video game is played" is the self-expression and creativity of vernacular 'folk' in the enactment of video game gameplay, is there any room for 'lore' in video games? Of course, if the theme of the video game deals with folklore, the 'lore' has a certain existence in the video game enactment. Michael Dylan Foster (2016, p. 5) recently suggested the term *folkloresque* as follows: "[T]he folkloresque is popular culture's own (emic) perception and performance of folklore. That is, it refers to creative, often commercial products or texts (e.g., films, graphic novels, video games) that give the impression to the consumer (viewer, reader, listener, player) that they derive directly from existing folkloristic traditions."

In addition to how (Foster, 2016, pp. 15–19) a popular culture product may *integrate* known motifs and forms to appear more folkloric (e.g., the *Harry Potter* franchise, including *Lego Harry Potter* video games), *portray* folklore and folklorists (e.g., the TV shows *Supernatural* or the mobile video game *Year Walk*) or *parody* folklore (e.g., the *Shrek* franchise or the adventure video game *Grim Fandango*), another, and arguably even more profound, perspective on the 'lore' of video games opens by reading Goffman (2013 [1961], p. 35): "The basic activity in game is a move… made or taken… game, defined as a body of rules associated with a *lore* regarding good strategies, and a play, defined as any particular instance of a given game being played from beginning to end."

This passage by Goffman illuminates that the 'lore' of a game does not manifest only in the theme or the fictional content of a game but more fundamentally in

how the game is played. If we consider the *lore*[103] of a game to refer to the strategies and thus also to the rules of the game, the lore of a game is a quintessential feature of any game that is enacted, whether we are speaking of a social game such as *Tag* or of a recent commercial video game. For example, on *gamefaqs.com*[104] there are currently more than 60 000 user-generated and submitted *walkthroughs*, that is, unofficial strategy guides, cheats and review articles about a multitude of video games. However, to equate the lore of how a game is played to the knowledge shared by the gaming community is to start from the middle, from the meso-level of recurrent patterns (*strategy*) in a game's enactments. As I suggest, "how a game is played" is also its *syuzhet*. On this micro-level of traversal through the game, the lore of a game manifests as a unique trajectory (*experience*) arising from the patterns of gameplay. Finally, the macro-level of lore in gameplay is the actual system of the game (*rules*), which enable both the recurrent patterns of the meso-level as well as the trajectories of the micro-level to appear.

Whereas in the case of backyard games it is nothing new to state that "the *lore* of a game is how it is played, and how it is played is present in every instance of gameplay on the micro-level of individual experience, meso-level of play strategies, and macro-level of re-enacting the rules of the game," the situation in cases of board games, collectible card games and video games is different. In commercial game products the rules are not 'lore' inasmuch as they are fixed and stable and presented as given to the players. Yet, as I discuss in Chapter 2 and Chapter 3, rules of any game can be changed, modified and altered by player communities. When the given set of rules are not taken for granted but maintained or transformed by the players themselves, the *lore* of a game extends again not only to the level of 1) experience, and 2) tactics and strategy, but also to 3) the rules themselves.

Let me present yet another argument of folkloric characteristics of commercial video games. Foster (2016, p. 3) argues that the movie *Spirited Away* (Studio Ghibli, 2001) is not folklore but folkloresque. It is not folklore, since it is an official commercial product—which entails a *profit motive*—transmitted mainly through institutional channels. It also exists in a fixed form that does not vary through time or performances. As Dan Ben-Amos insisted (1971, p. 14), an item presented on television or in a book is no longer folklore because the communicative context remains the same. Foster (2016, p. 29) continues to describe folklore as expressive culture, which is not dictated by any author, designer or professional artist. Furthermore, folklore is often a shared property of a particular group (see also, e.g., McNeill, 2013a; Oring, 1986; Toelken, 1996).

When we compare a movie to a video game, we notice that most video games are commercial products (but not all by any means), and they are also typically (but not always) shared through institutional channels. However, the critical difference is that, by definition, gameplay experiences are not fixed but uniquely varied. In gameplay, the communicative context does change as the formal game system is not the

[103] The word 'lore' origins from Old English *lār,* Old English *leornian* to learn, and refers to a particular body of knowledge or tradition (Marriam-Webster).

[104] Gamefaqs.com was started in 1995 by gamer and programmer Jeff Veasey who wanted to collect the knowledge of playing video games to a single internet archive. The service was bought by CNET Networks in 2003.

whole message. The game system restricts the possibilities of gameplay but does not determinate the course of any gameplay session. Again, as Miller (2008, p. 263) argues, "while both the game and the book are mass-produced texts, satisfying gameplay relies on the unique realization" of the texts. Adams (2014, p. 3) puts it aptly:

> Reading a book or watching a play is not passive, but it is not interactive in the sense of modifying the text. In contrast, each time you play a game, you can make different choices and have a different experience. Play ultimately includes the freedom to act and the freedom to choose how you act. This freedom is not unlimited, however. Your choices are constrained by the rules, and this requires you to be clever, imaginative, or skillful in your play.

Gameplay is a participatory, expressive and performative enactment, which is restricted, yet not dictated, by the game designers. The "storytelling rights" (Shuman, 1986), knowledge of how to play, and fan-fiction can be considered a shared property of a specific group, a folk group, of people who have experienced a particular game. It is crucial to observe, however, that all of these characteristics refer to our *encounters* with a game product, that is, to its ontology as a process—how it is appropriated, played, experienced and shared—not to the game product as detached from its gameplay.

Perhaps the most interesting feature that separates games and video games in this respect from books and movies lies within the commercial core of the games. Foster (2016, p. 23) discusses how plagiarism and ownership relates to folklore and folkloresque. He emphasizes that, in the cultural imaginary, folklore is understood to fall outside *intellectual property rights* (IPR): "The fact that folklore is considered common property—nobody *owns* it—is the very thing that allows the proliferation of versions and variants, the repeating of proverbs, the retelling of jokes, the teaching of techniques, the borrowing of patterns–indeed, all the processes through which expressive culture is transmitted from person to person, from culture to culture, from one generation to next." When we play a commercial game or video game, protected by IPR, are we in *any way* dealing with an item of folklore? I suggest that we indeed might be.

In Chapter 2, I introduce the term 'game mechanics,' which defines the *modes of interaction* available to the player during gameplay, and how the entities within the game interact with each other (see Sicart, 2009). In a quintessential fashion, game mechanics are at the heart of every video game as argued by Ernest Adams and Joris Dormans in *Game Mechanics* (2012, p. xi); "Game mechanics create gameplay." Granted that game mechanics, and the modes of interaction they provide, form the core of any gameplay experience, it is fascinating to recognize that no form of intellectual property clearly covers them. Although the rule-system of a game can be protected in some countries, individual game mechanics fall beyond the scope of IPR since they are not regarded as creative elements of the product. As an art and entertainment attorney notes in an internet forum discussion on the subject, "Essentially, the game mechanics are not protectable, nor is the idea of the game. So others are free

to copy the most basic parts of a game. I know this sounds kind of backwards since a good board game is really all about good mechanics, but there it is."[105]

In a recent blog entry (May 30, 2016), an attorney, Zachary C. Strebeck, reports a US court decision on an infringement case between the card game *Bang!* and the game *Legends of the Three Kingdoms*, which was considered to have directly cloned the game mechanics and rules of the former game. According to 17 U.S. Code §102, "In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work." Based on this code, the court concluded, "Unlike a book or movie plot, the rules and procedures, including the winning conditions, that make up a card-game system of play do not themselves produce the artistic or literary content that is the hallmark of protectable expression."[106]

Thus, we find that at the deep core level of any game, commercial or not, there is something that falls beyond intellectual property rights, something that can be versioned and varied, something that "nobody owns," something that is common property of the vernacular. In game design communities, to devise new game mechanics is known as a very difficult, if not nearly impossible, task to do. This is because *game mechanics are the folklore of game design*, they are the vernacular practices of how the game is played. Game mechanics can, indeed, be argued to be vehicles for *folk ideas*, that is, "traditional notions that a group of people have about the nature of man, of the world, and of man's life in the world" (Dundes 1971, p. 95).

It is not my intention to claim that a mechanic of "pick up"—or indeed any *single* mechanic of a video game—would be folklore, but I suggest that practices of combining mechanics together are. By this, I do not mean that, for instance, the mechanics of "pick up," "run" and "jump" would, even taken together, constitute folklore in a game. What I propose is that there are traditions of transforming folk ideas (Dundes, 1971) and players' everyday conduct into in-game events. These traditions do not reside on the level of a mechanic or even on the level of a set of mechanics. Instead we must begin from what emerges when these mechanics are set into motion, that is, from the dynamics of expressive gameplay. This observation brings us back to consider gameplay motifemes (Chapter 3). Since gameplay motifemes consist of game mechanics when put in motion, i.e., game dynamics, and of the player's performative practices, gameplay motifemes can be argued to be a folkloric element of both informal games and contemporary commercial video games.

By being the element of folklore in any game, game mechanics illuminate that *all games, whether they are social games played by schoolchildren or commercial action video games played by middle-aged men, retain their old folkloric core* not only in how we encounter them during gameplay but also as cultural artifacts. Just as McNeill (2013a, p. 13) writes: "It is folklore if it's passed via person-to-person transmission, creating multiple versions in which we recognize conservative elements (that

[105]https://www.quora.com/How-can-I-protect-my-intellectual-property-for-a-card-boardgame.

[106]http://www.strebecklaw.com/court-rules-favor-cloned-tableop-game-no-protection-us-copyright-law/

is, it's traditional), and if those multiple versions are dynamic and variable, with details changing to fit new contexts… so that there's no single right version (that is, it's informal)." This is indeed what game mechanics are about.

Abrahams (2005, p. 26) writes: "Folklore, as a traditional activity, argues traditionally; it uses arguments and persuasive techniques developed in the past to cope with recurrent social or existential problem situations." I propose that game mechanics are how folklore in games argues traditionally; the mechanics are the persuasive vernacular techniques and rhetoric that existed in games of the past and prosper still in contemporary high-budget commercial video games. To understand the continuities between the traditional and contemporary, folklorists must study the dynamics of culture "that focuses on the movement of traditional items as they are used by both performers and hearers in a living situation," as expressed by Abrahams (ibid., p. 38). Consider a passage by McNeill (2013a, pp. 8–9): "If I tell you a joke, and you turn around and tell it to someone else and the details change a bit, you did not tell it wrong, you just told a different version of it… In contrast, if I take a novel and change some of the words, it is not just "another version" or "my own version" of the novel; it's wrong… folklore, by the nature of its transmission, is malleable, adaptable, changeable, and mostly anonymous, and this makes it way more culturally and expressively communicative than a TV show."

A video game gameplay experience is malleable, adaptable, changeable and "my own version" of something shared by a folk group, that of the game players. A commercial video game is not folklore, of course, but I argue that every game necessarily includes an aspect of folklore—at least as long as game mechanics are considered common property rather than something that can be protected by copyright laws. Furthermore, there is no reason to assume that the emerged narrative structure of a video game-as-played is significantly different from those of traditional gameplay experiences or even from other forms of folklore. "Much like the narrating session once served up examples of how one travels on a perilous journey to become an adult, video games appropriate the monomythic folkloric kingdom creating a postmodern rechanneling of traditional content elements and structures" (Sherman, 1997, p. 256).

Indeed, the experience of a character-based video game gameplay is not a far cry from a monomyth within a monomyth; the individual adopts the position of the player and, from that position, the role of the protagonist of the game. In the well-known words by mythologist Joseph Campbell (2008 [1949], p. 23):

> A hero [and, again, the player] ventures forth from the world of common day into a region of supernatural wonder [and that of gameplay]: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man.

Whereas the "power to bestow boons" within the *fabula* of the game remain a characteristic of that storyworld, a similar power acquired by the player may be shared with others as personal narratives of one's endeavors, as strategic hints that can be given to others in need, and as intimate experiences of "being the cause" for changes in the gameworld, as expressed by Piaget (1961 [1952]). The storyworld accord of playing video games is the common experience of the monomythical quality of gameplay experiences, shared by many yet unique between individuals.

Taken together, these observations stress that folklore is not necessarily exiled from a cultural artifact when it is transformed or reproduced into a commercial product. Abrahams (2005, p. 69) argues that "the difference between folklore and other expressive phenomena lies in the range of relations possible in performance." As Sherman (1997, p. 244) writes, video games are not folk narratives, but they model them by providing opportunities for performative participation. If we take these statements as a guideline, we can indeed argue that there is a folkloric undertone in all sessions of gameplay, since to play a game is to take a performative stance and engage oneself with challenges that produce an experience that has structural similarities with that of experiencing a narrative.

Data Analysis: Memoirs of the Video Game Protagonist

I turn my attention to the personal narration and personal narratives the interviewees shared with me. These are the participants' expressions of their most memorable gameplay experiences and why they find playing video games valuable for themselves.

In folkloristics, Sandra K. Dolby Stahl (1977; 2008 [1989]; see Schuman, 2006, p. 149) describes personal narratives as first-person expressions of one's life events. Although the plot structure of a personal narrative is typically new and singular, personal narratives are not isolated from what is consider collective, intersubjective, and traditional (Stahl 2008 [1989], p. 16). As Stahl (1977, p. 19) emphasizes, the act of storytelling is itself traditional, and personal narratives include specific narrative form, function and stylization. In Stahl's view (ibid., p. 24; 2008 [1989], p. 30), personal narratives are "complete" narratives because a personal narrative is developed, and it "exists as a stable item in the teller's personal repository of usable materials (resources)." Amy Schuman (2006, p. 148) writes similarly that a "personal experience narrative is positioned between reports of the everyday and that which disrupts ordinary life."

A main argument of the current chapter is that, in contrast to most of our everyday experiences, a first-person experience of gameplay has an inherent structure of an enacted narrative. Not every experience is experienced as a dramatic trajectory of events, but a gameplay experience is, and this quality gives gameplay experiences a *heightened tellability* when compared to our other recurrent experiences. This tellability does not yet make a gameplay experience a personal narrative as described by Stahl (1977) since gameplay experiences are typically *untold* regardless of their structural similarities to prototypical narratives.

Not unlike dreams, it may make only little sense to tell your gameplay experiences to others who cannot fully comprehend the experience you are describing. In striking contrast to dreams, however, a player knows that there are thousands of others who also have had a unique first-person experience of playing a specific game. This renders gameplay experiences not only as tellable but also as *shareable* in gaming cultures. The players share an experience of "being there," and not in the narrow sense emphasized in the HCI literature on spatial presence, but rather as someone who made

things happen by being a player persona. This I highlight with the concept of *game-world accord*. Gameplay experiences are fuel for remembering past first-personal experiences alone and together; they are vehicles for "*story-sharing*."

Because of these reasons, most of my interview data (N=32) consists of personal narration rather than full-blown personal narratives (Stahl, 1977). This is to say that my interview material includes only some narratives that can be regarded "stable items" in the interviewee's repertoire. In my view, this observation does not render the data non-folkloric. Although well-developed personal narratives are rather scarce in the data, the data consists of vernacular expressions about encountering and experiencing a folkloric event of performative gameplay. In what follows, I consider the personal narrations of the interviews as stories, which as Abbott (2002) contends, are conveyed by a narrative discourse, although this discourse is not typically well-developed.

The interviewees generally began to talk more freely about their most memorable gameplay experiences when they reflected on their first experiences of playing video games and their childhood memories. For some, this happened already when we discussed their favorite games since these games quite often included 1–2 games that the interviewee had played many years ago. Others began to think back on their earliest memories, when they mentioned their old friends, parents, siblings or some gaming technology they had had in their childhood home.

When interviewees told me about their past gameplay experiences and reflected on their own feelings on them, they enacted *episodic memories* of earlier personal experiences involving a game and themselves as being the player of the game. In episodic memory the event is experienced as *absent* since it is not temporally actual. Drawing from Husserlian phenomenology, I posit that, when remembering a past event, a person does not re-present an 'image' of that situation but remembers the earlier experience. This means that thinking back on one's past experiences does not generate a third-personal observational stance at the cost of losing the memory of *experiencing* but that remembering rather combines both of these two aspects. Remembering subjective experiences is reflecting on oneself from a third-person vantage as an intentional object *but* is simultaneously a memory of how one felt in those situations of ongoing experience (*the noesis*). From this stance, the common experience of feeling emotions and being *moved* during remembering, e.g., childhood events, makes perfect sense. "In memory, one reproduces and relives, as it were, this past experience, but in a modified way, namely, precisely as re-presented, and thus as not occurring now but posited as past" (Thompson, 2007, pp. 289–291; Thompson, 2010, p. 165).

By analyzing the qualitative interview data, I was able to identify four main types of personal gameplay narration. In the first group, the interviewees described their [1] first-person experiences of playing a specific video game. The second group consisted of personal narration of sharing gameplay experiences with others, and of the folkloristic traditions that originated from playing video games [2]. Narration about interviewees' first encounters with video games [3] formed the third group. In the fourth type, the interviewees described how playing video games had affected their everyday life experience [4].

The narration about first-person experiences of playing video games consisted of [1.1] *enacted narratives* of gameplay and [1.2] *narration about gameplay experience of a heightened value*. When narrating enacted first-person gameplay experiences, an interviewee told me a story about a particular gameplay session in which he

or she as the player had experienced something emotionally significant. Typically, these stories included descriptions of high arousal, suspense, and dramatic turns of events:

> In this game, there is one turning point, which… everyone knows, it is really difficult, and it really becomes clear to you that you are not invincible at all… Well, finally after dying many times, I got past the whole thing and felt like a real winner. But then something happened… there is this mechanic which lets other players enter your game and try to kill you, and if they do, they are rewarded and you die. So, there I was... just went through a real hell in the game and was able to breathe out, when someone invades my game and kills me right there before I was able to save." (P12, adventurer-explorer)

> In *Nethack*, if you know what you are doing, you can play the game through every single time although the levels are procedurally generated. There are only very few sudden deaths, and mostly those are due to your own bad decisions. I remember, for example, that I once died in the last levels among some elemental planes when I entered by a wrong command key and shoved a staff in my bag which then exploded and destroyed all my healing potions. (P23, commander)

> One experience I remember from the recent past was about *Elder Scrolls Online* and its single-player campaign. There is this one part in which you have to go through a massive dungeon and a boss is waiting at the end. The boss fight came a bit suddenly, and it had an enormous group of minions with it. Then I was like, "Shit I have the worst possible skill set!" I had the game setting where I lost every weapon when I died, so after two deaths I was desperate. But then I used all the potions I got and tried once more, and won the damn thing finally. I remember the obsession: "God damn, I will not concede." (P21, companion-adventurer)

Often the stories about enacted narratives [1.1] in gameplay were simultaneously stories about a video game gameplay experience of a heightened personal value. In this latter type of stories, the participants described gameplay experiences that they had found particularly memorable:

> *Majestic*, it truly got under my skin. Majestic is an *alternative reality game* in which the game entangles with everyday life environments and routines. It was supposed to be about conspiracies and *X-Files* types of things… After the first chapter, I was completely hooked. It was really scary, since I suddenly started to receive actual phone calls which were about the game's fictional universe... And at the end of the game, I was shown some satellite video feed, like a live-webcast,

about a van and its GPS information. And I realized that it was driving towards my home. I was like what the hell? And then I saw my own home address there, some state agents are coming to get me! The game just ended just there, the last thing I saw on my screen was "live feed" of some special troop soldiers with guns stepping out of the van. And I ran to the window to look, scared as hell, if there really was a van waiting for me outside. (P2, adventurer)

As a child, I played everything from *Alter Ego* to *Alley Cat*, but the most impressive game for me was *Loom*, a point-and-click classic by LucasArts in the 90s. For someone like me, a girl living in her own imaginative worlds and enjoying beautiful things, that game was a mind-blowing experience. I remember that I got stuck in *Loom* when I should have known what spell could be used to remove a tornado from above a sea. I was still very young, so the English story and its hints did not quite open to me. So, my dad came to help. He did not know the game, but he understood the mechanics. In *Loom*, the spells of the game are constructed from melodies. Being a patient man, my dad sat down and went systematically through all possibilities for melodies. Finally, he got it right, the storm clouds disappeared, and a smile returned on my face. (W1, adventurer)

The most memorable gameplay experiences for me are about *World of Warcraft*. Although it has been more than a year since I played last, I remember vividly how I leveled-up my first character, a warlock called Grokh, who is still my main avatar today… We began to play with my big brother and friends already in 2005 in a realm called Argent Dawn. All the areas in which I traveled were amazingly beautiful, even frightening, since I did not know if I had entered into a high-level area. In Tirisfal Glades it was easy, but when I traveled with my lvl 10 warlock to Western Plaguelands, I encountered immediately an aggressive lvl 50 plague bear which started to chase me. I think I screamed aloud when I urged my character run back to a safer area… Later we joined a guild which organized many role-playing events. We participated in weddings, festivities, and hunts. Some of these events started spontaneously, out of our feeling of community. For example, after completing a dungeon, we used to meet in Booty Bay tavern, got drunk and told stories. (W8, adventurer)

When we compare the two types of stories that describe first-person experiences of playing a specific video game, we can notice that storytelling about enacted narratives—or what kind of narrative structure an elapsed gameplay experience had— primarily concerns *player performance*, and the dramatic turns of events that took place in gameplay in relation to the player's skills. Enacted narratives [1.1] are thus first-person narratives about what the player did and how it affected the course of gameplay. In contrast to this, stories about gameplay experience of a heightened value [1.2] include detailed descriptions of the gameplay as an experienced whole, including the aspects of *Ludic*, *Diegetic*, and *Verisimilitude* (see Chapter 7).

The stories of a heightened value do not emphasize a player's skillful experience over the other aspects of gameplay experience. Although these stories include elements describing excitement and arousal, they are not directly linked to the player's performance but to the events the player experienced. These are stories about what happened to the player in the gameworld, what she saw, what she experienced, and how it made her feel. Whereas enacted narratives focus on an individual gameplay session, stories of heightened value take the aesthetic wholeness of gameplay as the unit of description. For example, participant P2 (adventurer) tells a story about her whole experience of *Majestic* gameplay. It is not one singular gaming session what matters most but how consequent sessions together constituted a gameplay experience of a heightened value.

The different qualities between stories of enacted narratives [1.1] and gameplay experience of a heightened value [1.2] can be further elucidated by considering what Gerald C. Cupchik (2011b) writes about reactive and reflective modes of experiencing. In reactive mode, a person engages with the activity to modulate feelings of pleasure or arousal, but in reflective mode, the person interprets and elaborates the aesthetic characteristics of the experience in relation to her own views on life and its meanings. It can thus be suggested that the stories about enactive narratives are primarily stories about being in the reactive mode whereas stories about a gameplay experience of heightened value are narratives of being in the reflective mode of experiencing.

When participant W8 (adventurer) describes community events of *World of Warcraft*, she introduces social interaction as a constituent of meaningful gameplay experience. In the data of 32 interviewees and 10 written descriptions, the narration about sharing gameplay experiences [2] encompassed two types of stories. The first type of these stories illustrates *gameworld accord* [2.1], which I discuss in Chapter 7. The second type describes folkloric traditions [2.2] that are largely generated by the "story-machine" qualities of gameplay. Let us first consider stories about gameworld accord:

> For me, playing has always been a solitary experience… The story and the characters are what matter for me in games. Unfortunately, I have not discussed games much with my friends since not many of them play at all. Nowadays, I talk mostly about *Fallout* games with my friends' boyfriends and with one of my male friends… I have organized with my pianist-guitarist friend two concerts in which I have sung radio songs that are played in the gameworlds of *Fallout 3, Fallout: New Vegas* and *Fallout 4*. It was wonderful to be able to perform for an audience who had shared similar gameplay experiences. (W7, explorer)

> This game is influenced by "real" UFO mythology, stories about abduction and stuff. This game was my first experience about emergent gameplay that seems to generate little stories you could then share with your friends. Like how your whole team got trapped in an ambush and only one of them, only a rookie, managed to escape and

> shoot by blind luck so well that we survived, and the alien was killed. During those years, I played this game simultaneously with several friends. Each of us played alone, this is a single-player game, but our experiences had similarities and then we shared them like some war stories. (P12, adventurer-explorer)

These two excerpts demonstrate how emotionally relevant gameplay experiences facilitate *gameworld accord* (cf. James, 2015), that is, shared cultural and environmental imagination. Because gameplay is often perceived as intrinsically meaningful and emotional, we are also interested in sharing these experiences with others who have also "been there." As Miller (2008, p. 267) writes following Amy Schuman (1986), experiencing games first-hand brings along specific "storytelling rights." Only by playing a game, can one gain access to a *folk group* in which individuals engage in cultural meaning-making of a particular kind of self-expression and traditionality. This quality of a gameplay experience engenders versatile new folkloric activities and traditions [2.2]:

> We were all fans of *Final Fantasy VII* at the time, and imitated the victory poses and attack styles of the game's characters in school. It was fun, it was one of the first games with 3D animation we had played, and the animation looked a bit machine-like, sometimes. It was fun to imitate and play with friends. We looked so silly. (P11, mercenary-adventurer)

> When I was a kid, we had a PC and some games. Some other children had Commodore, but not many had any kind of machine for gaming. It was the ancient past, you know. We acted out events of some of those games with our friends in the forest nearby. I think we played *King's Quest*, at least, and some other graphic adventures of the 1980s, too… (P22, patterner-commander)

> When I was maybe 8–10 years old, and my friend had *Civilization II*, we used to sometimes to take the idea of the game to our sandbox playing. We built our own states, monuments, dams and everything out of sand. I remember that we were only allowed to use a few wooden sticks, because in the game in England there was not much wood, and we did not want to break the illusion of the play. (W9, commander)

> A while ago I played *Heavy Rain*, and my husband watched me play. The game is an interactive drama game, so it is played by reacting quickly to symbols that appear and disappear on the screen. The idea is that the player can make meaningful choices and contribute to the personality of the playable characters, and to the story. So, I wanted to play one of the main characters, Ethan Mars, as a responsible and non-violent dad… But there was an event in which, with Ethan, I had to fight a man whom I suspected had something to do with kidnapping Ethan's son. The symbols started appearing and indicated me to

> fight the man. I pressed quickly the Playstation buttons: circle, square, triangle, X, R1, L1, up, down, left, right as accurately as I could. I did ok, Ethan found a gun, and I figured that the fight event was over already. But then, a shaking symbol R1 appeared on the screen prompting me to press the button. So, without thinking, I pressed R1, and stared in disbelief when Ethan pressed the gun against the man's head and shot him. I was like: "Nooooo! Why did you do that! That was so out of his character!"
>
> Well, the next day was really bad for me at work, I was so angry at my boss who organized an important meeting without consulting me first. So, when I got home, I cursed him to my husband who asked me: "R1?" And I shouted back "R1!" [laughs]. After that, we started to utter "R1" in every occasion where a single headshot would be really appropriate. Like when someone cuts in front of you in line. (P2, adventurer)

> When I was just a little girl, 6 years old I think, I liked to watch my uncle play many videogames and he let me participate in the decisions he made in gameplay. I was fascinated already then in all magic-like things, so I wanted to tell him what spell he would choose next in those *Final Fantasy* games, and I got to name the summoned guardian force creatures in *Final Fantasy VIII*. So, they got really "mighty" names. One was named "KARHUNHAMMA" [BEAR-TOOT] since the maximum length for a name was 10 characters. (P29, companion-explorer)

Although a few of the stories above include descriptions of folkloric activities that include a small group close friends, several are best described by what Elliott Oring (1984, p. 20) calls *dyadic traditions*. Dyadic traditions are "behavioral and linguistic routines that are generated, endowed with significance, and maintained within the dyadic relationship" such as in a friendship or in a marriage. Interestingly, Oring (ibid., pp. 21, 27) observes that many instances of dyadic traditions are characterized by playful attitude and humor. According to Oring, (ibid., p. 21), dyadic traditions have three core dimensions. First, they reveal whether the persons of the folk dyad have a similar attitude towards the elapsed experience and if the participants of the dyad are sensitive to the same qualities of that experience. Second, dyadic traditions are encoded and encrypted to symbolize an intimate relationship between the immediate experience and the members of the dyad. Such expressions typically do not make sense to people who have not experienced something very similar. Third, dyadic traditions are narratives of participation, and thus these traditions evoke a sense of a shared meaningful past.

The aspect of a *meaningful past* was indeed evident in the stories of memorable gameplay experiences. During the final moments of their interviews, many participants began to think back on their earliest gameplay memories [3]. While some in-

terviewees emphasized gaming technology when remembering their childhood experiences, and a few reflected that they had mostly played alone, a great majority of these stories were also about playing together with family members or friends [3.1]:

> As a kid, I saw my cousin, who is a bit older than me, play the *Mario World* game and defeat Bowser, the final boss. Then later when I played it alone, also I got to the same place. But then I got so scared of Bowser, and so excited that I did not dare to play. So, I died on purpose just before Bowser, because I just was too scared. I think that I was five years old. Most of my other early memories are about playing together with friends. (P7, mercenary)

> We played together quite many sports games, *Giana Sisters*, and graphic adventures by Sierra, solving the puzzles together with the help of a dictionary. So, it was more memorable, perhaps, because I did it with my friends. We talked a lot about these games and tried to figure out the solutions during schooldays, too. Those memories are really vivid, it is almost unbelievable. I remember many in-game rooms and its items very clearly. Like in *Giana Sisters*, after some 20 years, I still remember all the levels and enemies. (P25, explorer)

> We have some old home video tapes on which my sister is playing with the computer and our parents go: "Let your little brother play too", and my sister replies: "No, I won't." Then there is a slapping sound when I smash the keyboard and yell: "Go away! It is my turn!"… Then *Age of Empires 2* was published. For me and my sister, it was like "now we are *really* playing this game!" So many of our real-life conflicts and arguments have been since solved in that game… I think these are the most vivid memories I have from childhood. (P21, companion-adventurer)

> My mom got as excited as I did about *Pokémon* games, when she still was together with my dad… but my dad did not like it at all, it was all too expensive, like the *Pokémon* stickers and toys: "Do not buy any of that stuff anymore, it is a waste of time and money," he used to say. But then when we went into a supermarket just me and my mom, my mom bought me those stickers for me and whispered "Let's not tell dad. Now when you capture a Pokémon in the game, you can put its sticker into the sticker book." And then we played together, Mom and I, staring the tiny screen of the Nintendo Gameboy. (P15, explorer)

> I have many memories about the *Playstation* console. When we bought the console, there were no memory cards available, so we could not save any game. So, we played *Ape Escape* and were able to proceed really far in the game, and started to panic that we could not save the game. So, we begged our mom to go to another store to buy a memory card, and finally she went. It was really slippery then, so

> she managed to damage our family car during that trip… I also remember that my uncle, who died in 2000, liked to play with the console whenever he visited us. So, when he stayed with us, he played *Final Fantasy VII* and asked me constantly to get him more coffee. I put his coffee into a pint since he really needed a lot of that stuff. (P20, mercenary)

Earlier research has argued that we can remember self-referent information better than information about others, and that we even better remember events that include our close others (see Ganesh et al., 2011). Emotionally significant experiences are also remembered more vividly and in more detail than information that is experienced neutrally (see Jeong, Biocca & Bohil, 2008, p. 193). My results of analyzing the personal stories of interviewees support both of these theories. Although the above stories all emphasize gameplay as a social experience—regardless of if the game was designed to be multiplayer or not—it was typical for these stories to include references to gaming technology [3.2]. Indeed, some interview participants emphasized technology over the other qualities in their earliest gameplay memories:

> A strong memory from those early years is the waiting. You had to wait so long for a game to load, and it was terrible with C-cassettes since you did not know whether the loading was even going to be successful. And we copied those games with tape recorders. They even broadcasted the code of some games on radio, so we attempted to record that, too. (P25, explorer)

> My earliest memories are from the arcades they had on those great ferries between the cities of Turku and Stockholm. I was maybe 10 years old, and they had *Space Invaders* there. So, my parents gave me 10 Finnish Marks and I spend all of my money on a single session playing that game. There was a huge line behind me, and other kids shouted: "Could you please stop already!" (P31, daredevil)

> During the 80s, we lived in Sweden and used to drive between Finland and Sweden quite often. So, I could play electronic games in the car and I played so much I got blisters on my thumbs [laughs]. I still remember the tunes from the game, too [hums the in-game music]. I think that I can still remember the rhythm of the game, since it was synchronized with the tempo of the music. (P3, adventurer)

Finally, in the fourth type of personal gameplay stories, the interviewees described how playing video games had affected their experiences of everyday life [4]. The first subclass of these stories deals with *humorous* gameplay experiences [4.1]:

> *Jetpack Joyride* was a mobile game that I played a while ago. It was like, only when I had to take a dump, I played the game. So, I developed a kind of habit. Then one day, I looked: "Hey, there are some

> stats about my playing visible here!" I laughed about it afterwards with my friends. I had spent more than four hours playing the game. (P13, mercenary)
>
> Then I mentioned *Hay Day* to mom. I did not understand the point of that game at all, but when my mom tried it, oh my god! She started to play that for real and got my cousin, a 33-year old mother of two kids, to play it with her. And then they started to talk every evening on phone with each other, like: "Could you send me some wheat?" "Yes, I need corn myself." Dear lord, that was horrible. (P15, explorer)
>
> Then I play *Tetris*, I have played quite many versions of the game. On good days, I have played two *Tetris* games simultaneously, one with my right hand and the other with my left hand. One version of *Tetris* had a two-player mode. So, I played it alone in both the cooperative and competitive modes against myself. You could say that usually I won. (W3, mercenary)
>
> This would be my fifth playthrough of this game. You know, that there is the joke that if someone even as much as mentions *Deus Ex* to the people present, one of those people goes instantly home to install the game again? (P21, companion-adventurer)

In addition to stories that described a humorous quality of gameplay situation, a few interviewees described to me how the logic or the events of gameworld "bleed" into their everyday life experienced, especially in their dreams [4.2]:

> I have really strange dreams. Games tend to come really strongly into my dreams. Oftentimes, I have dreams in which the logic of the game, or its places and characters are integrated into my own imagination. So that dreaming feels a bit like playing. Some immersive and impactful gameplay experiences tend to stick with me so that I continue to play when I dream. (P20, mercenary)
>
> After playing *Half-Life* very intensively, I had the feeling in real life that I should check all the corners to see if there is something waiting for me. Well, I did not *literally* do that, but I had the sensation that I should be careful and sneak around. The logic of the game breaks through a bit, I mean, for a while after playing. And *Tetris,* I can play the game in my mind, especially when I try to get sleep, those blocks starts to flow around. (P3, adventurer)

Still another group of interviewees reflected that their experiences of gameplay had some phenomenological similarities [4.3] with their "real-life" experiences:

> Some game memories are quite vivid for me. Similar maybe to some of my memories of our family trips in Turkey when I was a kid. (P27, mercenary)

> Well, making choices is something that reminds me about real-life in these Japanese RPGs. For example, when I traveled with my dad to New Zealand to see the *Lord of the Rings* scenery, we had to constantly make choices about where to go and what to eat. We are both really bad at making such choices. Then if we are tired, we just argue: "you decide," and the other replies, "no, you decide." (P15, explorer)

Finally, a few participants in this study openly told me that playing videogames was a significant part of who they are, and how they live their lives. For these people, drawing from Titon (1980), gameplay experiences have become constituents of their *life story*:

> A story about my gameplay experiences is a story about my life. A while ago I got a free pass for 7 days of playtime in *WoW*, and I felt like 20-years-old again. I played maybe obsessively because I am pregnant, and although I am over-the-moon happy, I am a bit scared too, that soon I won't have time to do anything, least of all to play games. Well, the fear will soon be over, and I will be thinking about all the wonderful games I will be able to play with my child and my amazing husband (Alliance, Marksmanship Hunter Dwarf, level 85). Games and playing games is an important part of who I am, and I cannot imagine my life without playing games. (W10, adventurer)

When an interviewee shared her experiences of playing videogames with me, she invited me to know her values and personality. Stahl (2008 [1989], p. xxxiii) writes that such *intimacy* is a definitional characteristic of personal narratives, and I consider that the same holds with gameplay experience stories. Indeed, during the interviews I often felt an intimate link of mutual understanding and trust between myself and the interviewees when they described their most memorable experiences of playing videogames.

According to Stahl (2008 [1989], pp. 18–19), three features are typical to all personal narratives. The features are *dramatic narrative structure*, an expectation of the story to be *true*, and a recognition that the *identity* of the main character of the story is the same as the person telling the story. When the features of personal narratives are compared with gameplay experience stories, we can observe that, although gameplay experiences include an inherent dramatic structure that describes true events, the identity of the main character of the story is not necessarily the same as that of the teller.

As we have seen, the main character of a gameplay experience story is often the person as being a player or as being a player *and* an in-game character. Since gameplay experience stories denote that the teller describes events during which he or

she adopted the position of the player, these stories are typically not personal narratives but instead *persona narratives*, stories of experiencing the world from the vantage point of the player. Although both personal narratives and persona narratives sustain the teller's identity through her usages of the pronoun *I*, in persona narratives *I* refers not only to the current moment and to the past (see Stahl 2008 [1989], p. 27) but also to the person as being the player, i.e., her player persona.

Similar to personal narratives (see Stahl 2008 [1989], p. 25), persona narratives of being the player are not folklore but instead means for expressing non-verbal folklore such as values, attitudes and preferences. Furthermore, persona narratives are stories about gameplay experiences, which I have inherently argued are a folkloric form of cultural expression. As Stahl (ibid.) writes about personal narratives, persona narratives also reveal what happens not only in the recounted story but also in relationships between the storyteller and her cultural values—and what she finds to be meaningful in her encounters with the world.

The Seven Player Types and Meaningful Gameplay Experience

In this final section of the current chapter, I conduct a statistical analysis on how the seven player types (Chapter 3) differ from each other from the viewpoint of experiencing a video game as inherently *meaningful*. As I outline in Chapter 2, understanding meaningful gameplay experience is a main empirical objective of this thesis (RQ2). I propose that to remember an experience and to hold it as a constituent of one's *life story* (Titon, 1980) is to be taken as a signifier of heightened value, importance, and meaning.

In Chapter 6, I hypothesize that, since events of emotional relevance are remembered vividly, meaningful gameplay experiences and emotional gameplay experiences can be interrelated. In Chapter 7, I note that appreciating *Diegetic* dimensions in games is more strongly correlated with immersion than *Ludic* or *Verisimilitude*. I also note that the player types who enjoyed (N=1,718) *Diegetic* the most were also the player types that were the most eager to share their gameplay experiences with me. The qualitative data I analyzed in this chapter support this view; players of *The Mercenary* type, *The Adventurer* type, and *The Commander* type reflected their gameplay experiences in a more detailed and comprehensive way than the players of the four other types.

The survey of 1,718 participants included *The Psychological Empowerment Scale* (Spreitzer, 1995), which is a psychometrically validated 12-item 7-point Likert scale designed for measuring experienced empowerment in working environments. The scale consists of the four 3-item factors of *Meaning*, *Competence*, *Self-Determination*, and *Impact*. Here, I only report data from the *Meaning* scale.

Spreitzer (1995) defines the dimension of *Meaning* as "the value of a work goal or purpose, judged in relation to an individual's own ideals and standards." I modified the scale in the survey (N=1,718) so that it measured the perceived meaning of gameplay experience in its relation to the survey participant's values. The respondents were asked to specify how much they agreed (1=completely disagree, 7=completely agree) that "Every gaming session is important to me," "Player activities are meaningful for me," and "The game I play is meaningful for me". The alpha for the 3-item scale of *Meaning* was 0.94, which can be considered a very high value.

I then calculated the *Meaning* mean sums for each of the seven player types to explore whether the player types differed in this sense as I hypothesized. The results are shown in Table 23.

	Meaning sum	Std.	N	Play Time
Adventurer	4.93	1.47	178	910
Commander	4.47	1.45	322	820
Companion	4.07	1.66	137	640
Daredevil	4.10	1.50	249	650
Explorer	4.02	1.55	271	630
Mercenary	4.94	1.31	335	1030
Patterner	3.50	1.66	225	600

Table 23. *Descriptive statistics for the seven player types and their perceived meaningful gameplay experiences sums, as measured with the 3-item Meaning sub-scale (α=0.94) of The Psychological Empowerment Scale (Spreitzer, 1995)*

From Table 23 we can note that *The Adventurers* (M=4.93) and *The Mercenaries* (M=4.94) find video gameplay experiences much more meaningful than the other five player types. Also, the player type of *The Commander* (M=4.47) reflected to a degree that gameplay brings about distinctive meaningfulness, but this experience was not shared with *The Companions, The Daredevils* or *The Explorers*, who neither agreed nor disagreed with the statements of the meaningfulness of a gameplay experience. *The Patterners* were the only participants who disagreed to some extent with the three propositions. These intriguing results indicate that the motifeme factor approach provides a relevant method for understanding how players valuate their gameplay experiences. However, these results do not yet provide data on how the motifeme approach compares with other approaches on understanding perceived meaningfulness of the gameplay experience.

To investigate this question further, I complemented the analysis by computing bivariate correlations (Spearman rank-order) between motifeme preference factors (Chapter 3), the identified three factors of 'a good game' (Chapter 7), play time, and the factors of favored emotional arousal in gameplay (Chapter 6). Of these dimensions of player conduct, appreciating *Diegetic* qualities in games was the most highly-correlated with perceived meaningful gameplay experience (0.55), followed closely by player preference in *Journey* (0.52). Favoring high *Emotional Arousal* (0.48), enjoying *Assault* (0.45) or *Manage* (0.41) were all moderately correlated with meaningful gameplay experiences. Weekly play time (0.32), appreciating *Ludic* (0.38) or *Verisimilitude* (0.32) and favoring *Care* (0.27) in games were weakly correlated with perceived meaningfulness. Finally, a preference in *Coordinate* (0.19) showed only a very weak connection with perceived meaningful gameplay experiences.

These correlations do not indicate by themselves that preference in, e.g., *Diegetic* or *Journey* would be a strong predictor for meaningful gameplay experiences.

Investigating that question falls beyond the scope of this thesis. Yet, these results do reveal strong connections between specific types of gameplay preferences and the perceived meaningfulness of gameplay activity for the player. These connections open new views on understanding gameplay as a form of experience that some players may hold dear enough to remember for decades. However, these questions cannot be considered much further without taking into consideration another important aspect of the first-person gameplay experience, that of *motivational factors to play video games*.

9. THE MOTIVATIONAL PULL OF THE GAMEPLAY EXPERIENCE

> We should not forget that emotions are intentional. They are about something, and in order to understand them, it is not enough simply to pay attention to their expressions; we also need to look at the context in order to determine what they are about (Zahavi, 2014, p. 163).

I propose in Chapter 5 that we cannot assume that one desires to continue gameplay simply because she has adopted the position of the player. Rather, when the player does desire to play, she has motivation to play. Since gameplay experience is the phenomenon under analysis in this thesis, *motivation to play* can be suggested as *the eighth and final invariant* of a video game gameplay experience.

When conducting the interviews, after the interviewees (N=32) and I had discussed their favorite games and their preferred way of taking the player's position in video game gameplay, I typically asked a short question: "Why do you play?" This question was experienced by many as a difficult one. Whereas some interviewees clearly expressed that they needed a few moments to think about their reasons to play, others replied immediately: "Because it is fun," which led me to follow up with: "Yes, but what makes it fun?"

The question of why we play games in general, and video games in particular, is studied in the literature as *human motivations to play*. While there are many studies on the subject and its connections with gameplay experience (see e.g., Ermi & Mäyrä, 2007; Kahn et al., 2015), I find two major ones especially interesting for the current thesis. First, Nick Yee's (2006; 2012) studies on online gaming motivations are valuable for my work because his approach is based on a factor analytic approach and relating the results with prior player type research.

Yee (2006) constructed an inventory on motivations to play, based on empirical works on MMORPG (massive multiplayer online role-playing games) players and Richard Bartle's earlier work (1996; 2003) on player behavior—and the proposed player types of 'killers,' 'explorers,' 'socializer' and 'achievers' by Bartle—in a MUD (multi-user dungeon) game environment. By conducting an exploratory factor analysis of data on 3000 players, Yee identified 10 motivational categories (eigenvalue > 1 test) in players of massively multiplayer online games (MMOs). With an additional factor analysis on the ten components, he was able to reveal three overarching motivation categories: achievement, sociality, and immersion. Together with Nicolas Ducheneaut and Les Nelson, Yee later (2012) presented a confirmatory factor analysis on the motivations to play scale.

An even more interesting body of research was conducted under the umbrella of the Self-Determination Theory (SDT), a macro-theory of human motivations, by e.g. Richard M. Ryan, C. Scott Rigby, Andrew Przybylski (2006), Ron Tamborini, Nicholas David Bowman, Allison Eden, Matthew Grizzard and Ashley Organ (2010), and Tamborini, Grizzard, Bowman, Eden, Leonard Reinecke and Robert J. Lewis

(2011). These studies are relevant in the context of this dissertation because they enable theoretical discussions on how game motifeme factors (see Chapter 3, Chapter 8) relate to gaming motivations, and to meaningful gameplay experiences in general.

Fundamentally, to discuss emotional experiences of gameplay, we should be able to presume the player as an *autonomous* actor and the main cause for distal effects that take place in the game. Through the modes of interaction, the player may gain the "pleasure of being the cause," as Piaget (1962 [1951], p. 90) put it, describing enjoyment in play. Psychologist Robert W. White (1959) has called the capacity to exercise and extend one's capabilities and to be effective in an agent–environment relationship *effectance*, and its corresponding affect *efficacy*, and has argued that it is innately motivating.

Richard M. Ryan and Edward Deci (2000, p. 54) note that individuals vary both in how motivated they are and what type of motivation they experience, that is, in whether they experience *intrinsic* or *extrinsic orientation* to an ongoing activity. In the context of the current thesis, both the level of motivation and especially its orientation are interesting since "orientation of motivation concerns the underlying attitudes and goals that give rise to action—that is, it concerns the why of actions" (ibid.).

According to Edward Deci and Ryan (1985), what White (1959) described as effectance is called, in empirical psychology, non-drive-based intrinsic motivation to be self-determining and *competent*. The experience of autonomy and competence (or the lack thereof) thus underlies all emotions brought forth by gameplay. This connects emotions induced from gameplay directly to the discussions of motivations to play; emotional experiences cannot be distinguished from experiences of human motivations. Recall from Chapter 6 that emotion can be understood as "the intention to act in the near future" (Freeman, 2000, p. 14), whereas "to be motivated means to be moved [i.e., inspired] to do something" (Ryan & Deci, 2000, p. 54).

In extrinsically motivating activities, the subject experiences external pressure toward a specific instrumental outcome. This diminishes the subject's perception of herself as being the locus of causality, which renders the situation controlling and restricting for the individual's creative self-expression. (Deci & Ryan, 1985, p. 110) In contrast to this, intrinsically motivating activity is inherently enjoyable and satisfying for an individual; "When intrinsically motivated a person is moved to act for the fun or challenge entailed rather than because of external prods, pressures, or rewards" (Ryan & Deci, 2000, p. 56).

Intrinsically motivated activities are not done for instrumental reasons but for intrinsic interest, positive experiences, novelty appeal, challenge, and aesthetic value. Such explorative and spontaneous playful behavior is connected to intrinsically motivating behavior not only in humans, but also in many animals. However, the concept of 'intrinsic motivation' does not mean that someone would be innately motivated without taking into account the situation in which the individual acts. Rather it means that a person experiences intrinsic motivation towards specific activities in the agent–environment relation. To understand intrinsic motivation, both the individual and the task she engages with must be considered (Ryan & Deci, 2000, pp. 56–59).

The Self-Determination Theory postulates three psychological needs for well-being, and argues that intrinsically motivating activities manage to support all three. The needs are *autonomy*, *competence*, and *relatedness*. Put differently, according to SDT, persons are intrinsically motivated to engage with activities that support the satisfaction of the three fundamental needs (Tamborini et al., 2010, p. 758). *Autonomy*

refers to the willingness and volition to engage with an activity. One experiences autonomy when the activities have personal value for the experiencer, and when the person has a clear understanding of her multiple choices to take action. Clear and constant feedback and perception of how one's own actions generate effects support autonomy and thus intrinsic motivation. (Ryan, Rigby & Przybylski, 2006). *Competence* is the need for putting one's skills in use to overcome optimal challenges and to experience effectance. The opportunity to learn new skills, master tasks at hand, and to be rewarded with positive feedback enhances competence. Competence, however, does not support intrinsic motivation if the individual does not also perceive herself to be autonomous in the situation. Finally, *relatedness* is the sense of being socially connected to close others (Ryan, Rigby & Przybylski, 2006).

Ryan, Rigby and Przybylski (2006) argue that the attractiveness of gameplay is primarily due to a game's capability to facilitate psychological need satisfaction and offer experiences of autonomy, competence and relatedness while playing. They suggest that the Self-Determination Theory can thus provide better understanding on why gameplay is so commonly experienced as "fun".

In this view, competence in gameplay is connected to intuitive game controls, optimal challenges and positive feedback. Competence is therefore directly associated with experiences of achieving one's objectives during play, whether these achievements are, e.g., in-game rewards for meeting the game's goals, or new skills the player learns through continued play. Gameplay engenders experiences of autonomy since playing is voluntary and the player can usually choose a game to her liking and experience being the locus of causality in game events. Also, the player can self-regulate her attitudes toward the game and make decisions based on afforded choices.

Relatedness is clearly connected to multiplayer-situations, although Ryan, Rigby and Przybylski (2006) also express interest in studying whether interacting with artificial intelligence may provide experiences of social connectedness. Intriguingly, this latter line of argumentation was adopted later in a statistical study by Oliver et al. (2015) who utilize relatedness as the player's "relationships with game characters rather than with other players."

In contrast to Yee's (2006) empirical approach on identifying motivations to play online games, Ryan, Rigby and Przybylski (2006) argue that theory of motivations should not focus on reasons for why people play specific types of contemporary games but ask instead how games in general tap into basic human motivations and are able to satisfy fundamental psychological needs. Building on this stance, Ryan, Rigby and Przybylski (2006) offer that the reasons we play are the same as our reasons to engage with any activity, and thus "players of all types seek to satisfy psychological needs in the context of play." Ryan, Rigby and Przybylski (2006) and Przybylski, Rigby and Ryan (2010) do not, therefore, conduct explorative studies on what the motivations of play *are* but ask how general human motivations to experience autonomy, competence, and relatedness manifest in gameplay. The authors, therefore, suggest that gaming environments are not, in this sense, unlike the 'real world.'

Study 5: Exploring the Motivational Drivers

In contrast to studies by Ryan et al. (2006) and Przybylski et al. (2010), the current thesis is not built on the Self-Determination Theory, and thus I do not take it as given that the three psychological needs of autonomy, competence and relatedness are necessarily the main motivations to play video games. Instead, I have fashioned an exploratory study on the motivational factors that players themselves perceive as their reasons to play. My overall goal in doing so was to seek answers to the following questions:

RQ2.11: Do the recurrent reasons for why people play video games constitute motivational factors?

RQ2.12: If such factors can be identified, how do these factors relate to the three dimensions of SDT, i.e., autonomy, competence and relatedness, and to the three overarching motivations to play online games as presented by Yee (2006)?

In order to study these questions, I constructed a *preliminary* motivations to play inventory based on a literature review, and a focus group meeting with three game designers, a psychologist, and a game design researcher in October 2014. The inventory was first tested in a pilot study (N=50), which contained open-ended fields to explore players' additional suggestions for their recurrent reasons to play video games. The final version of the preliminary inventory included in the survey of December 2014 (N=1,718) consisted the following items:

Item	*Motives to play video games*	*Mean*	*SD*
1	I play with my family and friends because of their company	2.51	1.39
2	I play to relax	3.87	1.05
3	I play for the fun of playing	4.10	0.99
4	I play because I am interested in different games	3.24	1.29
5	I play because I want to get immersed in games	3.12	1.37
6	I play online because of the other players	2.21	1.35
7	I play to kill time	2.98	1.24
8	I play because my friends play	2.11	1.26
9	I play because of competitiveness	2.33	1.33
10	I play so that I can get feelings of achievement and success	2.72	1.34
11	I play to avoid anxiety	1.98	1.24
12	I play to face challenges and to develop my skills	2.74	1.32

Table 24. *Motivations to play items included in the survey of December 2014 (N=1,718), and the mean preference sums and standard deviations for each item.*

The respondents of the survey were asked to report, on a scale from 1 to 5, how important (1= not at all important, 5 = very important) the above reasons were for their

gaming. From Table 24, we can see that the most important reason to play digital games in the data of these 1,718 Finnish and Danish respondents was clearly fun (item 3), followed by relaxation (item 2), game interest (item 4), and immersion (item 5). I also studied this question in the sub-group of mobile game players (n=238, see Chapter 3, Study 1). In this sub-group, the most important reason to play was again fun (mean 3.89), followed by relaxation (mean 3.67), but the third most important reason to play for this sub-group was to kill time (item 7, mean 3.05). These three motives were the only ones to have a mean sum above 3.00, which indicates the motive was at least somewhat of an important reason for the respondents to play digital games.

I analyzed the main data set (N=1,718) by conducting an exploratory factor analysis using principal factor extraction, polychoric correlations for computing factor analysis, and varimax rotation of the 1,718 respondents. I first identified the number of factors by using Velicer's minimum average partial (MAP) test, and accepted only factor loadings greater than 0.5. The MAP test suggested that two factors should be extracted from the data. In the first solution, items 7 and 11 had factor loadings < .5 and were excluded from the analysis. After excluding these items, I ran the MAP test again to confirm that two factors were still to be extracted. The second iteration with the remaining 10 items produced a solution with 2 factors, in which all items showed loadings > .5 (see Table 24).

Item	Factor 1	Factor 2	Uniqueness
1	0.6147		0.5516
2		0.6698	0.5513
3		0.8017	0.3450
4		0.7213	0.3646
5		0.6956	0.3786
6	0.7713		0.3697
8	0.8028		0.3435
9	0.7223		0.4495
10	0.5878		0.4835
12	0.5294		0.5060
Mean	2.4371	3.5749	
Std. Dev.	0.9736	0.9283	
Alpha	0.8257	0.7907	

Table 25. *Factor Loadings, uniqueness for items of the preliminary 'Motivations to play' scale and descriptive statistics for scale sums. Note that mean, standard deviation and Cronbach's alpha are calculated using items with loadings above 0.5.*

Six items (1, 6, 8, 9, 10, 12) loaded on the first factor. These items indicate that the player plays because she enjoys the company of others (items 1, 6, 8). She plays video games also because she is motivated by achieving goals and experiencing success (item 10), and because she is able to develop her skills in gameplay (item 12). The

player is furthermore motivated by competition, because it either offers her challenges or because when competing, she can be with close others (item 9), or both of these reasons.

Four items (2, 3, 4, 5) loaded on the second factor. These items indicate that the player is motivated to play because playing is fun and relaxing, and because she can immerse herself in games that are inherently interesting to her. All of the ten items included in the analysis loaded on a single factor without showing cross-loadings.

The ten motives to play and the two factors, which I label *Fun–Immersion* and *Relatedness–Competence*, worked as my framework to discuss with the 32 interviewees why they played games. Similar to the theme of 'a good game,' I first encouraged the participants to freely reflect on their own views on the subject, and I waited until after they shared their reflections to present the identified two motivational factors. Then, we continued to discuss whether these two factors were able to capture what they considered to be their own main drivers for playing video games:

> Mostly I play just to relax, and to have fun, and to experience something different from daily tasks and routines. Well, there is also the fact that games give me constant feelings of success. In real-life I must learn for years to play some musical instrument, but in games I can just grab the plastic guitar with five buttons and just perform an amazing solo before a bunch of people. (P12, adventurer-mercenary)

> I like games that I can play for 100 hours or even more, but only if the story is fascinating. I also like if I don't have to only follow the main story but if I can choose to do other things, too. Playing games relaxes me, you know. So, if I have awful stress, it helps. Other than that, I do not know. (P1, adventurer)

> All in all, I like challenge the most. I do not mind being really serious, and I enjoy tasting blood in my mouth. And if I then succeed, that is really rewarding. But fun, I do not think that gaming is so much "fun." (P11, mercenary-adventurer)

Several interviewees described their motives to play congruently to the model of the two motivational factors, *Fun–Immersion* and *Relatedness–Competence*. However, after only a few interviews, I observed that this was not always the case. For instance, there were player-interviewees who emphasized *either* the elements of challenge or being together with friends, without associating their reasons to play to the combination of those motives. Some players stressed the importance of experiencing the diegetic qualities of games but did not connect this to 'fun,' 'relaxation' or "mere fun":

> Nowadays, the story and the characters are what motivate me to play. I do not want to waste my time in mindless shooting but immerse in stories because they just feel more meaningful. Maybe I want similar experiences from playing as from books, movies or music: narratives, emotions, experiences, not only fun entertainment. (W9, commander)

Furthermore, a group of interviewees talked about a motivational driver that was missing from the original set of survey items (Table 24) but is recognized as a basic ingredient for intrinsically motivating activities—*autonomy*:

> I want to be able to define myself how I play, and if *I* want, I go fighting against some boss or just wander in the gameworld without any objective, just searching for stuff. I want to go with my own flow and decide myself. I do not like to follow some agenda set by others. (P2, adventurer)

> There is something engaging in those gameplay situations in which all the weapons and items you had are taken away, and you must just rely purely on your own decisions to succeed. I sometimes even do it by myself. For example, in *Fallout* if I'm at level 20, I just leave all my stuff behind except one gun and start to search for new stuff from scratch, since… I am able to do so… So, it is the feeling of empowerment that pulls me to play. (P21, companion-adventurer)

How should the results of the preliminary explorative study (N=1,718) be interpreted? Why were the elements describing fun, interest, and immersion loaded on the first factor and the items of competence, relatedness, and competition on the second factor? Although most of the interviewees did recognize that the twelve motives (Table 24) were crucial for their play, a fair amount of the players identified their own play as being motivated by either challenges *or* the company of the others, and either fun *or* immersion in the gameworld. The Self-Determination Theory provides us with a relevant theoretical framework to analyze these results.

Ryan, Rigby and Przybylski (2006) suggest that intrinsic motivation in gameplay is associated not only with autonomy, relatedness and competence but also with *presence*, which they understand as "the sense that one is within the gameworld." Later, Przybylski, Rigby and Ryan (2010) studied how gameplay experiences that manage to satisfy the needs of autonomy, competence, and relatedness predict presence. They consistently found in several studies and experiments that satisfying the three motivational needs not only predicted game enjoyment but also immersion (Przybylski et al., 2009, p. 253). The players whose motivational needs are satisfied, therefore, "are more phenomenologically embedded in the emotional, physical, and narrative elements of the gameworld" (Przybylski et al., 2010, p. 162).[107] Furthermore, as I mention earlier in this chapter, Ryan and Deci (2000, p. 56) and Ryan, Rigby and

[107] Przybylski, Rigby and Ryan (2010) report a study in which they compare how the three SDT needs predict game enjoyment when compared to the overarching motives to play online games proposed by Yee (2006). As I mention already in Chapter 3, and is noted also by Przybylski et al. (2010), Yee's model studies motivations as activity-bounded phenomena, whereas SDT is based on universal psychological needs, which are argued to apply across all kinds of situations. By conduction regression analyses, Przybylski, Rigby and Ryan (2010) found in their study that the three needs all predicted game enjoyment, but the "player motives" of achievement, immersion, and socializing by Yee (2006) did not.

Przybylski (2006) offer 'fun' as a recurrent description for an experience in which the three psychological needs of autonomy, competence, and relatedness are satisfied.

The argumentation by prominent SDT theorists suggests, then, that neither 'immersion' nor 'fun' are to be considered as parallel factors to autonomy, competence, and relatedness but instead *second-order* phenomena, that is, types of experiences of situations in which the SDT needs are fulfilled. 'Interest' is not unlike 'fun' and 'immersion' in this sense, as is discussed later in this chapter. The SDT theory thus offers an interpretation of the two-factor model revealed in the preliminary study I report above: the factor, *Relatedness–Competence*, can be considered as a first-order motivational factor to play, and the factor that encompasses both 'fun' and 'immersion'—as well as relaxation and interest (Table 24)—can be considered to describe second-order experiential and emotional outcomes of gratifying play.

Although the two factors of *Relatedness–Competence* and *Fun–Immersion* can be argued to be sympathetic with both SDT and the three motivational factors to play online games as proposed by Yee (2006), these preliminary results are not identical to either of these models. In addition to not making a distinction between competence (including an item describing achievement) and relatedness (including an item of socializing), the results reported here differ from Yee by introducing 'fun' as a factor and by relating it directly with 'immersion.' In comparison to SDT, the need for 'autonomy' was missing from the inventory (Table 24). However, the analysis on the interview data suggested that 'autonomy' could be an important motivational driver for playing video games, which led me to reconsider the preliminary motivations to play inventory. Also, I wanted to investigate further whether analyzing additional data would result in a model describing first-order and second-order motivations in a more distinguished way. Most importantly, I was not fully convinced by the connection between fun and immersion and relatedness and competence since not all of my interviewees associated these drivers to play with each other.

Seen from an SDT stance and supported by the qualitative interviews (N=32), the preliminary study was not fully successful in identifying distinctive motivational factors to play but instead revealed that motivations to play could be divided into first-order and second-order constructs. However, the data from the preliminary study does not provide adequate tools to study this question in more detail. Therefore, I decided to design an additional study to investigate precisely this matter.

To be able to develop the motivations to play inventory, I conducted a SDT literature review. Because of this, the second study was more firmly informed by SDT, although I designed it as an exploratory study without postulating the SDT needs of autonomy, competence, and relatedness as primary reasons to play video games. The additional inventory items were, however, even more crucially influenced by a more profound analysis I conducted on the qualitative interview data (N=32) and the open-ended answers of the survey (N=1,718).

Developing the Motivations to play Scale

I analyzed the interview data in November and December 2015, which enabled me to take the results of this analysis into consideration in reconstructing the motivations to play scale before conducting another survey (N=845) in late December 2015. As I mention in the beginning of this chapter, the question, "Why do you play?" was a

subject area I discussed with every interviewee, most typically in the final part of the interview. I present here the findings of my analysis on this specific part of the qualitative data and elucidate how I developed the motivations to play scale based on the interview results. As mentioned earlier, many of my interviewees stated at first that they played video games simply because it is fun and generally pleasurable. Often, the topic of what motivates players to play led them to also discuss *emotional experiences* they get from gameplay:

> It is mostly fun, but it can also be irritating. But mostly I play just because it relaxes me and just feels good. So, it is about fun, then. (P1, adventurer)

> I find gaming entertaining, that is why I play. It is the same thing when I read stuff. I do not read novels to learn something or to educate myself. I want to be entertained. (P19, explorer)

> I just want to build houses so that the gameworld would be really nice… It pisses me off when another player comes to destroy what I have created. I would just like to design and build for my pleasure and to make the citizens happy. (P25, explorer)

Another group of interviewees emphasized that the experiential outcome they hoped for was not general pleasure but rather the feeling that playing a specific type of game *relaxes* them and works as a method for stress relief:

> When I lose, I quit. But it does not mean that I would not begin again in 10 minutes. I do not like it if I have to push my skills to succeed. There should be an option for avoiding real challenge. I want to play easy games. The best games relax me, they take my thoughts away from my own problems. (P28, explorer)

> For me the most important feeling is relaxing and the flow-like state. It takes away my stress, and I do not have to think about shopping lists or diapers for a while. I can just lay back and be. (P3, adventurer)

> I play mobile games maybe about 30 minutes daily. Just because after work I want to fall on the couch, breathe and relax. (P11, mercenary-adventurer)

A few participants connected this type of playing specifically to *mobile game gameplay* and made a distinction in this sense between mobile games and other type of games they played. Some interviewees stated explicitly that they played mobile games merely to avoid boredom:

> I play mobile games if I have the feeling that I must do something with my hands or stay awake. Like if I do not have the energy to listen

> to a lecture, or something. But just getting a high-score does not motivate me. It is like after two minutes—thank you, I am done. (P14, adventurer)

> Yes, *Candy Crush Saga* is like a secondary activity for me. It does not really relax me. I never play these games to "have a *me*-moment." I just play while I eat my lunch, or something like that. If I would not have the energy to get up from my bed in morning, the light of my phone and the sounds of a mobile game would wake me up nicely. But that's that, really. (P29, companion-explorer)

Furthermore, there were a few interviewees who did not emphasize gameplay as generally pleasurable and relaxing, or mobile gaming as a secondary activity to avoid boredom. Instead, they reflected on their playing as a self-conscious method of regulating their mood:

> Games as media are a bit similar to music. There are many options for your current mood. In different life situations, you can enjoy different types of games. Some can try to find a balance in life with the help of games. (P4, adventurer-mercenary)

> Platform games are like "you do not need your brains," they just give you something to focus on, I like them because of that. In some games, the trigger is in social interaction, in *SingStar*, for example. And in some games, solving puzzles. Or it can be some combination of those. (P22, patterner-commander)

The interview data suggests that there are at least four ways to approach the 'pleasurable' experiential outcome of playing for fun: an expectation that gameplay i) makes you feel good in a general way; ii) relaxes you and distracts you from your real-life issues; iii) acts as a secondary activity to avoid boredom or to kill time; and iv) is a way to self-regulate your current mood with the aid of entertaining and enjoyable gaming.

According to the argumentation by Ryan, Deci, Przybylski, Rigby, the pull of games is largely due to their capability to facilitate activities that satisfy all three fundamental needs. Efficacy, challenges and skill-growth facilitate competence; opportunities to explore and choose ways to act support autonomy; and cooperation and intersubjective communication enhance relatedness (Przybylski et al., 2014, p. 442). These needs, furthermore, are what bring forth experiences of self-determination, argued by these authors as intrinsically motivated—"*fun*" being one of the most common ways to express such an experience.

Still, it must be asked: what is *fun*, exactly? Fun is, indeed also in the data collected for this study, a recurrent description for what motivates one to play games. Again, in the terms of Goffman (2013 [1961], pp. 34–44), notable in gameplay situations is the absence of "interaction tension" and the corresponding presence of "euphoric ease," which enables experiences of fun. Interaction tension emerges if the desires of a person and the situationally normative are not aligned. Characteristic of a

gameplay experience is that what the player wishes to do is explicitly regarded as what is expected to be done in order to be successful in a game.[108]

In contrast to playing for fun, the interviewees' narration on playing for competence focused on specific qualities of their preferred gameplay experiences and the expected emotional outcomes, especially the feeling of achievement:

> The experience of control is so important. It is what makes playing enjoyable. But I do not play only for achieving something. For example, in *Streets of Rage*, which is an old-school fighting game, every punch and fighting sound gives a little reward to my brain, so it feels good. I like arcade games, since they require skills and you can really see yourself getting better every time. (P7, mercenary)

> It is more fun when you can level up and you become more powerful, so that is why I play. It is also about the story, but it is really about the feeling of achievement, like wow, I actually made it. (P15, explorer)

> Well platformers give me a different feeling, like my adrenaline-levels are higher. But in strategy games, you usually have to start from the bottom and be worse than the others. And when you get victories, you get better so that you can eventually beat pretty much everything you encounter. So, reaching that level is satisfying. (P30, commander)

Some participants emphasized that the most gratifying gameplay experience was a result of mastering their own gaming skills. When searching for this experience, the players may intentionally want to engage with games of an extremely hard difficulty level:

> These [bullet hell] games are so over-the-top difficult, I have wondered many times why I even play them. It is constant struggling and banging your head against the wall. But then when you beat an impossible boss, you are like… the feeling, it is this mind-blowing euphoric good feeling, the adrenaline levels are sky-high. Your hands shake like hell when you finish, so it feels like you would have just

[108] According to Deterding (2015), games outline a specific range of emotions and are designed to encourage players to express these emotions in gameplay. In this sense, games do not only present a set of rules to the players but also a normative spectrum of "emotion display" within which the interaction tension is reduced and the euphoric ease, i.e., the experience of fun, becomes possible. For instance, if a person finds the competitiveness of *Monopoly* unappealing, there is a tension between the emotions connected to succeeding in the game and those that the player finds motivating. To put it differently, to experience fun, the needs and motivations of the player should align with those enabled by the gameplay and the dynamics of the game system itself.

> escaped from an angry pack of wolves and barely survived. (P13, mercenary)

> It is about getting better and proceeding in the game. So, you can feel that, hey, I can do this now! So that's the feeling I aim for. In some games, like in *Diablo*, I prefer collecting items and developing my characters, but it is really more about learning new skills as a player and getting better. It is fun, and challenging… well it is fun because it is challenging. (P23, commander)

While some reflected that the development of their own skills was the key for their best gameplay experiences, some thought that learning how the game system works was the thing they were looking for:

> Well for me, the reward I get is about learning new things. In some older games by Paradox, you do not really know what happens in the game. You see some changes, but you have to figure out yourself why just these things happen. So, I went through the structure of the game by myself and read the game's files. It is something I enjoy, to understand how the game system works. (P17, commander)

Still another group of interviewees pondered that they were expecting to experience an *epic win*, the culmination point of the gameplay, a distinctive achievement to be remembered:

> I want to get that "epic win," it is the best thing in gaming. To get that feeling "I was able to do that, yeah I did it! I am so good!" You can get those experiences so much more often in games than you can in real-life. So, I look for real challenges in games to get real feelings of epic winning. It is not bad at all to feel a little panic and scared, and immersed, it enhances the feelings. (P20, mercenary)

By analyzing the interview data, I was able to highlight four different aspects that players find rewarding when they play for competence. Players value a sense of achievement that follows an experience of: i) becoming generally more powerful in a game and able to overcome any challenge they may encounter; ii) mastering their own skills as a competent player; iii) learning and understanding the complex game system and its regularities; and iv) an epic win over a challenging and formidable foe. To these we should add that many interviewees emphasized the importance of experiencing making progress in a game. It is important to note that all of the above aspects of experiencing challenges and achievements are also possible in solitary gameplay. However, two other types of experiences emerged in the data when the interviewees' reflected on their multiplayer game experiences:

> Competitive online gaming was compelling because I felt that I could be one of the best players if I only practiced enough… But I quit in 2005, because it was too time-consuming and not really that fun or

> glorious… it was a rewarding thing to do since suddenly you were really good at doing something. (P11, mercenary-adventurer)
>
> There are maybe 10 of us now, and nothing related to games is too obscure for us. Whatever we play, we tend to play it seriously, compete, shout and stuff. I really like to have some way to assess how good I am in games, some ranking or high score list, for example. Being able to compare your performance with the others' makes it possible to form teams with equal skill levels. (P6, commander)
>
> The most memorable experiences for me have been those moments when… you are the last one alive of your team... You can feel the excitement rising and your heart beating faster. And then there is the relief. And when you succeed, everyone is really happy and praises you. It is a powerful feeling. (P7, mercenary)

These three interview excerpts highlight that social play broadens the sense of achievement into v) winning a competition and social recognition and praise from the other players or from the audience. The last two aspects of playing for competence are closely connected to the motivational driver to play to be with close others, but these two reasons to play should not necessarily be equated. When one plays for relatedness, she is primarily expecting experiences of socializing, which may render the game itself a 'by-product' of the experience. Of course, one can play competitively *because* it enables social interaction with others. In this sense, the fifth and the sixth aspects of playing for challenge could be situated in between the motivational factors of competence and relatedness. In some narratives by the interviewees, however, it was clear that they played primarily to be with others rather than to be competent:

> So, with my brother, it is now more about being together than playing a specific game. We are both interested in games, yes, but games are more like a catalyst or engine for us to spend time together and talk about everything. (P17, commander)
>
> It is a shared experience. When we play together, it is like watching a movie with friends. The game is experienced simultaneously, but there is a deeper sense of doing things rather than just watching something. For example, when we play *Final Fantasy* games simultaneously, each of us at our own home, and talk over *Skype*, we can cheer on the others and decide together where to go next. (P9, mercenary-adventurer)
>
> I started to play *EVE Online* in 2012. The game is so huge. It is an open-world game, so you can do almost whatever you like. The social aspect is very strong in this game. Many times, I just logged into the game and chatted with other players without even playing at all. We

> talked about everything, like about daily news and whatever was going on in our lives. (P27, mercenary)

When talking about social gameplay experiences, some players noted that they played games i) to have a reason to spend time with their friends or family members. This was especially true when the interviewees reflected on their favorite board games. Others emphasized that multiplayer gaming ii) enhanced the 'fun' element in gameplay, while still others thought that iii) multiplayer gaming, either local cooperative play or online gaming, brought some new elements to the game that would otherwise be inaccessible for them in single-player gaming. Finally, there were a few players who specified that playing together made the experience more immersive. The main elements in the personal narratives of immersion, however, were the desire to act as an autonomous agent in the gameworld and to participate in its events. Let us next consider how the interviewees described autonomy as their primary reason to play:

> For me the best thing is a specific… freedom. So that I do not have to be anywhere or to do something someone tells me to do. I can be independent. When I played more, I could literally close every door in my home, put down the curtains and decide that I would not answer the phone if it rings. It is really a unique feeling. It is *my* moment. There is only me and the pale light of the screen. (P2, adventurer)

> Now when I think about it, being able to make my own decisions is really important. If a game does not enable me to play as I like, I lose interest really quickly. When I think about what game to play next, I always check first what kind of choices it provides for me. I like to explore all possibilities in games. (P4, adventurer-mercenary)

> Being able to be in control and make your own decisions is paramount. When I play, I try to remember that I do not really have the control, it is something designed in the game. But it is a peculiar effect, I start to feel like I can really make a difference. (P13, mercenary)

Several interviewees considered the possibility to be autonomous as a key ingredient for experiences of immersion, escapism, and continued play at large:

> I am fascinated with being able to fly X-Wings and swing at Darth Vader with a lightsaber or whatever, but in online games I lose my interest because, you know, "hell is other people." So many online groups are toxic and hostile. So, if you even get in such a group, you suddenly must do all kind of shit and keep up your level to the standards of the others. (P12, adventurer-explorer)

> *Red Dead Redemption* is one of my favorite games. It has such a strong atmosphere, you can lose yourself there, just be immersed in the gameworld. It is a real feeling of being there and to be able to go

> wherever you like. It is a sort of escapism, I guess… I like it to be my own experience, to find my own path. (P11, mercenary-adventurer)

Mostly, the personal narratives of an immersive experiential outcome were directly connected to the diegetic qualities of the game. Many interview participants emphasized the importance of an expansive gameworld and compelling storyline. When doing so, they often compared gameplay experiences to their experiences of watching movies and reading books:

> What keeps me playing is the story of the game. I want to know how the story ends. My personality is like that, I want closure… Even if I don't identify with the game's characters, I am immersed in the gameworld. I have traveled quite a lot in many countries, and gaming feels a bit similar. It gives me strong and vivid memories. (P13, mercenary)

> It is about making decisions and then following that path by playing a role. For example, in *Dragon Age* and *Deus Ex*, when you have made a decision, it is going to affect the story… I like to take the perspective of a character and then start to act like she would act and think like she would think. (P21, companion-adventurer)

> I like games in which I can create and design my own avatar. I hate to play in groups of many players, but I like the character creation and customization options in MMORPGs… It is about entering the gameworld and experiencing it. You want to know what kind of place it is, and get to know the people who live there. (P18, adventurer)

Several players thought that best gameplay experiences were those that were able to make them feel *attached* to the gameworld and especially its characters, including the avatar of the player herself. This experience of attachment was found to be especially emotional and touching by a few interviewees. It was what made them care about their experience and feel, for example, emotions of sadness and sorrow:

> Well, I do not know if I feel so different when I play from when I watch movies. Maybe I am more attached to the characters and their stories since I can participate more and make meaningful choices like… So, I get the feeling that I do not just follow the story, but I make the story happen. (P9, mercenary-adventurer)

> I get attached to the avatars I play with, and their in-game friends. I have had many discussions with my female friends about the in-game romances in these games. There is a feeling of loss when a long game comes to an end, when I have to leave the characters behind. (P30, commander)

> The feeling of sorrow is probably the strongest feeling I get from games. Well, I have fun too, but it is rare for me to laugh when I play. And sometimes I may despise some character. But sorrow is what I seem to experience in many games… I do not get similar emotional experiences from books. In games it is more like being in the character and with the other characters so long, doing things together and helping each other. (P1, adventurer)

By analyzing the interview data, several aspects of playing out of desire to be autonomous were revealed: to i) being able to choose how to act, ii) exploring possibilities, and iii) making one's own decisions. In the interviewees' narration, these elements were connected with how the interviewees described feelings of iv) self-expressivity, freedom and for-me-ness in gameplay experiences. In many interviews, the players who talked about the importance of acting autonomously in gameplay also referred to being motivated by immersive experiences. Although some players only talked about gameplay immersion without emphasizing their autonomy as players, there was a clear connection between these two subject areas.

When the interviewees shared their thoughts on the motivational pull of immersion, they reflected on i) the sense of being in the gameworld; ii) how deeper participation facilitates experiences of story-making and being a part of the game's storyworld; iii) identifying with one's avatar and feeling attached to the game's characters; and iv) the wide range of emotions from joy to sorrow, which devoted participating may bring along.

Based on my findings on the interview data analysis, I retained eight items from the preliminary motivations to play inventory (Table 24) when constructing a second iteration of the scale. I decided to drop items 7: "I play to kill time" and 11: "I play to avoid anxiety" because neither of these items showed loadings on the factors of the preliminary study and both of them had high uniqueness scores (Item 7: 0.92, Item 11: 0.721), which indicates that these variables were not explained well by the revealed factors of the first-order and second-order motivations to play.

A qualitative interpretation also supports the decisions of excluding the item 7 and the item 11. If a person reflects to play to avoid boredom or because she is anxious, she comments upon the personal and sociocultural context in which she chooses to play rather than the activity of gameplay itself. In such a situation, gameplay is seen as a step to the right direction but not necessarily as inherently meaningful or intrinsically motivating type of activity. Thus a person may reflect that she usually plays while waiting for a bus, but this depiction does not explain *how* the activity of playing manages to make the situation more satisfactory. I propose that the items 7: "I play to kill time" and 11: "I play to avoid anxiety" are not motivations to play similarly to e.g., competence, relatedness or immersion. Instead, these two items could be connected to more profound motivations to play in distinctive ways. Indeed, this constitutes an important subject for future research on e.g., motivations to play casual mobile games.

I decided also to exclude item 4: "I play because I am interested in different games" since I considered it too vague for making sensible interpretations. Moreover, this item is not discussed in the abovementioned SDT literature the way 'fun' and 'immersion' are.

An Exploratory Factor Analysis with the Refined Scale

I developed the second version of the motivations to play-inventory further by splitting three items of the original inventory into two separate ones (Items 1, 10, 12 in Table 24), and by devising a total of 12 completely new items to study the possible motivational factors of 'autonomy,' 'immersion' and 'fun' further. All of the new items were based on my analysis on the interview data and qualitative data from the survey of 1,718 respondents.

I also compared the refined inventory items with SDT literature on the psychological needs of competence, autonomy, and relatedness as well as how presence or immersion and fun have been described in this theoretical tradition. Based on this theoretical and empirical foundation, the research questions and hypotheses of this exploratory study are:

RQ2.13: Can we identify motivational factors for why people play video games?

RQ2.14: If we can, do the factors consist of constructs that can be interpreted as SDT needs?

RQ2.15: Do other factors, such as 'immersion' and 'fun,' emerge from the data, or do these elements cross-load on the possible SDT factors?

H1: Based on the results of the preliminary study, I expect that motivations to play factors will be revealed.

H2: Based on the results of the preliminary study and SDT literature, the factors that will be revealed include the motivations of autonomy, competence, and relatedness.

H3: Based on the SDT literature, I hypothesize that no more than three motivational factors will emerge. The items describing 'immersion' or 'fun' will not constitute independent factors, but these items will cross-load on the SDT factors instead.

The revised motivations to play scale was included in a survey of 879 Finnish respondents (ages 18–65, mean age 41.5, women 50.5%), who were recruited by a company specialized in survey research. The initial data set included 1,053 participants, but I removed a total of 174 of these since they showed *content nonresponsivity* by responding in an identical way regardless of the item content. A data cleaning procedure, which aims to screen the data to exclude inappropriate responses, is generally encouraged, especially in factor analytical studies aiming for scale development (Meade & Craig, 2012). I removed the participants who did not show any or only very minimal variance in their responses. The careless response rate (16.5%) was in line with the typical estimations (see e.g. Meade & Craig, 2012). The third survey I report in this thesis was conducted in 2016 by utilizing a web-based survey tool. Answering the survey took about 15 minutes with either a mobile phone or a computer. Similar to the first survey (N=1,718), the respondents of this survey (N=879) were asked to

report on a scale from 1 to 5 how important (1= not at all important, 5 = very important) 25 reasons were to their gaming (Table 26).

Item	*Motivations*	*Mean*	*SD*
1	I play online because of the other players	1.90	1.17
2	I play because my friends play	1.88	1.14
3	I play with my family because of their company	2.09	1.21
4	I play with my friends because of their company	2.07	1.22
5	I play because I especially enjoy playing with others	2.10	1.22
6	I play to get experiences in being successful	2.67	1.22
7	I play because of the challenge	2.95	1.21
8	I play to master my skills and to beat myself	2.71	1.22
9	I play to make progress and to achieve objectives	2.93	1.25
10	I play to beat my opponents or enemies in the game	2.46	1.29
11	I play because I want to immerse myself in games	2.62	1.29
12	I play because I want to identify with the game characters	1.99	1.17
13	I play because the gameworld and its mysteries fascinate me	2.53	1.33
14	I play because game events bring about emotions	2.25	1.23
15	I play because I want to be part of the gameworld and its events	2.22	1.26
16	I play because it is fun	3.63	1.17
17	I play because playing games is relaxing	3.48	1.15
18	I play because games are entertaining	3.64	1.14
19	I play because games are enjoyable	3.51	1.17
20	I play because playing makes me feel good	3.18	1.20
21	I play because in games I can be independent	3.07	1.24
22	I play because in games I can make my own decisions	3.05	1.25
23	I play because in games I can make a difference with my actions	2.71	1.25
24	I play because in games I can make meaningful choices	2.70	1.25
25	I play because in games I can realize myself and my values	2.43	1.22

Table 26. *The second iteration of motivations to play inventory, as included in the survey (N=879), and the mean preference sums and standard deviations for the items.*

I analyzed the survey data by conducting an exploratory factor analysis using principal factor extraction and promax rotation with a data set from 879 respondents. I used the promax rotation method instead of varimax rotation, because promax rotation allows correlations between factors and does not force them to be orthogonal to each other (Matsunaga, 2010, p. 100). It is plausible to assume that a player who is motivated to play can be motivated by several distinctive factors, and, therefore, varimax rotation could misinterpret the results. The number of factors was identified by using Velicer's minimum average partial (MAP) test, which suggested five factors to be extracted. Item 10, "I play to beat my opponents or enemies in the game" did not load on any of the five factors, but all of the other items resulted in loadings > .5 on a factor. In the

second iteration, the MAP test still suggested five factors. All of the remaining 24 items showed a loading over 0.5 on a factor, and the solution was thus retained.

Five items (11–15) loaded on the first factor. These suggest that a player is motivated by being able to immerse herself in the gameworld and its events, and by identifying herself with game characters. The player enjoys being a part of the fiction of the game, and she is fascinated by its mysteries, which may bring about versatile emotions. I call this factor *Immersion*.

Five items (21–25) also loaded on the second factor. These items describe how a player is motivated to play video games because she is able to make a difference in games with her actions, to realize herself and her values by acting independently, and to choose her own way to act among the afforded options. This factor is *Autonomy*.

Four items (6–9) loaded on the third factor. This motivational factor suggests that a player plays because of the challenge a game provides her with. Through challenges, she is able to make progress and achieve her goals. The experiences of challenges and being successful motivate her because she also desires to master her skills and beat herself. I name this factor *Competence*.

Similar to factors 1 and 2, five items (16–20) loaded on the fourth factor. These items denote that an individual plays because games are entertaining and enjoyable, and because gameplay is fun. She is also drawn to play because playing makes her feel good and relaxes her. I name the fourth factor *Fun*.

Finally, five items (1–5) loaded on the fifth factor. These items constitute a motivation-to-play factor that emphasizes social connectedness in a gameplay situation. A person plays because of the company of her friends, because she enjoys being with others and playing with close others and because she can be with her family members during gameplay. In online gaming, she is fascinated by interacting with the other players. I label this factor *Relatedness*.

The exploratory factor analysis I report in Table 26 suggests five motivational factors for playing video games. These factors are *Fun*, *Relatedness*, *Immersion*, *Autonomy*, and *Competence*. Notably, item 10 describing competition did not load on any of the factors but showed similarly low (<.50) loadings on several factors. This indicates that we would not play because of the competition *an sich* but because of a combination of other factors, including the factor of being with others (relatedness), being competent, experiencing immersion and having fun.

As hypothesized, motivations to play factors emerged from the data (H1). Based on the results of the preliminary SDT literature review, I expected that the exploratory factor analysis would include the three SDT factors of *Autonomy*, *Competence*, and *Relatedness*. Such factors were revealed, and thus the second hypothesis (H2) was supported in this study. However, in contrast to the third hypothesis (H3), both the factors of playing for *Fun* and playing to experience *Immersion* were also identified.

These results are not fully in line with SDT argumentation. If *Fun* and *Immersion* are experiences of SDT need satisfaction as Ryan et al. (2006), Przybylski et al. (2009) and Przybylski et al. (2010) argue, they should not constitute distinctive motivation-to-play factors, nor should they load only on one of the SDT motivation factors. However, the preliminary study suggested that motivations for playing can

perhaps be divided into first-order motivations (*Relatedness–Competence*) and second-order motivations (*Fun–Immersion*). Although the exploratory factor analysis I report in Table 26 does not reveal any structure of first-order and second-order factors, it is possible that such a structure is a latent quality of the five motivational factors to play video games.

Item	*Factor 1*	*Factor 2*	*Factor 3*	*Factor 4*	*Factor 5*	*Uniqueness*
1					0.7250	0.2949
2					0.8804	0.2434
3					0.6961	0.5152
4					0.9074	0.1990
5					0.8065	0.2789
6			0.6661			0.3622
7			0.8621			0.2216
8			0.8525			0.2547
9			0.5836			0.3385
11	0.6405					0.2954
12	0.8240					0.2455
13	0.8094					0.2387
14	0.8630					0.1795
15	0.9104					0.1479
16				0.8795		0.2443
17				0.7916		0.3148
18				0.9365		0.1462
19				0.8875		0.1698
20				0.6742		0.2555
21		0.7039				0.2386
22		0.8075				0.1927
23		0.7605				0.2037
24		0.7697				0.2217
25		0.5570				0.3423
Mean	2.3233	2.7918	2.8157	3.4901	2.0114	
Std. Dev.	1.1306	1.1023	1.0770	1.0528	1.0299	
Alpha	0.9411	0.9314	0.9030	0.9429	0.9160	

Note: Mean, standard deviation and Cronbach's alpha are calculated using items with loadings above 0.5.

Table 27. *Factor Loadings (Loadings > .5), uniqueness for items of the second iteration of motives-to-play scale and descriptive statistics for scale sums (N=879).*

Recall that several players told me in the interviews that they played just because it is fun. Only by asking "What makes it fun?" was I able to flesh out their reflections on, e.g., the ability to overcome challenges was that which made gameplay fun for them. Both 'fun' and 'immersion' could then be recurrent ways to reflect on and describe

specific types of experiences and emotional outcomes. I propose in Chapter 6 that 'immersion' is a player reflection of experiences of heightened presence. Similar to 'fun,' this would render 'immersion' as an *experiential outcome* rather than a first-order reason to play. This is indeed what the SDT literature suggests by offering that SDT needs facilitate experiences of both immersion and fun. To confirm if there are indeed five factors for playing video games and know if the factors can be divided into first-order and second-order motivational factors, a confirmatory factor analysis should be conducted.

I calculated the motivational factor mean sums for the sub-group (n=492 in this data set) of players who reported playing mobile games more than any other types of digital games, as measured by weekly play hours. Interestingly, the mean sums for mobile game motivational factors did not differ much from the mean sums of the whole data of 879 respondents. Further, the same five-factor structure was found when I ran another EFA with the sub-group of mobile game players. In the mobile game player sub-group, *Fun* was clearly regarded as the most important factor for playing games (mean 3.60). As with the data set as a whole (N=879, Table 26), *Competence* was the second most important reason to play (mean 2.87), followed by *Autonomy* (mean 2.83), *Immersion* (mean 2.38), and, finally, *Relatedness* (mean 2.08). These results suggest that, although there may be other latent reasons for why people play mobile games in particular (e.g., to kill time or to avoid boredom), mobile game motivations are not fundamentally different from motivations for playing other kinds of digital games. The same motivational drivers underline both mobile game playing and PC and console gaming.

Study 6: Confirmatory Factor Analysis

As discussed above, Ryan et al. (2006), Przybylski et al. (2009) and Przybylski et al. (2010) contend that 'immersion' and 'fun' are to be understood as experiential states that result from situations in which the basic psychological needs of autonomy, relatedness, and competence are satisfied. The results from Study 5 indicate, however, that both fun and immersion constitute their own motivational factors rather than those that would be associated with all three SDT needs. It is not plausible to make arguments on the relationships between the SDT motivations to play and fun or immersion without conducting a confirmatory factor analysis. Therefore, I ask:

RQ2.16: Can the five-factor structure reported in Study 5 be confirmed by conducting a confirmatory factor analysis on the motivations to play-scale (Table 26) with additional survey data?

H1: I expect that by conducting a confirmatory factor analysis, the five-factor model of motivations to play can be confirmed.

I designed a confirmatory factor analysis on the five latent constructs (*Fun*, *Relatedness*, *Immersion*, *Autonomy*, *Competence*) by analyzing the data from a survey con-

ducted in December 2015 (N=845). The survey included a 25-item inventory of motivations to play, identical to what I report in Table 26. This made it possible for me to compare these two data sets and to analyze whether the five-factor model of the survey reported above (N=879) could be confirmed with another data set. Both of these data sets consist of survey respondents of Finnish people who were at least slightly interested in video games and playing video games. The only significant difference between these two data sets is that the data from 845 respondents consists of people ranging from 18 to 55 years old, whereas the data from 879 respondents consists of people between 18 and 65.

By conducting explorative studies on motivations to play, I have been able to develop a theoretical perspective on the subject, allowing me to make theory-based hypotheses on quantity, quality and relationships of the proposed motivational factors to play video games. In contrast to an exploratory factor analysis (EFA), a theory-driven confirmatory factor analysis (CFA) allows each item included in the analysis to have its own unique variance. As Alan C. Acock (2013, p. 11) states, a unique variance means the proportion of the responses for a question that do not reflect the shared variance between other items of the same factor. For instance, item 16, "I play because it is fun" (Table 26), shows a loading of 0.865 on the factor *Fun* (see Figure 18), and this proportion of the variance of variable 16 is what it shares with the four other items that also loaded on *Fun*. The unique variance of item 16 is called the *error term*. In contrast to EFA, the error term or the unique residual of a variable is also under analysis in CFA.

In the confirmatory factor analyses I report below, the oval shapes represent *latent factors*, and the rectangular shapes the observed items, that is, the actual questions that were asked of survey respondents in the survey (N=845). The little circles next to the shapes are the error variances. Again, error variance describes what is unique to each item and what is not measured by the latent factor or factors. The analyses I report here are confirmatory since I have specified, based on the reported studies and the literature, that there are five motivational factors for playing video games: *Autonomy, Competence*, *Relatedness*, *Fun* and *Immersion*.

I conducted the CFAs according to the procedure suggested by Acock (2013) and Matsunaga (2010). Acock emphasizes that, for developing a model consisting of more than one factor, one should first ensure that each factor is meaningful by itself. This procedure, however, is valid only if the survey includes scales that have been validated in prior research. Since the scales of *Autonomy, Competence*, *Relatedness*, *Fun* and *Immersion* were exploratory, I did not conduct validation for each scale but moved instead to screen the items of the motivations to play scale (Table 26) according to a procedure proposed by Matsunaga (2010).

A researcher aiming to validate a factor structure should first consider whether the items included in the scale can be argued to measure the factors properly. The items should be *screened* in order to identify which items can be included in a CFA. According to Matsunaga (2010, p. 101), inventory items can be evaluated with three types of criterion. First, a researcher can focus on the highest factor loadings the items show on a factor. The threshold for this criterion can be 0.40 or above. In this thesis, I apply the threshold of 0.50 for this purpose. Second, the cross-loading between the highest and the second highest factors per an item can also be considered. In this evaluation model, researchers typically utilize thresholds of 0.6/0.3, 0.6/0.4 or 0.5/0.2. The third method does not operate with fixed factor loadings but instead

measures the discrepancy between the highest and the second highest factor loadings. A discrepancy value of over 0.3 is typically considered good and thus items that show a discrepancy value of over 0.3 can be retained in the pool of inventory items.

I screened the results of the EFA with the data of 879 respondents (Table 27) by utilizing the criteria of primary factor loading of > .60 and a discrepancy value of > .30. By following these principles, I excluded items 9, "I play to make progress and to achieve objectives," and 25, "I play because in games I can realize myself and my values," because the highest factor loading for these items was under 0.60. I then calculated the discrepancy values for each item by comparing their primary and secondary factor loadings. Since the lowest discrepancy value for the remaining 22 items was 0.44 (item 21, "I play because in games I can be independent"), I did not remove any additional items from the motivations to play inventory. As a result, the inventory consists of 22 items in which the factors of *Fun*, *Relatedness* and *Immersion* all include 5 items, *Autonomy* 4 items, and *Competence* 3 items.

For conducting a CFA on the motivations to play, I constructed 3-item scales for each of the hypothesized five factors. This was done because three items per a latent factor is regarded as sufficient for conducting CFA analyses (Brown, 2015, pp. 61–62). Another reason for including only a sub-sample of the 22 items was that if a shortened scale could be confirmed, the instrument of 15 items could be more easily included in follow-up studies than the whole inventory would be. I selected the three items for a factor based on the criteria of a primary loading > .60 and a discrepancy value > .30. In addition, I took into consideration the qualitative aspects of the items and whether each of the items could be argued to portray discernible features of the corresponding latent construct. I present the selected items in Figure 17 and Table 28.

I constructed the confirmatory factor analyses with a statistical modeling method known as structural equation modeling (SEM). J. J. Hox and T. M. Bechger (1998) describe that SEM is typically used to identify theoretical constructs of the data by identifying correlations or path coefficients between latent (exogenous) factors and observed (endogenous) variables. SEMs are usually reported by presenting visual models, and the statistical model as a set of matrix equations. I ran all of the CFA calculations with a maximum likelihood estimation without missing values (see Acock, 2013). I proceeded to conduct a confirmatory factor analysis for the *five-factor model* presented in Study 5. Since my hypothesis was that the SDT-based motivations to play (autonomy, relatedness, competence) may predict the motivations of fun and immersion, I drew the five-factor model accordingly (Figure 17).

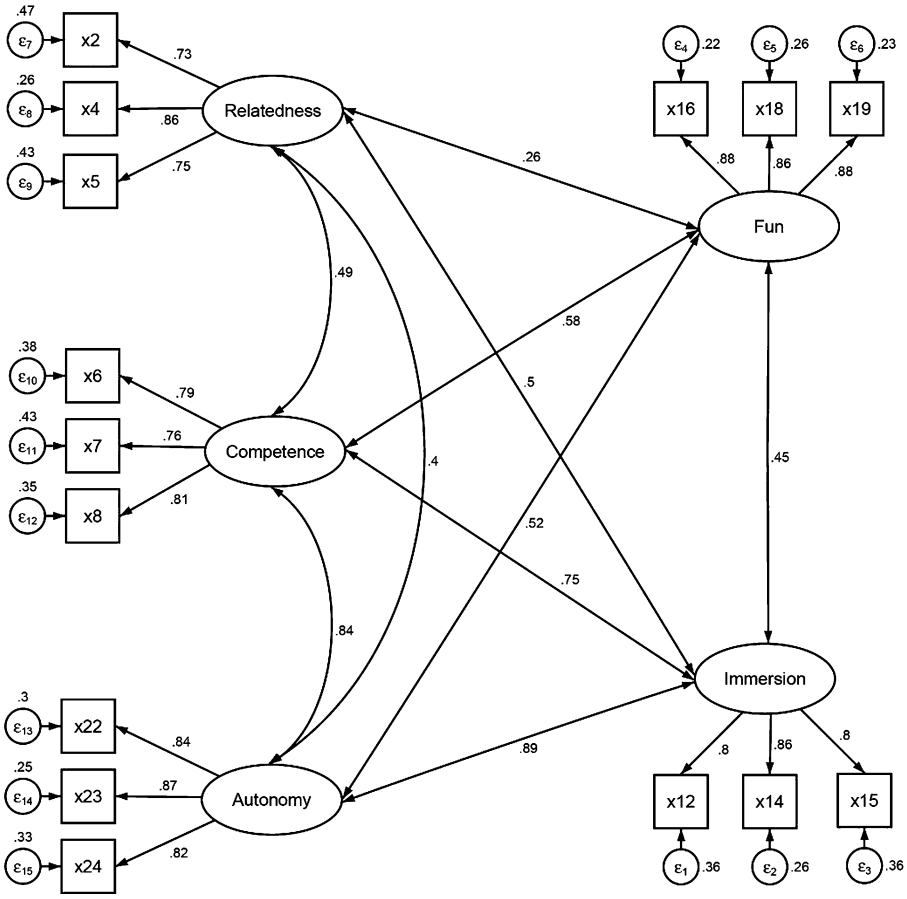

Figure 17. *A measurement model reporting confirmatory factor analysis for the five motivational factors to play video games (N=845). All loadings are significant on the level p < 0.001. The goodness-of-fit values of the model: RMSEA 0.060, CFI 0.970, SRMR 0.036.*

There are several methods of evaluating the goodness of a CFA model. The comparative fit index (CFI) calculates how well the model fits the whole data by comparing the model to a baseline model that does not assume relationships between observed variables and latent factors. The CFI value for the five-factor model (Figure 17) was 0.970. This result means that the model is 97 percent better than a baseline model in which it is assumed that the items and the latent constructs are unrelated. A CFI score of 0.95 is widely considered as good and 0.90 as acceptable (see Acock, 2013, p. 23). The root mean squared error of approximation (RMSEA) is another widely utilized measure for analyzing the goodness-of-fit of a model. The RMSEA measures whether the complexity of the model is reasonable. If the model is unnecessarily complex, the RMSEA score will be worse. A value under 0.050 is generally considered a good fit, and a value under 0.080 is acceptable. The RMSEA score for the five-factor model I report in Figure 17 was 0.060, which suggests that the model fit is acceptable. Finally, the standardized root mean squared residual score (SRMR), which measures the absolute fit of the model, was 0.036, which is considered a good value (see Kenny,

2015).[109] Similar to the values of RMSEA, SRMR is considered good if the value is under 0.05 and acceptable if it remains under 0.08 (see Acock, 2013, p. 24; Schreiber et al., 2006, p. 330; Brown, 2015). I did not utilize the chi square test ($\chi 2$), because this test has been argued to be ill-fitting for large sample sizes, especially when the correlations in the model are strong (Matsunaga, 2010, p. 106; Russell, 2002).

According a structural equation modeling review article by Schreiber et al. (2006, p. 327), if most of the goodness-to-fit indexes indicate a good fit, the model can be regarded as a close fit. Based on this argument, the model of Figure 17 can be argued to have a good fit with the data. The fit of the model could have been further improved by letting error residuals of the items correlate with each other by studying the modification indices of the model. However, here, I followed arguments presented by Brown (2015) who contends that error covariances should be added only if they are strongly justified by, e.g., method effects, such as reversed wordings or similar phrasings between the items, or theory. Since the model presented in Figure 17 showed a close fit to the data according to SRMR and CFI tests, and an acceptable fit according to RMSEA, there was no need to try to improve the fit by adding error covariances to the model.

One should ask, however, why the RMSEA value remained over 0.05 although the other indices suggested a close fit to the data? RMSEA measures the complexity of the model, and a high value indicates that the model could be unnecessarily complex. If we consider the results of the confirmatory factor analysis for the five-factor model (Figure 17), we can note that the factors of *Autonomy* and *Immersion* are very highly (0.89) correlated with each other. In the data of 845 participants, this might suggest that the variables of *Autonomy* and *Immersion* are very close to loading on a single factor rather than on two separate ones. Another reason for getting only an acceptable RMSEA value is revealed by studying the modification indices of the final model; nearly all statistically significant but unallowed correlations between individual items of the model were either between the variables of *Immersion* and those of the other SDT factors, or between *Fun* and those of the SDT factors. Although the modification indices did not suggest major changes to the model, it is worth noting that the changes can be interpreted as qualitative differences between the SDT motivations to play and *Fun* and *Immersion*. I return to this subject shortly.

	Variable	Mean	SD	Skewness	Kurtosis
x2	I play because my friends play	2.89	1.72	0.30	1.66
x4	I play with my friends because of their company	2.66	1.56	0.51	2.02
x5	I play because I especially enjoy playing with others	3.63	1.63	-0.20	1.80

[109] Another widely used measure is the Chi Square Test: $\chi 2$ which measures whether the model is statistically significant. However, David A. Kenny (2015) notes that if the sample size of a study is larger than some 400, the chi square test considered an ill-fitting test because it is statistically significant in almost all cases, especially if the correlations in the model are large. Thus I do not report the Chi Square test results.

x6	I play to get experiences of being successful	2.64	1.85	0.63	1.84
x7	I play because of the challenge	2.60	1.64	0.58	1.95
x8	I play to master my skills and to beat myself	2.36	1.59	0.82	2.32
x12	I play because I want to identify with the game characters	1.90	1.28	1.29	3.51
x14	I play because game events bring about emotions	1.60	1.15	1.97	6.02
x15	I play because I want to be part of the gameworld and its events	1.88	1.30	1.36	3.75
x16	I play because it is fun	3.98	0.98	-1.14	4.29
x18	I play because games are entertaining	4.00	0.99	-1.19	4.40
x19	I play because games are enjoyable	3.93	1.01	-1.04	3.96
x22	I play because in games I can make my own decisions	3.16	1.23	-0.42	2.21
x23	I play because in games I can make a difference with my actions	2.90	1.25	-0.16	1.99
x24	I play because in games I can make meaningful choices	2.83	1.26	-0.12	1.90

Table 28. *Descriptive statistics for the 15-item motivations to play scale (N=845).*

All of the five motivational factors for playing video games were found to correlate with each other, as shown in the Figure 17. The strongest connection was shown to be between *Autonomy* and *Immersion* (0.89), which indicates an intimate relationship between these two motivational factors. *Autonomy* also correlated very strongly with *Competence* (0.84). *Autonomy* showed a moderate connection to *Fun* (0.52) and *Relatedness* (0.40). Playing for *Competence* strongly correlated with *Immersion* (0.75), relatively strongly with *Fun* (0.58), and moderately with *Relatedness* (0.49). *Relatedness* showed only a weak connection to *Fun* (0.26), but it was found to be moderately connected to *Immersion* (0.50). Finally, *Immersion* was associated moderately with *Fun* (0.45). All of the correlations shown in Figure 17 are statistically significant.

To validate a construct, the *construct validity*, *convergent validity* and *discriminant validity* of the model should be studied and reported. The goodness-of-fit indices demonstrated construct validity for the five-factor model, as I report above. Convergent validity means that latent constructs or observed variables that should be related to each other, according to theory, can in fact be shown to be related. This can be analyzed by investigating correspondence or convergences between constructs argued to be similar. To show convergence, intercorrelations between observed variables or latent constructs should be at least *moderate* (Kline, 2010, pp. 71–72). As shown in Figure 17, all of the five motivations to play constructs are correlated with each other on the level of $p < 0.001$, which means that the correlations are highly statistically significant, and it can be concluded that the five constructs measure a single phenomenon, that of *motivations to play*.

To show convergence of a latent factor, the factor loadings for each item should be considered to be strong, that is, over > 0.60. The model I present in Figure 17 fulfills this criterion because the lowest factor loading was 0.73 for item x2, "I play because my friends play." Convergent validity of a construct can be further analyzed

by calculating the *composite reliability* (CR) estimated for each of the factors. A value over of 0.7 is considered to be a good value for CR (see Zait and Bertea, 2011). The CR estimates for the 3-item five factors were: *Relatedness* (0.823), *Competence* (0.827), *Immersion* (0.861), *Fun* (0.905) and *Autonomy* (0.880).

To investigate both the convergent and discriminant validity for a CFA, an *average variance extracted* (AVE) analysis is recommended (Farrell 2009; Zait and Bertea, 2011). The AVE analysis is used for studying the average amount of variance in the observed variables that is explained by the factors. The value of AVE should be at least 0.50 for each factor to demonstrate convergent validity (Fornell and Larcker 1981; Farrell 2009). After calculating the AVE value, the analysis continues by testing if the square root of average variance of each construct is larger than the square of the correlation between two constructs within the model. If the AVE value for a factor exceeds its shared variance with the other factors, the analysis supports discriminant validity for the model (Fornell and Larcker 1981, pp. 45–46; Farrell 2009).

	Relatedness	Competence	Immersion	Fun	Autonomy
Relatedness	**0.610**				
Competence	0.236	**0.615**			
Immersion	0.246	0.565	**0.673**		
Fun	0.066	0.345	0.198	**0.761**	
Autonomy	0.159	0.698	0.799	0.268	**0.710**

Table 29. *The Average Variance Extracted Analysis on the five-factor model of motivations for playing video games (AVE values bolded) and shared variances between the constructs. The test was calculated according to a formula by Fornell and Larcker (1981, p. 46), which considers the measurement error of the variables.*

The AVE values for each of the five motivations to play factors were clearly over 0.50, but the shared variance *Autonomy–Competence* and *Autonomy–Immersion* still exceeded the AVE of the corresponding factors. These results, together with factor loadings and composite reliability (CR) estimates, support convergent validity for the five-factor model (Figure 17), but the discriminant validity remains open for critique, regardless of the fact that the five-factor structure was indeed identified in the EFA made with the data of 879 respondents. Because of this, another CFA study should be designed and conducted with cross-cultural data to confirm whether motivations for playing digital games can be reliably interpreted through the framework of five motivational factors.

With the exception of the correlation between *Relatedness* and *Fun* (0.24), all of the correlations I report in Figure 17 were at least moderate. Why did *Relatedness* show lower correlations with the other four factors than it did with the other latent constructs? Perhaps this happened because playing games to be with friends and with close others renders gameplay as an instrument for fulfilling another goal than gameplay itself, namely that of socializing. More precisely, *Relatedness* may be partly

an extrinsically motivated reason to play games. Since the five-factor model shown in Figure 17 describes *the core drivers for intrinsically motivated gameplay*, the factor of *Relatedness* is not very strongly correlated with the four other factors. Nevertheless, *Relatedness* also shows moderate correlations to other factors than *Fun*.

Ryan and Deci (2000) argue that in SDT, extrinsic motivation and intrinsic motivation are seen as *a continuum*. Some forms of extrinsic motivation may thwart autonomy, competence and relatedness, but this is not necessarily the case. Extrinsically motivating activities can also be experienced as intrinsically rewarding. All activities that are extrinsically motivating are done to attain a separable outcome not innate to the activity itself. For example, elements such as rewards, threats, and pressure for competition can diminish intrinsic motivation in an activity since they are perceived as ways to control one's agency (Ryan & Deci, 2000, p. 59). The process by which an individual can adopt externally given objectives as her own is called *internalization* in SDT; "Thought of as a continuum, the concept of internalization describes how one's motivation for behavior can range from amotivation or unwillingness, to passive compliance, to active personal commitment" (ibid., p. 60).

Ryan and Deci (2000, pp. 61–62) present a taxonomy of human motivation consisting of three main categories: amotivation, extrinsic motivation and intrinsic motivation. Extrinsic motivation further includes the sub-categories of external regulation, introjection, identification, and integration. In external regulation, an activity is done solely for external demand. In introjection, a person is interested in the activity but regulates it internally, mainly because of the pressure of others, or to boost her own feeling of worth. In identification, the subject acknowledges that the activity at hand has importance for her and thus identifies the goals of the activity as her own, although she might not find the activity otherwise interesting. In integration, the subject fully perceives herself as an autonomous agent, and that her competences match those of the activity. Although a person feels that the activity and her own motivations are aligned, integration remains extrinsically motivating since it is done because of the expected value it has for other situations. In integrated regulation, however, the activity is experienced as volitional and personally rewarding.

I propose that the primary experiential outcome of relatedness, namely "socializing," does not describe intrinsically motivating gameplay but rather extrinsically motivating yet *integrated* activity. "Socializing" can be argued to point outwards from the gameplay to the social relations between a player and her opponent. Although *Relatedness* was not as strongly correlated with the other four motivations as the latter were with each other, the observed items of the five scales *converged* into the latent factors of *Relatedness*, *Competence*, *Autonomy*, *Fun* and *Immersion* as hypothesized, and these five latent factors converged into the single higher order factor of *intrinsic motivation to play video games*. This concludes the construct validity, convergent validity and discriminant validity test of the suggested five-factor model. The measurement model I report in Figure 17 confirms the five factors for playing video games as *Relatedness*, *Competence*, *Autonomy*, *Immersion* and *Fun*, although the relationship between *Autonomy* and *Immersion* as well as that between *Autonomy* and *Competence* should be validated with an additional confirmatory factor analysis with cross-cultural data. In SDT literature, it is not only argued that autonomy, relatedness, and competence predict fun and immersion but also that the second-order phenomena of immersion and fun mediate *gameplay enjoyment*. I investigate this question in the final statistical study of this thesis.

Study 7: Motivations to Play and Positive Valuations

In this final statistical study, I investigate how the five motivations to play predict video game enjoyment and appreciation. I do this by presenting a constructed structural equation model based on the measurement model, i.e., the confirmatory factor analysis of the five motivational factors to play (Figure 17). This research subject is important because better understanding entertaining and meaningful gameplay experience is key to apprehending different game cultures and the individual valuations players attach to games and gaming.

In what follows, I consider the motivational factors of *Immersion* and *Fun* qualitatively distinct from *Autonomy, Competence*, and *Relatedness* for two reasons. First, the preliminary study of this chapter (N=1,718) suggests that the motives to play can be divided into two main categories consisting of 1) competence, competition, and relatedness, and 2) fun, immersion, relaxation and interest. Second, SDT literature offers that 'fun' and 'immersion' are experiential states engendered by situations in which the three psychological needs are satisfied. This latter observation renders 'fun' and 'immersion' as second-order phenomena or *types of experiences* to be considered in relation to the first-order dimensions of autonomy, competence, and relatedness.

Earlier in this chapter, I mentioned the studies by Przybylski et al. (2009) and Przybylski et al. (2010) in which it was found that satisfying the SDT needs in gameplay predicted experiences of immersion. In these studies, the authors argue that the effect that SDT needs satisfaction has on immersion may *moderate* gameplay enjoyment (Przybylski et al., 2009, p. 253). Tamborini et al. (2010) note that *enjoyment* in SDT is indeed generally understood as satisfaction of the three needs, and it is not particularly connected to pleasure-seeking purposes of an individual. The distinction between enjoyment as 1) satisfaction of the three SDT needs and 2) pleasure-seeking is, however, paramount when analyzing what kinds of gameplay experiences the five motivations to play predict.

Tamborini et al. (2010) offer an inclusive approach in which both the satisfaction of "higher-order" SDT needs and hedonic or pleasure-driven purposes are understood as facets of *'enjoyment'* (ibid., p. 759), where the former would cover why we also enjoy tragedy, horror, and dramas, which are qualitatively distinctive from "mere" pleasure-seeking in an immediate experience. In their approach, positive valuations of media are not split into *enjoyment* and *appreciation*, but it is held instead that both the satisfaction of hedonic needs (immediate arousal, absorption) and eudaimonic needs of SDT elicit experiences of enjoyment. "Whereas we agree that appreciation and enjoyment may be distinct processes, we do not believe that one is tied to the satisfaction of hedonic needs and the other is tied to the satisfaction of nonhedonic needs… all positive valuations of need satisfaction can be experienced as enjoyment" (Tamborini et al., 2011, pp. 1025–1026).

Similar to Ryan et al. (2006), Tamborini et al. (2010) designed an experimental setting in which they manipulated specific qualities of gameplay that facilitate experiences of the SDT needs. This was done to experiment the connection of the SDT needs satisfaction and perceived enjoyment of gameplay activity. Also similar to Ryan et al. (2006), it was found that autonomy, competence, and relatedness all predicted gameplay enjoyment. However, Tamborini et al. (2010) acknowledge that

their approach does not explain all of the variance of enjoyment since the hedonic features were excluded from the study. Because of this, Tamborini et al. (2010) conclude that both pleasure-driven and SDT need-driven aspects should be studied simultaneously to understand what makes gameplay experiences enjoyable. Hedonic pleasure, e.g., 'fun', remains crucial to the concept of enjoyment.

The studies reported in Tamborini et al. (2010) suggest that players may indeed be intrinsically motivated to play based on *both* purely pleasure-seeking reasons *and* on interest in experiencing something that taps a specific psychological need, such as autonomy, competence, or relatedness as proposed by SDT. However, the approach by Tamborini et al. (2010) differs from another body of studies on media enjoyment, which is equally important for interpreting further how the proposed five motivations to play engender gameplay experiences.

Vorderer (2009) and Vorderer and Ritterfield (2009) argue for a two-factor model of positive entertainment experience consisting of hedonic needs, or *enjoyment*, and higher-order *eudaimonic* needs, that is, *appreciation.* Taken together, both the factors of enjoyment and appreciation would engender positive valuations of entertainment. Similarly, Oliver and Bartsch (2010; 2011) and Oliver et al. (2015) distinguish appreciation from enjoyment and argue the two as conceptually distinct, although the latter authors define eudaimonic appreciation more narrowly than Vorderer and Ritterfield (2009), as contemplations concerning, e.g., human moral virtues and life's purposes (Oliver and Bartsch, 2011) and affects such as being touched, moved or compassionate (Oliver et al., 2015).

According to Tamborini et al. (2011, pp. 1037–1038), although both appreciation and pleasure-seeking behavior bring about enjoyment, they can be distinguished by recognizing that enjoyment is characterized by *intuitive* processing, whereas appreciation requires a more *reflective* attitude. In pleasurable experiences, the intrinsic needs of SDT are all satisfied through quick and intuitive responses. However, in appreciation, at least one of the SDT needs is satisfied via reflection, introspection and contemplation when the others are not. The latter denotes specific meaningfulness, importance, insight and significance characteristics, which can be argued to be absent from "mere" pleasure—of which the experience of *fun*, *engagement* and *amusements* are prime examples, as shown in the studies by Oliver and Bartsch (Oliver & Bartsch, 2010; Oliver & Bartsch, 2011, pp. 29–30; Lewis et al., 2014, pp. 397–398).

Like Tamborini et al. (2011), Cupchik (2011a; 2011b) argues that media responses can be separated into action-oriented *reactive* and experience-oriented *reflective* modes. If an individual chooses media to get experiences that modulate pleasure and excitement, she acts according to a reactive mode. When a person is deeply engaged with content that resonates with her own personal life experiences and values, she is in a reflective mode of experiencing. Cupchik argues that the emotional elaboration of the reflective mode is more complex, challenging and involving than the affective covariation of reactive mode because reflective mode requires perception and evaluation of symbolic meanings and relating these aesthetic qualities to the person's own life history (2011a, p. 339). It remains an open question, then, whether both the positive valuations of appreciation and pleasure are to be regarded as facets of the *dual-process* of enjoyment (Tamborini et al. 2010; 2011) or whether enjoyment results only from pleasureable experiences and is thus orthogonal to qualitatively distinctive appreciation (Oliver & Bartsch, 2010; 2011).

In sum, the approach by Oliver et al. (2010; 2011; 2015) and Vorderer (2009), Vorderer and Ritterfield (2009) differ from Tamborini et al. (2010; 2011) by postulating two kinds of positive valuation for satisfying gameplay, *appreciation* and *enjoyment*, whereas Tamborini argues that both hedonic pleasure-seeking conduct and non-hedonic appreciation-seeking conduct are facets of the broadly defined 'enjoyment.' Furthermore, Oliver and Bartsch (2011, p. 31) presume that appreciation defined as "contemplation of meaningfulness via human virtue" is associated with specific affective and motivational outcomes that further differentiate appreciation from pleasure-seeking. In this study, I utilize a model suggested by Oliver et al. (2010; 2011; 2015) and study enjoyment and appreciation as distinctive modes of positive valuation of an experience. I ask the following research questions:

RQ2.17: Do the five motivational factors for playing video games predict gameplay enjoyment and appreciation?

RQ2.18: If they do, do the motivations of *Immersion* and *Fun* mediate the effect between the SDT needs and gameplay enjoyment as suggested by Przybylski et al. (2009, p. 253)?

H1: Based on SDT literature, I expect that the five motivations for playing video games predict gameplay enjoyment and appreciation.

H2: I hypothesize that the effects the SDT motivations to play are mediated by both *Fun* and *Immersion*.

Importantly, Cupchik (2011b) describes the action-oriented reactive mode as *pleasurable* and the experience-oriented reflective mode as inherently *interesting* for the individual. Building on Berlyne (1971), Cupchik (2011b, p. 7) notes that 'interest' is associated with the increasing complexity and novelty of the experience, whereas 'pleasure' is connected to a preference of only moderate complexity:

> Interest in a program [of entertainment] can result from intellectual engagement and a search for meaning or for alleviating boredom. Pleasure can result from the meaningful interpretation of a program or from the positive associations that it evokes. Interest and pleasure are therefore complementary processes. At a superficial level, a program can serve merely to distract a bored viewer and elicit pleasant associations. At a more profound level, a viewer can be drawn into the interpretive process that is pleasurable in and of itself.

Based on the above, I assessed enjoyment and appreciation of video games using two three-item constructs. The survey of 845 respondents included an 18-item *product attachment scale* (Mugge et al., 2006), which is reported to consist of the five latent factors of *product attachment, self-expression, group affiliation, memories* and *pleasure*. Respondents' product attachment to their favorite games was enquired about in the survey by asking them to remember a game that was especially gratifying and

memorable for them and then state how much they agreed (1=completely disagree, 5=completely agree) with a set of questions. I calculated an *Appreciation* (α = 0.88) mean sum (Mean=3.31) for the items "I am very attached to this game," "This game is very dear to me" and "I have a bond with this game." Similarly, I constructed the *Enjoyment* (α=0.90) mean sum (Mean=3.97) for the items of "I enjoy playing this game," "It is a pleasure to play this game" and "I feel good when I play this game."

I chose to assess appreciation by asking how dear games were to the players, because playing games is considered an intrinsically motivating activity, and only intrinsically motivating activities are experienced as inherently valuable and interesting (Ryan & Deci, 2000, p. 64). To hold that an activity or a product is precious to someone is thus to maintain that it has personal significance and value of a kind, and that the individual appreciates at least some element of the activity because it resonates with her own life history and values (Cupchik, 2011a; 2011b).

I studied how the five motivations for playing video games predict gameplay enjoyment and appreciation by designing a structural-equation model (SEM). An SEM makes it possible to estimate path models by including intervening variables between independent variables and dependent variables (Hox & Bechger, 1998). The path analysis estimates *theoretically causal* connections between latent variables identified in the CFAs, i.e., the measurement model (Acock, 2013, p. 115). The model I present in Figure 18 appropriates the measurement model presented in Study 6 (Figure 17).

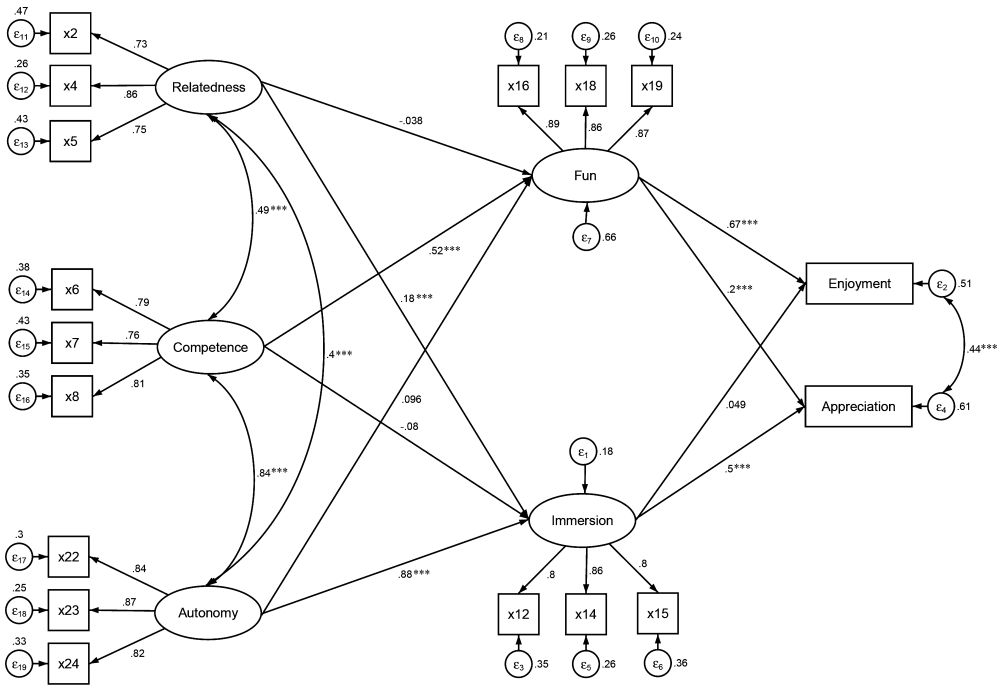

Figure 18. *Structural equation model on how the five motivational factors for playing video games predict the endogenous outcome variables of gameplay Enjoyment and Appreciation. In this model, Fun and Immersion are considered second-order motivational factors and as mediators for the SDT motivational factors. *** p < 0.001.*

I assigned the motivational factors of *Immersion* and *Fun* as intervening latent constructs between the latent three SDT factors, and the dependent single-item variables of *Appreciation* and *Enjoyment*. Thus, all of the five motivations to play were considered as possible predictors for gameplay *Enjoyment* and *Appreciation*. In addition, I investigated the moderating roles of *Immersion* and *Fun*. This was a theoretically informed decision, since prior research suggests that 1) all of the SDT needs have direct effects on gameplay enjoyment (Ryan et al., 2006; Tamborini et al., 2010), and that 2) the experiential outcomes of fun and pleasure (Tamborini et al., 2011) and immersion (Przybylski et al., 2009) are mediators of game enjoyment. The goodness-of-fit values for the model presented in Figure 18 indicated a good model and a close fit to the data (RMSEA 0.054, pclose 0.110, CFI 0.971, and SRMR 0.037).

According to the data of 845 survey participants, playing for the challenge and for making progress (*Competence*) in a game moderately predicts (0.52) that the player is motivated to play because gameplay experiences are fun, entertaining and relaxing (*Fun*). If one plays because she enjoys putting her skills to the test, she is therefore likely to expect the experience to be fun. Interestingly, this result is supported by studies on flow experience, which argue that experienced flow predicts perceived enjoyment (Landhäußer & Keller, 2012; Baumann, Lürig, & Engeser, 2016). However, the motivational driver of *Competence* did not predict that the player would be drawn to play because gameplay offers emotional experiences of being in the gameworld and relating with in-game characters (*Immersion*). In contrast to *Competence*, being motivated by the possibility of acting independently and freely (*Autonomy*) very strongly (0.88) predicted a preference in immersive gameplay experiences (*Immersion*). Being able to decide what to do, where to go, and how to express oneself facilitates the experiences of being immersed in the gameworld. *Autonomy* did not significantly contribute to the motivation of *Fun*.

Playing to be able to spend time with close others (*Relatedness)* did have a weak effect (0.18) on playing because gameplay experiences are immersive, but there was no significant effect on *Fun*. If one plays because she wants to be with her friends, she is therefore a somewhat likely to enjoy immersing herself in the gameworld. The results are reasonable. If one plays in order to be with close others, one does not necessarily expect the gameplay itself be the locus of delight. Yet, there are also players who report that they play with others because it makes the gameplay experience more engaging and captivating. Therefore, it can be concluded that, while many players play just to be with the others, the some players play with others because it enhances the meaningfulness of the gameplay. This result only partially supports the decision by Oliver et al. (2015) to interpret relatedness in video game gameplay as the interactions the player forms with in-game characters.

Of the three SDT motivations for playing video games in the model (Figure 18), none had more than minor effects on the outcome variables: perceived gameplay *Enjoyment* and *Appreciation*. Because the effects were minor and not supported by the theoretical framework of this study, I did not include these direct paths in the

model.[110] Instead, Figure 18 shows that the most important predictor (0.67) for *Enjoyment* is the motivation to play games because gameplay is fun and relaxing. *Fun* also contributes to *Appreciation*, albeit only weakly (0.20). Playing games because the experiences are immersive and emotionally touching moderately predicts (0.50) *Appreciation*. However, in the light of the data of the 845 respondents, the pull of immersive gameplay does not contribute to *Enjoyment*.

We can now calculate the direct, indirect and total effects for each of the five motivational factors for gameplay *Enjoyment* and *Apperciation* (Table 30). The results reveal that while *Immersion* (0.50) and *Autonomy* (0.46) are the main predictors of *Appreciation*, the effect of *Autonomy* is fully mediated by *Immersion*. Also, playing for *Relatedness* (0.08) or for *Competence* (0.07) has an effect on gameplay *Appreciation*, although this effect is very weak.

Playing video games because of *Competence* was, together with *Fun*, the main predictor for perceiving gameplay experiences as enjoyable. Again, the effect of *Competence* on *Enjoyment* was fully mediated by *Fun*. All of the other motivational factors, *Relatedness, Autonomy* and *Immersion*, had weak negative effects on gameplay *Enjoyment*, indicating that a player who plays because of these reasons is a bit less likely to regard gameplay experiences as inherently enjoyable. Rather, such a player would consider gameplay experiences as interesting and meaningful.

The model presented in Figure 18 measures 39 percent of the variance of gameplay *Appreciation* and 49 percent of the variance of gameplay *Enjoyment,* as measured with the R-squared test. Thus, I can conclude that the five motivational factors of *Autonomy*, *Relatedness*, *Competence*, *Fun* and *Immersion* predict both gameplay *Enjoyment* and gameplay *Appreciation*. The results confirm the first hypothesis of this study (H1). Also, the effects of the SDT motivations to play on *Enjoyment* and *Appreciation* were almost completely mediated by the motivational factors of *Fun* and *Immersion* (H2).

Based on these findings, I suggest that the five motivations to play can indeed be divided into first-order motivations, *Autonomy*, *Competence* and *Relatedness*, and second-order motivations, *Fun* and *Immersion*. Whereas the motivations of *Competence*, *Autonomy* and *Relatedness* perhaps describe the human needs for self-determination, the motivations of *Fun* and *Immersion* more accurately grasp the phenomenological level of experiencing the player–game relationship in the ongoingness of gameplay.

Similar to the study by Przybylski et al. (2009, p. 253),[111] it was revealed in the this study that in-game autonomy is more closely related to 'presence' or experienced immersion than it is to the other two SDT needs. In other words, one can more deeply relate with the game's storyworld and experience a wide range of emotions from happiness to sadness if one is able to truly act autonomously in a game.

[110] The modification indices suggest that *Relatedness* would have a very weak positive effect on *Appreciation*, and that all of the three SDT motivations would have very weak (*Relatedness, Competence*) or weak (*Autonomy*) negative effects on *Enjoyment* if they were included.

[111] The correlations between other relevant factors and presence were 0.28 for in-game competence, and 0.31 for game enjoyment (see Przybylski et al. 2009, p. 253).

Outcome	Direct Effect	Undirect Effect	Total Effect
Measurement			
Immersion → Appreciation	0.50***	-	0.50***
Fun → Appreciation	0.20***	-	0.20***
Relatedness → Appreciation	-	0.08***	0.08***
Competence → Appreciation	-	0.07	0.07
Autonomy → Appreciation	-	0.46***	0.46***
Immersion → Enjoyment	0.05	-	0.05
Fun → Enjoyment	0.67***	-	0.67***
Relatedness → Enjoyment	-	-0.02	-0.02
Competence → Enjoyment	-	0.34***	0.34***
Autonomy → Enjoyment	-	0.11	0.11
Structural			
Relatedness → Immersion	0.18***	-	0.18***
Competence → Immersion	-0.08	-	-0.08
Autonomy → Immersion	0.82***	-	0.82***
Relatedness → Fun	-0.04	-	-0.04
Competence → Fun	0.52***	-	0.52***
Autonomy → Fun	0.10	-	0.10

*** $p < 0.001$, ** $p < 0.01$, and * $p < 0.05$

The significance levels are for the unstandardized solution, and the effects are shown for the standardized solution.

Table 30. *The direct, indirect and total effects of the five motivational factors for playing video games on gameplay Appreciation and Enjoyment (N=845).*

The results of Study 7, however, suggest that the SDT need satisfactions do not only contribute differently to the experiences of fun and immersion but also that neither fun nor immersion, as expected experiential outcomes, are predicted by all of the three motivational factors of autonomy, relatedness, and competence (cf. Przybylski et al. 2009, p. 253). These findings are different from those of Ryan et al. (2006) and Tamborini et al. (2010), who, in their experimental studies, found a connection between satisfaction of autonomy, competence, and relatedness and perceived enjoyment of gameplay experience. It must be emphasized, however, that the study I report here is not based on manipulating game qualities during gameplay activity, but it is instead based on players' own reflection on their motivations to play. It is thus not plausible

to argue that the current study would be contradictory to that of Ryan et al. (2006) or Tamborini et al. (2010).

We can also compare these findings to the three motivations for playing online games as suggested by Yee (2006): achievement, socializing and immersion. To be able to discuss this subject, I want to remind the reader that the model I present in this chapter argues that motivations to play can be interpreted as first-order or as second-order motivations. Motivations of the first-order describe what the player expects to be able to *do* in gameplay, whereas motivations of the second-order illustrate what the player expects to *experience*. The second-order motivations emphasize emotional outcomes of an activity, while the first-order motivations are about the activity itself, and the player's agency in it. Following this line of reasoning, I consider *Immersion* and *Fun* to be second-order motivations to play.

From this stance, I propose that what Yee (2006) describes as motivations to play should rather be understood as the experiential states and emotional outcomes one expects to experience in intrinsically motivating gameplay, that is, second-order motivations. More precisely, I propose that 'achievement' is the primary second-order motivation of *Competence*, 'socializing' of *Relatedness*, and 'immersion'—as we see from the current study—of *Autonomy*. For example, one can express that she plays because she can *experience* achievements or because she can feel connected to the others. Correspondingly, seen from the perspective of first-order motivations, if one plays to be able to realize her autonomy, she is likely to expect experiences of immersion and emotions associated with that experiential state. When playing because of relatedness, one may not be intrinsically interested in gameplay as a standalone phenomenon but in gameplay as a social event. Further, if one plays for the challenge, she is likely to expect experiences of mastery, achievement and fun.

By offering that motivations to play can be interpreted from a first-order and second-order perspective, I argue that the five-factor model I develop in this chapter is congenial with both the argumentation of the SDT literature and the three motivations for playing online games, as identified by Yee (2006). Recall also the distinction between an action-oriented pleasurable mode and an experience-oriented reflective mode, as proposed by Cupchik (2011b). In Cupchik's view, the action-oriented mode is connected to pleasant associations and experiences that do not have a high-level of complexity, whereas the experience-oriented mode illuminates how an activity comes to have personal importance to an individual. In future research, it would be intriguing to analyze how being in a reflective narrative mode of experiencing relates to gameplay appreciation, and how game developers can take this into consideration when designing new games for varied audiences.

Based on three sets of data (N=1,718, N=879, N=845), I suggest in this chapter that we play video games because of five core reasons: 1) to be able to realize oneself autonomously, 2) to face challenges that put our skills and competence to the test, 3) to be with people close to us, 4) to be able to experience immersion and 4) to have fun. By constructing a structural equation model, I further demonstrate how these motivational factors predict gameplay enjoyment and appreciation. All of the five motivational factors are connected to an intrinsic motivation for playing video games inasmuch as they contribute to either enjoyment or appreciation and interest. The SEM model in Figure 18 is congenial with the argumentation by Oliver et al. (2015) since the study reported here suggests that a variety of reasons for playing video games

predict gameplay enjoyment and appreciation, and these reasons qualitatively describe different ways to valuate intrinsically motivating gameplay experiences.

Summary: The Conceptual Framework of Eight Invariants

In the Chapters 5–9 of this thesis, I first develop theoretical arguments by combining phenomenological enactivism and folkloristics (RQ3), and then explore how gameplay is experienced as personally valuable by analyzing three sets of statistical data (N=2,594, N=845, N=879), interview data of 32 participants, and 10 writings on meaningful gameplay experience (RQ2). In the course of this thesis, I argue for a total of *eight invariants of gameplay experience* (RQ1):

[i] *lusory attitude* and the position of the player (Chapter 2)
[ii] *coordinative and explorative* player practice (Chapter 5)
[iii] a change in the *self-presence* (Chapter 6)
[iv] *player persona* and its performative distance (Chapter 6)
[v] *emotional outcome* (Chapter 6)
[vi] *gameworld-relation* of ludic, narrative, and verisimilitude aspects (Chapter 7)
[vii] *enacted narrative* or narrative structure of gameplay experience (Chapter 8)
[viii] *motivation to play* (Chapter 9)

Building on the arguments I make throughout this dissertation, I contend that players have different preferences in relation to demands and possibilities for coordinative ludic and explorative paidic player practice [Invariant ii]; the types of self-presence and skillful access during gameplay [Invariant iii]; and participatory distance incorporating a specific performative node of functioning [Invariant iv] in distinctive ludonarrative gameworld settings [Invariant vi]. Finally, a gameplay experience has the structure of a narrative [Invariant vii], which makes it a sensible subject area for personal narration and emergent storytelling of adopting and acting through the position of the player [Invariant i]. I propose that for a gameplay experience to arise as memorable and meaningful, all of the eight dimensions should be taken into careful consideration. Thus, I offer that the framework of the eight invariants manages to reveal the qualities of gameplay experience through which it arises as emotional, relevant and worth sharing with others. The framework of these eight invariants also illustrates the complexity of the phenomenon of gameplay, and the importance of considering games simultaneously as artifacts and processes, which we who play experience from a first-personal stance.

The approach of gameplay motifemes seems to be a promising method for interpreting how players share similar preferences in video game gameplay. In Chapter 3, we see that players can be categorized into player types based on their preferred and disliked gameplay motifeme factors, and that the highly similar five-factor structure of *Assault, Manage, Journey, Care,* and *Coordinate* was revealed in two separate statistical studies (N=1,718 and N=845). We also see in Chapter 3 that the five factors of gameplay preferences have relevant correlations with motivations to play, recurrent

challenge types of video games, and with the "risk" of playing games of a particular genre, i.e., action games and strategy games.

In Chapter 5, it is revealed that players of the seven player types share different preferences in coordinative and explorative player practice (Invariant ii). We see in Chapter 6 that players appreciate different participatory distances, emotional experiences, and levels of involvement (Invariants iii, iv, and v), and that these differences are correlated with their gameplay motifeme appreciation. By bringing together players' preferences in gameplay motifemes and expectations for a particular range of emotions [Invariant v], I argue that a better understanding of people's desires in specific gameplay motifemes may be a potential way of comprehending the more general reasons for why some gameplay memories are valued over others.

This is continued in Chapter 7 with an analysis on how players of different player types favor ludic, diegetic, and verisimilitude dimensions in video game gameplay. In Chapter 8, I analyze the personal narration themes of players of the seven motifeme-based player types, and how the seven player types reflect the perceived meaningfulness of gameplay experiences.

The revealed seven player types (Chapter 3) are traits for distinctive player personae, that is, specific types of performances of the self in video game gameplay. By indicating that they favor one gameplay motifeme type over the others, the respondents of the survey (N=1,718) expressed that they prefer a specific performative position, that is, a type of player persona over the others. I propose that the seven identified player types can thus be interpreted as player persona types. Therefore, we have seven preliminary player persona types: *The Mercenary*, *The Companion*, *The Adventurer*, *The Commander*, *The Patterner*, *The Explorer*, and *The Daredevil*.

Taken as a whole, the gameplay motifeme approach and the eight argued invariants of video game gameplay experience seems to be a potential conceptual framework for further investigations of first-person gameplay experience and game cultures. However, I conducted an additional content analysis process with the qualitative interview data (N=32) to explore whether the eight invariants could be argued to cover all relevant dimensions of first-person gameplay experience.

In content analysis (Mayring, 2012; Hsieh & Shannon, 2005; Gläser & Laudel, 2011), the analysis process begins with a preliminary model of expected relations between recurrent variables in the data under observation. The model helps the researcher devise relevant research questions and select and produce appropriate data for analysis. It also works as the 'search grid' for identifying relevant patterns from the transcriptions, which can then be developed into abstract categories for further analysis (see Chapter 3). Finally, organizing the data into categories makes it possible for the researcher to conduct thematic analyses (Boellstroff et al. 2012, p. 167).

I analyzed the qualitative player interview data by coding the interview transcriptions into categories and data sections. I followed here an analysis procedure described in Boellstroff et al. (2012, pp. 164–168) and began by comparing interview transcriptions to find regularities, patterns and differences in relation to the conceptual framework I had developed and present in the previous chapters. After the initial systematization phase, I indexed the data sections according to the conceptual categories representing the eight invariants of gameplay experience. This enabled me to identify the relevant concepts and data sets for the current study, as well as recognize what parts of the data was not taken into account in the original model of eight invariants. My objective here was similar to how Boellstroff et al. (2012, p. 176) describe the

purpose of an ethnographic analysis: "[W]e focus on the rich specificity [of the data]... from that specificity we craft an analysis whose value goes beyond the particular incidents we encountered. We seek patterns and logics—the ways of thinking, believing, and doing that makes cultures and societies possible."

I proceeded then to analyze the data that did not fit the conceptual model by coding it into additional categories until a 'theoretical saturation' was reached. Saturation occurs when analyzing the data no longer contributes new insight on the phenomenon under analysis but rather consistently repeats the already identified structures and themes (Boellstroff et al., 2012, p. 59). A recursive process through which the theoretical model is re-evaluated in relation to the empirical data was required for operationalizing the abstract notions derived from theoretical discussions. Operationalization is an important objective for developing the framework into directions that enable comparison between studies aiming to scrutinize different aspects of meaningful gameplay experience.

When I analyzed the interview data, I quickly learned that the structure of the eight invariant dimensions or categories did not fully cover what had been discussed in the interviews. By comparing the material in all nodes, I reached a saturation point in coding the data into core categories when I had classified the data of the first 16 interviews. All of the eight proposed invariants of gameplay experience were represented in the data, but not equally. Most of the interviewees did not talk very much about their attention allocation and self-presence [Invariant iii] in gameplay and coordinative/explorative player practice [Invariant ii], although several interviews did provide material on these subjects. Instead, the players talked at length of the gameworld-qualities of their favorite games [Invariant vi], emotional outcomes of gameplay [Invariant v], motivations to play [Invariant viii] and their personal memories of playing video games [Invariant vii].

A few interviewees reflected on their gameplay experiences by describing in detail what kind of *challenges* they preferred in games. Although the subject of 'challenge' can be considered to fall under the category of 'coordinative player practice' (Chapter 5, see also Study 2 of Chapter 3), I did not analyze this data extensively. This is an important addition to be considered in future research on gameplay preferences, player types, and gameplay experiences. Another theme that arose when analyzing the interview data was players' perception on *addictive gameplay*. While a few talked about addictive games, only one interviewee and one person who submitted a written description of their gameplay experiences regarded this "addiction" as a negative thing. It was more common for the interviewees to speak about "good addiction" and refer to the addictive nature of games as a quality of a satisfying game experience. Moreover, the approach of gameplay motifemes and eight invariants does not describe the broader historical and cultural context in which gameplay experiences arise. Nor does it focus on subject areas such as age or gender of the player, game technology, or personal gaming history.

In addition to the subject areas of the eight invariants of gameplay experience, the theme of what Deterding (2013) calls "gaming modes" emerged in a notable way from the content analysis of the interview data. Drawing strongly from Goffman, Deterding (ibid., p. 248) studies what he calls "gaming modes" by analyzing the data of

19 interviews. According to him, gaming modes are the different ways in which leisure video gaming frames are organized into gaming events. He argues that gaming modes differ from each other principally based on their different *ethos*, that is the "jointly acknowledged dominant motivational relevancy that guides the actual organisation of the gaming instance (including genre, setting, device, social contexture), and is drawn upon discursively as an evaluative standard and rationale for actions, events, and communications transpiring in the situation" (ibid., p. 260).

Deterding suggests that gaming modes consist of four aspects, all of which were already recognized by Goffman: motivational relevancy including skill and involvement; telicity or purposefulness; attentive absorption; and arousal. Although I have also analyzed the phenomenon of gameplay from a framework that includes the aspects of motivation, skill, purposefulness, absorption (self-presence), and emotion, my focus is on the first-person experience and not on the types of *organization of the gaming situation* (cf. Deterding, 2013).[112]

Several of my 32 interviewees did, however, reflect on their favorite gaming "setup" and type of involvement or *gaming mentalities* (Kallio et al., 2011) with games under the nodes of relaxing *casual gaming* with low difficulty levels, *hardcore gaming* with very high difficulty levels, and social gaming in the forms of *competitive gaming* and *cooperative gaming*. A few interviewees talked about *mobile gaming* by distinguishing it from PC or console gaming. Relatedly, some interviewees talked about "true gaming," which they often associated with experiences of immersion and presence. Finally, a couple of interviewees shared their experiences on devising their own rules for playing video games, and modifying existing commercial game products to better fit their own preferences.

The content analysis of 32 interviewees therefore suggests that the model of eight invariants could be further amended by taking the gaming setup into more careful consideration. This is indeed an important area for future research. Although a gaming mode is, of course, an invariant of gameplay as a cultural phenomenon, this subject strongly overlaps with the proposed eight invariants. As Deterding himself states (ibid., p. 248), the motivational relevancy of a gaming event is the main factor that separates one gaming mode from another. Furthermore, Deterding suggests that the gaming modes can be analyzed by specifying how much emphasis is put on the *telicity*, i.e., the coordinative player practice, in gameplay.

The close connections that gaming modes arguably have in relation to motivations to play, expected emotional outcomes, and telicity may suggest that 'gaming

[112] Although the conceptual framework I propose has similarities with that of Deterding's (2013), there are also several crucial differences. First, the model I develop takes a firm first-personal stance on the phenomenon of gameplay by putting the viewpoint of the experiencer as the focal point of the analysis. Second, as I discuss in Chapter 5, from the viewpoint of phenomenological enactivism, the self does not appear only in relation to an ongoing situation but rather both as an enduring autonomous organization *and* situated—according to the principle of *needful freedom* by Jonas (2001 [1966]). Based on the concept of needful freedom, I am able to consider how the self emerges during gameplay as a player persona, and how prereflective self and narrative self appear in skillful gameplay. Third, the framework of this thesis emphasizes the narrative organization of the gameplay experience. Fourth, the current study adds an emphasis on game motifemes to the gameplay experience discussion, enabled by the designed gameworld and enacted by player agency. Fifth, I analyze extensive sets of both statistical and interview data.

mode' is a higher-order description, which includes several of the invariants of gameplay experience, namely, coordinative/explorative player practice [Invariant ii], emotional outcome of gameplay [Invariant v], and motivations to play [Invariant viii]. If a gaming mode is interpreted as an aggregate of several invariants of gameplay experience, and as a way to reflect on one's own game preferences, it can be proposed that my approach of eight invariants of the gameplay experience and that of gaming modes by Deterding (2013) are sympathetic to each other regardless of their different theoretical stances.

Discussion: The 'Real' Relevance of the Gameplay Experience

In the final discussion of this thesis, I aim to bring together the arguments I have made throughout the previous chapters. By doing so, I ask: how does a video game gameplay experience emerge as something *real* and genuine, given that gameplay is by definition something separable from fully real.

In *Half-Real* (2005, p. 1) Jesper Juul argues that video games consist of real rules and fictional worlds, which is similar to an argument previously proposed by Caillois (2001 [1961]; see Aarseth, 2014b, p. 490). The argument states that when a player encounters, e.g., a dragon in a game, the player is dealing with a fictional dragon instead of a real one. Aarseth (2007b, p. 37), however, disagrees with Juul by comparing the dragons of Tolkien's storytelling world with the ones a player encounters when playing video games. According to Aarseth, in-game dragons are not only signs but simulations, and this difference makes game content profoundly different from fictional content. "[W]e can get to know the simulation much more intimately that we come to know the fiction… we can't have our way with fictions, but with games, we may." Aarseth (2007b, pp. 36–37) suggests that the category of fiction is problematic in the context of video games since games provide experiences of real participation. He proposes that an in-game dragon should be understood as *virtual* and as *simulated* instead of claiming it to be either real or fictional.

Karhulahti (2012) has recently questioned, however, whether in-game entities, such as a dragon, can be accepted as a simulation. He states, based on reading Chris Crawford (1982), that accepting a dragon as simulation contradicts the primary function of computer-based simulations, which is to gain empirically valid and reliable knowledge of the factual world. Karhulahti (2012) proposes that from the concepts suggested by Aarseth (2007b), we could discard 'simulation' but appropriate 'virtual.' Drawing from Langton (1986), he gives 'the virtual realm,' 'the virtual universes' and dynamics of 'virtual automaton' as alternative terms for describing the contents of a video gameplay experience.

I agree with Karhulahti (2012) in accepting 'virtual' as a better concept for characterizing in-game contents and events than 'simulation.' 'Virtual' can be understood as *potential* (Massumi, 2002, p. 30), where it is related to the gap between what is perceived as actually being "'Virtual' connotates approaching the actual *without arriving there*" (Boellstroff, 2008, p. 18–19; see Miller, 2012, p. 7). Virtual is thus not to be opposed to real but to actual.

To ask whether something is real or fictional is an important research question for third-person approaches interested in the 'objective' characteristics of their research subject (see Chapter 1). For the first-person approach of phenomenology and enactivism, the question of the objective 'truthfulness' is not adequate in itself. Instead, game contents are examined as experienced and in relation to how they are perceived and enacted by the player. "Grasped phenomenologically… reality is that which is disclosed to us as real… we have no grip on what reality means apart from what is disclosed to us as real, and such disclosure necessarily involves the intentional activity of consciousness" (Thompson, 2007, p. 21). It is not satisfactory to argue that in-game events, characters, or qualities of the gameworld are real or unreal without postulating an embodied subject who perceives and experiences the game as such, e.g., during pre-reflective gameplay or while reflecting on her earlier experiences.

I suggest that from a phenomenological and enactive first-person stance of the current study, it is not correct to posit in-game activities as profoundly virtual, either. A person who plays a video game would agree that the emotions she experiences during gameplay are not virtual but actual. This raises the question: based on what grounds can gameworlds be argued to be different and more virtual than our everyday cultural world "since it is human 'nature' to experience life through the prism of culture, human being has always been virtual being? Culture is our 'killer app': we are virtually human" (Boellstroff, 2008, p. 5). Sutton-Smith (2001 [1997], p. 195) made a similar observation: since "human cultures are built out of imagination and fantasy… the duality of mundane and virtual is more appropriate" than real and unreal, and "mundane and virtual are both *real worlds* but in different ways." Our lives have been virtual all along inasmuch as our lives include experiences of the *potentially actual* (Miller, 2012, p. 7).

I offer the concept of *relevance* as an alternative to the dichotomy of virtual/actual. From the research tradition of pragmatics in narrative understanding, we could draw the four maxims: quantity, quality, relation and manner. Here, quantity refers to the informativeness of communication, quality to its truthfulness, relation to its relevance, and manner to its clarity, lucidity and organization (Grice, 1975). In the narrative understanding of different forms of literature, such as fiction, it matters not whether the quality of truthfulness is present. Instead, the principle of relevance is of great importance and may be primary in comparison to the other maxims; we have to be able to make sense of what we encounter (Walsh, 2007, p. 30).

Instead of postulating game contents as real/unreal by following the maxim of *quality*, we can apply the maxim of *relation* and discuss the in-game events as potentially (virtually) *relevant* (see Popova, 2014). When game events are enacted by the player, these potentials manifest as actual, real emotional experiences that are relevant, meaningful and memorable to the player-subject: "The goals of play are fictional; the incentive rewards, however, that accompany movement to a fictitious goal—these are real." (Peterson, 2002, p. 70)

In gameplay, virtual becomes actual through participation. This is to say that, in ongoing gameplay, the distinction between virtual and actual vanishes. Meaning resides in this process of sense-making: "One can treat the difference between actuality and possibility [virtual] in terms of temporal displacement… Meaning is the unity of actualization and virtualization" (Luhmann, 1995, p. 65). The player does not have to accept the in-game events as real, that is, pretend to play or suspend her disbelief, because the in-game events become meaningful and actual through her participatory

agency, and an access to the responsive gameworld. Perhaps we do not have to make-believe in what we encounter in games since they make sense to us through our ongoing participation. Just as Aarseth (2014b, pp. 491-492) writes:

> [T]here is no need for make-believing when players shoot at each other in *Counter-Strike* (Valve Corporation, 1999); they are manipulating nonphysical, informational guns that shoot non-physical, informational projectiles and when their avatars are hit, they do not have to make-believe that they are eliminated. This happens, factually, in the game machine, entirely independent of the players' imagination, just like a pinball when it drops below the reach of the flippers.

Let me now return to theories of affective science and enactive phenomenology, which I introduce in Chapter 6. Appraisal theorists Fridja and Scherer (2009, pp. 142–144) suggest that four *features of emotion* are of central importance to the understanding of any phenomenon under analysis: 1) emotions come forth to us when something relevant happens in our presence, 2) they give a strong motivational force, 3) and urge us to act, and 4) this urge is given a priority over other action possibilities.

Recall the argument I make in Chapter 5: "Videogame gameplay emerges as an autonomous organization between at least one player and a dynamically changing game system" and that this reciprocity gives the person who plays an identity of player proper. Now, consider the presented four central features of emotion (Fridja & Scherer, 2009) together with an enactive approach to sense-making as described by Kyselo (2015):

> [N]ot everything in the world matters; instead, environmental and individual processes acquire a particular status for the individual when they matter for the continuation of its identity. Being in the world is thus always concerned and an act of evaluation… A person *cares* for self-preservation as long as she is alive.

I argue that gameplay is experienced as emotional because *it matters to our self-constitution*. To care about the events that take place in the game is to care about one's identity as player proper, i.e., one's performative player persona. Following Noë (2015) and Korsgaard (2011), I suggest that inasmuch as we play at all, gameplay participates in constituting us as humans—we define ourselves also by playing games: "If, when we act, we are trying to constitute ourselves as the authors of our own movements, and at the same time, we are making ourselves into the particular people who we are, then we may say that the function of action is *self-constitution*" (Korsgaard, 2011, p. xii).

The fact that gameplay is emotional for us means that it has a specific relevancy as a first-person experience. Were it not relevant, no emotions would emerge from it. "Emotions are elicited when something relevant happens to the organism" (Fridja & Scherer, 2009, p. 143; Colombetti, 2014, p. 13). We become afraid in horror games because there appears a threat to our continuity as players proper. We feel joy when we achieve in-game goals because these achievements are *ours*; they have the

inevitable quality of *for-me-ness* (Zahavi, 2014), a quality that is present in all of our activities in which we have sense of agency and sense of ownership (Gallagher, 2012). Gameplay is relevant, and therefore emotional, because the player acquires self-presence in the player–gameworld relation. It is where her "I" resides during gameplay.
I argue that presence in gameplay is greater than in other media since all gameplay engenders transformations in the player's self-presence (Chapter 6). "Presence as *access* is as real as presence gets, and that's real enough" (Noë, 2012, pp. 33–34). Therefore it can be concluded that regardless of the content of the game, whether the player, for example, encounters massive dragons, trees that speak or other "counter-intuitive" in-game figures, a gameplay experience as a first-person experience is real, the emotions one feels are real, and gameplay as a whole may converge into real through its relevance—depending on how present it is to our *access spaces* (Noë, 2012, pp. 34–36). The more comprehensive the presence is in video game gameplay, the closer to real it turns out to be; "[W]hat are given to me in perception are not necessary truths, but presences" (Di Paolo, 2016, quoting Merleau-Ponty). The dragon Juul writes about (2005) is not real or fictive, but present, and through its presence it may gain real relevance for us as the game players.

Goffman (2013 [1961], p. 80) wrote: "An encounter provides a world for its participants… something in which the individual can become unselfconsciously engrossed is something that can become real to him." The moment we step back from gameplay to take on an introspective stance or if we engage in other activities, the relevance of gameplay takes a serious hit. This happens because we no longer perceive our agent–environment relation from the perspective of our player persona, our presentation of the self in gameplay. In-game events do not appear as emotional, relevant or real to us anymore.

In Chapter 1, I introduce *first-person folkloristics*—consisting of the marriage between folkloristics and phenomenological enactivism—and offer it as a promising theoretical framework for studying both the invariant structures and varied experiences of video game gameplay. I position this thesis as a work for demonstrating how 'enactment' can be understood as an alternative approach to performance-centered folkloristics, which, according to Bronner (2016), faces considerable challenges, especially in digital environments. In contrast to folkloristic school of performance studies, an enactment-centered approach is able to study cultural expressions without postulating 'performer' and 'audience,' but instead that of a 'participant.'

By utilizing the concept of 'enacting' and 'enactment,' a folklorist can change the locus of interest between the first-person view and the third-person view, in which the former emphasizes embodied subjective experience and the latter an event in which an embodied subject acquires the position of a participant. Enactment-centered first-person folkloristics investigates the continuities between cultural traditions and emergent cultural expressions, including performances. The concept of 'enaction' also connects folkloristics directly to a field of embodied cognitive sciences, which opens up unexplored possibilities for interdisciplinary discourses. These notions are largely in line with how Bronner (2016) describes the impacts of practice theoretical approaches in contemporary folkloristics.

It is my sincere wish that the observations I offer in this thesis manage to open up new horizons for both folkloristics and game scholars representing varied research traditions. Studying games and play requires active interdisciplinary research collab-

oration, and cooperation with game developers. With this thesis, I argue that folkloristics belongs among the disciplines that study all games, whether informal social ones or commercial video games. In its very essence, folkloristics is a field of research specialized in exploring the connections between traditions, genres, and transmission—in the case of 'game' this covers the ontologies of games both as objects and processes that are preserved and varied through time.

CONCLUSIONS

> When someone asks, "What is folklore?" I reply: "All those things *they* say, *they* sang, *they* played" (Abrahams, 2005, p. 10).

The purpose of this thesis is to investigate the video game gameplay experience by exploring its invariant structures (RQ1) and the varied meanings players attach to these structures (RQ2). It is argued that folkloristics is a promising academic discipline for studying these questions as it is an equally promising research tradition for studying all kinds of games (RQ3). Although 'folklore' is, by definition, to be distinguished from what is considered institutional and commercial, folklore can exist only in relation to the established and to the norm, and therefore, folkloristics studies not only the vernacular but the vernacular in its dynamic and dialogic relationships with the institutional. This delineation renders 'game' as a prominent subject of research for folkloristics, especially in its ontology as a process, that is, a game-as-played.

Games as processes can be approached from two profoundly different angles. If the interaction processes that take place between players and a game are viewed from an outside perspective, we can speak of a third-person viewpoint. In contrast to this, the first-person approach advocated in this thesis begins from the experience of an individual and argues that objects cannot be analyzed without investigating for whom the analyzed phenomenon manifests and how it comes forth in the experience.

Folkloristics has been argued to be a field of academic research specialized in taking a view within and striving to better understand how culture is experienced and expressed by the vernacular. This observation positions folkloristics as a discipline suitable for taking the first-personal approach. Enter *first-person folkloristics*, the stance of this thesis and a research strategy, which aims to illuminate how the vernacular experiences and expresses itself and its surrounding culture on the level of the embodied and affective subject.

Although many folklorists emphasize the subjective experience in their analyses, the tools for doing so remain limited if a folklorist does not embrace an interdisciplinary attitude. Phenomenology is a field of philosophy that appropriates the life-worlds of individuals as its point of departure to investigate the structure of consciousness and experience. In its thread of *enactivism*, we meet a scientific attitude of embodied cognitive science, which aims to naturalize phenomenology by studying the entire brain–body–environment perspective of an experience. Enactivism does not analyze the objects of the world and the subjects as detached from each other but precisely and only in their ongoing coupling. It is argued in this thesis that phenomenological enactivism is a highly relevant theoretical tradition for conducting first-person folkloristics *and* for studying games as processes since enactivism has been devised for examining both the interactivity and the *qualia* of our encounters with the world.

It has been proposed by Goldstein (1993) and later by McNeill (2013b) that folkloristics can be distinguished from its closest academic disciplines by the combination of what they call "tools for a folkloristics." There are arguably three of such tools: 'genre,' 'transmission' and 'tradition.' These tools mirror that folkloristics is interested in studying objects of folklore, processes of folklore, and the continuities in how the objects and processes of folklore are experienced in a variety of vernacular

communities and cultures. I argue that these three tools shape folkloristics into a very promising research tradition for studying play and games. This is because games are objects *and* processes (Aarseth 2014b), and both of these ontologies require corresponding research tools. With the tool of 'genre,' folklorists are equipped to study games as objects, and the tool of 'transmission' affords them to investigate games as processes. With the tool of 'tradition,' folklorists are furthermore capable of investigating games and gaming through patterns in time and cultures.

The combination of folkloristics, phenomenological enactivism and game studies may be regarded as improbable, but I trust that presenting this interdisciplinary theoretical framework is a central contribution of this thesis for both folkloristics and game studies discourses at large. Whereas the research interests of folkloristics are in the specific cultural expressions and how they are transmitted to others, phenomenology aims not to identify idiosyncratic characteristics but to establish invariant structures of experience. This profound difference between phenomenology and folkloristics does not mean that the two research traditions would be necessarily incompatible if they were considered distinctive phases of conducting research. With this thought in mind, I moved forward in this thesis to first investigate the invariant structures of games as processes and only then did I consider, through the lens of these invariants, how varied experiences arise from the player–game coupling also known as gameplay.

The Invariants of the Video Game Gameplay Experience

From Lusory Attitude (i) to Explorative and Coordinative Player Practice (ii)

I began tracking the invariants of gameplay by delineating that a video game gameplay experience requires a player and a video game object, and their ongoing interaction, which is called *coupling* in enactivism. While prior research offers a large body of descriptions for 'gameplay,' none of the earlier studies utilizes embodied cognitive theory for developing a rigorous definition for the phenomenon. Enactivism, I argue, offers such a stance since it is built on theoretical biology and neuroscientific work on situated cognition.

To be able to analyze 'gameplay' from the perspective of enactivism, I offered a view on the systems that are interconnected in gameplay. A player is an autonomous system, but a game is heteronomous. An autonomous living system regulates its interactions with the world in order to sustain and regenerate its constitution. Instead of stable states, it has tendencies and transients. In contrast to this, a game is a state machine (Juul, 2005) that changes its current state in relation to the player's actions and its internal code.

Following Mead (2015 [1934]) and phenomenological argumentation, I propose that the self of the player encompasses pre-reflective consciousness and reflective, i.e., narrative, consciousness. In the course of this thesis, this distinction was important to make since it was immediately followed by an argument that narrative consciousness is required for taking on the position of the player, for embracing the

lusory attitude (Suits, 2005 [1978]). Without narrative consciousness, the player would not be able to consider herself *as being* the player (Mead, 2015 [1 934]), which would mean that the person who plays could not make a distinction between 'game' and other events in her life. The lusory attitude is not something the player should only embrace before gameplay to make it possible but instead something that the player must actively sustain throughout gameplay by desiring to retain herself as being the player. Therefore, the lusory attitude is both a precondition for gameplay and an invariant of the gameplay experience. This marked the first invariant structure of the video game gameplay experience.

In an enactive theory of social cognition by De Jaegher and Di Paolo (2007), it is contended that the quality of 'autonomy' is not only essential for living systems, but social interactions can come to have temporary autonomy. In *autonomy of interaction* (Kyselo, 2014) at least two autonomous systems that are coupled with each other regulate themselves and the interaction in activities of participatory sense-making (De Jaegher & Di Paolo, 2007).

By conducting a phenomenological analysis, I argue that the quality of autonomy does not only come forth in social play but in all forms of gameplay, including single-player video game gameplay. This argument is based on the proposed phenomenal sameness between human–game interaction and human–human interaction. The player who desires to play must take into consideration the interactional demands set by the game. The game provides affordances, that is, opportunities to act for the player, and these affordances are normative since the performance of the player is evaluated by the game, as Karhulahti (2015b) has recently argued. The actions the player takes are thereby not individual actions in the sense that she would not have to take her responsive partner, the game, into constant consideration. This condition renders a player's action phenomenally similar to a social action taken in person-to-person interaction. I call these *performative acts*.

By taking performative actions, the player sustains herself as being the player *and* the interaction, which is also sustained by the game system. From this reciprocity, gameplay emerges as autonomous organization. More than that, this reciprocity engenders the identities of the *player proper* and the *game proper* since it is the autonomy of gameplay that gives the game system and the player their "true" identities.

Although the player–game interaction has qualities similar to social interaction, the game remains heteronomous. In contrast to autonomous agents, such as humans, the game belongs to its environment and is not able to dictate the gameplay. The asymmetry between a living being and its environment mandates that only the living being—because of its adaptive autonomy—is able to regulate its interactions. From a first-person enactive stance, it is the player who regulates her encounter with the game by intending to sustain her identity as being the player.

The argument that gameplay has an autonomy is not new. Instead, many authors have stated that games have endogenous meaning. What is new in my argument is that, by appropriating an enactive theory of participatory sense-making, I reveal how this autonomy arises from the coupling between an autonomous player and a heteronomous game, through reciprocal acts that bear phenomenal similarities to performative social acts between two persons.

The crucial notion here was that a player's performative acts are *explorative* or *coordinative*. Again, similar to any social interaction, the autonomy of the player–game coupling of gameplay is sustained by explorative and coordinative practices. In

explorative practices, the player studies, tests, bends and even breaks the rules of the game. In coordinative practices, the player takes actions to find accord with the game system. Understood as a dialogical and recursive pattern through time, the explorative and the coordinative practices enable an equilibrium that pushes the game forward. This process is akin to *growth in adaptation* in living systems in their environments. More precisely, the player evaluates the needs and then explores her possibilities. Then she expands her means for making progress in the game by coordinating her actions in relation to the demands of the game.

The notion of explorative and coordinative player practices is not a new argument in game studies either. The novel contribution of this thesis is that this notion has not been analyzed in relation to how gameplay arises as an endogenous, autonomous system of meaning-making. Furthermore, gameplay as a phenomenon has not previously been compared to the process of folkloristic activities in general. Here, my argument was that, as a type of activity, gameplay has profound similarities with how folklore manifests in culture: in both, the person represents the vernacular who is able to express herself and create something new in relation to that what is normative, institutional and regulated by social rules.

I argue that both the explorative player practices and the coordinative player practices are required for an activity to be regarded as gameplay. Thus, they are constitutive principles of gameplay and together comprise the *second invariant of the video game gameplay experience*. I defined gameplay as the self-sustaining autonomy that arises in a dynamic reciprocity between at least one autonomous agent and a responsive game artifact. In this reciprocity, the agent both regulates itself and its coupling with the responsive game artifact in the processes of exploration and coordination.

From Self-Presence (iii) to Persona (iv)

I went on to investigate the position of the player and her identity as player proper. In gameplay, a specific repertoire of features is presented to the player. As argued in the literature of human–computer interaction (HCI), these features may facilitate experiences of *spatial presence*, *social presence* and *self-presence* for the player. In spatial presence, the player senses herself as being there in the mediated environment. (Steuer, 1992; Wirth et al., 2007). Social presence is the sensation of being in contact with another intentional agent through a medium (Biocca et al., 2003) in the forms of immediate co-presence, being psychologically involved with another intentionality, and being behaviorally engaged with each other (Tamborini & Skalski, 2006). In self-presence a person feels that her self is transported to the virtual environment to the extent that this alternative self arises as primary egocentric reference frame of experiencing (Wirth et al., 2007).

In contrast to HCI literature, I contended in this thesis, from a phenomenological stance, that self-consciousness includes the aspects of pre-reflective consciousness and reflective or narrative consciousness. I argued that all discussions on presence should take this two-folded nature of consciousness into consideration and ask how the presence manifests in relation to both pre-reflective and reflective experience.

Furthermore, and perhaps consequently, HCI literature seldom appropriates a first-person stance or studies the life-world of the experiencer. Because of this, the role of active participation by the player has only received moderate attention. In enactivism and in the stance of the current thesis, presence is defined as how experience becomes available to the subject. It is stressed that presence is a matter of degree rather than something that only happens in mediated interactions. Presence describes what kind of access we have to the world, and thus what kind of agency is provided for the skillful experiencer (Noë, 2009; Noë, 2012).

I argued that video game experiences have a greater degree of presence than our encounters with other types of media. This is because most games require that we allocate our main involvement, that is, our main self-presence to the gameplay instead of dividing our attention between other activities. Games also manage to tap into our capability of skillful action or *access spaces* (Noë, 2012) more extensively than other media. We can both perceive how objects in the media act upon ourselves and we can act upon them as being the players. Games require us to utilize social interaction skills because we have to adapt to new situations by taking the normativity of the player performance into constant consideration. Finally, I argued that video game g*ameplay inevitably alters the player's self-presence*, and that this is to be taken as the *third invariant* of the video game gameplay experience.

Whereas self-presence in prior literature has meant that the player feels like she is experiencing the unfolding events from a viewpoint of an in-game avatar and thus identifies herself with this position, my argument is that such an embodied representation in the game is not required for a change in self-presence. Instead, a change in the self-presence means in this thesis that gameplay changes our agent–environment relations, which introduces "I" anew. This is to take a relational stance on "I": that what I experience as 'me' is not separable from what is *present* for me in every situation. As long as we aim to remain the player of a game, we invariantly care about our relationship with the game, which changes our primary relationship with the world into the ongoing coupling between ourselves and the game.

Video game gameplay does not only alter a person's self-presence but also brings along the new temporary identity of the player proper. I introduced the concept of *player persona* as the mask of the player through which a person experiences the gameplay and expresses herself. *Persona is the fourth invariant of the video game gameplay experience*. Persona is not to be equated with a role. If there is a role in a game, this role is a fictional intentionality within the game, not the position a person acquires by adopting a lusory attitude. Persona is how we experience the organized activity of gameplay through the identity of the player proper. It is how we present ourselves in gameplay and enact a perspective of the gameworld.

Although my cogitations on persona were strongly influenced by Goffman, I made a clear distinction between frame analytic studies and my own endeavor by accepting the phenomenological take on enduring pre-reflective self. In my view, Mead's writings on the social self can be regarded as sympathetic with the phenomenological and enactive view, but Goffman's social constructivism takes a different stance on understanding the self as a bundle of social interactions and roles without an explicated lasting core. Following Kyselo's (2015) lead, I appropriated Jonas' (2001 [1966]) theory of *needful freedom*, which enables both the autonomous stable self and the situated selves or I-positions that manifest in our encounters in the world.

From this theoretical perspective, I revisited Goffman's dramaturgical theory on presentation of the self in everyday interaction (1959) and proposed that the player persona's presentation of the self in gameplay can be analyzed in relation to the model fashioned by Goffman. By doing so, I urged that the presentation of the player in gameplay is profoundly performative and that it covers the seven facets of *lusory attitude*, *style*, *responsibility, glorification*, *normativity*, *skill* and *uncertainty*. In gameplay, the player presents herself as a persona by taking on the position of the player and by expressing herself in a specific style. The position of the player entails responsibility for the decisions that are made and the actions that are taken, and conducting normative acts may lead to glorification of the player. However, to reach this, one must show skills and expertise and recognize that the final outcome of the performative play is never absolutely certain.

From Gameworld-relation (vi) to Enacted Narrative (vii)

I continued to discuss the concept of 'performance' and whether, in addition to the player's participation, gameplay itself could be considered a performance. This discussion was based on folkloristic literature on performance. I conclude that gameplay is not a performance because performance includes a re-presentation of absent events, and it is shown (*dis*played) rather than lived through (played). Although all experiences are, of course, also lived through, in gameplay the conscious player does not primarily stage or re-present her performance but instead presents herself by enacting. Gameplay, like performances, is constitutive (created and enacted), epistemic (a way to know), and critical (reflexive) activity (see Bell, 2008), but this is not enough to give gameplay the identity of performance.

From the vocabulary of folkloristics, 'enactment' was proposed as more suitable description for the event of gameplay. Abrahams (1977) introduced enactment as a latent category that encompasses performances, festivities, rituals, and play and games. All of these cultural events consist of encouraged participation, stylization of behaviors, heightened senses of meaning and intensity, and reflectively self-conscious forms of participation. We readily know when gameplay is going on, and similarly, we are quick to identify festivities, rituals and performances. Cultural enactments are *genres of interaction* and patterned scenes of focused cultural conduct. Drawing from Abrahams (1977; 1982; 2005), I propose that games-as-played can be demarcated game enactments.

In a game enactment, the game emerges as an alternative environment for the player. By reading the theory of *Umwelt* by Jakob von Uexküll (2010 [1934]), I suggested that such an environment is intrinsically meaningful for the player-subject because participating in it enables her existence as being the player proper. *Umwelt* is the first-person view to the world, and in this thesis, it is argued that during gameplay *gameworld* comes forth for the player as a temporary *Umwelt*: the self-world of the player. Our actions have different kinds of meanings in games than they have in non-game environments because of game mechanics (Sicart, 2009). Thus, a *gameworld-relation* is proposed as the sixth invariant in the gameplay experience.

Similar to how I interpreted Goffman's (1959) theory of the presentation of the self to performative player practice, I explored how a gameworld comes to have a full-blown sense of worldness to it. I proposed seven such relationships: a *lusory attitude* is enabled by the *affordances* of the game; the performative *style* of the player takes place in a *setting* presented by the game; performative play includes an element of *responsibility*, which makes sense because the actions the player takes have *consequences* in the game; the player may experience *glorification* because the consequences in the game are *contingent* on the game design and form interrelated events instead of only isolated effects; the player performance is *normative* because of the *rules* of the game; the player must show expertise and *skill* and her performance is *evaluated*. Yet, the player performance entails *uncertainty*, because of the element of *noncommunication* in the game.

I continued then to explore the notions of gameworld and storyworld in relation to each other and argued that the player's performative participation in the game is what engenders a *syuzhet*, that is, the plot or the narrative discourse of the gameplay experience. With this argument, I meant that gameplay acquires its dramatic organization in relation to the player's agency and decisions. Noting that a game presents a story to the player (or "tells a story") is different from discussing how the game-as-played comes to have narrative structure in the player experience. In gameplay, a player may experience her endeavors in the game as parts of the game's *fabula* or story and storyworld. When we think back on our gameplay experiences, we do not remember only what happened in the game but also how we made it happen.

Building on these views, I argued that every gameplay experience generates an *enacted narrative* and that this quality is to be understood as the seventh invariant in the video game gameplay experience. Our experience of playing games necessarily make sense to us because games are sense-making systems. An experience of gameplay has an inherent dramatic organization in which actions lead to effects and activities to consequences. This is what the rule-system and the game mechanics enable, and this is also why all gameplay experiences as enacted have a structure not unlike prototypical narratives. At times, we all experience that the events we encounter have an inherent *sense of story* to them. In gameplay, however, this experience is not rare or uncommon but definitional. I argue that it is a core reason for why people play games or attend sport events in the first place: we want to experience the dramatic narrative structure of unfolding events. A game can be regarded as a *story machine*, although it is not a narrative in itself.

The innate narrative structure of a gameplay experience is also what makes video game gameplay *folkloric*. As Kiri Miller (2008; 2012) has argued before me, a gameplay experience is akin to "folkloristic text" since it exists in multiple versions and is shared in versatile cultural communities. Furthermore, game mechanics, that is, *modes of interaction*, have a deep folkloric core. Many of the game mechanics of contemporary video game cultures have their roots in informal games, and these traditions of game design are not owned by anyone. Rather they are commonly shared, borrowed, modified and presented to players worldwide.

From Motivations (viii) to Emotional Outcomes (v)

The fifth and the eight invariants of the video game gameplay experience encompass the emotional relevance of being a player. I argued that a person who takes on the position of the player by adopting a lusory attitude is *invariantly motivated to play*. I continued with the argument that the player plays with an invariant expectation of an *emotional outcome*; understood from a stance of enactivism, a gameplay experience is constitutionally emotional because it matters to our identity as being the players of the game. As long as a player intends to play and *cares* about her player persona, gameplay emerges as value-laden and emotionally relevant. Finally, the invariant emotionality of video the game gameplay experience is what introduces gameplay experiences as relevant and meaningful. I offered that, instead of discussing games as real/unreal or actual/virtual, we can ask how relevant the gameplay experience is for the player-subject and thus how *present* the player is for the game and the game, correspondingly, for the player.

Taken as a whole, the proposed eight invariants of video game gameplay experience state that: the player has to take the position of the player in order to play a video game, and continue to exhibit a lusory attitude throughout the gameplay (i). When she plays, her participation consists of explorative and coordinative player practices, which afford experienced growth in adaptation (ii). In gameplay, the player is available for the game and the game is available for the skillful access of the player. Because of this shared availability, gameplay invariantly changes the self-presence of the player (iii). By participating in a game, the player acquires the identity of a performative player persona (iv). In the coupling between a player and a game, the game environment arises as the primary context for our agency, which introduces a game-world-relation to the player (vi). The structure of a gameplay experience is that of an enactive narrative, which necessarily makes sense to us as a dramatic trajectory through the game (vii). As long as the player intends to play, she shows a kind of motivation for gameplay (viii), which entails an expectation of the emotional outcome (v) of the experience.

The Varied Experiences of Video Game Gameplay

Gameplay Motifemes and Player Types

The empirical sections of this thesis consisted of a series of mixed-methods studies on players' gameplay preferences and their interpretations on preferred gameplay experience. I began the empirical analyses by developing a folkloristic approach to the model of game dynamics preferences published by Vahlo et al. (2017). I argue that game dynamics that emerge from interrelated game mechanics when set in motion by player performance can be interpreted as *gameplay motifemes*. I base this argument on Alan Dundes' (2007 [1964]) article on game morphology in which Dundes utilized the functions of folktales as proposed by Vladimir Propp (1968 [1928]).

In Dundes' view, motifemes converge into the functions or *units of action* in folklore, and allomotifs into how concurrent motifemes are varied and presented in a singular item of folklore. Based on the framework by Dundes, I argue that gameplay motifemes are abstracted descriptions of an activity enabled by game dynamics and enacted by performative play, defined from the point-of-view of its significance for the course of the game. Similar to 'player performance' and 'game dynamics,' 'gameplay motifeme' describes a meaningful unit of gameplay. However, whereas 'player performance' emphasizes the player's point-of-view and 'game dynamics' stresses the designed game product, 'gameplay motifeme' observes the activity of gameplay as a whole, from the perspective of player–game coupling.

In the first statistical study of the thesis, I explored the gameplay motifemes of contemporary video games and players' preferences in taking performative agency in them. These empirical questions were thus analyzed to investigate the variable manifestations of the invariants gameworld-relation (vi), and the player's performative preferences as the player persona (iv).

I conducted a qualitative content analysis on 700 published game review articles to identify what the most prevalent gameplay motifemes of video games are. The analysis, consisting of printed review articles of *Pelit* and *Pelaaja* magazines and online articles published on IGN.com, GameSpot and TouchArcade, resulted in 2900 individual descriptions of gameplay motifemes, which exemplified what "you will be doing as the player of this game." These descriptions were then abstracted into finite verb phrases that specify the core activity and its immediate objects. By comparing the individual descriptions, i.e., allomotifs, I proceeded, with the co-authors of Vahlo et al. (2017), to present 33 core gameplay motifemes of contemporary video games.

The list of 33 core gameplay motifemes was then constructed into *The Core Game Dynamics Scale* (The CGD scale), which was included in a survey of 2,594 respondents. The purpose of the survey was to investigate whether player-respondents could express their preference in gameplay motifeme and whether we could reveal latent motifeme preference-type factors based on respondents' preference scores. This was studied by conducting an exploratory factor analysis on the data of 1,718 respondents who reported that they played digital games at least one hour weekly but not more than 8 hours every day.

The factor analysis revealed five gameplay motifeme type factors: *Assault*, *Manage*, *Journey*, *Care* and *Coordinate*. A player who prefers *Assault* is likely to enjoy shooting enemies, sneaking and laying traps, stealing cars, breaking the law and waging war. If one prefers *Manage*, she indicates a preference in building and constructing, generating resources, directing people or inhabitants and strategizing. A high preference in *Journey* denotes that the player is fascinated with exploring the gameworld and its secrets, creating an avatar and developing its skills and abilities, making meaningful choices and collecting hidden treasures. A player who enjoys *Care* tends to like to take care of animals and show affection towards others by flirting, hugging and kissing. Finally, a high preference in *Coordinate* suggests that the player enjoys the gameplay motifemes of staying in rhythm by playing instruments or dancing, jumping on platforms while avoiding obstacles, or matching tiles together.

In Vahlo et al. (2017), based on the revealed five motifeme type preferences, we conducted a cluster analysis to explore whether the preference scores in the factors formed player types. A cluster analysis indicated seven player types: *The Mercenary, The Companion*, *The Patterner*, *The Daredevil*, *The Adventurer*, *The Explorer* and

The Commander. Each of these player types had distinctive preferences for the five gameplay motifeme type factors. For instance, *The Commander* had a neutral score in *Assault*, a very high score in *Manage*, but a very low score in *Care*.

Informed by the results of the first study (N=1,718), I made several modifications to The CGD scale and included it in another survey of 845 respondents. I then repeated the analysis procedure of the first study to investigate whether the second analysis would result in similar gameplay motifeme factors. Five factors were also revealed in this study and, due to their very high similarity with the first study, I was able to reveal the motifeme type preference factors of *Assault*, *Manage*, *Journey*, *Care*, and *Coordinate* in this study as well. I then continued to develop The CGD scale by making a data triangulation by analyzing a total of 166 official game instruction manuals. Here, I followed the steps of the content analysis included in the first study. As a result, I was able to identify most of the motifemes already included in the first iteration of The CGD scale. In addition to this, the results of the data triangulation suggested that an additional 11 gameplay motifemes could be considered in the third iteration of the scale.

I concluded this section of the thesis by studying how the gameplay motifeme type factors and individual motifeme items compared to recurrent in-game challenge types and established video game genre classifications. In a statistical calculation of the *relative risk ratio*, I was able to demonstrate that the motifeme type factor preferences were connected to the probability to play specific video game genres. These connections were, however, multi-dimensional. For example, a preference in *Assault* did not only predict a higher "risk" for playing action games, but also action-adventure games, role-playing games and racing games. This study was part of the discriminant test of The CGD scale since it revealed that, by asking what kinds of gameplay motifemes players preferred to play, we did not ask whether they were "action game players" or "strategy game players."

By reading folkloristic literature on genre classifications, I argued, by following Whittaker (2012) that actions and activities form the most promising unit of analysis by which a game genre classification can be developed. Finally, I presented a preliminary take on how video game genres can be classified based on the gameplay motifeme model proposed in this thesis.

Varieties of Meaningful Gameplay Experience

I continued the empirical analyses in Chapters 5–9 by conducting mixed-methods studies on the quantitative data of three surveys (N=1,718, N=845, N=879) and qualitative data consisting of the interviews I conducted with 32 players who participated in the first survey of 1,718 respondents. Furthermore, I analyzed 10 open letters submitted to my call for meaningful gameplay experiences. The call was open only to the respondents who had participated in the local version of the first survey (N=594).

A total of 308 respondents indicated in the local survey conducted in December 2014 (N=594) that they were interested in future research. I shortlisted these interview candidates based on their player type, since each of these respondents were included in the cluster analysis process. I interviewed eight players of *The Mercenary*

type, seven of *The Adventurer* type, seven of *The Explorer* type, six of *The Commander* type, two of *The Companion* type, and one each of *The Patterner* and *The Daredevil* types. I analyzed the interviews through the conceptual framework of eight invariants in video game gameplay experience. The analysis consisted of four sections: the ludic involvement in ongoing gameplay; the game choice; memories of the video game protagonist; and motivations to play.

In the first section of the analysis, I reflected on the qualitative data with regards to the invariant of coordinative and explorative player practice, pre-reflective and narrative self-consciousness, and the discussions of player's skills. Here, it was argued that taking the pre-reflective stance results in emotionally different kinds of gameplay experiences than playing from the narrative or reflective stance. When discussing coordinative and explorative player practice and players' skills, I offered a critical view of how Csikszentmihályi's (1990) theory of flow experience manages to encompass the varied gameplay experiences. I suggested that the explorative player practice is difficult to conceptualize in the framework of 'flow,' and yet explorative paidic activity was reflected by many interviewees as what they really enjoyed in gameplay.

I continued then to analyze how the interviewees narrated their preferences in player performance. This I did from the viewpoint of the invariant player persona and the proposed four functional nodes of principal, enactor, strategist and animator (see Goffman 1986 [1974]). I especially studied how players may or may not experience empathy in the animator node when playing from a first-person or third-person camera angle. I then continued to discuss how in-game characters, and the gameplay experience as a whole, manage to engender experiences of social presence and, correspondingly, social emotions such as pride, fear or sadness.

I concluded this empirical section with a series of analyses on emotions in gameplay experience. By conducting factor analyses and linear regressions with the data of 1,718 respondents, I revealed that common emotions of gameplay can be divided into *Positive Valence* and *Negative Valence*. I then identified that *Positive Valence* includes the dimensions of *Comfort* and *Thrill*, and *Negative Valence* the aspects I called *Disaster* and *Disappointment*. *Comfort* describes feelings of certainty, ease and self-trust, whereas *Thrill* denotes excitement, attentiveness and relief. These positive emotional experiences were then contrasted to the *Disaster* of feeling anger, fear and shock, and the *Disappointment* of self-contempt, shame, inability and frustration.

By analyzing the connections between the motifeme factors and the four factors of emotions in gameplay, I showed that a preference in *Journey* is a main predictor for enjoying *Comfort* and *Thrill*, whereas appreciating *Assault* predicts higher preference in *Disaster* and *Disappointment*. The preference profiles of the seven player types also suggest that video game players appreciate emotional experiences of positive valence much more than those of negative valence. In the case of positive valence, players hope to experience emotions of comfort, pleasure and satisfaction more than those of thrill and excitement. In emotions of negative valence, experiences of fear and disaster are tolerated better than those of disappointment and shame.

I then proceeded to investigate how players reflect on the elements of a good game. For this purpose, I conducted another statistical analysis on the data of 1,718 respondents. A factor analysis revealed that players appreciate video games based on three dimensions: *Diegetic*, *Ludic* and *Verisimilitude*. A player who prefers *Diegetic* appreciates a good story and beautiful in-game music, and in-game characters with

which the player can identify with. High scores in *Ludic* indicate that the player appreciates a responsive game system with a well-tuned level of difficulty and smooth gameplay. *Verisimilitude* indicates that the player enjoys real-like and believable gameplay experiences, which do not "break the illusion." When the interviewees narrated freely about what made a game a good game for them, they described their preferences congruently with the revealed three factors. Both in the interviews and the statistical data, it was revealed that *Ludic* qualities were regarded generally as the most important elements for a good game, followed by *Diegetic*. While some players also emphasized *Verisimilitude*, these aspects were not typically mentioned as the most important qualities for a good game.

Next, I analyzed the personal narration and the personal stories of the interviewees to understand what made specific gameplay experiences memorable for the players and what the interviewees (N=32) described when they discussed their gameplay experiences with me. It was revealed that these narratives were about four main types. In the first type of narration, the interviewees described their first-person experiences of playing a highly memorable video game. The second type of personal narratives considered folkloristic traditions and the feeling of the 'gameworld accord' that resulted from video game gameplay. The third type of narration dealt with the interviewees' first encounters with video games and video game technology. The fourth and final type encompassed how the interviewees described the impact of playing video games in their everyday life. I concluded this chapter by statistically analyzing how the seven player types were connected to the perceived meaningfulness of a gameplay experience. The analysis revealed that gameplay experiences are more meaningful for *The Mercenaries* and *The Adventurers* than for the other five player types. It was also observed that a preference in *Diegetic* qualities in games and in the motifeme factor of *Journey* strongly correlated with the perceived meaningfulness of first-person gameplay experiences.

Finally, I investigated the profound question of why people play video games. In order to do so, I conducted an iterative mixed-methods process, which was launched with a factor analysis on a preliminary motivations to play scale. The analysis on the data of 1,718 respondents revealed two motivations to play factors: *Fun–Immersion* and *Relatedness–Competence*. I then analyzed the interview data in which I discussed these two broad categories with the 32 interviewees. The qualitative data analysis suggested that the motivations to play scale could be significantly improved by including several items that would describe *Fun*, *Immersion*, *Relatedness* and *Competence* and by introducing *Autonomy* as the fifth core reason to play video games.

After conducting a literature review of self-determination theoretical (SDT) studies on motivations for playing video games, I made another factor analysis with a data set of 879 respondents. I included the second iteration motivations to play scale in this latter survey. As a result of yet another factor analysis, the 25 items included in the motivations to play inventory loaded on five factors: *Autonomy*, *Relatedness*, *Competence*, *Immersion* and *Fun*. Based on the SDT literature, the interview data analysis and the results of the two statistical studies, I hypothesized that the five motivations to play factors could be divided into first-order (the SDT motivations of *Autonomy*, *Relatedness*, and *Competence*) and second-order (*Fun* and *Immersion*) motivations to play. In this model, the first-order motivations describe what the player

expects to be able to do in motivating gameplay, and the second-order motivations emphasize the emotional outcome of such a gameplay experience.

For investigating whether the five revealed factors (N=879) could be considered as the five main reasons to play, and whether the motivations could be argued to be first-order or second-order motivations, I conducted a *confirmatory factor analysis* (CFA) with the data of 845 respondents. The survey for the 845 respondents included an identical motivations to play inventory as the data of 879 respondents, which made this procedure plausible. With the data of the 845 respondents, I was able to confirm the five factors of gameplay motivations, although the correlations between *Autonomy* and *Immersion* and *Autonomy* and *Competence* suggest that yet another CFA should be conducted with cross-cultural data. The CFA model, which I presented in Chapter 9, showed an acceptable fit (RMSEA 0.060, CFI 0.970, SRMR 0.036) to the data of 845 respondents without the need to let error residuals correlate with each other.

I followed this analysis by designing a structural equation model to investigate whether playing for a specific reason would predict gameplay enjoyment or gameplay appreciation. This final model had a close fit with the data (N=845, RMSEA 0.054, CFI 0.971, SRMR 0.037). The model indicates that playing because one enjoys challenges (*Competence*) predicts that one is motivated by the emotional outcome driver of *Fun*. The motivational factor of *Autonomy* even more strongly predicted the driver of experiencing *Immersion* in gameplay. Finally, the effect of *Relatedness*, *Competence*, and *Autonomy* on gameplay *Enjoyment* and gameplay *Appreciation* was completely mediated by the experiential outcome factors of *Fun* and *Immersion*. The factor of *Immersion* was strongly connected to gameplay *Appreciation*, and the motivational factor of *Fun* predicted even more strongly perceived gameplay *Enjoyment*.

Final Words

I have argued in this thesis for phenomenological enactivism and folkloristics as a promising stance for studying the gameplay experience. There are many possibilities for future research based on what I have presented in this thesis. Future research could explore, in a more extensive way, the proposed eight invariants of the video game gameplay experience. The motifeme preference factor approach should be developed further by conducting a confirmatory factor analysis on the third iteration of the scale, and the motivations to play scales and the elements-of-a-good-game scale should be analyzed more extensively than was possible in the context of a dissertation.

Throughout this study, I have described myself as a phenomenologically inclined folklorist doing video game research. I am not only that but also a game scholar. Since 'game' still today remains an elusive research subject, which is often positioned at the intersection of multiple research traditions rather than understood as its own discipline, a game researcher can have an identity of both a game scholar and, e.g., folklorist. Similarly, this thesis has been an endeavor in both folkloristics and game studies. I hope that this thesis opens new discussions on how folkloristics and phenomenological enactivism deserve a central position in the academic discourses of game studies, and especially in studies concerning the rhetoric of self, progression, and identity (see Sutton-Smith, 2001 [1997]) and the ontology of games as processes.

The combination of folkloristics and phenomenological enactivism appears to be a rich framework for examining procedural knowledge generation, meaning construction, and the emotional gameplay experience. These synergies become evident in the concept of 'enaction,' which can be described as the practice of *laying down a path in walking* as we traverse through the [game] environment (Varela, 1987, p. 63). After all, both video games and folklore must be enacted to exist (Abrahams, 2005, p. 59; Galloway, 2006, p. 2).

REFERENCES

Aarne, A. (1910). *Verzeichnis der Märchentypen, mit Hülfe von Fachgenossen Ausgearbeitet*. Folklore Fellows Communication. Helsinki: Suomalaisen tiedeakatemian toimituksia.

Aarne, A. & Thompson, S. (1961). *The Types of the Folktale. 2nd revision*. FF Communications no 184. Helsinki: Academia Scientiarum Fennica.

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

Aarseth, E. (2001). Allegories of Space: The Question of Spatiality in Computer Games. In, M. Eskelinen & R. Koskimaa (Eds.) *Cybertext Yearbook 2000* (pp, 152–171). Saarijärvi: Publications of The Research Centre for Contemporary Culture, University of Jyväskylä.

Aarseth, E. (2003). Multi–Dimensional Typology of Games. In, M. Copier & J. Raessens (Eds.), *Level Up: Digital Games Research Conference Proceedings*. Utrecht: Universiteit Utrecht.

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

Aarseth, E. (2007a). I Fought the Law: Transgressive Play and The Implied Player. In A. Baba (Ed.), *Situated Play, Proceedings of DiGRA 2007 Conference*. DiGRA and University of Tokyo, 2007.

Aarseth, E. (2007b). Doors and Perception: Fiction vs. Simulation in Games. *History and Theory of the Arts, Literature and Technologies*, 9, 35–44.

Aarseth, E. (2012). A Narrative Theory of Games. In, *Proceedings of the International Conference on the Foundations of Digital Games* (pp. 129–133). Raleigh, North Carolina: ACM Press.

Aarseth, E. (2014a). Ludology. In, M. J. P. Wolf & B. Perron (Eds.), *The Routledge Companion to Video Game Studies* (pp. 185–189). New York and London: Routledge.

Aarseth, E. (2014b). Ontology. In, M. J. P. Wolf & B. Perron (Eds.), *The Routledge Companion to Video Game Studies* (pp. 484–492). New York and London: Routledge.

Abbott, P. H. (2002). *The Cambridge Introduction to Narrative*. University of Cambridge Press: Cambridge.

Abrahams, R. D. (1977). Toward an Enactment–Centered Theory of Folklore. In W. Bascom (Ed.), *The Frontiers of Folklore* (pp. 79–120). Washington D.C.: American Anthropological Association Series.

Abrahams, R. D. (1982). Play and Games. *Motif: International Review of Research in Folklore and Literature*, 3, 4–7.

Abrahams, R. D. (2005). *Everyday Life: A Poetics of Vernacular Practices*. Philadelphia: University of Pennsylvania Press.

Acock, A. C. (2008). *A Gentle Introduction to Stata. Second Edition.* Texas, College Station: Stata Press.

Acock, A. C. (2013). *Discovering Structural Equation Modeling Using Stata*. *Revised Edition*. Texas, College Station: Stata Press.

Adams, E. (2014). *Fundamentals of Game Design*. *Third Edition*. San Francisco: New Riders.

Adams, E. & Dormans, J. (2012). *Game Mechanics. Advanced Game Design*. Berkeley, CA: New Riders.

Apperley, T. H. (2006). Genre and game studies: Toward a critical approach to video game genres. S*imulation & Gaming*, 37(1), 6–23.

Ariel, S. (2002). *Children's Imaginative Play: A Visit to Wonderland*. London: Praeger.

Arsenault, D. (2009). Video Game Genre, Evolution and Innovation. *Eludamos. Journal for Computer Game Culture,* 3 (2), 149–176.

Arsenault, D. (2014). Narratology. In, M. J. P. Wolf & B. Perron (Eds.), T*he Routledge Companion to Video Game Studies* (pp. 475–483). New York and London: Routledge.

Arsenault, D. & Perron, B. (2009). In the Frame of the Magic Cycle: The Circle(s) of Gameplay. In, B. Perron & M. J. P. Wolf (Eds.), *The Video Game Theory Reader 2* (pp. 109–132). New York and London: Routledge.

Asadowskij, M. (1926). *Eine Sibirische Märchenerzählerin*. FF Communications 68. Helsinki: Suomalainen Tiedeakatemia.

Avedon, E. M. (1971). The Structural Elements of Games. In, E. M. Avedon & B. Sutton–Smith (Eds.), *The Study of Games* (pp. 419–426). New York and London: John Wiley & Sons Inc.

Avedon, E. M. & Sutton–Smith, B. (1971). *The Study of Games*. New York and London: John Wiley & Sons, Inc.

Aylett, R. (1999). Narrative in Virtual Environments: Towards Emergent Narrative. In, *Narrative Intelligence: Papers from the 1999 AAAI Fall Symposium*, Technical report FS–99–01, pp. 83–86. Menlo Park: AAAI Press, 1999.

Bakhtin, M. M. (1981). *The Dialogic Imagination*. Translated by. Caryl Emerson and Michael Holquist. Austin, London: University of Texas Press.

Barbour, K. & Marshall, P. D. (2012). The Academic Online: Constructing Persona through the World Wide Web. *First Monday*, 17(9).

Barbour, K., Marshall, D. P. & Moore, C. (2014). Persona to Persona Studies. *M/C Journal of Media and Culture, 'Persona'*, 17(3).

Barr, P. (2007). *Video Game Values. Play as Human–Computer Interaction*. Academic dissertation. Victoria University of Wellington.

Barrett, L. F. (2006). Are Emotions Natural Kinds? *Perspectives on Psychological Science*, 1, 28–58.

Barrett, L. F. (2011). *Beyond the Brain. How Body and Environment Shape Animal and Human Minds*. New Jersey: Princeton University Press.

Barthes, R. (1982). *Selected Writings*. Glasgow: Fontana Press.

Bartle, R. A. (1996). *Hearts, Clubs, Diamonds, Spades: Players Who Suit MUDS*. http://www.mud.co.uk/richard/hcds.htm. Visited 1st of January, 2017.

Bartle, R. A. (2003). *Designing Virtual Worlds*. Boston: New Riders.

Bateman, C. Boon, R. (2006). *21st Century Game Design*. Hingham, MA: Charles River Media, Inc.

Bateman, C., Lowenhaupt, R., & Nacke, L. E. (2011). Player typology in theory and practice. *Proceedings of DiGRA 2011 Conference: Think Design Play*, pp. 1–13.

Bateson, G. (1971 [1956]). The Message "This is Play". In, R. E. Herron & B. Sutton–Smith (Eds.), Child's Play (pp. 261–269). New York and London: John Wiley & Sons, Inc.

Bateson, G. (1988). *Angel's Fear. Investigation into the Nature and Meaning of the Sacred*. London: Rider Co.

Bateson, G. (2000 [1955]). A Theory of Play and Fantasy. In, G. Bateson, *Steps to an Ecology of Mind* (pp. 177–193). Chicago and London: The University of Chicago Press.

Bateson, G. (2000 [1969]). Double Bind. In, G. Bateson, *Steps to an Ecology of Mind* (pp, 271–278). Chicago and London: The University of Chicago Press.

Bateson, G. (2000 [1972]). *Steps to an Ecology of Mind*. Chicago: University of Chicago Press.

Bateson, G. (2002 [1979]). *Mind and Nature. A Necessary Unity.* New Jersey: Hampton Press Inc.

Bauman, R. (1975). Verbal Art as Performance. *American* ANTHROPOLOGIST, 77(2), 290–311.

Bauman, R. (1992). Performance. In, R. Bauman (Ed.), *Folklore, Cultural Performances, and Popular Entertainments. A Communications–centered Handbook* (pp. 41–49). New York and Oxford: Oxford University Press.

Bauman, R. (2012). Performance. In, R. F. Bendix & G. Hasan-Rokem (Eds.), *A Companion to Folklore* (pp., 94–118). Malden, Oxford: Blackwell Publishing Ltd.

Baumann, N., Lürig, C., & Engeser, S. (2016). Flow and enjoyment beyond skill-demand balance: The role of game pacing curves and personality. *Motivation and Emotion*, 32, 67–77.

Bealer, A. H. (2012). Eco-Performance in the Digital RPG Gamespace. In, G. A. Voorhees, J. Call & K. Whitlock (Eds.), *Dungeons, Dragons, and Digital Denizens. The Digital Role–Playing Game* (pp. 27–47). New York: The Continuum International Publishing Group.

Bell, E. (2008). *Theories of Performance*. Los Angeles and London: Sage Publications.

Ben-Amos, D. (1971). Toward a Definition of Folklore in Context. *Journal of American Folklore* 84 (331), 3–15.

Ben-Amos, D. (1976). Analytical Categories and Ethnic Genres. In, D. Ben-Amos (Ed.), *Folklore Genres* (pp. 215–2242). Austin: University of Texas Press.

Ben-Amos, D. (1997). Performance. In, T. Green (Ed.), *Folklore: An Encyclopedia of Beliefs, Customs, Tales, Music, and Art* (pp, 630–635). Santa Barbara: ABC–CLIO.

Berlyne, D. E. (1971). *Aesthetics and psychobiology*. New York: Appleton–Century–Crofts.

Biddle, B. J. (1986). Recent Developments in Role Theory. *Annual Reviews of Sociology*, 12, 67–92.

Biocca, F. (1997). The Cyborg's Dilemma: Progressive Embodiment in Virtual Environments. *Journal of Computer–Mediated Communication*, 3.

Biocca, F. A., Harms, C. & Burgoon, J. K. (2003). Toward a More Robust Theory and Measure of Social Presence: Review and Suggested Criteria. *Presence: Teleoperators and Virtual Environments*, 12(5), 456–480.

Björk, S. & Holopainen, J. (2005). Patterns in Game Design. Hingham: Charles River Media.

Boellstorff, T. (2008). *Coming of Age in Second Life. An Anthropologist Explores the Virtually Human*. Princeton and Oxford: Princeton University Press.

Boellstorff, T., Nardi, B., Pearce, C. & Taylor, T. L. (2012). *Ethnography and Virtual World. A Handbook of Method*. Princeton and Oxford: Oxford University Press.

Bogost, I. (2010). *Persuasive Games. The Expressive Power of Videogames*. Cambridge, MA: The MIT Press.

Bordwell, D. (1985). *Narration in the Fiction Film*. Madison: University of Wisconsin Press.

Brewster, P. G. (1952). Children's Games and Rhymes. In, I. W. Newman (Ed.), *The Frank C. Brown Collection of North Carolina Folklore*, Vol 1 (pp. 29–219). Durham: Duke University Press.

Brier, S. (2008). *CyberSemiotics. Why Information is Not Enough!* Toronto: University of Toronto Press.

Brier, S. (2013). Cybersemiotics: A New Foundation for Transdisciplinary Theory of Information, Cognition, Meaningful Communication and the Interaction Between Nature and Culture. *Integral Review*, 9(2), 220–263.

Bronner, S. J. (2007). *The Meaning of Folklore. The Analytical Essays of Alan Dundes*. Logan, Utah: Utah State University Press.

Bronner, S. J. (2012). Practice Theory in Folklore and Folklife Studies. *Folklore*, 123(1), 23–47.

Bronner, S. J. (2016). Toward a Definition of Folklore in Practice. *Cultural Analysis*, 15(1), 6–27.

Brown, T. A. (2015). *Confirmatory Factor Analysis for Applied Research. Second Edition*. The Guilford Press, New York.

Bruner, J. (1991). The Narrative Construction of Reality. *Critical Inquiry*, 18(1), 1–21.

Bruner, J. (2002). *Making Stories: Law, Literature, Life*. New York: Farrar, Straus, and Giroux.

Buccitelli, A. B. (2012). Performance 2.0: Observations toward a Theory of the Digital Performance of Folklore. In, T. Blank (Ed.), *Folk Culture in the Digital Age. The Emergent Dynamics of Human Interaction* (pp. 60–84). Logan: Utah State University Press.

Buccitelli, A. B. (2017). *Race and Ethnicity in Digital Culture: Our Changing Traditions, Impressions, and Expressions in a Mediated World*. Westport: Praeger.

Bucher, T. (2014). About a Bot: Hoax, Fake, Performance Art. *M/C Journal of Media and Culture, 'Persona'*, 17(3).

Buhrmann, T. & Di Paolo, E. (2015). The Sense of Agency – A Phenomenological Consequence of Enacting Sensorimotor Schemes. *Phenomenology and Cognitive Science*, doi: 10.1007/s11097–015–9446–7, online first.

Caillois, R. (2001 [1961]). *Man, Play and Games*. Urbana and Chicago: University of Illinois Press.

Calleja, G. (2007). *Digital Games as Designed Experience: Reframing the Concept of Immersion*. Academic Dissertation. Victoria University of Wellington.

Calleja, G. (2012). Erasing the Magic Circle. In, J. R. Sageng, H. Fossheim & T. M. Larsen (Eds.), *The Philosophy of Computer Games* (pp. 77–93). Dordrecht: Springer.

Calleja, G. (2013). Narrative involvement in digital games. In Proceedings of the Foundations of Digital Games 2013 (pp. 9–16). Presented at FDG '13, Chania, Greece.

Campbell, J. (2008 [1949]). *The Hero with a Thousand Faces. Third Edition*. Novato, California: Joseph Campbell Foundation.

Canossa, A. & Drachen, A. (2009). Patterns of Play: Play-Personas in User-Centred Game Development. *Breaking New Ground: Innovation in Games, Play, Practice and Theory.* Proceedings of DiGRA 2009.

Casement, A. (2014). Persona. In, D. A. Leeming (Ed.), *Encyclopedia of Psychology and Religion*. Boston, MA: Springer.

Chemero, A. (2009). *Radical Embodied Cognitive Science*. Cambridge, MA: MIT Press.

Clarke, R. I, Lee, J. H. & Clark, N. (2015). Why Video Game Genres Fail: A Classificatory Analysis. *Games and Culture*, 1–21. DOI: 10.1177/1555412015591900

Clearwater, D. A. (2011). What defines video game genre? Thinking about genre study after the great divide. *Loading... The Journal of the Canadian Game Studies Association*, 5, 29–49.

Clore, G. L. (1992). Cognitive Phenomenology: Feelings and the construction of judgment. In, L. L. Martin & A. Tesser (Eds.), *The construction of social judgments* (pp. 133–163). Hillsdale, New Jersey: Erlbaum.

Colombetti, G. (2014). *The Feeling Body. Affective Science Meets the Enactive Mind*. Cambridge, MA: The MIT Press.

Conquergood, D. (1998). Beyond the Text: Toward a Performative Cultural Politics. In, S. J. Daily (Ed.), *Future of Performance Studies* (pp. 25–36). Annandale: National Communication Association.

Consalvo, M. (2009). There is No Magic Circle. *Games and Culture*, 4(4), 408–417.

Costikyan, G. (2013). *Uncertainty in Games*. Cambridge, MA: MIT Press.

Crawford, C. (1982). *The Art of Computer Game Design*. http://www–rohan.sdsu.edu/~stewart/cs583/ACGD_Art-Computer-GameDesign_ChrisCrawford_1982.pdf.

Crawford, C. (2002). *The Art of Interactive Design: A Euphonious and Illuminating Guide to Building Successful Software*. San Francisco: No Starch Press.

Crawford, C. (2013). O*n Interactive Storytelling. Second Edition*. New York: New Riders.

Crawford, J. R. & Henry, J. D. (2004). The Positive and Negative Affect Schedule (PANAS): Construct validity, measurement properties and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, 43, 245–265.

Csikszentmihályi, M. (1975). *Beyond Boredom and Anxiety*. San Francisco: Jossey–Bass.

Csíkszentmihályi, M. (1990). *The Psychology of Optimal Experience*. New York: Harper & Row Publishers.

Csíkszentmihályi, M. (2002 [1992]). *Flow. The Classic Work on How we Achieve Happiness. Revised Edition*. London: Rider.

Cuffari, E. C., Di Paolo, E. & De Jaegher, H. (2015). From Participatory Sense–Making to Language: There and Back Again. *Phenomenology and the Cognitive Sciences*, 14(4), 1089–1125.

Cupchik, G. C. (2011a). The Digitized Self in the Internet Age. P*sychology of Aesthetics, Creativity, and the Arts*, 5(4), 318–328.

Cupchik, G. C. (2011b). The Role of Feeling in the Entertainment = Emotion Formula. Journal of Media Psychology. *Theories, Methods, and Applications*, 23(1), 6–11.

Dale, G. & Green, S. (2016). Video Games and Cognitive Performance. In, R. Kowert & T. Quant (Eds.), *The Video Game Debate. Unravelling the Physical, Social, and Psychological Effects of Digital Games* (pp. 131–152). New York: Routledge.

De Jaegher, H. & Di Paolo, E. A. (2007). Participatory Sense–Making. An Enactive Approach to Social Cognition. *Phenomenology and Cognitive Sciences*, 6(4), 485–507.

De Jaegher, H. & Di Paolo, E. A. (2008). Making Sense in Participation: An Enactive Approach to Social Cognition. In, F. Morganti, A. Carassa & G. Riva (Eds.), *Enacting Intersubjectivity: A Cognitive and Social Perspective on the Study of Interactions*. Emerging Communication: Studies in New Technologies and Practices in Communication. Volume 10. IOS Press.

De Jaegher, H. & Froese, T. (2009). On the Role of Social Interaction in Individual Agency. *Adaptive Behavior*, 17(5), 444–460.

De Jaegher, H., Di Paolo, E. A. & Gallagher, S. (2010). Can Social Interaction Constitute Social Cognition? *Trends in Cognitive Sciences*, 14(10), 441–447.

de Vignemont, F. & Singer, T. (2006). The Empathic Brain: How, when and why? *Trends in Cognitive Sciences*, 10, 435–441.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self–determination in human behavior*. New York: Plenum.

Dégh, L. (1969). *Folktales and Society. Storytelling in a Hungarian Peasant Community*. Indiana: Bloomington.

Deterding, S. (2013). *Modes of Play. A Frame Analytic Account of Video Game Play*. Academic Dissertation, University of Hamburg.

Deterding, S. (2015). The Joys of Absence: Emotion, Emotion Display, and Interaction Tension in Video Game Play. In, *Proceedings of the 10th International Conference on the Foundations of Digital Games (FDG 2015)*. Society for the Advancement of the Science of Digital Games, Pacific Grove, California."

Di Paolo, E. (2016). Participatory Object Perception. *Journal of Consciousness Studies*, 23 (5–6), 228–258.

Di Paolo, E. & Thompson, E. A. (2014). The Enactive Approach. In, L. Shapiro (Ed.), *The Routledge Handbook of Embodied Cognition* (pp. 68–76). New York: Routledge.

Di Paolo, E. A. (2005). Autopoiesis, Adaptivity, Teleology, Agency. *Phenomenology and the Cognitive Sciences*, 4(4), 429–452.

Di Paolo, E. A. & De Jaegher, H. (2012). The Interactive Brain Hypothesis. *Frontiers in Human Neuroscience*, 6(163), 1–16.

Di Paolo, E. A., Rohde, M. & De Jaegher, H. (2010). Horizons for the Enactive Mind: Values, Social Interaction, and Play. In, J. Stewart, O. Gapenne & E. A. Di Paolo (Eds), *Enaction. Toward a New Paradigm, for Cognitive Science* (pp. 33–87). Cambridge, MA: The MIT Press.

Donaldson, M. (1992). *Human Minds. An Exploration*. New York: Penguin Books.

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

Dundes, A. (1965). What is Folklore? In, A. Dundes (Ed.), *Study of Folklore* (pp. 1–3). New Jersey: Prentice-Hall.

Dundes, A. (1971). Folk ideas as Units of Worldview. *The Journal of American Folklore*, 84 (331), 93–103.

Dundes, A. (2007 [1962]). From Etic to Emic Units in the Structural Study of Folktale. In, S. J. Bronner (Ed.), *The Meaning of Folklore. The Analytical Essays of Alan Dundes* (pp. 90–100). Logan, Utah: Utah State University Press.

Dundes, A. (2007 [1964]). On Game Morphology: A Study of the Structure of Non-Verbal Folklore. In, S. J. Bronner (Ed.), *The Meaning of Folklore. The Analytical Essays of Alan Dunde*s (pp. 156–163). Logan, Utah: Utah State University Press.

Ekman, P. (1994). Moods, emotions, and traits. In, P. Ekman & R. J. Davidson (Eds.), *The nature of emotions – Fundamental questions* (pp. 56–58). New York: Oxford University Press.

Ellsworth, P. C., & Scherer, K. R. (2003). Appraisal processes in emotion. In, H. H. Goldsmith (Ed.), *Handbook of affective sciences* (pp. 572–595). New York: Oxford University Press.

Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K. & Kyngäs, H. (2014). *Qualitative Content Analysis. A Focus on Trustworthiness*. Sage Open.

Engel, A. K. (2010). Directive Minds: How Dynamics Shape Cognition. In, J. Stewart, O. Gapenne & E. A. Di Paolo 2010 (Eds.), *Enaction. Toward a New Paradigm for Cognitive Science* (pp. 219–243). Cambridge, Massachusetts: The MIT Press.

Ermi, L. & Mäyrä, F. (2007) Fundamental Components of the Gameplay Experience: Analysing Immersion. In, S. de Castell & J. Jenson (Eds.), *Worlds in Play – International Perspectives on Digital Games Research* (pp. 37–53). New Literacies and Digital Epistemologies Vol. 21. New York: Peter Lang.

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

Eskelinen, M. (2012). *Cybertext Poetics. The Critical Landscape of New Media Literary Theory.* New York and London: Continuum.

Evans, J. D. (1996). Straightforward statistics for the behavioral sciences. Pacific Grove, CA: Brooks/Cole Publishing.

Faisal, A. & Peltoniemi, M. (2015). Establishing video game genres using data–driven modeling and product databases. *Games and Culture*, 1–24. DOI: 10.1177/1555412015601541.

Farrell, A. M. (2009). Insufficient discriminant validity: a comment on Bove, Pervan, Beatty and Shiu. *Journal of Business Research*, 63(3), 324–327 (2009)

Fine, G. A. (2002 [1983]). *Shared Fantasy. Role–Playing Games as Social Worlds*. Chicago and London: University of Chicago Press.

Fink, E. (1968). The Oasis of Happiness: Toward an Ontology of Play. *Yale French Studies*, 41, 19–30.

Fink, E. (2016 [1960]). Play as Symbol of the World. In, E. Fink (2016), *Play as Symbol of the World and Other Writings* (pp. 33–215). Bloomington, IN: Indiana University Press.

Fink, E. (2016 [1975]). Play and Celebration. In, E. Fink (2016), *Play as Symbol of the World and Other Writings* (pp. 216–224). Bloomington, IN: Indiana University Press.

Foerster, H. von (1984). *Observing Systems*. Seaside, CA: Intersystems Publications.

Forman, G. (1983). Sutton–Smith, Play, and Maybe Piaget. In, W. F. Overton (Ed.), *The Relationship Between Social and Cognitive Development* (pp. 251–254). London and Hillsdale: Lawrence Erlbaum Associates.

Fornell, C. & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.

Foster, M. D. (2016). The Folkloresque Circle: Toward a Theory of Fuzzy Allusion. In, M. D. Foster & J. A. Tolbert (2016), *The Folkloresque. Reframing Folklore in a Popular Culture World* (pp. 41–63). Logan: Utah State University Press.

Frankfurt, H. G. (1998). *The importance of what we care about*. Cambridge: Cambridge University Press.

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

Frasca, G. (2004). Videogames of the Oppressed: Critical Thinking, Education, Tolerance, and Other Trivial Issues. In, N. Wardrip–Fruin and P. Harrigan (Eds.), *First Person. New Media as Story, Performance, and Game* (pp. 85–93). Cambridge, MA: The MIT Press.

Freeman, W. J. (2000). Emotion is essential to all intentional behavior. In, M. D. Lewis & I. Granic (Eds.), *Emotion, Development, and Self–Organization: Dynamic Systems Approaches to Emotional Development* (pp. 209–235). Cambridge: Cambridge University Press.

Fridja, N. H. (2007). *The Laws of Emotion*. Mahwah, New Jersey: Erlbaum.

Frijda N. H. & Scherer K. R. (2009). Emotion definition (psychological perspectives). In, D. Sander & K. R. Scherer (Eds.), *Oxford companion to emotion and the affective sciences* (pp. 142–143). Oxford, UK: Oxford University Press.

Frith, U. & Frith, C. (2010).The social brain: allowing humans to boldly go where no other species has been. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 365, 165–176.

Froese, T. & Di Paolo, E. A. (2009). Sociality and the life–mind continuity thesis. *Phenomenology and the Cognitive Sciences*, 8(4), 439–463.

Froese,T. & Stewart, J. (2012). Enactive cognitive science and biology of cognition: A response to Humberto Maturana. *Cybernetics & Human Knowing* 19(4): 61–74.

Frog, Koski, K. & Savolainen, U. (2016). At the Intersection of Text and Interpretation: An Introduction to Genre. In, K. Koski, Frog & U. Savolainen (Eds.), *Genre - Text - Interpretation: Multidisciplinary Perspectives on Folklore and Beyond (pp. 17*–43). Helsinki: Suomalaisen Kirjallisuuden Seura.

Frog. (2016). 'Genres, Genres Everywhere, but Who Knows What to Think?': Toward a Semiotic Model. In, K. Koski, Frog & U. Savolainen (Eds.), *Genre - Text - Interpretation: Multidisciplinary Perspectives on Folklore and Beyond (pp. 47*–88). Helsinki: Suomalaisen Kirjallisuuden Seura.

Frome, J. (2007). Eight Ways Videogames Generate Emotion. In, *Situated Play, Proceedings of DiGRA 2007 Conference.*

Gallagher, S. & Zahavi, D. (2008). *The Phenomenological Mind. 2nd Edition*. London and New York: Routledge.

Gallagher, S. A. (2005). *How the Body Shapes the Mind*. Oxford: Oxford University Press.

Gallagher, S. A. (2012). Multiple aspects in the sense of agency. *New Ideas in Psychology*, 30, pp. 15–31

Gallagher, S. A. (2014). Empathy, Simulation, and Narrative. *Science in Context*, 25(3), 355–381.

Gallagher, S. A. & Bower, M. (2014). Making enactivism even more embodied. *Avant 5*, (2), 232–247.

Galloway, A. R. (2006). *Gaming: Essays on Algorithmic Culture*. Minnesota: University of Minnesota Press.

Galloway, A. R. (2008). The Unworkable Interface. *New Literary History*, 39(4), 931–955.

Galyean, T. A. (1995). *Narrative Guidance of Interactivity.* Academic Dissertation. Massachusetts Institute of Technology.

Ganesh, S., van Schie, H. T., de Lange, F. P., Thompson, E. & Wigboldus, D. H. J. (2011). How the Human Brain Goes Virtual: Distinct Cortical Regions of the Person–Processing Network Are Involved in Self–Identification with Virtual Agents. *Cerebral Cortex*, 22 (7), 1577–1585.

Genette, G. (1980 [1972]). *Narrative Discourse*. Oxford: Basil Blackwell.

Genette, G. (1988 [1983]). *Narrative Discourse Revisited*. Ithaca: Cornell University Press.

Georges, R. A. (1969). The Relevance of Models for Analyses of Traditional Play Activities. *Southern Folklore Quarterly,* 23, 1–23.

Georges, R. A. (1972). Recreation and Games. In, R. M. Dorson (Ed.), *Folklore and Folklife: An Introduction* (pp. 173–189). Chicago: University of Chicago Press.

Gibson, J. J. (1986 [1979]). *The Ecological Approach to Visual Perception*. New York: Taylor & Francis Group.

Gläser, J. & Laudel, G. (2011). *Life with and Without Coding: Two Methods of Early–Stage Data Analysis in Theory–Guided Qualitative Research*. Berlin.

Goffman, E. (1959). *The Presentation of Self in Everyday Life*. New York: Anchor Books.

Goffman, E. (1966). *Behavior in Public Places. Notes of the Social Organization of Gatherings.* New York: The Free Press.

Goffman, E. (1969). *Strategic Interaction*. Philadelphia: University of Pennsylvania Press.

Goffman, E. (1981). *Forms of Talk*. Philadelphia: University of Pennsylvania Press.

Goffman, E. (1986 [1974]). *Frame Analysis. An Essay on the Organization of Experience*. Boston: Northeastern University Press.

Goffman, E. (2013 [1961]). *Encounters. Two Studies in the Sociology of Interaction*. Mansfield Centre, CT: Martino Publishing.

Goldstein, D. E. (1993). Not just 'Glorified Anthropologist': Medical Problem Solving through Verbal and Material Art. *Folklore in Use*, 1(1), 15–24.

Goldstein. K. J. (1999 [1967]). Strategy in Counting Out: An Ethnographic Folklore Field Study. In, A. Dundes (Ed.), *International Folkloristics. Classic Contributions by the founders of Folklore* (pp. 231–244). Lanham, New York: Rowman & Littlefield Publishers Inc.

Grace, L. D. (2013). Affection Games in Digital Play: A Content Analysis of Web Playable Games. *Proceedings of DiGRA 2013: DeFragging Game Studies*.

Greifeneder, R., Bless, H. & Pham, M. T. (2011). When do People Rely on Affective and Cognitive Feelings in Judgment? A Review. *Personality and Social Psychology Review*, 15(2), 107–141.

Grice, H. P. (1975). Logic and Conversation. In, P. Cole & J. Morgan (Eds.), *Syntax and Semantics. Volume 3: Speech Acts* (pp. 41–58). New York: Academic Press.

Groos, K. (1912 [1901]). *The Play of Man*. New York, London: D. Appleton and Company.

Guyker, R. (2016). *Myth in translation: The ludic imagination in contemporary video games.* Academic dissertation. Pacifica Graduate Institute.

Hakkarainen, P., Bredikyte, M., Jakkula, K. & Munter, H. (2013). Adult play guidance and children's play development in a narrative play–world. *European Early Childhood Education Research Journal*, 21(2).

Halliwell, S. (2012). Diegesis – Mimesis. In, P. Hühn et al. (Eds.), *The living handbook of Narratology*. Hamburg: Hamburg University. http://www.lhn.unihamburg.de/article/diegesis——mimesis.

Hamari, J., & Tuunanen, J. (2014) Player types: A meta–synthesis. *Transactions of the Digital Games Research Association*, 1(2).

Hartmann, T. & Klimmt, C. (2006). Gender and Computer Games: Exploring Females' Dislikes. *Journal of Computer–Mediated Communication*, 11, 910–931.

Harviainen, J. T. (2012). *Systemic Perspectives on Information in Physically Performed Role-play*. Academic dissertation. Tampere: University of Tampere.

Hefner, D., Klimmt, C. & Vorderer, P. (2007). Identification with the Player Character as Determinant of Video Game Enjoyment. In, L. Ma, R. Nakatsu & M. Rauterberg (Eds.), *International Conference on Entertainment Computing 2007. Lecture Notes in Computer Science 4740* (pp. 39–48). Berlin: Springer.

Herman, D. (2002). *Story Logic. Problems and Possibilities of Narrative*. Lincoln and London: University of Nebraska Press.

Herman, D. (2005). Storyworld. In, D. Herman, J. Manfred & M–L Ryan (Eds), *Routledge Encyclopedia of Narrative Theory* (pp. 569–570). London: Routledge.

Herman, D. (2009). *Basic Elements of Narrative*. Chichester, West Sussex: Wiley–Blackwell.

Honko, L. (1989). Folkloristic Theories of Genre. In, A–L. Siikala (Ed.), *Studies in Oral Narrative. Studia Fennica 33* (pp. 13–28). Helsinki: Suomalaisen kirjallisuuden seura.

Horton, D. & Wohl, R. R. (1956). Mass Communication and Para-social Interaction: Observations on Intimacy at a Distance. *Psychiatry*, 19, 215–229.

Hox, J. J. & Bechger, T. M. (1998). An Introduction to Structural Equation Modeling. *Family Science Review*, 11, 354–373.

Hsieh H–F. & Shannon S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15 (9), 1277–1288.

Hughes, L. A. (1999). Children's Games and Gaming. In, B. Sutton–Smith, J. Mechling, T. W. Johnson & F. R. McMahon (Eds.), *Children's Folklore* (pp. 93–116). Logan, Utah: Utah State University Press.

Huizinga, J. (2014 [1950]). *Homo Ludens. A Study of the Play-Element in Culture*. Mansfield Centre, CT: Martino Publishing.

Hunicke, R., LeBlanc, M., and Zubek, R. (2004). MDA: A Formal Approach to Game Design and Game Research. *Proceedings in AAAI workshop on Challenges in Game*, AAAI Press.

Hutt, C. (1971). Exploration and Play in Children. In, J. S. Bruner, A. Jolly & K. Sylva (Eds.), Play: Its Role in Development and Evolution (pp, 202–215). Harmondsworth: Penguin Books.

Hutto, D. D. H. (2012). *Folk Psychological Narratives. The Sociocultural Basis of Understanding Reasons*. Cambridge, Massachusetts: The Mit Press.

Hutto, D. D. H. & Myin, E. (2013). *Radicalizing Enactivism. Basic Minds without Content*. Cambridge, Massachusetts: The MIT Press.

Hymes, D. (1975). Breakthrough into Performance. In, D. Ben–Amos & K. S. Goldstein (Eds.), *Folklore: Performance and Communication* (pp. 11–74). The Hague: Mouton.

Hyvärinen, M. (2008). Revisiting the Narrative Turns. *Life Writing*, 7(1), 69–82.

Ihde, D. (1990). *Technology and the Lifeworld: From Garden to Earth.* Indiana: Indiana University Press.

Isbister, K. (2016). *How Games Move Us. Emotion by Design. Playful Thinking Series.* Cambridge, MA: The MIT Press.

James, E. (2015). *The Storyworld Accord. Econarratology and Postcolonial Narratives.* Lincoln and London: University of Nebraska Press.

Jenkins, H. (2004). Game Design as Narrative Architecture. In, N. Wardrip–Fruin and P. Harrigan (Eds), *First Person. New Media as Story, Performance, and Game* (pp. 118–130). Cambridge, Massachusetts: The MIT Press.

Jensen, G. H. (2013). Making Sense of Play in Video Games: Ludus, Paidia, and Possibility Spaces. Eludamos, *Journal for Computer Game Culture*, 7(1), 69–80.

Jeong, E. J., Biocca, F. A. & Bohil, C. J. (2008). Effects of Representational Realism in 3D violent Games. *Presence 2008. Proceedings of the 11th Annual International Workshop on Presence*. Padova, 16–18 October, 2008.

Jonas, H. (2001 [1966]). *The Phenomenon of Life. Toward a Philosophical Biology*. Evanston, Illinois: Northwestern University Press.

Jørgensen, K. (2008). Audio and Gameplay: An analysis of PvP battlegrounds in World of Warcraft. *Game Studies*, 8(2).

Jørgensen, K. (2013). *Gameworld Interfaces*. Cambridge, MA: The MIT Press.

Jung, C. G. (1928). *Two Essays on Analytical Psychology*. London: Bailliére, Tindall and Cox.

Jung, C. G. (1946). *Psychological Types*. *Or the Psychology of Individuation*. London: Kegan Paul, Trench, Trubner & Co. Ltd.

Jung, C. G. (1968). *The Archetypes and the Collective Unconscious. Volume 9, part I of The Collected Works*. Second Edition. Princeton: Princeton University Press.

Juul, J. (2001). The repeatedly lost art of studying games. Review of Elliott M. Avedon & Brian Sutton–Smith (ed.): The Study of Games. *Game Studies*, 1(1).

Juul, J. (2002). The Open and the Closed: Game of emergence and games of progression. In, *Computer Games and Digital Cultures Conference Proceedings*, edited by F. Mäyrä, 323–329. Tampere: Tampere University Press, 2002.

Juul, J. (2005). *Half–Real. Video Games between Real Rules and Fictional Worlds*. Cambridge, MA: The MIT Press.

Juul, J. (2008). The Magic Circle and the Puzzle Piece. In, S. Günzel, M. Liebe & D. Mersch (Eds.), *Conference Proceedings of the Philosophy of Computer Games 2008* (pp. 56–67). Postdam: Postdam University Press.

Juul, J. (2014). Genre in Video Games (and why we don't talk [more] about it). A blog entry in Juul's blog "*The Ludologist*". Visited 13th of February, 2018. url: https://www.jesperjuul.net/ludologist/2014/12/22/genre-in-video-games-and-why-we-dont-talk-about-it/

Järvinen, A. (2002). Halo and the Anatomy of the FPS. *Game Studies*, 2(1).

Järvinen, A. (2008). *Games without Frontiers: Theories and Methods for Game Studies and Design*. Academic dissertation. Tampere: University of Tampere.

Kahn, A.S., Shen, C., Lu, L., Ratan, R. A., Coary, S., Hou, J., Meng, J., Osborn, J. & Williams, D. (2015). The Trojan Player Typology: A cross-genre, cross-cultural, behaviourally validated scale of video game play motivations. *Computers in Human Behavior*, 49, 354–361.

Kallio, K. P., Mäyrä, F. & Kaipainen, K. (2011). At least nine ways to play: approaching gamer mentalities. *Games & Culture*, (6)4, 327–353.

Kaptelinin, V. & Nardi, B. A. (2006). *Acting with Technology. Activity Theory and Interaction Design*. Cambridge, MA: The MIT Press.

Karhulahti, V-M. (2012). Do Videogames Simulate? Virtuality and Imitation in the Philosophy of Simulation. *Simulation & Gaming*, 46(6), 838–856.

Karhulahti, V-M. (2015a). *Adventures of Ludom: A Videogame Geneontology*. Academic dissertation. University of Turku.

Karhulahti, V-M. (2015b). Defining the Videogame. *Game Studies*, 15(2).

Kelso, S. J. A. (1995). *Dynamic Patterns. The Self–Organization of Brain and Behavior.* Cambridge, MA: MIT Press.

Kenny, D. A. (2015, November 24). *Measuring model fit*. From http://davidakenny.net/cm/fit.htm. Retrieved 17th of January, 2017.

Kirkpatrick, G. (2012). Constitutive Tensions of Gaming's Field: UK gaming magazines and the formation of gaming culture 1981–1995. *Game Studies*, 12(1).

Kirkpatrick, G. (2013). *Computer Games and the Social Imaginary. Digital media and society series*. Cambridge: Polity Press.

Kirshenblatt-Gimblett, B. (1996). Topic Drift: Negotiating the Gap between the Field and Our Name. *Journal of Folklore Research*, 33, 245–254.

Klabbers, J. H. G. (2009). *The Magic Circle: Principles of Gaming & Simulation*. Rotterdam: Sense Publishers.

Klastrup, L. (2003). A Poetics of Virtual Worlds. *Fine Arts Forum*, 17(8), 100–109.

Klastrup, L. (2008). What makes World of Warcraft a world? A note on death and dying. In, H. Corneliussen & J. Rettberg (Eds.), *Digital Culture, Play, and Identity: A World of Warcraft Reader* (pp. 117–136). Cambridge, Massachusetts: The MIT Press.

Klevjer, R. (2002). In defense of cut-scenes. In F. Mäyrä (Ed.), *Proceedings of computer games and digital cultures conference* (pp. 191–202).

Klevjer, R. (2006). *What is the Avatar? Fiction and Embodiment in Avatar–Based Single–player Computer Games*. Academic Dissertation. University of Bergen.

Klimmt, C. & Vorderer, P. (2003). Media Psychology "is not there yet": Introducing theories on media entertainment to the presence debate. *Presence: Teleoperators and Virtual Environments*, 12(4), 346–359.

Klimmt, C., Hefner, D. & Vorderer, P. (2009). The Video Game Experience as ''True'' Identification: A Theory of Enjoyable Alterations of Players' Self–Perception. *Communication Theory*, 19, 351–373.

Kline, R. B. (2010). *Principles and Practice of Structural Equation Modeling.* Third Edition. New York: The Guilford Press.

Korsgaard, C. M. (2011). *Self–Constitution. Agency, Identity, and Integrity*. Oxford: Oxford University Press.

Kravtsov, G. G. & Kravtsova, E. E. (2010). Play in L.S. Vygotsky's Nonclassical Psychology. *Journal of Russian and East European Psychology*, 48(4), 25–41.

Kull, K. (1998). On semiosis, Umwelt, and semiosphere. *Semiotica*, 121(3–4), 299–310.

Kull, K. (2001). Jakob con Uexküll: An introduction. *Semiotica*, 134(1–4), 1–59.

Kyselo, M. (2014). The body social: an enactive approach to the self. *Frontiers in Psychology*, 5 (986), 1–16.

Kyselo, M. (2015). The enactive approach and disorders of the self – the case of schizophrenia. *Phenomenology and the Cognitive Sciences*, 15(4), 591–616.

Kätsyri, J., Hari, R., Ravaja, N. & Nummenmaa, L. (2013). The Opponent Matters: Elevated fMRI Reward Responses to Winning Against a Human Versus a Computer Opponent During Interactive Video Game Playing. *Cerebral Cortex*. Advance online publication. doi:10.1093/cercor/bhs259.

Landay, L. (2014). Interactivity. In, M. J. P. Wolf & B. Perron (Eds), *The Routledge Companion to Video Game Studies* (pp. 173–184). New York and London: Routledge.

Landhäußer, A., & Keller, J. (2012). Flow and Its Affective, Cognitive, and Performance-Related Consequences. In S. Engeser (Ed.), *Advances in Flow Research* (pp. 65–85). New York, NY: Springer New York.

Langton, C. (1986). Studying artificial life with cellular automata. *Physica D*, 22, 120–149.

Lau, K. (2010). The Political Lives of Avatars. Play and Democracy in Virtual Worlds. *Western Folklore*, 69(3–4), 378–394.

Laurel, B. (2004). Response by Brenda Laurel. In, N. Wardrip–Fruin and P. Harrigan (Eds), *First Person. New Media as Story, Performance, and Game* (pp. 19–23). Cambridge, MA: The MIT Press.

LeBlanc, M. (2004). Tools for Creating Dramatic Game Dynamics. In K. Salen & E. Zimmerman (Eds.), *The Game Design Reader. A Rules of Play Anthology* (pp. 438–459). Cambridge, MA: The MIT Press.

Lee, K. M. (2004). Presence, Explicated. *Communication Theory*, 14(1), 27–50.

Legrand, D. (2006). The bodily self: the sensori–motor roots of prereflexive self–consciousness. *Phenomenology and Cognitive Science*, 5, 89–118.

Leino, O. T. (2010). *Emotions in Play. On the Constitution of Emotion in Solitary Computer Game Play*. Academic dissertation. IT University of Copenhagen.

Leino, O. T. (2012). Untangling Gameplay: An Account of Experience, Activity and Materiality within Computer Game Play. In J. R. Sageng, H. J. Fossheim & T. Mandt–Larsen (Eds.), *The Philosophy of Computer Games. Volume 7*, Philosophy of Engineering and Technology (pp. 57–75). Dordrecht, Heidelberg: Springer.

Lewis, R. J., Tamborini, R., Weber, R. (2014). Testing a Dual-Process Model of Media Enjoyment and Appreciation. *Journal of Communication*, 64, 397–416.

Leys. R. (2011). The Turn to Affect: A Critique. *Critical Inquiry*, 37(3), 434–472

Liebe, M. (2008). There is no Magic Circle: On the Differences between Computer Games and Traditional Games. In, S. Günzel, M. Liebe & D. Mersch (Eds.), *Conference Proceedings of the Philosophy of Computer Games 2008* (pp. 324–340). Potsdam: Potsdam University Press.

Lieberoth, A. & Roepstorff, A. (2015). Mixed Methods in Game Research. In, P. Lankoski & S. Björk (Eds.), *Game Research Methods. An Overview* (pp. 271–289). ETC Press under Creative Commons License.

Linderoth, J. (2004). *Datorspelandets mening. Bortom idén om den interaktiva illusionen.* Academic dissertation. Göteborg: University of Göteborg.

Linderoth, J. (2005). Animated game pieces. Avatars as roles, tools and props. *Aesthetics of Play Conference*. Bergen. From: http://www.aestheticsofplay.org/linderoth.php. Retrieved 15th January, 2017.

Linderoth, J. (2013). Beyond the Digital Divide: An Ecological Approach to Game-Play. *Transactions of the Digital Games Research Association*, 1 (1), 1–17.

Lopez, M. L. (1980). *A Study of Philippine Games*. Quezon City, Philippines: University of Philippines Press.

Louchart, S. (2007). *Emergent Narrative – towards a narrative theory of Virtual Reality.* Academic Dissertation. University of Salford.

Luhmann, N. (1995). *Social Systems*. Standford: Standford University Press.

Malaby, T. (2007). Beyond Play: A New Approach to Games, *Games and Culture*, 2(2), 95–113.

Marshall, P. D. (2010). The Promotion and presentation of the self: Celebrity as marker of presentational media. *Celebrity Studies*, 1(1), 35–48.

Marshall, P. D. (2014). Seriality and Persona. *M/C Journal of Media and Culture, 'Persona'*, 17(3).

Massumi, B. (2002). *Parables for the Virtual: Movement, Affect, Sensation*. Durham, NC: Duke University Press.

Mateas, M. & Stern, A. (2000). Interaction and Narrative. In K. Salen & E. Zimmermann (Eds.), (2005). *The Game Design Reader: A Rules of Play Anthology* (pp. 642–666). Cambridge, MA: MIT Press.

Matsunaga, M. (2010). How to Factor-Analyze Your Data Right: Do's, Don'ts, and How-To's. *International Journal of Psychological Research*, 3(1), 97–110.

Maturana, H. R. (2002). Autopoiesis, Structural Coupling and Cognition: A history of these and other notions in the biology of cognition. *Cybernetics & Human Knowing*, 9(3–4), 5–34.

Maturana, H. R. & Varela, F. (1980). *Autopoiesis and Cognition. The Realization of the Living.* Dordrecht: Reidel.

Maturana, H. R. & Varela, F. J. (1987). *The Tree of Knowledge. The Biological Roots of Human Understanding*. Boston and London: Shambala.

Mayring, K. (2012). *Content Analysis: An Introduction to Its Methodology. Third Edition.* Thousand Oaks: Sage.

McGann M., & De Jaegher H. (2009). Self-Other Contingencies: Enacting Social Perception. *Phenomenology and the Cognitive Sciences*, 8(4), 417–437.

McGann, M., De Jaegher, H. & Di Paolo, E. A. (2013). Enaction and Psychology. *Review of General Psychology*, 17(2), 203–209.

McMahan, A. (2003). Immersion, Engagement, and Presence. A Method for Analyzing 3-D Video Games. In, M. J. P. Wolf & B. Perron (Eds.), *The Video Game Theory Reader* (pp. 67–86). New York, London: Routledge.

McNeill, L. S. (2013a). *Folklore Rules. A fun, Quick, and Useful Introduction to the field of Academic Folklore Studies*. Logan: Utah State University Press.

McNeill, L. S. (2013b). And the Greatest of These is Tradition: The Folklorist's Toolbox in the Twenty-First Century. In, T. J. Blank & R. G. Howard (Eds.), *Tradition in the Twenty–First Century. Locating the Role of the Past in the Present* (pp. 174–186). Logan: Utah State University Press.

Mead, G. H. (2015 [1934]). *Mind, Self & Society. The Definitive Edition.* Chicago and London: The University of Chicago Press.

Meade, A. W., & Craig, S. B. (2012). Identifying Careless Responses in Survey Data. *Psychological Methods. Advance online publication (2012*). doi: *10.1037/a0028085*

Mechling, J. (1989). "Banana Cannon" and Other Folk Traditions Between Human and Nonhuman Animals. *Western Folklore*, 48, 312–323.

Mechling, J. (2006). Solo Folklore. *Western Folklore*, 65, 435–453.

Merleau-Ponty, M. (2002 [1962]). *Phenomenology of Perception*. London and New York: Routledge.

Metz, C. (1974). *Film Language: A Semiotics of the Cinema*. Chicago: University of Chicago Press.

Miller, K. (2008). Grove Street Grimm: Grand Theft Auto and Digital Folklore. *Journal of American Folklore*, 121(481), 255–285.

Miller, K. (2012). *Playing Along. Digital Games, YouTube, and Virtual Performance.* Oxford: Oxford University Press.

Miller, T. G. (1986). Goffman, Positivism and the Self. *Philosophy of Social Scienc*e, 16, 177–195.

Moors, A., Ellsworth, P. C., Scherer, K. R. & Fridja, N. H. (2013). Appraisal Theories of Emotion: State of the Art and Future Development. *Emotion Review*, 5(2), 119–124.

Mugge, R., Schifferstein, H. N. J. & Schoormans, J. P. L. (2006). Longitudinal Study of Product Attachment and its Determinants. *European Advances in Consumer Research*, 7, 641–647.

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

Murray, J. H. (1997). *Hamlet on the Holodeck. The Future of Narrative in Cyberspace.* Cambridge, MA: The MIT Press.

Mäyrä, F. (2008). *An Introduction to Game Studies: Games in Culture*. Los Angeles: Sage.

Nachmanovitch, S. (2009). This is Play. *New Literary History*, 40 (1), 1–24.

Nardi, B. (2010). *My Life as a Night Elf Priest. An Anthropological Account of World of Warcraft*. Michigan: University of Michigan Press.

Newell, W. W. (1884). *Games and songs of American children*. New York: Harper & Brothers.

Newman, J. & Simons, I. (2004). *Difficult Questions about Videogames.* Nottingham: Suppose Partners.

Nitsche, M. (2011). Games as Structures for Mediated Performances. In, S. Günzel & D. Mersch (Eds.), *Logic and Structure of the Computer Game* (pp. 110–129). Potsdam: University Press.

Noë, A. (2004). *Action in Perception*. Cambridge, Massachusetts: The MIT Press.

Noë, A. (2009). *Out of Our Heads. Why You are not Your Brain, and Other Lessons from the Biology of Consciousness.* New York: Hill and Wang.

Noë, A. (2012). *Varieties of Presence*. Cambridge and London: Harvard University Press.

Noë, A. (2015). *Strange Tools. Art and Human Nature*. New York: Hill and Wang.

Nowak, K. L. & Biocca, F. A. (2004). The Effect of the Agency and Anthropomorphism on Users' Sense of Telepresence, Copresence, and Social Presence in Virtual Environments. *Presence:Teleoperators and Virtual Environments*, 12(5), 481–494.

Nowak, K., Krcmar, M. & Farrar, K. M. (2008). The Causes and Consequences of Presence: Considering the Influence of Violent Video Games on Presence and Aggression. *Presence: Teleoperators and Virtual Environments*, 17(3), 256–268.

Noyes, D. (2003). Group. In, N. Feintuch (Ed.), *Eight Words for the Study of Expressive Culture* (pp. 7–41). Champaign: University of Illinois Press.

Oatley, K. (1999). Why Fiction may be Twice as True as Fact: Fiction as Cognitive and Emotional Simulation. *Review of General Psychology*, 3(2), 101–117.

Oliver, M. B. & Bartsch, A. (2010). Appreciation as Audience Response: Exploring Entertainment Gratifications Beyond Hedonism. *Human Communication Research*, 36, 53–81.

Oliver, M. B. & Bartsch, A. (2011). Appreciation of Entertainment. The Importance of Meaningfulness via Virtue and Wisdom. *Journal of Media Psychology*, 23(1), 29–33.

Oliver, M. B., Bowman, N. D., Woolley, J. K., Rogers, R., Sherrick, B. I. & Chung, M–Y. (2015). Video Games as Meaningful Entertainment Experiences. *Psychology of Popular Media Culture*. Advance Online Publication. DOI. 10.1037/ppm0000066

Opie, I. & Opie, P. (1969). *Children's Games in Street and Playground*. Oxford: Oxford University Press.

Oring, E. (1984). Dyadic Traditions. *Journal of Folklore Research*, 21(1), 19–28.

Oring, E. (1986). *Folk Groups and Folklore Genres: An Introduction*. Logan: Utah State University Press.

Oring, E. (2013). Thinking through tradition. In, T. J. Blank & R. G. Howard (Eds.), *Tradition in the Twenty-First Century. Locating the Role of the Past in the Present* (pp. 22–48). Logan: Utah State University Press.

Parlett, D. S. (1999). *The Oxford Dictionary of Card Games*. Oxford: Oxford University Press.

Pearce, C. (2004). Towards a Game Theory of Game. In, N. Wardrip-Fruin and P. Harrigan (Eds), *First Person. New Media as Story, Performance, and Game* (pp. 143–153). Cambridge, Massachusetts: The MIT Press.

Pearce, C. (2009). *Communities of Play. Emergent Cultures in Multiplayer Games and Virtual Worlds*. Cambridge, MA: The MIT Press.

Peterson, J. B. (2002). *Maps of Meaning: The Architecture of Belief*. Routledge. 1st Edition.

Piaget, J. (1962 [1951]). *Play, Dreams and Imitation in Childhood.* New York: W. W. Norton & Company, Inc.

Piaget, J. (1966). Response to Sutton-Smith. *Psychological Review*, 73 (1), 111–112.

Pike, K. L. (1954). *Language in Relation to a Unified Theory of the Structure of Human Behavior, Part I.* Glendale: Summer Institute of Linguistics.

Pitkänen, J. (2015). Stimulated recall as a game research method. In, P. Lankoski & S. Björk (Eds.), *Game Research Methods. An Overview* (pp. 117–132). ETC Press under Creative Commons License.

Popova, Y. (2014). Narrativity and enaction: the social nature of literary narrative understanding. *Frontiers in Psychology*, 5(895), 1–14.

Popova, Y. B. (2015). *Stories, Meaning, and Experience. Narrativity and Enaction*. New York, London: Routledge.

Propp, V. (1968 [1928]). *Morphology of the Folktale. Second Edition*. Austin: University of Texas Press.

Propp, V. (1984). *Theory and History of Folklore.* Manchester: Manchester University Press.

Przybylski, A. K., Deci, E. L., Rigby, C. S. & Ryan, R. M. (2014). Competence–Impeding Electronic Games and Players' Aggressive Feelings, Thoughts, and Behaviors. *Journal of Personality and Social Psychology*, 106 (3), 441–457.

Przybylski, A. K., Ryan, R. M.& Rigby, C. S. (2009). The Motivating Role of Violence in Video Games. *Personality and Social Psychology Bulletin*, 35(2), 243–259.

Przybylski, A. K., Weinstein, N., Murayama, K. Lynch, M. F. & Ryan, R. M. (2012). The Ideal Self at Play: The Appeal of Video Games that let you be all you can be. *Psychological Science*, 23(1), 69–76.

Przybylski, A., Rigby, C. S. & Ryan, R. M. (2010). A Motivational Model of Video Game Engagement. *Review of General Psychology*, 14(2), 154–166. DOI: 10.1037/a0019440.

Reeves, B. & Nass, C. (2002 [1996]). *The Media Equation. How People Treat Computers, Television, and New Media Like Real People and Places*. Stanford: CSLI Publications.

Ricoeur, P. (1984–1988). *Time and Narrative*. Chicago: Chicago University Press.

Rizzolatti G. & Sinigaglia C. (2010). The Functional Role of the Parieto–frontal Mirror Circuit: Interpretations and Misinterpretations. *Nature Reviews Neuroscience*, 11, 264–274

Roberts, J. M., Sutton–Smith, B. & Kendon, A. (1963). Strategy in Games and Folk Tales. *Journal of Social Psychology*, 61, 185–199.

Robets, J. M. & Sutton–Smith, B. (1962). Child Training and Game Involvement. *Ethnology*, 1, 166–185.

Rouse, R. (2001). *Game Design: Theory & Practice*. Plano, TX: Wordware.

Rucinska, Z. & Reijmers, E. (2015). Enactive account of pretend play and its application to therapy. *Frontiers in Psychology*, 6(175).

Russell, D. W. (2002). In search of underlying dimensions: The use (and abuse) of factor analysis in Personality and Social Psychology Bulletin. *Personality and Social Psychology Bulletin*, 28, 1629–1646.

Russell, J. A. (2003). Core affect and the psychological construction of emotion. *Psychological Review*, 110, 145–172.

Ryan, R. & Deci, L. (2000). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology*, 25(1), 54–67.

Ryan, R. M., Rigby, C. S. & Przybylski, A. (2006). The Motivational Pull of Video Games: A Self–Determination Theory Approach. *Motivation and Emotion*, 30 (4), 344–360.

Sagan, D. (2010). Introduction. In, Uexküll, J. von, *A Foray into Worlds of Animals and Humans. With a Theory of Meaning* (pp. 1–34). Minneapolis, MN: University of Minnesota Press.

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

Sartre, J-P. (2003 [1957]). *Being and Nothingness*. London and New York: Routledge.

Schechner (1988 [1978]). *Performance Theory. Revised and expanded edition.* New York, London: Routledge.

Scherer, K. R. (2009). Emotions are emergent processes: they require a dynamic computational architecture. *Philosophical Transactions of the Royal Society*, 364, 3459–3474.

Schier-Oberdorffer, U. (1993). Kinderspiel. In, R. W. Brednich (Ed.), *Enzyklopädie des Märchens* (pp. 1336–1354). Berlin: Walter de Gruyter.

Schilbach, L., Timmermans, B., Reddy, V., Costall, A., Bente, G., Schlicht, T. & Vogeley, K. (2013). Toward a second–person neuroscience. *Behavioral and Brain Sciences*, 36, 393–462.

Schneider, A., Hommel, G. & Blettner, M. (2010). Linear Regression Analysis. Deutsches Ärzteblatt Int. 107(44), 776–782.

Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of Educational Research*, 99, 323–337.

Schroeder, R. (2002). Social interaction in virtual environments: Key issues, common themes, and a framework for research. In, R. Schroeder (Ed.), *The Social Life of Avatars: Presence and Interaction in Shared Virtual Environments* (pp. 1–18). London: Springer–Verlag.

Schubert, T. W. (2009). A New Conception of Spatial Presence: Once Again, with Feeling. *Communication Theory*, 19, 161–187.

Schwartzman, H. B. (1979). *Transformations. The Anthropology of Children's Play*. New York and London: Plenum Press.

Schwertl, M. (2016). "We have a situation here!". On Enactment as a Middle Ground between Practice and Performance. *Cultural Analysis*, 15(1), 168–177.

Semin, G. R. & Cacioppo, J. T. (2009). From Embodied Representation to Co–regulation. In J. A. Pineda (Ed.), *Mirror Neuron Systems. The Role of Mirroring Processes in Social Cognition* (pp, 107–120). New Jersey: The Humana Press.

Shafer, D. M., Carbonara, C. P., & Popova, L. (2011). Spatial presence and perceived reality as predictors of motion–based video game enjoyment. *Presence: Teleoperators and Virtual Environments*, 20(6), 591–619

Shamay-Tsoory, S. G., Aharon–Peretz, J. & Perry, D. (2009). Two systems for empathy: a double dissociation between emotional and cognitive empathy in inferior frontal gyrus versus ventromedial prefrontal lesions. *Brain. A Journal of Neurology*, 132 (3), 617–627.

Sherman, S. R. (1997). Perils of the Princess: Gender and Genre in Video Games. *Western Folklore*, 56(3–4), 243–258.

Sherry, J. L., Lucas, K., Greenberg, B. S. & Lachlan, K. (2006). Video game uses and gratifications as predictors of use and game preference. In P. Vorderer, & J. Bryant (Eds.), *Playing Video Games. Motives, Responses, and Consequences* (pp. 213–224). New York: Routledge, Taylor & Francis Group.

Shinkle, E. (2008). Video Games, Emotion and the Six Senses. *Media, Culture & Society*, 30(6), 907–915.

Shuman, A. (1986). *Storytelling Rights: The Uses of Oral and Written Texts by Urban Adolescents*. Cambridge: Cambridge University Press.

Shuman, A. (2006). Entitlement and empathy in personal narrative. *Narrative Inquiry*, 16, 148–155.

Shuman, A. & Hasan-Rokem, G. (2012). The Poetics of Folklore. In, R. F. Bendix & G. Hasan-Rokem (Eds), *A Companion to Folklore* (pp. 55–74). Chichester, West Sussex: Wiley-Blackwell.

Sicart, M. (2009). Defining Game Mechanics. *Game Studies*, 8(2).

Sicart, M. (2014). *Play Matters*. Cambridge, Massachusetts: The MIT Press.

Siikala, A-L. (1990). *Interpreting oral narrative*. FF Communications 245. Helsinki: Suomalainen tiedeakatemia.

Skalski, P. & Tamborini, R. (2007). The Role of Social Presence in Interactive Agent-Based Persuasion. *Media Psychology*, 10(3), 385–413.

Sokolov, Y. M. (1966 [1938]). Russian Folklore. Pennsylvania: Hatboro.

Souriau, E. (1951). La structure de l'univers filmique. *Revue internationale de filmologie*, 2(7–8), 231–240.

Stahl, S. K. D. (1977). The Personal Narrative as Folklore. *Journal of the Folklore Institute*, 14 (1/2), Special Double Issue: Stories of Personal Experiences, 9–30.

Stahl, S. K. D. (2008 [1989]). *Literary Folkloristics and the Personal Narrative*. Bloomington: Trickster Press.

Stein, E. (1964). *On the Problem of Empathy*. Translated by Waltraut Stein. The Hague: Nartinus Nijhoff.

Stenros, J. (2012). In Defence of a Magic Circle: The Social and Mental Boundaries of Play. *DiGRA Nordic 2012*, Digra.

Stenros, J. (2015). *Playfulness, Play, and Games. A Constructionist Ludology Approach.* Academic Dissertation. Acta Universitatis Tamperensis 2049. Tampere: Tampere University Press.

Stenros, J., Paavilainen, J. & Mäyrä, F. (2011). Social Interaction in Games. *International Journal of Arts and Technology*, 4 (3), 342–358.

Steuer, J. (1992). Defining Virtual Reality: Dimensions determining Telepresence. *Journal of Communication*, 42(4), 73–93.

Stevens, P. & Bateson, G. (1979). Gregory Bateson on Play and Work. *The Association for the Anthropological Study of Play Newsletter*, 5(4), 2–4.

Suits, B. (2005 [1978]). T*he Grasshopper. Games, Life and Utopia*. Peterborough: Broadview.

Suominen, J. (2011). Game Reviews as Tools in the Construction of Game Historical Awareness in Finland, 1984–2010: Case MikroBitti Magazine. *Think, Design, Play – Digra 2011 conference*. Utrecht School of the Arts, Hilversum 14–17 September 2011.

Sutrop, U. (2001). Umwelt – Word and concept: Two hundred years of semantic change. *Semiotica*, 134(1–4), 447–462.

Sutton-Smith B. (1967). The Role of Play in Cognitive Development. *Young Children*, 8, 361–370

Sutton-Smith, B. (1966). Piaget on Play: A Critique. *Psychological Review*, 73 (1), 104–110.

Sutton-Smith, B. (1971). A Reply to Piaget: A Play Theory of Copy. In, R. E. Herron & B. Sutton-Smith (Eds), *Child's Play* (pp. 340–342). New York and London: John Wiley & Sons, Inc.

Sutton-Smith, B. (1983). Piaget, Play, and Cognition, Revisited. In, W. F. Overton (Ed.), *The Relationship Between Social and Cognitive Development* (pp. 229–249). London and Hillsdale: Lawrence Erlbaum Associates.

Sutton-Smith, B. (2001 [1997]). *The Ambiguity of Play*. Cambridge and London: Harvard University Press.

Sutton-Smith, B. & Kelly-Byrne, D. (1984). The Idealization of Play. In, P. K. Smith (Ed.), *Play in Animals and Humans* (pp. 305–324). Oxford: Basil Blackwell.

Tamborini, R. & Skalski, P. (2006). The Role of Presence in the Experience of Electronic Games. In, P. Vorderer & J. Bryant (Eds), *Playing Video Games. Motives, Responses, and Consequences* (pp. 225–240). New York: Routledge, Taylor & Francis Group.

Tamborini, R., Bowman, N. D., Eden, A., Grizzard, M. & Organ, A. (2010). Defining Media Enjoyment as the Satisfaction of Intrinsic Needs. *Journal of Communication*, 60, 758–777.

Tamborini, R., Grizzard, M., Bowman, N. D., Reinecke, L., Lewis, R. J. & Eden, A. (2011). Median Enjoyment as Need Satisfaction: The Contribution of Hedonic and Nonhedonic Needs. *Journal of Communication*, 60, 1025–1042.

Taylor, T. L. (2006). *Play Between Worlds. Exploring Online Game Culture*. Cambridge, MA: The MIT Press.

Terlecki, M., Brown, J., Harner–Steciw, L., Irvin–Hannum, J., Marchetto-Ryan, N., Ruhl, L., & Wiggins, J. (2011). Sex differences and similarities in video game experience, preferences, and self-efficacy: Implications for the gaming industry. *Current Psychology*, 30(1), 22–33. DOI: 10.1007/s12144–010–9095–5

Thompson, E. (2007). *Mind in Life. Biology, Phenomenology, and the Sciences of Mind*. Cambridge: The Belknap Press of Harvard University Press.

Thompson, E. (2010). Self-No-Self? Memory and Reflexive Awareness. In, M. Siderits, E. Thompson & D. Zahavi (Eds.), S*elf, No Self? Perspectives from Analytical, Phenomenological, and Indian Traditions* (pp. 157–175). Oxford: Oxford University Press.

Thompson, E. (2011). Living Ways of Sense–Making. *Philosophy Today*, 55 (SPES Supplement), 114–123.

Thompson, E. & Stapleton, M. (2009). Making Sense of Sense–Making: Reflections on Enactive and Extended Mind Theories. *Topoi*, 28(1), 23–30.

Thompson, T. (2010). The Ape That Captured Time: Folklore, Narrative, and the Human–Animal Divide. *Western Folklore*, 69(3/4),395–420.

Titon, J. T. (1980). The Life Story. *Journal of American Folklore*, 93, 276–292.

Titon, Jeff Todd. 1995. Text. *Journal of American Folklore*, 108(430), 433–448.

Toelken, B. (1996). *Dynamics of Folklore*. Logan: Utah State University Press.

Tolbert, J. A. (2016). A Deadly Discipline: Folklore, Folklorists, and the Occult in Fatal Frame. In, M. D. Foster & J. A. Tolbert (2016), *The Folkloresque. Reframing Folklore in a Popular Culture World* (pp. 125–143). Logan: Utah State University Press.

Tomkins, S. S. (1962). *Affect, Imagery, Consciousness. Vol 1: The Positive Affects*. New York: Springer.

Tonkin, E. (1992). Mask. In, R. Bauman (Ed.), *Folklore, Cultural Performances, and Popular Entertainments. A Communication-Centered Handbook* (pp. 225–232). New York, Oxford: Oxford University Press.

Travis, R. (2012). Epic Style: Re–compositional Performance in the BioWare Digital RPG. In, G. A. Voorhees, J. Call & K. Whitlock (Eds.), *Dungeons, Dragons, and Digital Denizens. The Digital Role–Playing Game* (pp. 235–255). New York: The Continuum International Publishing Group.

Tseng, F-C. (2010). Segmenting online gamers by motivation. *Expert Systems with Applications*, 38, 7693–7697. DOI: 10.1016/j.eswa.2010.12.142

Uexküll, J. von (1926). *Theoretical Biology*. New York: Harcourt, Brace & Company Inc.

Uexküll, J. von (1957 [1934]). A Stroll Through the Worlds of Animals and Men. In, C. H. Schiller & K. S. Lashley (Eds.), *Instinctive Behavior. The Development of a Modern Concept* (pp. 5–80). New York: International Universities Press, Inc.

Uexküll, J. von (2010 [1934]). *A Foray into the Worlds of Animals and Humans with a Theory of Meaning*. Minneapolis, MN: University of Minnesota Press.

Vahlo, J. (2017). An Enactive Account of the Autonomy of Videogame Gameplay. *Game Studies*, 17(1).

Vahlo, J., Kaakinen, J., Holm, S., Koponen, A.: Digital Game Dynamics Preferences and Player Types. *Journal of Computer-Mediated Communication*, 22(2), 88–103 (2017). doi: 10.1111/jcc4.12181

Vahlo, J. & Koponen, A. (2018). Player Personas and Game Choice. In, N. Lee (Ed.), *Encyclopedia of Computer Graphics and Games.* Boston, MA: Springer.

Varela, F. J. (1979). *Principles of Biological Autonomy.* New York: Elsevier North Holland.

Varela, F. J. (1987). Laying Down a Path in Walking. In W. I. Irwin (Ed.), *Gaia. A Way of Knowing. Political Implications of the New Biology* (pp. 48–64). Great Barrington, MA: Lindisfarne Press.

Varela, F. J. & Shear, J. (1999). First-Person Methodologies: What, Why, How? In, F. J. Varela & J. Shear (Eds.), T*he View from Within. First-Person Approaches to the Study of Consciousness* (pp. 1–14). Bowling Green, OH: Imprint Academic.

Varela, F. J., Thompson, E., & Rosch, E. (1991). *The Embodied Mind: Cognitive science and Human Experience.* Cambridge, MA: MIT Press.

Vorderer, P. (2009). *What do we want when we want narratives?* http://sites.google.com/a/newliteracies.co.cc/xin-su-yang-yan-jiu-qun/2009shu-wei-xushi-guo-ji–gong-zuo-fang/1-2-vorderer/What_do_we_want_when_we_want_narratives_v1.3.doc. Retrieved in 9.2.2017.

Vorderer, P. & Ritterfeld, U. (2009). Digital games. In, R. Nabi, & M. B. Oliver (Eds.), T*he SAGE handbook of media processes and effects* (pp. 455–468). Thousand Oaks, CA: Sage.

Vygotsky, L. (1986 [1934]). *Thought and Language*. Translated by Alex Kozulin. Cambridge, MA: The MIT Press.

Vygotsky, L. S. (1967 [1933]). Play and its role in the mental development of the child. *Soviet Psychology*, 5, 6–18

Walsh, R. (2007). *The Rhetoric of Fictionality. Narrative Theory and the Idea of Fiction.* Columbus: The Ohio State University Press.

Walsh, R. (2011). Emergent Narrative in Interactive Media. *Narrative*, 19(1), 72–85.

Weber, A. & Varela, F. J. (2002). Life after Kant: Natural Purposes and the Autopoietic Foundations of Biological Individuality. *Phenomenology and the Cognitive Sciences*, 1(2), 97–125.

Webster, J. G. (2014). *The Marketplace of Attention. How Audiences Take Shape in a Digital Age.* Cambridge, MA: The Mit Press.

Wegner, D. M. (2005). Who is the controller of controller processes? In R. R. Hassin, J. S. Uleman & J. A. Bargh (Eds.), *The New Unconscious* (pp. 19–36). New York: Oxford University Press.

White, R. W. (1959). Motivation reconsidered. *Psychological Review*, 66, 297–333.

Whittaker, G. (2012). A Type Index for Children's Games. *Folklore*, 123(3), 269–292.

Winnicott, D. W. (2005 [1971]). *Playing and Reality*. London and New York: Routledge.

Winters, B. (2010). The Non-Diegetic Fallacy: Film, Music, and Narrative Space. *Music & Letters*, 91(2), 224–243.

Winthrop-Young, G. (2010). Afterword. Bubbles and Webs: A Backdoor Stroll through the Readings of Uexküll. In, Uexküll, J. von (2010 [1934]), *A Foray into the Worlds of Animals and Humans. With a Theory of Meaning* (pp, 209–243). Minneapolis: University of Minneapolis Press.

Wirth, W., Hartmann, T., Böcking, S., Vorderer, P., Klimmt, C., Schramm, H., Saari, T., Laarni, J., Ravaja, N. Gouveia, F. R., Biocca, F., Sacau, A., Jäncke, L., Baumgartner, T. & Jäncke, P. (2007). A Process Model of the Formation of Spatial Presence Experiences. *Media Psychology*, 9(3), 493–525.

Wolf, M. J. P. (2001). Genre and the video game. In, M. J. P. Wolf (Ed.), *The Medium of the Video Game* (pp. 113–234). Austin: University of Texas Press.

Wolf, M. J. P. (2014). Worlds. In, M. J. P. Wolf & B. Perron (Eds), *The Routledge Companion to Video Game Studies* (pp. 125–131). New York and London: Routledge.

Wolling, J. (2009). The Effect of Subjective Quality Assessments on Media Selection. In: T. Hartmann (Ed.), *Media Choice: A Theoretical and Empirical Overview* (pp. 84–101). New York and London: Routledge.

Yan, X. & Su, X. G. (2009). Linear Regression Analysis. Theory and Computing. New Jersey: World Scientific.

Yee, N. (2006). Motivations for Play in Online Games. *Journal of CyberPsychology and Behavior*, 9, 772–775.

Yee, N., Ducheneaut, N. & Nelson, L. (2012). Online Gaming Motivation Scale. In, *Proceedings of the 2012 ACM annual conference on Human Factors in Computing Systems ACM 2012.* (pp. 2803–2806). Austin, USA, 5–10, May 2012.

Young, K. (2004). Frame and Boundary in the Phenomenology of Narrative. In, M-L Ryan (Ed.), *Narrative Across Media. The Languages of Storytelling* (pp. 76–107). Lincoln and London: University of Nebraska Press.

Zagal, J. P., Ladd, A. & Johnson, T. (2009). Characterizing and Understanding Game Reviews. *Proceedings of the 4th International Conference on the Foundations of Digital Games*, 2009.

Zagal, J. P., Tomuro, N. & Shepitsen, A. (2012). Natural Language Processing in Game Studies Research. *Simulation & Gaming*, 43(3), 356–373.

Zahavi, D. (2005). *Subjectivity and Selfhood. Investigating the First–Person Perspective*. Cambridge, MA: The MIT Press.

Zahavi, D. (2014). *Self & Other. Exploring Subjectivity, Empathy, and Shame.* Oxford: Oxford University Press.

Zait, A., Bertea, P. (2011). Methods for Testing Discriminant Validity. *Management & Marketing*, IX (2), 217–224.

Zimmerman, E. (2012). *Jerked Around by the Magic Circle – Clearing the Air Ten Years Later. Gamasutra.* http://www.gamasutra.com/view/feature/6696/jerked_around_by_the_magic_circle_.php?print=1. Retrieved February 9th, 2017.

APPENDICES

Appendix 1:
Illustrations for the Seven Player Persona Types[113]

The Mercenary

The Adventurer

[113] Character illustrations by Juha Harju (2016) and player type icons by Natasha Trygg (2017) for the research project *Your Kind of Games*, financed by Tekes and the University of Turku.

The Explorer

The Commander

The Companion

The Daredevil

The Patterner

Appendix 2: Game Instruction Booklets

999: Nine Hours, Nine Persons, Nine Doors

Ace Attorney Trials and Tribulators

Advance Wars Dual Strike

Alpha Centauri

Alundra

Animal Crossing

Assassin's Creed 2

Astro Boy

Baldur's Gate 2

Baten Kaitos

Batman Arkham Asylum

Battlefield 3

Beyond Good and Evil

Bioshock

Bit Trip Complete

Breath of Fire IV

Call of Duty: BlackOops

Castlevania: Symphony of the Night

Catherine

Child of Eden

Chocobo Tales

Chrono Cross

Chrono Trigger

Civilization V

Command & Conquer: Red Alert

DanceDanceRevolution

Dark Souls 2

Day of the Tentacle

Dead Space

Deus Ex: Human Revolution

Diablo II

Disgaea 4

Disgaea DS

Donkey Kong Returns

Doom

Doom 2

Dragon Quest VII

Duck Hunt

Dune II

Dungeon Master

Elite Beat Agents

Etrian Odyssey

Europa Universalis III

F-Zero Legend

Fable 2

Fallout 2

Fallout 3

Fifa 15

Final Fantasy Tactics

Final Fantasy VI

Final Fantasy VII

Final Fantasy X

Fire Emblem

Ghost Trick

God of War II

Gran Turismo 3

Grim Fandango

Grand Theft Auto III

Grand Theft Auto V

Gunship

Half-Minute Hero

Half-Life

Halo

Harvest Moon

Heartstone

Heavy Rain

Homeworld

Ico

Ikaruga

Indiana Jones and the Fate of Atlantis

Infinite Space

Jagged Alliance 2

Jak & Daxter Trilogy

Jak II

Jet Set Radio

Katamari Damarcy

Kingdom Hearts

Last of Us

Legend of Dragoon

Lego Harry Potter

Limbo

Little Big Planet

Locoroco

Lufia Curse of the Sinistrals

Mario Kart

Mass Effect 2

Master of Orion II

Metal Gear Solid 4

Metroid Trilogy

Midnight Club:
Los Angeles

Might & Magic:
Clash of Heroes

Minecraft

Myst

Ni No Kuni

Nintendogs

Nintendogs + Cats

Okami

Okamiden

Patapon

Persona 3 Fes

Persona 4

Pro Evolution Soccer 2011

Planescape: Torment

Pokemon Leaf Green

Populous

Portal 2

Prince of Persia

Professor Layton
and the Curious Village

Radiant Historia

Ratchet & Clank 3

Rayman Legends

Resident Evil IV

Rez

Ridge Racer

Rock Band

Rome Total War

Shadow of the Colossus

Shenmue 2

Silent Hill

Silent Service

Sim City 2013

Spelunky

SSX on Tour

Star Ocean II

Starcraft 2

Street Fighter

Street Fighter IV

Suikoden II

Super Mario

Super Mario 64 DS

Super Mario Galaxy 2

Super Robot Taisen

Super Smash Bros

Supreme Commander

Tales of the Abyss

Tetris

The Dark Spire

The Sims 2

The World Ends With You

The World of Goo

Theme Park

To the Moon

Towerfall

Transport Tycoon

Ufo: Enemy Unknown

Ultima Online

Ultima VI

Uncharted 2

Vagrant Story

Valkyria Chronicles

Viewtiful Joe

Walking Dead

Warcraft III

Wipeout Fusion

Xcom: Enemy Within

Xenoblade Chronicles

Xenogears

Yoshi's Island

Ys Seven

Zelda A Link to the Past

Zelda Twilight Princess

Appendix 3: Data Tables of the Statistical Analyses

	Unstandardized value	Standardized value
Measurement Model Estimates		
Immersion → x12	1 (constrained)	0.802
Immersion → x14	1.106	0.859
Immersion → x15	1.056	0.798
Fun → x16	0.867	0.882
Fun → x18	0.853	0.859
Fun → x19	0.881	0.876
Relatedness → x2	1 (constrained)	0.725
Relatedness → x4	1.307	0.856
Relatedness → x5	1.111	0.753
Competence → x6	1 (constrained)	0.789
Competence → x7	0.932	0.755
Competence → x8	1.019	0.807
Autonomy → x22	1 (constrained)	0.838
Autonomy → x23	1.048	0.868
Autonomy → x24	1.002	0.821
Variances		
error x12	0.551	0.355
error x14	0.434	0.261
error x15	0.636	0.363
error x16	0.214	0.221
error x18	0.259	0.262
error x19	0.236	0.233
error x2	0.673	0.474
error x4	0.454	0.263
error x5	0.703	0.433
error x6	0.544	0.377
error x7	0.589	0.430
error x8	0.500	0.348
error x22	0.454	0.298
error x23	0.384	0.246
error x24	0.521	0.327
Immersion	1.000	1
Fun	1 (fixed)	1 (fixed)
Relatedness	0.745	1
Competence	0.900	1
Autonomy	1.069	1
Factor covariances		

Immersion with Fun	0.445	0.445
Immersion with Relatedness	0.428	0.496
Immersion with Competence	0.713	0.751
Immersion with Autonomy	0.924	0.893
Fun with Relatedness	0.221	0.256
Fun with Competence	0.549	0.578
Fun with Autonomy	0.535	0.517
Relatedness with Competence	0.398	0.486
Relatedness with Autonomy	0.355	0.398
Competence with Autonomy	0.819	0.835

*** p < 0.001, Note: RMSEA 0.060, CFI 0.970, SRMR 0.036

Appendix Table 1. *Unstandardized and standardized factor loadings for the CFA model of Five Motivational Factors (N=845) as reported in Study 6 of Chapter 9.*

	Unstandardized value	Standardized value
Structural Model Estimates		
Relatedness → Immersion	0.008	0.183
Competence → Immersion	-0.003	-0.080
Autonomy → Immersion	0.035	0.884
Relatedness → Fun	-0.009	-0.038
Competence → Fun	0.111	0.517
Autonomy → Fun	0.019	0.964
Measurement Model Estimates		
Immersion → Gameplay Enjoyment	1 (fixed)	0.049
Fun → Gameplay Enjoyment	2.732	0.675
Immersion → Gameplay Appreciation	12.384	0.503
Fun → Gameplay Appreciation	1 (fixed)	0.205
Immersion → x12	24.726	0.804
Immersion → x14	27.284	0.859
Immersion → x15	26.143	0.800
Fun → x16	4.264	0.887
Fun → x18	4.175	0.858
Fun → x19	4.300	0.872
Relatedness → x2	1 (fixed)	0.726
Relatedness → x4	1.304	0.857
Relatedness → x5	1.1101	0.753
Competence → x6	1 (fixed)	0.789
Competence → x7	0.933	0.756
Competence → x8	1.020	0.807
Autonomy → x22	1 (fixed)	0.838
Autonomy → x23	1.048	0.868
Autonomy → x24	1.003	0.821

Variances		
Gameplay Appreciation	0.610	0.611
Gameplay Enjoyment	0.350	0.512
error x12	0.549	0.354
error x14	0.434	0.262
error x15	0.630	0.360
error x16	0.207	0.214
error x18	0.260	0.263
error x19	0.242	0.239
error x2	0.671	0.473
error x4	0.458	0.265
error x5	0.702	0.432
error x6	0.546	0.378
error x7	0.587	0.428
error x8	0.501	0.349
error x22	0.454	0.299
error x23	0.385	0.247
error x24	0.518	0.325
Immersion	0.001	0.181
Fun	0.028	0.661
Relatedness	0.747	1
Competence	0.899	1
Autonomy	1.068	1
Factor Covariances		
Apperciation with Enjoyment	0.204	0.441
Relatedness with Competence	0.399	0.486
Relatedness with Autonomy	0.356	0.398
Competence with Autonomy	0.819	0.836

All estimates, variances and covariances are significant on the level of $p < 0.001$, with the exception of Competence → Immersion, Relatedness → Fun, Autonomy → Fun, and Immersion → Gameplay Enjoyment, which are not statistically significant, Note: RMSEA 0.054, pclose 0.139, CFI 0.971, SRMR 0.038

Appendix Table 2. *Unstandardized and standardized factor loadings for the SEM model of Five Motivational Factors, gameplay Appreciation and Enjoyment (N=845) as reported in Study 7 of Chapter 9.*

Appendix 4: Qualitative Research Data

	Interview date	Gender	Age	Player type
Interview P1:	6.11.2015	Female	23	Adventurer
Interview P2:	2.11.2015	Female	38	Adventurer
Interview P3:	18.11.2015	Female	37	Adventurer
Interview P4:	2.12.2015	Male	25	Adventurer
Interview P5:	19.11.2015	Female	23	Explorer
Interview P6:	9.12.2015	Male	25	Commander
Interview P7:	19.11.2015	Male	27	Mercenary
Interview P8:	21.11.2015	Male	29	Mercenary
Interview P9:	2.12.2015	Female	24	Mercenary
Interview P10:	5.12.2015	Female	25	Explorer
Interview P11:	3.11.2015	Male	27	Mercenary
Interview P12:	17.12.2015	Male	32	Adventurer
Interview P13:	24.11.2015	Male	27	Mercenary
Interview P14:	15.12.2015	Female	22	Adventurer
Interview P15:	6.12.2015	Female	25	Explorer
Interview P16:	25.11.2015	Male	26	Commander
Interview P17:	24.11.2015	Male	34	Commander
Interview P18:	5.12.2015	Female	25	Adventurer
Interview P19:	9.11.2015	Female	35	Explorer
Interview P20:	17.11.2015	Female	26	Mercenary
Interview P21:	27.11.2015	Male	27	Companion
Interview P22:	4.11.2015	Female	34	Patterner
Interview P23:	25.11.2015	Male	28	Commander
Interview P24:	14.11.2015	Female	30	Explorer
Interview P25:	16.11.2015	Female	38	Explorer
Interview P26:	17.12.2015	Male	37	Mercenary
Interview P27:	3.12.2015	Male	25	Mercenary
Interview P28:	11.5.2016	Female	43	Explorer
Interview P29:	14.9.2016	Female	20	Companion
Interview P30:	14.9.2016	Female	28	Commander
Interview P31:	20.9.2016	Male	49	Daredevil
Interview P32:	5.10.2016	Female	36	Commander

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