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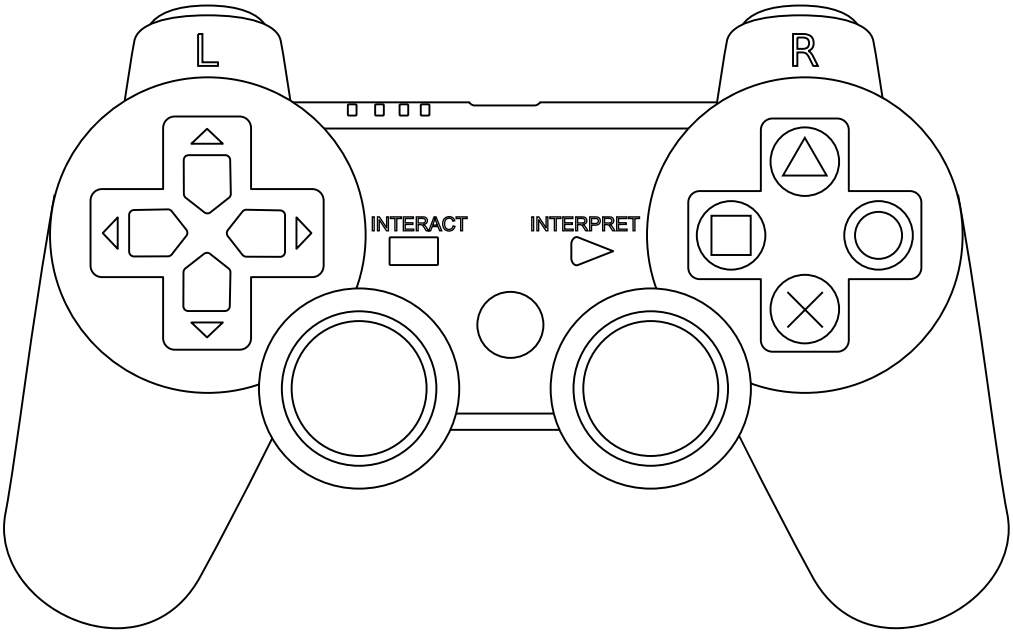
250

Jonne Arjoranta

Real-Time Hermeneutics

Meaning-Making in Ludonarrative Digital Games



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ABSTRACT

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Digital games are a relatively new medium. While they have been around for over half a century, they only became a major part of the culture relatively late. Like every other medium before, games also have struggled to find an expressive language of their own. Some of the expressive styles of other media are still relevant for games, but new ones have to be created specifically for videogames.

This dissertation is a study of how ludonarrative videogames, videogames that combine game elements with narrative elements, express and convey meaning. This is done as part of game studies, a multidisciplinary approach to studying games. The purpose is twofold: to build a foundation for better understanding of meaning-making in games, and to provide game designers with tools for analyzing issues related to meaning.

This study uses philosophical tools to analyze meaning in games. The philosophical hermeneutics of Hans-Georg Gadamer is used to compare the meaning-making in games to the interpretation of works of art. The theory of the interpretive process is based on the idea of the hermeneutic circle. Wittgenstein's concept of language-games is used in examining how games should be defined and how their relations to each other should be understood. These philosophical methods are combined with the study of procedurality, narrativity and players.

This study shows that ludonarrative games are procedural systems that are interpreted both during gameplay and as a part of the surrounding cultural context. The result of this interpretation is neither predetermined by the game designer nor fixed during gameplay, but potentially open for endless reinterpretation as players interact with the game in new ways and as the cultural context changes. In order to convey meaning, ludonarrative games can borrow expressive tools from other media, for example by using perspective in the way it is used in cinema.

Additionally, this study provides guidelines for designing meaning. It is shown how meaning can be used as a game mechanic, and how games contain unique ways of expressing things that would be hard to convey in other media.

Keywords: computer games, definition, digital games, Gadamer, game studies, hermeneutics, language-games, ludonarrative, meaning, narratology, role-playing games, videogames, Wittgenstein

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LIST OF FIGURES AND TABLES

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I Arjoranta, J. (2011a). Do We Need Real-Time Hermeneutics? Structures of Meaning in Games. In *DiGRA 2011: Think Design Play*. Utrecht: Utrecht School of the Arts.

II Arjoranta, J. (2014). Game Definitions: A Wittgensteinian Approach. *Game Studies,* 14 (1).

III Arjoranta, J. (2011b). Defining Role-Playing Games as Language-Games. *International Journal of Role-Playing*, (2).

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CONTENTS

1 INTRODUCTION

Digital games have been around for more than half a century. Games are significantly older. They are as old as culture, perhaps even older. Play is a universal phenomenon as prevalent in the animal kingdom as it is among humans. While play and games are not synonymous, they should be discussed together.

Despite their age, games have not been studied for long. Cultural anthropologists and sociologists have noticed that humans tend to play and to play games, but this has usually led them to study play or the cultural and social structures of play. Psychologists have discussed play and the play-instinct, but it took the rise of digital gaming for games to be recognized as a distinct and fascinating form of expression of their own. With this recognition game studies, or more controversially, ludology, began to take shape (Frasca, 1999).[1]

These days it would be difficult to ignore the power and importance of games. The most successful media products of our time are videogames, at least by commercial standards.[2] There already exists a generation that has grown up with games as a central form of culture. Boellstorff (2006, p. 33) expresses it accurately when he states that "the information age has, under our noses, become the gaming age." Understanding games is therefore important for understanding the contemporary culture in general, although one could argue that this is hardly a new state of affairs and that games have always been central to culture (cf. Huizinga, 1938/1949; Myers, 2006, p. 49).

In addition to games becoming entertainment colossi rivaling cinema as a form of entertainment, they have also become a part of mainstream culture. As Jesper Juul (2009, p. 8) argues, games have become normal. In addition to the enormous blockbusters that require specialized equipment, there are games that are played everywhere, often on the small screens of our phones. Not all of

[1] The word 'ludology' is derived from the Latin 'ludus' for play (Huizinga, 1938/1949). It is sometimes used as a synonym for game studies, but often takes a more specific meaning of studying games from a game-centric perspective.

[2] This study uses the terms 'digital game' and 'videogame' interchangeably. Both terms should be understood as referring to games on consoles, computers and other electronic and digital platforms.

those who play call themselves players, but that does not stop them from playing.

This study sets out to understand a specific aspect of games: How games create meaning? In order to answer that question, we first need to clarify certain key aspects of games. Two central aspects are their background in play and the modern phenomenon of digital games. A short introduction to these aspects is presented next.

1.1 A Brief History of Play Theory

Theorizing about play has a long tradition, going back at least to Aristotle. He writes about the function and role of play in *Politics*:

> But, though both labour and rest are necessary, yet the latter is preferable to the first; and by all means we ought to learn what we should do when at rest: for we ought not to employ that time at play; for then play would be the necessary business of our lives. But if this cannot be, play is more necessary for those who labour than those who are at rest: for he who labours requires relaxation; which play will supply: for as labour is attended with pain and continued exertion, it is necessary that play should be introduced, under proper regulations, as a medicine: for such an employment of the mind is a relaxation to it, and eases with pleasure. (Aristotle, 1919, para. 1337b)

For Aristotle, play is a counterpart to work, a frivolous and non-essential yet a necessary part of life. Here one can already notice the tendency to juxtapose play in opposition to work, valuing play only as a respite from work. In other words, play is seen as being necessary but lacking independent value; it is conceived of as "merely play" (Riezler, 1941, p. 505). This tendency continues in the Christian tradition and is emphasized by the birth of Protestantism, which sees work as an important virtue of the pious person (Sutton-Smith, 1997, pp. 201–202). The good Christian has no time for play, for there is much work that needs to be done before salvation is earned (Snow, 1993, pp. 12–13).[3]

However, in an effort to argue against Kant's conception of ethics, German idealism ends up rescuing play. Friedrich Schiller criticizes Kant for not taking the aesthetic experience seriously enough and argues that taste is a necessary condition for building morality (Guyer, 2008). While doing so, Schiller elevates play to an important role in his aesthetic thinking. He writes:

> [M]an only plays when he is in the fullest sense of word a human being, and he is only fully a human being when he plays. (Schiller, 1794/1985, p. 107)

Here play is not something wasteful done just for rest and relaxation, but an essential part of being a human. This line of thought is later picked up by Johan Huizinga, who provides the previous quote from Schiller in his book *Homo Lu-*

[3] This is of course an overt simplification of Protestant theology. For the original, more fine-grained version of this argument, see Weber (1905/2011).

dens (1938/1949).[4] Huizinga sets it upon himself to study how culture is constituted by play, and manages to find forms of it in all kinds of cultural formations, ranging from sports and war to art and law. Even the realm of sacred is pervaded by play for rituals have an element of play to them. Huizinga also remarks that play necessarily precedes culture as humans are not the only playing animals.

Huizinga's line of thinking is continued by Roger Caillois (1960/2001, 1961). He expands Huizinga's terminology and builds a more comprehensive framework for analyzing play, perhaps most importantly by dividing forms of play into agon, alea, mimicry and ilinx, or competition, chance, make-believe and vertigo, respectively.

These forms of play coexist and a game may include several, or all, of them. Poker, for example, is a combination of both competition and chance. Caillois also separated the forms of play on a continuum ranging from paidia to ludus, where paidia is playful and unstructured and ludus is structured and constrained by rules. In his view, games would end up on the ludus-end of the spectrum.

However, Caillois also analyzed several cultural forms as degenerations of play. For example, he saw drug-use as a corruption of ilinx and superstition as a corruption of alea. This makes his theory of play rather normative in parts, labelling as corrupted the parts of play he does not appreciate or approve (cf. Caillois, 1961, pp. 43–56). Even if one agrees with his normative assertions, it is worth questioning whether this is a fruitful approach to understanding play.

The line of thought reaching from Huizinga and Caillois to modern day is the basis for the way scholars in game studies often portray the history of their field. While many of the concepts still used in game studies (e.g., the magic circle) originate in this line of research, this of course leaves out many other approaches to play and games that scholars do not consider as compatible with or relevant to modern day game studies. At least four such approaches are easy to name:

1. The anthropological study of folk games, exemplified by the work of Brian Sutton-Smith (1971; 1959, 1997).
2. The study of play in psychology (e.g., Winnicott, 1971).
3. Mathematical game theory that begun with the work of John von Neumann (e.g., Neumann, 1944/1953).
4. The study of animal play (e.g., Fagen, 1981).

While this list is probably lacking in many respects, it shows how broad the phenomena of play and games are and how hard it is to cover all of the neces-

[4] Another line of research related to German idealism, but separate from Huizinga, is the hermeneutic approach to play, e.g., Gadamer (1960/2004, pp. 102–110), Ricoeur (1981, pp. 185–190). See chapter 2.1 for more on this approach.

sary ground.[5] Play and games are not just one thing but a broad array of related things (cf. Paper 2). Sutton-Smith (1997, pp. 4–5) shows just how many by compiling a list of 189 different forms of play, ranging from *Dungeons & Dragons* and daydreams to dancing and getting laid (see TABLE 1). Not surprisingly, the list also includes play-forms that many would consider games. Of note is also the amount of play-forms that are not simply a frivolous waste of time but significant forms of culture or social life. And counter to the dominant view of play as something that children do, many of them are unsuitable for children. I will conclude this discussion of play with a quote from Ellis (1973, p. 22):

> The perplexing problem of how to define play will only be resolved by continually regenerating new definitions that fit current concepts of play behavior.

This study tries to discuss a form of "play behavior" that is relatively modern: digital videogames. As was stated above, play in general is a persistent phenomenon. However, not all of its forms have been around for an equally long time.

While understanding the intellectual environment for this research is important in order to comprehend the arguments, identifying the background of the phenomenon it comments upon is also informative. For this reason, a brief history of digital games is presented next.

[5] For work not discussed here, see for example Walz (2010, pp. 41–48) on Buytendijk's work on play.

Category	Forms of play
Mind or subjective play	dreams, daydreams, fantasy, imagination, ruminations, reveries, Dungeons and Dragons, metaphors of play, and playing with metaphors
Solitary play	hobbies, collections, (model trains, model airplanes, model power boats, stamps), writing to pen pals, building models, listening to records and compact discs, constructions, art projects, gardening, flower arranging, using computers, watching videos, reading and writing, novels, toys, travel, Civil War reenactments, music, pets, reading, woodworking, yoga, antiquing, flying, auto racing, collecting and rebuilding cars, sailing, diving, astrology, bicycling, handicrafts, photography, shopping, backpacking, fishing, needlework, quilting, bird watching, crosswords, and cooking
Playful behaviors	playing tricks, playing around, playing for time, playing up to someone, playing a part, playing down to someone, playing upon words, making a play for someone, playing upon others as in tricking them, playing hob, putting something into play, bringing it into play, holding it in play, playing fair, playing by the rules, being played out, playing both ends against the middle, playing one's cards well, playing second fiddle
Informal social play	joking, parties, cruising, travel, leisure, dancing, roller-skating, losing weight, dinner play, getting laid, potlucks, malls, hostessing, babysitting, Saturday night fun, rough and tumble, creative anachronism, amusement parks, intimacy, speech play (riddles, stories, gossip, jokes, nonsense), singles clubs, bars and taverns, magic, ham radio, restaurants, and the Internet
Vicarious audience play	television, films, cartoons, concerts, fantasylands, spectator sports, theater, jazz, rock music, parades (Rose Bowl, mummers', Thanksgiving), beauty contests, stock-car racing, Renaissance festivals, national parks, comic books, folk festivals, museums, and virtual reality
Performance play	playing the piano, playing music, being a play actor, playing the game for the game's sake, playing New York, playing the fishes, playing the horses, playing Iago, play voices, play gestures, playbills, playback, play by play, player piano, playgoing, playhouses, playlets
Celebrations and festivals	birthdays, Christmas, Easter, Mother's Day, Halloween, gifting, banquets, roasts, weddings, carnivals, initiations, balls, Mardi Gras, Fastnacht, Odunde
Contests (games and sports)	athletics, gambling, casinos, horses, lotteries, pool, touch football, kite fighting, golf, parlor games, drinking, the Olympics, bullfights, cockfights, cricket, Buzkashi, poker, gamesmanship, strategy, physical skill, chance, animal contests, archery, arm wrestling, board games, card games, martial arts, gymnastics
Risky or deep play	Caving, hang gliding, kayaking, rafting, snowmobiling, orienteering, snowballing, and extreme games such as bungee jumping, windsurfing, sport climbing, skateboarding, mountain biking, kite skiing, street luge, ultrarunning, and sky jumping

TABLE 1 Forms of play according to Sutton-Smith (1997, p. 4–5)

1.2 A Brief History of Digital Games

This chapter follows one of the standard ways of presenting the history of digital games by focusing on games as historical objects and presenting them in chronological order. Less consideration is given to the people and processes behind these objects. An alternative narrative of these events might focus on the important people behind the early development of the medium, like Willy Higinbotham, Steve Russell, Ralph Baer or Nolan Bushnell (Malliet & de Meyer, 2005). Or it might focus on the cultural forerunners of games that show how digital games did not spring from nothing, but came to fruition following earlier cultural forms and through gradual technological advances (Huhtamo, 2005). It is sometimes easy to forget that digital games did not spring from the genius of the first developers. They have both mechanical and cultural precedents.

An interesting example of an early mechanical game is *El Ajedrecista* (*The Chess Player*), manufactured by Leonardo Torres y Quevedo in 1912 (Montfort, 2005, p. 76; Randell, 1982).[6] It precedes most examples of automatic, interactive games by decades. It was an automaton, capable of playing a limited form of chess against a human opponent. The first version used a mechanical arm to move the pieces, but some years later Torres made a version of the game that used magnets underneath the board, making it seem as if the pieces were moving on their own.

One of the important predecessors of videogames is the slot machine, and the penny arcades they were often found in (Huhtamo, 2005, p. 4). They formed the cultural assumption on what it is like to interact with game machines: place a coin and be entertained for a minute or two. The pinball machine was also an important forerunner of gaming machines. Pinball machines rely on similar kind of interaction than the first videogames. I write “rely” instead of “relied" because they are still very much in use, even if they are mostly superseded by other games.

When arcade game machines later appeared, they followed the pattern established by these earlier machines. They were only rarely placed in locations meant for children. An arcade machine in a penny arcade or in a bar was for the entertainment of adults, even if that did little to keep children from playing with them (Huhtamo, 2005, p. 10). Mechanical games were followed by electronic games, which used analog technology to achieve similar purposes.

The first games created on digital computers were not meant for entertainment but served serious purposes. A digital computer, the Ferranti NIMROD, capable of playing the game *Nim*, was actualized in 1951, but the game was originally designed for digital platforms already in 1941 (Donovan, 2010; Redheffer, 1948, p. 343). *Nim* was a simple game of picking up tokens, but the game logic was based on binary numbers, making it perfectly suited for a computer.

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[6] Randell (1982, p. 6) seems to incorrectly state the year as 1911.

An early example of a graphical electronic game was the *Cathode-ray tube amusement device*, a plan for a missile simulator from 1947, which was unfortunately never realized (Wolf, 2012, pp. 1–2). Another computer game using a cathode-ray tube for graphics was called *OXO* or alternatively *Noughts and Crosses*, following the traditional version of the game. It was created in 1952 by a doctoral student of Cambridge University. It ran on the Electronic Delay Storage Automatic Calculator (EDSAC), which was also the opponent in the game.

Computing was quickly adopted for commercial purposes, and in 1955 the American Management Association was involved in developing the *Top Management Decision Simulation*, a learning tool for corporate executives (Wiemer, 2011, p. 5). It was still a relatively simple simulation and could have been run without the use of a computer. It was soon followed by other management simulations, like *Business Management Game* and *Top Management Decision Game,* both in 1957 (Keys & Wolfe, 1990, p. 310).

Games took a step back towards entertainment in 1958 when Willy Higinbotham created *Tennis for Two* (Malliet & de Meyer, 2005, p. 23). It used an oscilloscope as a screen and was simply a way of showcasing the technology to the visitors of the Brookhaven National Laboratory.

One of the best known steps in videogame history is the creation of *Spacewar*, which was created for the PDP-1 mainframe at MIT in 1962 (Malliet & de Meyer, 2005, p. 24). It started a long lasting trend of science fiction in computer games and featured multiplayer gameplay by having two players play against each other. It is also notable that *Spacewar* was not based on any pre-digital game but could only be played on a computer (Aarseth, 2001a). A networked version of *Spacewar* was created in 1969 (Wolf, 2012, p. 211).

The first arcade videogame, *Computer Space*, was created in 1970 (Malliet & de Meyer, 2005, p. 25). It took inspiration from *Spacewar* but was playable on an arcade cabinet and the purpose of the game was commercial. It was an important event in two ways: it continued the tradition of the slot machine and it moved videogames from the realm of research and technology to the realm of commercial entertainment.

Computer Space paved the way for Atari's first game, *Pong*, which was released in 1972 and become both a commercial hit and an outstanding cultural phenomenon. It was first tested in a bar close to Atari's headquarters, but early on there were plans to spread it to venues that were more friendly for children and families (Montfort & Bogost, 2009, p. 9). This happened more concretely when Atari released the home console version, *Home Pong*, in 1975.

Atari was however not the first to reach the home console markets. That was accomplished by Magnavox with their home console Odyssey in 1972. In addition to six cartridges, it came with cards, dice and scoreboards, showing how the console was placed in the same continuum with board games. A total of 27 different games on 11 different game cards were created for the Odyssey (Winter, 1996). It was a commercial success, selling more than 300 000 units before being superseded by later models (Baer, 1998).

Colossal Cave Adventure, also known simply as *Adventure*, was first created in 1976 and served as the model for many early text-based adventures (Montfort, 2005, p. 10). These text adventures featured a textual introduction and provided answers to almost-natural language commands, like "GO IN." The purpose of *Adventure* was to explore the textual landscape that was based on a real cave in Kentucky and solve the puzzles it presented.

While earlier videogames had shared the notoriety of arcades, the first videogame to cause widespread media panic was *Death Race*, published in 1976 (Kocurek, 2012). While there was no official licensing involved, it was largely based on the movie *Death Race 2000* from the previous year. The game consisted of up to two players driving their cars over small gremlins which turned into tombstone-obstacles when dying. While the gremlins were presented as monsters in the marketing material, players driving over small humanoid shapes were too much for people concerned about the apparent violence in the game. The public outcry made the game a precedent in later discussions regarding videogame-related violence, but it also helped to fuel the game's sales.

One of the games to continue in the footprints of *Adventure* is *Zork*, programmed at the MIT in 1977 (Montfort, 2005, p. 97). It is the most well-known and successful textual adventure game, despite being only an incremental advancement over earlier games such as *Adventure*. *Zork* was later ported to different home microcomputers and released commercially (Montfort & Bogost, 2009, pp. 44–45).

The first digital games were created by professionals with access to mainframes or, a bit later, by college students using university-owned computers. They did not create games for children, but for themselves. While some of the games would have been playable by children, games like *Zork* required both access to expensive hardware and an ability to comprehend and produce text.

The year 1977 saw big changes for games. It was the year of the first videogame industry crash with only Atari, Coleco and Magnavox remaining on the market (Wolf, 2012, p. 80). It was also the year when Atari released the Atari VCS, starting a serious competition with Magnavox for the position of the leading home console. At the same time, mass marketed home computers started appearing on the market.

The next year the development of the immensely influential *Multi-User Dungeon* (MUD) began. The online version was created in 1980 (Wolf, 2012, p. 217). It followed the path laid out by *Adventure*, but the addition of multiple players made it a precursor of future multiplayer games, like Massively Multiplayer Online Role-playing Games (MMORPG). The text-based game allowed people from different locations to play together, making MUD the first online multiplayer game and a basis for a genre of games called simply MUDs.

1978 was also the year when Japanese Namco's arcade *Space Invaders* was created (Montfort & Bogost, 2009, p. xi). It was brought into the United States that year. It featured a layout similar to Atari's 1976 *Breakout*,, but was graphically more complex. The iconic aliens have since become an influential element of popular culture. An Atari VCS version of the game was created in 1980.

In 1978 Atari released the forerunner of future graphical adventure games called *Adventure*, named after the game that inspired it (Montfort & Bogost, 2009, p. xi). This *Adventure* was intended as an adaptation of the earlier text-based *Adventure*, but because of the limitations set by the Atari VCS, it differed vastly from the original. The complex text descriptions were replaced by graphics and the interaction was limited to moving the joystick.

Namco created the arcade game *Pac-Man* in 1980 (Montfort & Bogost, 2009, p. xi). It was only fairly successful in Japan but extremely successful in the United States, becoming a cultural icon in both gaming and popular culture. Atari released a VCS version of *Pac-Man* in 1982 but the port was not very successful because of hardware limitations.

A significant change in the game industry took place with the great videogame industry crash of North America in 1983 (Wolf, 2012, p. 81). Developers native to North America met with problems, opening the doors for Nintendo who published the Nintendo Entertainment System (NES) in North America in 1985 (Consalvo, 2006, p. 124). The console was originally published in Japan as the Nintendo Famicom two years earlier. A substantial amount of Nintendo's marketing was targeted at children. While this was certainly nothing new, as games had been marketed in toy departments before, Nintendo was met with unprecedented success. Nintendo had already managed to penetrate the North American market through Midway with *Donkey Kong* in 1981,, but the development of the NES secured them a permanent foothold across the ocean (Malliet & de Meyer, 2005, p. 29).

The main body of videogame manufacturing moved to Japan, with Nintendo, Sega and later Sony producing and publishing successful home consoles. It was not until the beginning of the 2000s when Microsoft challenged their rule by producing a home console, the Xbox. This does not mean that there was no videogame industry outside Asia. On the contrary, the 1980s was a time of global growth for the videogame industry, with most of the forms of gaming we know today having their predecessors in this era. While the console manufacturers were from Japan, making games was not limited to Japanese companies. Neither was it limited to consoles, as the development of computer hardware made computer gaming an option. Home computers, like Commodore 64, Atari 400/800 and Apple II, ran games that were ported from arcade machines, but also completely new ones that were developed especially for these platforms. Many classics, like *Ultima I: The First Age of Darkness* that started the *Ultima* series in 1981, were first released for home computers.

The 1990s were a time when games moved from two to three dimensions and the genres that were not already established in the 1980s were created. While games have moved in incredible strides since the beginning of the videogame industry, the updates have since been more incremental. There are new input methods, the graphics are better and designers have become better in all aspects of design. However, regarding the aspects relevant to this study, much has remained the same. The basic forms of interaction, meaning-making and interpretation have remained similar.

Perhaps the biggest change since the 1990s has been the creation of massively multiplayer games and the adoption of high-speed online communication methods. Games are more social than ever and these social processes affect how they are interpreted and how players interact with them. These features are unlikely to disappear and will probably form an even more integral part of future gaming.

This has been a very brief history of games. Hopefully it provides the necessary context for understanding what this study is about. Next, a brief overview of game studies is presented.

1.3 A Brief Look at Game Studies

'Game studies' is not an old discipline, if it can even be considered a discipline. At the most informal level, it might be defined as the study of games. That, however, is not entirely accurate, since there is research that studies games without being part of the tradition of game studies. These studies use games in order to understand some other phenomenon (e.g., Hoeft, Watson, Kesler, Bettinger & Reiss, 2008; Seijts & O'Farrell, 2005).

The year 2001 saw the founding of Game Studies, a journal dedicated to the study of games. In the editorial, the Editor-in-Chief, Espen Aarseth, described it as the "Year One of Computer Game Studies." As was shown earlier, this was hardly the first time games were studied academically, but this was the first time that they were the focus of an academic field of studies, or at least something that aspired to be a field of studies. However, there have been few tools for studying games and no consensus on the concepts used. Like Aarseth (2001b) writes:

> Computer games are perhaps the richest cultural genre we have yet seen, and this challenges our search for a suitable methodological approach. We all enter this field from *somewhere else*, from anthropology, sociology, narratology, semiotics, film studies, etc, and the political and ideological baggage we bring from our old field inevitably determines and motivates our approaches. (italics in the original)

This "baggage" has led to disagreement and, sometimes, fierce battles on the terminology and methods used to understand and discuss games. Videogames consist of all kinds of things from code to story and signs to players. In order to understand the complex phenomenon of digital games, all of these aspects must be taken into account and a diverse set of tools must be used (Mäyrä, Holopainen, & Jakobsson, 2012, p. 296).

Perhaps the best-known example of methodological disagreement is the infamous ludology–narratology debate around the turn of the millennium. It concerned a disagreement over what would be the best tools for understanding games, and what assumptions about games those tools would entail. The debate is presented in more detail in a later chapter, as it highlights some aspects of games discussed later in this study. The ludology–narratology debate is also

an excellent example of the problem mentioned above, with researchers coming from different fields and with different assumptions commenting on the issue (cf. Paper 4).

Regardless of differences in opinion on how games should be studied, game studies is united by the belief that games are something special. They are not simply variations of something else but a thing of their own, a thing worthy of academic study. It might even be that the disagreements and struggles with self-identification are a normal part of an academic discipline trying to define itself (Lowood, 2006).

In 2005 the then Digital Games Research Association (DiGRA) president, Frans Mäyrä (2005) presented three theses for game studies:

1. There needs to be a dedicated academic discipline for the study of games.
2. This new discipline needs to have an active dialogue with, and be building on of existing ones, as well as having its own core identity.
3. Both the educational and research practises applied in game studies need to remain true to the core playful or ludic qualities of its subject matter.

While these suggestions did draw some criticism, they seem like a reasonable way forward. Bogost (2006, p. 5) criticized the three theses of the notion that there is, or should be, a "core" to game studies and that such a core "privileges the ludic over the literary" (see also Keogh, 2014, p. 3; cf. Mäyrä, 2008a, pp. 6–10). Games are a complex phenomenon, and looking for a common core of all games may not be a path worth taking (cf. Paper 2). Bogost's suggestion is instead to focus on how games express things, an approach adopted here.

1.4 The Study of Meaning in Games

Game studies have begun to cover the territory of games, but much remains uncovered. Researchers from different fields have different interests, but many would benefit from a consistent account of the structures of meaning in games. This would also help with the self-identification of game studies as a discipline.

Efforts to study meaning in games have been made with a range of approaches. One of the most influential is the so-called "proceduralist school" (e.g., Bogost, 2007). This approach emphasizes the procedural elements of games and how those elements affect the way games convey meaning (e.g., Bogost, 2007, 2008; Treanor, Mateas, & Wardrip-fruin, 2010; Treanor & Mateas, 2011). This approach is most likely influential because it addresses qualities only present in games and shows how procedural systems can create meaning. There are other researchers that use a similar approach which is not directly related to the proceduralist school, even if this term is sometimes broadly applied to anyone interested in the processes that constitute a game (e.g., Juul, 2005; Wardrip-Fruin, 2009; Weise, 2003).

There are also other approaches that highlight the special qualities of games, approaches that focus on the material and digital basis of the game, like

platform studies (Jones & Thiruvathukal, 2012; Montfort & Bogost, 2009) and software or code studies (Montfort, Baudoin, & Bell, 2012). These approaches show how games are not simply abstract systems but require a material basis on which to run. Sometimes it makes all the difference whether the game is run on a home console, a personal computer or an arcade machine. These machines have different affordances that affect the way the game actualizes on that particular platform.

Other approaches focus on the interactions around the games, on the people who play them (Hamari & Tuunanen, 2014; Mäyrä, 2007) and the culture(s) surrounding them (Boellstorff, 2006; Mäyrä, 2008a, pp. 13–27). Not all players are identical and different people play different games. Playing in different cultures presumes different things about the nature of play, the role of play in life and what is appropriate to simulate or represent in games.

Some approaches borrow tools and concepts from other fields of research such as narratology and literary studies (Aarseth, 2012; Calleja, 2013; Simons, 2006). These approaches emphasize that games do not just contain meaning; they also contain texts and tell stories. The strength of the approaches that borrow from narrative studies is in their ability to explain how concepts like the metaphor apply to games (Begy, 2011; Möring, 2012). Others have argued that games require a literacy of their own (Gee, 2004).

What is still lacking is an account of meaning in games that covers the phenomenon from the whole range of aspects that need to be taken into account, from culture to the player to the game. It is not even clear what "meaning" means for different scholars in game studies.[7] For example, for Juul (2005, pp. 191–193) meaning is tied to questions of moral evaluation, to good and evil.

The proceduralist approach makes a convincing case for a comprehensive approach, taking into account the special features of games that affect how games create meaning. However, it is firmly based on the ludological approach to games, mainly considering them as systems. Sicart (2011) argues that it does not take play into account sufficiently:

> The main argument of the critique against procedurality has to do with its lack of interest in the player and play. Many of the games produced and analyzed under the proceduralist domain are visually playful, thematic parodies of the mundane and absurd, from airport security to oil economics. But these games are seldom playful in a mechanical, procedural sense: these are single player, puzzle or resource management games, with only few "operations" available to players, and a very limited space of possibility in which players can express themselves.

The hermeneutic approach adapted in this study has long considered play as a part of the process of interpretation, and may therefore help in bridging systems and play (Gadamer, 1960/2004, pp. 102–110; Mäyrä, 2008b, p. 4). While this study does not answer all the relevant questions or provide a theory to end

[7] See 2.2.3 Meaning as Use and 2.4.1 Understanding Language for how meaning is understood in this study.

all theory, it paves way for an approach that provides meaningful answers to questions of meaning, with some important caveats that are presented next.

1.5 Objectives and Research Questions

This study was born out of the desire to understand how games create meaning and the belief that hermeneutics would be a useful tool for finding an answer to that question. In the beginning, this seemed like a question awaiting an answer, but as the research continued, it turned out to be a broad collection of interrelated questions instead of a single question.

How do games create meaning? The answer is a bit more complicated than was originally anticipated. That is why the included papers take stabs at the question from different perspectives, trying to map out the borders of the territory being explored. Whenever the research closed in on a border, there was more territory yet to be found and mapped.

To make sure that the research did not get entirely lost in the territory, some restrictions had to be set for it. This study is focused on what Aarseth (2012, p. 130) calls "ludonarratives," phenomena that combine both game and story elements. My use differs slightly from Aarseth's, and I discuss ludonarrative games, not just ludonarratives. Instead of presenting an exact definition of ludonarrative games at this point, I will discuss the concept in more detail in a later chapter (2.3.5), which also contains an explanation of why my use differs from Aarseth's. The examples of ludonarrative games that I discuss include games like *Fallout 2*, *King of Dragon Pass* and *Spec Ops: The Line*. These are all games that combine game elements and story elements. Ludonarrative games have the cultural referents that make hermeneutic analysis conducted in this study possible. Understanding the games discussed in this study would not be possible without taking their narrative aspects into account.

While one of the papers in this study deals with role-playing games (Paper 3), most are focused on digital games. This does not mean that I consider digital games to be somehow better than non-digital ones, but they are certainly more visible in the contemporary culture. While board games and role-playing games are noticeable cultural phenomena, it is hard not to notice digital games. However, there is a danger of seeing games only through the lens of digital games (cf. Linderoth, 2011). As Stenros and Waern write:

> Game studies would benefit from acknowledging that digital games should be studied as a special case of games rather than the other way around. (Stenros & Waern, 2011, p. 1)

This study tries to acknowledge this "digital fallacy," (Stenros & Waern, 2011, p. 1) and sees all games as a collection of related phenomena (see Paper 2). However, most examples are still drawn from digital games.

One of the reasons game scholars choose digital games as examples is that they have permanence not found in many other forms of games. While play is a fleeting phenomenon, digital games still have permanence in the sense that the scholar can return to the game and still find comparable, if not identical, things. Digital games are also reasonably easy to document, because they run on platforms capable of capturing everything that happens on them. Not all games are like this. Montola (2012, p. 74) has studied what he calls "ephemeral games," which are more difficult for the scholar to access (see also Frasca, 2001, pp. 178–180). Larps (Live Action Role-Playing Games) are usually played only once, and even if repeated, they might change significantly from one instance to another.[8] Capturing role-play is easier in the digital environment than it is in the physical world, and the boundaries around play are clearer (cf. Harviainen, 2012, pp. 77–79). Digital games can also easily be more complex than analog games, since much of the processing and note-keeping is taken care of by the system.

While some of the insights from this study could be generalized to also cover abstract games, it remains largely a territory better left for someone else to explore (e.g., Begy, 2011). Abstract games lack many of the features discussed in this study, and while creating an abstract hermeneutics might be possible, such a task is not attempted here. Another type of gaming excluded from consideration here is meta-gaming (Huvila, 2013).

How do games create meaning? If I learned something from philosophy, it is this: getting the right answer requires asking the right questions. Much of philosophy has been about figuring out how to ask the right questions and some philosophers have even seen the clarification of the language we use to do so as the sole task of philosophy (Wittgenstein, 1922, p. 39). While I do not share this notion, it does have some merits when discussing a new area of inquiry, like game studies.

Is the question of how games create meaning the right question? The problem here is not that it is a bad question, but that it is a complex question. It hides other, more specific questions. A good answer to the first question requires good answers to the more specific questions. The specific questions covered in this study are the following:

1. What are the preconditions for understanding how games create meaning? (Paper 1)
2. How should games be defined and delimited? (Papers 2, 3 and 4)

These more general questions prepare the theoretical framework for discussing meaning in games and show how hermeneutics is a valuable tool for game studies. With a preliminary answer to these more theoretical questions, the focus then shifts to a more specific problem. Because the focus of this study is in

[8] Larp is a form of physically enacted role-play. See e.g., Paper 3 and Hitchens & Drachen (2008, pp. 10–11).

ludonarrative games, the theoretical framework built to answer the previous questions is then applied to a specific question about ludonarrative games:

3. How do ludonarrative games create meaning? (Paper 5)

As chapter 4.3.4 discusses, this is done to cover a larger territory of meaning than a strictly hermeneutic approach would have allowed. However, the question of narrative meaning is closely related to the hermeneutic approach, as narrative games are more likely than abstract games to require the kind of complex hermeneutic analysis this study builds a theory for.

I have listed the most relevant papers after each question, but since the themes are interrelated, other papers also touch upon the issues mentioned. Answers to these research questions are presented later, in chapter 3, and then discussed in the following chapter.

As can be seen from the previous list, the question of what we understand as games is central to understanding them as things that are interpreted. This is also where the philosophical background of this work can be seen: much of the work is focused on trying to come up with the right questions to ask.

1.6 Research Process and Structure

Research for this study was mainly conducted at the University of Jyväskylä, with a short visit of six months to the University of Aarhus. Studies at Aarhus informed especially Paper 5.

This research began in 2010 with a change of discipline from philosophy to digital culture. While this was a logical change of focus given the topic of the study, it necessitated learning a new set of theories, approaches and discourses. While some of these carried over from the research for my master's thesis, most of it was acquired by reading through papers published in and around game studies.

This study consists of five research papers and this introduction. The five papers are listed in the beginning of this study and can be found after the introduction. This introductory part clarifies the background of the research conducted in the papers and summarizes their content, giving a more rounded view of the issues that are discussed in the papers. While the papers try to answer specific questions, this introductory part combines those research questions into a logical whole.

The introductory part consists of four sections. In the first section I presented some background for the study, and defined the objectives and scope of this study. These preface the actual theoretical discussion of the subject.

The second section presents the theoretical foundation, starting from hermeneutics and continuing with a presentation of game studies. The chapter shows how these two have been previously researched and combines them into a theoretical framework for this study.

The discussion of hermeneutics is divided into two chapters, to classical and philosophical hermeneutics. This presentation follows one of the traditional ways of presenting the history of hermeneutics (Gadamer, 2006). After the theoretical background, some hermeneutic methodology is presented, with a special focus on the aspects of hermeneutics most relevant to the current study.

The exposition of hermeneutics is followed by an exposition of game studies. Elements of games, like procedurality and rules, which are central to this study, are analyzed in more detail. The chapter on game studies ends with some consideration of players and more detail on how games and stories relate to each other.

The third section presents the results of this study, going through the research questions presented in the previous chapter and relating them to the results achieved in the papers. A summary of the results synthesizes the three distinct questions related to understanding meaning in games into a preliminary answer on how meaning in games should be understood.

The last section provides a discussion of those results and gives suggestions for future research. First, some theoretical implications are discussed. Second, some practical implications are considered. Third, the reliability and validity of this study is assessed. Finally, some recommendations for further research are provided.

While this study does not explicitly rely on playing games as a source of data, playing – and to a lesser extent, making – games has still informed the research.[9] I have played hundreds of digital games, board, card and role-playing games, and a number of live-action role-playing games. To put it in different terms: when I have not researched games, I have been playing them on platforms that reach from the digital to the physical.

Aarseth (2003, p. 3) argues that the best way to research games is by playing them. While Aarseth means a very specific way of playing for research, one could say on a more general level that understanding games certainly requires playing them. How seriously would a scholar of literature be taken if they did not read books? Or a researcher of cinema, who did not watch films? Not all scholars of play need to be professional players, but some playing experience certainly helps. A person who reads a lot is called "well read." A person who studies games should perhaps be "well played" (Davidson, 2009, p. 1).

I prefer certain kinds of games, and this is reflected in the kinds of games I use as examples and to some degree in the games I analyze. The first digital game I vividly remember playing was *Super Mario Bros.*, probably at the beginning of the 1990s. I may have tried other games before that, but after Mario, there was no going back. While I have owned only a few of the platforms published since, I have at least tried most of them. That also shows something of how most of my early gaming was organized: when I played Mario, I was not playing alone, but at a friend's house. This is a trend that has continued since. It is easy to forget that games did not suddenly become social with today's multi-

[9] For an example of playing research, see e.g., Karppi & Sotamaa (2012).

player technology, even if in the early days the word often meant passing the controller around.

I will not elaborate on my tastes any further, since the details are mostly irrelevant for this study. However, I will note that I have never been an active player of MMORPGs, and thus there is very little analysis of those kinds of games in this dissertation. MMORPGs have additional meaning-making processes that are dependent on the large social groups that play them. As such, they are better studied with tools for example from sociology and communications research.

However, this study does discuss role-playing games to an extent. One of the papers (Paper 3) focuses solely on this form of play. I have played role-playing games more or less regularly since 1995 in table-top, digital and live role-playing forms. This is why they often appear as examples in my writing and in many ways exemplify the prototypical ludonarrative game I write about. The difference between these types of role-playing games and MMORPGs is perspective and scope: the focus in my study is on the individual interpreting their surroundings, even if the surrounding is social.

More recently, I have become interested in game development. Realizing the potential of games to say and do things, and inspired by the passionate people around me making games, I have also focused more of my attention on how the objects of my interest are made. It has hopefully given me a more well-rounded view of what I research.

2 THEORETICAL FOUNDATION

This chapter presents the theoretical foundation for this study. First, it presents an overview of hermeneutics with a special focus on philosophical hermeneutics. Then it examines Wittgenstein's philosophy of language-games in order to show how meaning is created in language. And finally, it explores game studies through a discussion of the central concepts and theories used in the study of games. These are then related back to hermeneutics and language games in the final chapter, which combines these three approaches into a synthesis.

This study should be read as a part of and in conversation with game studies. What this exactly means, however, is not entirely clear. The study of games is not a specific academic discipline, but an assortment of approaches to studying games. Games are studied in a variety of academic contexts, with the philosophical being a minor one.[10]

2.1 Hermeneutics

Hermeneutics is the theory of interpretation.[11] Its roots are in the works of Aristotle and in the interpretation of the will of gods and holy texts. Understanding what the gods want is no easy task, especially when their will is represented through texts that are mediated by mere humans.

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[10] For philosophical approaches to game studies, see e.g., Sageng, Fossheim and Larsen (2012), Sicart (2009) or Tavinor (2005, 2008, 2009). This list is necessarily lacking, as "philosophical approaches" is quite large a category.

[11] When discussing hermeneutics, it is customary to do it in two languages by using the original, often German, terminology to complement the primary language. This is done at least in part because of the difficulty of translating the terminology accurately. However, this study forgoes the custom for the sake of readability. Readers interested in the original terminology can follow up the references in this chapter.

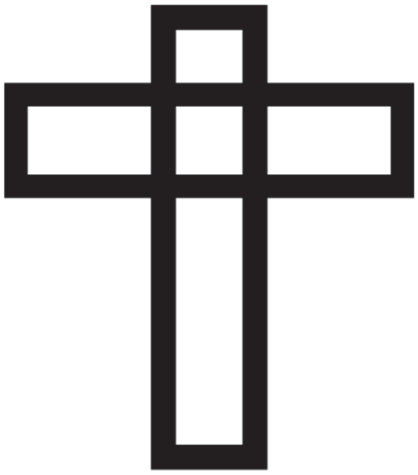

FIGURE 1 A simple geometric shape often interpreted as a religious symbol.

Interpreting texts in the right way is essential for the believer, but believers are not the only ones who need skills in interpretation. We want to and need to interpret all kinds of texts, because texts that are so simple that they need no interpretation are very rare. Actually, hermeneutics argues that no such texts exist and that interpretation is always necessary when texts are encountered. Philosophical hermeneutics takes this even further by arguing that interpretation is a necessary undertaking for being in the world and that interpreting is a basic human characteristic. For example, try looking at FIGURE 1 without interpreting it.

Before we move onto discussing the specifics of hermeneutic theory, something should be said about the hermeneutic concept of ´text´. While historically hermeneutics has focused on texts in the traditional sense of the word, the concept has been since been broadened to cover all kinds of objects that require interpretation (cf. Ricoeur, 1981, pp. 145–164, 169, 197–221). Fields like archaeology, architecture and law all have different kinds of objects that must be interpreted. In this study, hermeneutics is broadened to cover a new kind of phenomenon, games.[12]

This should not be read as an attempt to argue that games are texts. Viewing everything as texts makes the concept of text useless.[13] I argue instead that

[12] For previous work in game hermeneutics, see e.g., Aarseth (2007), Harviainen (2008, 2012), Karhulahti (2012, 2014), Lemke (2010), Lindley et al. (2007). For work in hermeneutics in computer science, see e.g., Capurro (2009), Mallery, Hurwitz and Duffy (1987).

[13] Cultural studies experienced what is commonly referred to as the "textual turn" in the beginning of the 1970s that saw "text" used as an analogy to understand for example psychological and social phenomena (e.g., Brockmeier, 2009, p. 218).

understanding games is in many ways similar to understanding texts in the traditional hermeneutic sense. This echoes Ricoeur's (1981, pp. 197–221) argument that meaningful activity can be interpreted as a text. In other words, this study presents an argument from analogy. As with any analogy, the devil is in the details. Understanding games through theories built for something else requires understanding the relevant differences (cf. Papers 1 and 5).

What follows is not an even and comprehensive overview of the history of hermeneutics. Instead, more focus is given to the elements relevant to this study. The purpose is not to present the whole history of hermeneutics, but to give the reader enough background information before going into the details of the theory.

2.1.1 Classical Hermeneutics

What is here referred to as classical hermeneutics covers a period ranging from the time of Ancient Greeks to the 20th century. After the era of classical philosophy, hermeneutics was mostly a matter of exegesis, the interpretation of holy texts. In the Christian tradition, theological thinkers from Augustine to Luther tried to discover how to best understand the Bible and combine its sometimes paradoxical messages into a unified gospel. At the same time, Talmudic scholars created a school of thought discussing the proper way of understanding the Torah.

A distinctive difference is made here between classical and philosophical hermeneutics, which changed the focus of hermeneutics to broader questions of understanding (Gadamer, 2006). What had begun as questions of the right way to interpret the Torah and the Bible, became a theory of human understanding.

While the history of hermeneutics is fascinating and broad, going through more than two millennia of theory would not be beneficial for this study.[14] What follows instead is a conventional presentation of hermeneutics that will focus on the contributions of Friedrich Schleiermacher (1768–1834) and his follower Wilhelm Dilthey (1833–1911). This leaves out such important thinkers as Augustine, Chladenius and Droysen, to name but a few of the many contributors to hermeneutic thought (Grondin, 1994). This does not mean that understanding the history of hermeneutics is not important, as is evident from reading Schleiermacher's and Dilthey's thinking.

Schleiermacher considered himself the first to broaden hermeneutics into a general theory of interpreting linguistic expressions, a universal hermeneutics (Schmidt, 2006, p. 10). He saw hermeneutics as a tool for understanding every imaginable linguistic expression. Schleiermacher thought that there were two possible approaches to interpretation: the lax and the strict practice. The first concerns most instances of interpretation and can do with less demands, but universal hermeneutics proper must adopt the strict practice. The strict practice

[14] For readers interested in the history of interpretation, see Grondin (1994), Jeanrod (1991), Whitman (2000).

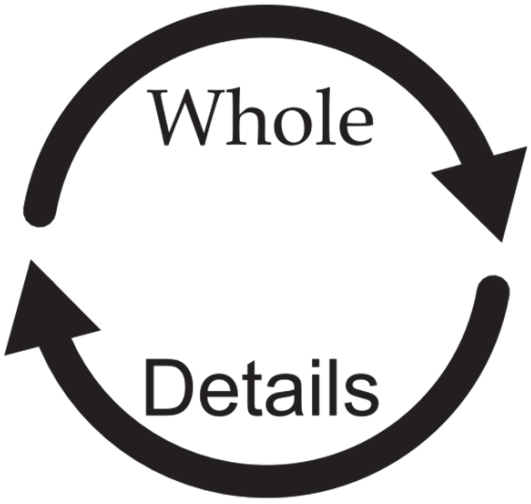

FIGURE 2 Schleiermacher's hermeneutic circle

assumes that misunderstandings happen as a matter of course and a methodological approach to interpretation must be used as a safeguard against them. Only then can hermeneutics truly work towards understanding.

Schleiermacher divides hermeneutic interpretation into two types: grammatical and psychological. Grammatical interpretation is concerned with understanding language. This concerns not just language in general – e.g., English – but the specific way an author uses it. The interpreter must share the language of the author. Psychological interpretation is concerned with understanding the author's thinking and how those thoughts are expressed (cf. Gjesdal, 2006, pp. 137–138). To do so, the interpreter must understand both the author's personal psychology, the environment they are writing in and the subject matter being explored. Schleiermacher sees the goal of hermeneutics as "to understand the utterance at first just as well and then better than its author" (Schleiermacher, 1838/1998, p. 23).

Both of these forms of interpretation happen in a hermeneutic circle. The hermeneutic circle is a concept that describes the process of interpretation. In order to understand the details of a text, the interpreter must relate them to the whole of the text. But in order to understand the whole text, the interpreter must understand the details. This forms a circle of interpretation that moves from the general to the specific and vice versa (see FIGURE 2). The structure of interpretation applies to both grammatical and psychological interpretation and to all levels of detail, from understanding single works as parts of the author's oeuvre and understanding single words as parts of sentences.

According to Schleiermacher, different kinds of texts have different kinds of requirements for interpretation (Schmidt, 2006, p. 13). Everyday conversa-

tions are the simplest, requiring minimal grammatical and psychological interpretation. Original works require complex psychological interpretation but are grammatically easy to understand. Classical works are the opposite, requiring complex grammatical interpretation but less psychological interpretation. The most complex task for hermeneutics is understanding works of genius that require both complex grammatical and psychological interpretation.

Schleiermacher's follower, Wilhelm Dilthey, can be said to have broadened the task of hermeneutics from interpreting linguistic expressions to a methodology for the human sciences. He is skeptical of positivist methodologies in human sciences and distinguishes between explanation and understanding as different goals for the natural and human sciences. However, here we will not focus on Dilthey's contributions to the theory of human sciences, discussing instead his theory of interpretation.

For Dilthey, the goal of interpretation is to reach lived experience, which he understood as the unitary meaning of living through an experience in all of its aspects. These are accessible to an interpreter through manifestations of life, the external and physical markers of experiencing something. Manifestations of life fall into three different categories:

1. concepts and judgments, or larger collections of those,
2. actions, and
3. expressions of lived experience.

The first group consists of concepts that try to present the way things are in the world and include items like newspaper articles and textbooks. The second group, actions, is understandable because even non-communicative acts reveal a purpose behind the action. For example, seeing somebody set up a canvas and paints, we could conclude that they intend to paint a picture. The last group, expressions of lived experience, are direct expressions of one's inner life. They can be as simple as a frown expressing disapproval or as complex as a poem or an autobiography. They can also contain unconscious elements.

Dilthey thinks that manifestations of life are understood by making analogical inferences from general cases. Single manifestations are understood as parts of general cases. However, this is not a case of deductive reasoning but

TABLE 2 Types of interpretation according to Schleiermacher.

	Simple Psychological	**Complex Psychological**
Simple Grammatical	Everyday conversations	Original works
Complex Grammatical	Classical works	Work of genius

rather based on analogy. The interpretive process works by the interpreter placing themselves in the situation that is being interpreted, and reverse-engineering the lived experience from its manifestation. However, the goal is not to reach the mental state of the original creator, but of an ideal person, the person whose mental states the work expresses.

2.1.2 Gadamer's Philosophical Hermeneutics

The move from classical hermeneutics to philosophical hermeneutics is both historical and theoretical. The distinction should not be understood to mean that thinkers like Schleiermacher and Dilthey were not philosophical. On the contrary, they both show a deep understanding and appreciation of philosophical thought. This is especially evident in Schleiermacher's call for general hermeneutics and Dilthey's search for a methodology for the human sciences (cf. Gjesdal, 2006).

Instead, the move from classical to philosophical hermeneutics is more about the questions asked than the methods used. The question of right interpretation is less central to philosophical hermeneutics. Rather, it focuses on the preconditions of human understanding and interpretation.

Hans-Georg Gadamer introduces the term 'philosophical hermeneutics', but he uses it in relation to his teacher, Martin Heidegger. Heidegger's thinking is often divided into two periods, early and late, with the change in between them described as the 'turn' in his philosophy (Lammi, 1991, p. 489). Early Heidegger is identified especially with *Being and Time* (1927/1996), a difficult and influential text about the ontology of Being. [15]

This is hermeneutics in a completely different sense than the one Schleiermacher and Dilthey had in mind. Heidegger questions the basic premises of metaphysics, trying to find the fundamental conditions for understanding itself. His answer is not what, but who, a questioning being that is able to question Being itself.

Late Heidegger turned to language and poetic thought in an attempt to find the underlying cause of what he considered the failings of Western metaphysics. He wrote about art and technology, trying to reveal Being in a new way (Heidegger, 1978).

If Heidegger's thinking seems difficult to understand, it is because his thinking is difficult. Heidegger set out to fix the flaws in metaphysics, which he partly identified with the language being used. This led him to use new language, in an effort to find ways of describing things that were not corrupted by the old language. The profound difference of both his thinking and the language he used to describe that thinking make his works hard to follow.

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[15] Heidegger's academic work is sometimes questioned on the premise that he joined the National Socialists in 1933. It is claimed that his sympathies cast his whole philosophical project in a suspicious light. For a review of this discussion, see Thiele (1997).

However, for the purposes of this study, it is not necessary to explore Heidegger's thought in detail, and more focus is given to his student, Gadamer. While Heidegger is certainly one of the most important philosophers of the 20th century, Gadamer takes his thinking in a direction that is more directly applicable to this study. [16]

Gadamer takes Heidegger's thought and through a rigorous critique of earlier hermeneutics, applies it to human interpretation and understanding in his magnum opus, *Truth and Method* (1960/2004). His concern is

> -- not what we do or what we ought to do, but what happens to us over and above our wanting and doing. (Gadamer, 1960/2004, p. xxvi)

In other words, Gadamer explores the premises and structure of human interpretation, the aware and unaware things we do and which happen to us when we seek to understand something. In doing this, he builds a theoretical framework for philosophical hermeneutics that addresses questions of understanding, interpretation, the truth in art, and the objectivity of the human sciences. This is already far removed from the original concern of hermeneutics, the correct interpretation of holy texts (Jeanrod, 1991).

Gadamer builds his theory on a critique of Kant and the Enlightenment thinkers whom he accuses of abandoning tradition as a source of knowledge:

> the fundamental prejudice of the Enlightenment is the prejudice against prejudice itself, which denies tradition its power. (Gadamer, 1960/2004, p. 273)

Here, Gadamer situates himself in the tradition of historical thinkers and attempts a "rehabilitation of authority and tradition" as he calls it (Gadamer, 1960/2004, p. 278). Understanding what Gadamer means with 'prejudice' is essential to understanding his thinking. For Gadamer, prejudice is not a negative thing, but a pre-judgment, and as such an essential part of all thinking. He (2004, p. 273) writes:

> The history of ideas shows that not until the Enlightenment does *the concept of prejudice* acquire the negative connotation familiar today. Actually "prejudice" means a judgment that is rendered before all the elements that determine a situation have been finally examined. (italics in original)

He sees prejudices as the fore-structures of understanding and humans as always understanding something in a preliminary way before starting the conscious task of interpreting. Following Heidegger, Gadamer calls this 'thrownness' (Schmidt, 2006, p. 69, 99–101).

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[16] Gadamer is occasionally subject to the same suspicion of Nazi sympathies as Heidegger. However, in Gadamer's case these suspicions seem unfounded (Grondin, 2003).

FIGURE 3 The hermeneutic spiral of interpretation

This process of interpretation works in the manner of the hermeneutic circle described by Schleiermacher and elaborated above (Schmidt, 2006, p. 14). The process of interpretation is not cyclical in the sense that it would always end up where it started from. Instead, the process of interpretation begins anew each time, building on the results of earlier reflection and becoming better with each subsequent cycle. In that sense a spiral may be a better metaphor for interpretation than a circle (see FIGURE 3).

Gadamer emphasizes how no thinking happens outside history and a context. Recognizing our place in history and the positive aspect of pre-judgments is a central aspect of his thinking. This does not mean that the authority of tradition could or should not be questioned. However, it does mean that tradition is not inherently suspicious, as it was for the Enlightenment thinkers. Nor should Gadamer's position on prejudice be read as espousing subjectivity in interpretation. On the contrary:

> Certainly philosophical hermeneutics does not legitimize private and arbitrary subjective biases and prejudices, because for it the sole measure which it allows is the 'matter' [Sache] being considered at the time, or the text one is seeking to understand. (Gadamer, 2006, p. 45)

He argues that being conscious of one's prejudices, and the fact that there is no escaping those prejudices, gives interpretations more legitimacy than blindly denying that our point of view might be less than objective. By becoming conscious of our prejudices, we can free ourselves of the "tyranny of hidden prejudices" (Gadamer, 1960/2004, p. 272) that would otherwise plague our interpretation.

A crucial point in Gadamer's view of prejudice is his analysis of application. He argues that all interpretation happens in relation to some purpose and, therefore, all interpretation includes application. Here, application means the reason of interpretation. Why was the text picked up in the first place? For what purpose is it being interpreted? Answering these questions helps us understand the prejudices behind the interpretation process. For example, a historian studying legal documents looks at them for an entirely different reason than a lawyer applying them to a legal case (cf. Paper 1).

One of the central concepts Gadamer uses when discussing the context of interpretation is the horizon. He writes:

> The horizon is the range of vision that includes everything that can be seen from a particular vantage point. (Gadamer, 1960/2004, p. 301)

This should not be read as a literal visual point of view, but as a mental landscape, a context of interpretation and understanding. It reveals a metaphorically important aspect of contexts that must be taken into account when discussing interpretation. First, an interpretation always has a horizon that is impossible to overcome from that perspective. Second, as interpreters we are always bound by our horizons. Third, to understand something historical, the interpreter must acquire the appropriate historical horizon.[17] While our horizon limits our interpretations, it is also a productive tool. Like prejudices, the horizon enables us to make interpretations in the first place. It is a starting point we can use to reach understanding.

While a certain horizon may limit our understanding, temporal distance helps us broaden our horizons. As time goes on and the point of view becomes more distant, more things come into view as the horizon broadens (cf. Paper 4). This is especially important in understanding historical phenomena. Understanding what something means in history, means understanding what kind of relation it has to other things in history. For example, before the Second World War, the First World War was known simply as the Great War. However, this name is less appropriate after World War II, since the second war was even bigger and more catastrophic than the first one. Historians writing about the First World War after the second one could then situate it in relation to the Second World War, effectively opening new horizons of interpretation.

Temporal distance also has a second, opposite aspect of effective history. Interpreters are part of history, but so are the objects they are trying to interpret. Gadamer explains:

> If we are trying to understand a historical phenomenon from the historical distance that is characteristic of our hermeneutical situation, we are always already affected by history. (Gadamer, 1960/2004, p. 300)

[17] Compare to Ricoeur (1981, p. 208): "A work does not only mirror its time, but it opens up a world which it bears within itself."

Whenever the object of interpretation has existed in history before the interpretation has begun, it has created an effective history of earlier interpretations and meanings. These are not identical to the object itself, but an important aspect of it when interpretation is taken into consideration. It is impossible and undesirable to try to separate, for example, *Mona Lisa* from all earlier interpretations of it, since the earlier interpretations are a central aspect of what constitutes *Mona Lisa* in the first place. Those interpretations have become part of its effective history and have become permanent additions to its meaning. Again, Gadamer's view is not that we should submit to this effective history and accept it as gospel, but that being conscious of it can give us a better chance of reaching the truth of the matter. No object of interpretation is a vessel for a single, unified meaning, but a fountain of possible meanings that may be actualized in different historical and cultural contexts.

Gadamer's admittance of the changing nature of meaning can give the impression that truth or meaning is somehow subjective. That is not the case. Because Gadamer's own account of the matter leaves room for interpretation, David Weberman (2000) has sought to clarify it with the aid of two new concepts: intrinsic and relational properties (see also Paper 1).

Intrinsic properties are properties that events or objects have without any reference to any other events or objects. Basic intrinsic properties are, for example, size and shape. These do not change, or change very rarely, perhaps changing the object to a different one. A car cut in half has very different intrinsic properties than a complete car. The division also changes its meaning: it is no longer a proper vehicle.

Relational properties are properties that events or objects have in relation to other events or objects. The earlier example of a war being the Second World War constitutes a relational property by implying a First World War. Other relational properties could be being a sister, not having played the original *Pac-Man* or owning a copy of the *Truth and Method*. These are all properties that can only exist in relation to other things. These properties might also change because of fortunate or unfortunate circumstances, especially over time.[18]

While Gadamer does not use these terms, it is this idea that underlies his theory of how objects of understanding are underdetermined or incomplete. In this context, incompleteness means that an object's meaning is never complete or final. Because its relational properties are always in flux, no final meaning can be assigned to an object. Gadamer emphasizes the temporal aspect, but the changes in the cultural vantage point of the interpreter also change the possible meaning of the object (Weberman, 2000, pp. 55–56). We might generalize this to mean that as long as culture is going to change, our interpretations need to change as well. Reaching some kind of final understanding would require nothing less than a Hegelian end of history.

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[18] Weberman (2000, p. 55) also argues that relational properties are not simply epistemological but ontological properties of things.

This use of Weberman's distinction should make clear that Gadamer's account of interpretation does not endorse subjectivism or relativism. A more apt description might be to call it "interpretive pluralism," as it shows how meaning is firmly dependent on the context of interpretation (Weberman, 2000, p. 51). There is a meaning and truth to be found, but they are not set in stone while history marches by.[19]

Gadamer also makes a sharp distinction between authorial intent and the meaning of an object. While earlier hermeneutic thinkers, like Schleiermacher, identified a text's meaning with the author's intent, Gadamer disagreed, arguing that these need to be separated.[20] For Schleiermacher, interpretation is a process of reconstruction, where the interpreter tries to reconstruct the author's original intent. Gadamer sees interpretation in terms of recreation, with the interpreter recreating the meaning in relation to the present horizon (see also Paper 4). The author's intent is something permanent, while an object's meaning is always incomplete and always subject to change when the context around the object changes. This stance makes sense especially when historical events have caused a significant change in the meaning of an object, as happened, for instance, in case of swastika. It is also congruent with Gadamer's idea of effective history.

It is impossible to discuss Gadamer's hermeneutics without commenting on his conception of language. For Gadamer, language is the medium in which understanding happens and conversation is a metaphor for the process of interpretation (Malpas, 2013). He does not rule out the possibility of other forms of understanding the world but gives primacy to language, calling it the "medium of hermeneutic experience" (Gadamer, 1960/2004, p. 385). His analysis of hermeneutics is "analysis of the universal linguisticality of man's relation to the world" (Gadamer, 1977, p. 19).

Gadamer bases his analysis of interpretation on his theory of language. Gadamer argues that to understand something, we must enter into a dialogue with it. He writes:

> Thus we return to the conclusion that the hermeneutic phenomenon too implies the primacy of dialogue and the structure of question and answer. That a historical text is made the object of interpretation means that it puts a question to the interpreter. (Gadamer, 1960/2004, p. 363)

While application required questioning in a different manner, asking questions from the object being interpreted, a genuine understanding requires a dialogue between the interpreter and the object of the interpretation. When this is successful, the interpreter reaches what Gadamer calls a "fusion of horizons" (Gadamer, 1960/2004, p. 305). The horizon of the interpreter and the object be-

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[19] Some post-structuralist and deconstructionist theorists might challenge the existence of truth and meaning, but as this work is not concerned with this meta-discussion, the task of answering them is left for other researchers.

[20] Ricoeur (1981, pp. 200–201) argues that this is especially true when discourse turns into text.

ing interpreted fuse, creating an understanding of the subject at hand. This fusion also brings prejudices to the fore and gives us a chance to refute them by comparing what we expect to find with what the object is actually saying.

Play also forms a part of Gadamer's (2004) hermeneutics. For him, play was a central metaphor for the ontology of the work of art. Because of Gadamer's interest in the artwork as a structure that frames the aesthetic encounter, he focuses on play as a structure rather than action. This leads Leino (2010, p. 71) to conclude that Gadamer is "perhaps the first ludologist." Gadamer (1960/2004, p. 102) writes:

> When we speak of play in reference to the experience of art, this means neither the orientation nor even the state of mind of the creator or of those enjoying the work of art, nor the freedom of a subjectivity engaged in play, but the mode of being of the work of art itself.

This frames Gadamer's interest in play as being part of his theory of aesthetics. However, he does seem to try to say things about play in general, and his thoughts occasionally seem to mirror those of Caillois and Huizinga, whose ideas were presented in the introduction.

Gadamer places play prior to the subjectivity of the player. Losing oneself in the act of playing is not an aberration, but a fundamental part of the nature of play: "all playing is a being-played" (Gadamer, 1960/2004, p. 106). He (2004, p. 105) also views play as something larger than just human action:

> It is obviously not correct to say that animals *too* play, nor is it correct to say that, metaphorically speaking, water and light play *as well*. Rather, on the contrary, we can say that *man* too plays. (italics in the original)

Play is a to-and-fro movement, a playful mode of being, exhibited by nature, animals and humans, and necessary for the appreciation of aesthetic objects. This perspective seems to place games much closer to the realm of art than is generally thought (cf. Smuts, 2005).

Gadamer is convinced that art can be used as a tool for revealing the truth about the world. However, for him the truth found in art is neither a singular, static thing nor a neutral logical proposition. Again, Gadamer is fighting against the weight of the history of thought, which has long equated art with the false and the deceitful. Gadamer argues that art is a way of revealing the truth instead of concealing it. He (2004, p. 84) writes that

> art is knowledge and experiencing an artwork means sharing in that knowledge.

This is knowledge of a different kind than the one gained from scientific research. Instead, it can help answer questions connected to what it is to be human and how we should relate to the world. Gadamer (1986, p. 18) writes:

> The kind of truth that we encounter in the experience of the beautiful does unambiguously make a claim to more than merely subjective validity.

This does not mean that the truth found in art is comparable to the one discovered in science. It is meaningless to compare them, since they are of different type and reveal different parts of the world in different ways.

Gadamer follows Hegel's lectures on aesthetics in formulating his view that works of art are mirrors of the worldviews embedded in them. This should not be confused with the artist's subjective intention of what they were trying to convey with the work. Gadamer refers instead to the worldview represented by the artist when doing art.

To understand life during the industrial revolution in 19th century Britain or the experience of war in Germany during the Second World War, one can turn to the writings of historians or one can consult the works of art that depict those periods. The understanding derived from the works of historians and artists are not in competition, but present different perspectives on the same phenomenon.

2.1.3 Philosophical Hermeneutics and the Critique of Gadamer

Other researchers in hermeneutics that could be relevant to the present study but who are not dealt with at length here are Edmund Husserl, Jürgen Habermas and Paul Ricoeur. Of all the researchers in philosophical hermeneutics I have chosen to mention these three because of their significant influence on the field and their dialogue with Gadamer.

Husserl is considered to be the founder of phenomenology. His work was influenced by Wilhelm Dilthey and he had a big influence on Heidegger who worked as Husserl's assistant for a time (Beyer, 2013). Gadamer is also familiar with Husserl's work both directly and through Heidegger's influence.

Jürgen Habermas is a renowned philosopher and sociologist who has had a significant influence on social theory. Habermas has tried to build a hermeneutically informed theory of social structure, drawing upon critical theory, Marxist thought and psychoanalysis (Mendelson, 1979, p. 46). Gadamer and Habermas had an extended dialogue over the years, which influenced the philosophical views of both thinkers.

Habermas criticizes Gadamer for his views on language and tradition. He claims that Gadamer overemphasizes the role of language and fails to properly distinguish between things that exist in language and things that are merely reflected by it, like labor and domination (Mendelson, 1979, p. 64). Gadamer has attempted to answer, for example in a later supplement to *Truth and Method*, but his concept of language does seem to run into problems with the previous distinction.

A central point of Habermas's criticism against Gadamer is Gadamer's positive view of tradition. Habermas argues that Gadamer's view does not leave enough room for social criticism or for properly critical hermeneutics (Mendelson, 1979, p. 64, 67).

Combined, Habermas's criticism of Gadamer focuses on his worry that hermeneutics as a theory for the social sciences does not provide proper tools for critiquing structures of oppression (cf. Gadamer, 1975). If hermeneutics is

content to describe "what happens to us over and above our wanting and doing" (Gadamer, 1960/2004, p. xxvi), it cannot work as a tool for emancipation.

While Gadamer is interested in the conditions of understanding, Habermas tries to theorize and formulate the preconditions of a society free of domination. While a very valuable endeavor, it is not relevant to understanding games, and Habermas's value to the present study is mostly related to his critique of Gadamer.[21]

Paul Ricoeur is another important hermeneutic philosopher, known especially for his work in phenomenology and hermeneutics. As with Habermas, it would take a lengthy treatise to do justice to the breadth of Ricoeur's work. Instead, the focus will be on the elements that are most relevant to the questions explored in this work.

A notion especially relevant to the current study is Ricoeur's idea of interpreting any meaningful action as a text (Ricoeur, 1981, pp. 197–221). He analyses the structure of action and finds that action and text share a similar structure. The analogy is based on the concept of speech-act, a bridge between action and language (Austin, 1962). Ricoeur argues that actions become embedded in both actual documents and in history as a document of all things that have happened, and can be then read from that document as if from a text.[22]

This is important for the current study, which tries to do a similar act of objectification by analyzing games as texts, or at least using tools originally meant for texts. Unlike games, actions do not have a permanent aspect to them, other than in the sense argued for by Ricoeur. This makes analyzing games potentially easier. However, games also have an impermanent aspect to them since gameplay is not something that persists in time. This will be discussed in more detail below, but for now it is enough to note that games are played, and that playing is an important aspect of their meaning.

There is also a large number of other thinkers that criticize and comment on Gadamer in a variety of ways but are not presented in detail here. Their criticisms, however, merit mention.

Gadamer has been criticized for neither discussing epistemology nor providing a methodology despite the title of his most important book (Lammi, 1991, p. 489). The original proposed title, *Fundamentals of a Philosophical Hermeneutics*, was perhaps more descriptive in this sense than *Truth and Method* (Schmidt, 2006, p. 95). Gadamer is not trying to formulate a methodology for interpretation or a theory of truth, but to describe the preconditions for human understanding.

Some scholars have also noted that Gadamer's critique of previous hermeneutic thinkers may not have been the most generous reading of earlier research (see e.g., Gjesdal, 2006, pp. 133–134; Harrington, 2000, p. 493; Pettersson,

[21] Habermas can also be applied to studying games. See e.g., Balzer (2011).
[22] This form of argument is used by Montola (2012) and Harviainen (2012) to show how larps can be studied. Montola relies on Searle (1969) and the speech-act theory, Harviainen applies Ricoeur (e.g., 1981).

2009, p. 17). He reads the history of philosophy with the intent of applying it to his own project, which perhaps explains the one-sidedness of the interpretation. It is also in line with his conviction that interpretation necessarily contains an aspect of application.

Gadamer's view on how interpretation works is not universally accepted. While Gadamer argues that authorial intent is not to be confused with the meaning of a work of art, some thinkers disagree. For example, E. D. Hirsch espouses a view based on authorial intent (Barthold, 2014). This leads to another disagreement: Gadamer argues that because the meaning of a work is not tied to the author's intent, it is always in flux, potentially changing when the horizon changes. To Gadamer, this is not a subjectivist or a relativist position, since the meaning is always tied to a specific frame of reference, within which it can be determined. Hirsch (1967, p. 123) disagrees, arguing that Gadamer confuses meaning (author's intent) with signification (reader's interpretation), a distinction Gadamer would recognize but dismiss as not significant regarding the question of artistic meaning.

The hermeneutic tradition is too long and broad to adequately cover in one chapter. Instead, this chapter has focused on some specific aspects of hermeneutics and particularly the philosophical hermeneutics of Gadamer, whose thoughts on language, interpretation and play are especially valuable for game studies (e.g., Karhulahti, 2014; Leino, 2010; Sicart, 2009). His thoughts are applied to games at the end of the theory chapter.

2.2 Wittgensteinian Philosophy

One of the central strands of research in this study is Wittgensteinian philosophy. Since this is far from unambiguous, it needs to be clarified. This is done in two ways: First, by distinguishing between early and later Wittgenstein. Second, by discussing how later Wittgenstein has been read in numerous ways, for example by philosophers such as Kripke and Winch.

2.2.1 Early Wittgenstein and the *Tractatus Logico-Philosophicus*

The first important distinction is between the early Wittgenstein of *Tractatus Logico-Philosophicus* (1922) and the later Wittgenstein of *Philosophical Investigations* (1953/2001). These two are usually discussed separately, almost as if they were written by different authors, for the views presented in them have very little in common. I will give a short overview of the *Tractatus*, as it should enlighten Wittgenstein's later thought. The *Tractatus* famously states that it

> deals with the problems of philosophy and shows, as I believe, that the method of formulating these problems rests on the misunderstanding of the logic of our language. Its whole meaning could be summed up somewhat as follows: What can be said at all can be said clearly; and whereof one cannot speak thereof one must be silent. (Wittgenstein, 1922, p. 23)

It then proceeds to state seven main theses, each supported by clauses and subclauses. Together they present what Wittgenstein at the time views as the solution to all problems philosophy has with the world and its relation to language. The seven main theses are as follows:

1. The world is everything that is the case.
2. What is the case, the fact, is the existence of atomic facts.
3. The logical picture of the facts is the thought.
4. The thought is the significant proposition.
5. Propositions are truth-functions of elementary propositions. (An elementary proposition is a truth function of itself.)
6. The general form of truth-function is [p, ξ, N(ξ)]. This is the general form of proposition.
7. Whereof one cannot speak, thereof one must be silent. (Wittgenstein, 1922)

With the *Tractatus,* Wittgenstein purports to have established a theory of language that tells philosophy what can and what cannot be meaningfully discussed. In early Wittgenstein's theory of language things like aesthetics, ethics and metaphysics are just confusions in language (Biletzki & Matar, 2014). Having solved all philosophical problems, Wittgenstein left philosophy and focused his interests elsewhere.

The *Tractatus* inspired members of the Vienna Circle to develop a philosophical movement that has been called both logical positivism and logical empiricism (cf. Creath, 2014; Passmore, 1943). They were interested in creating a unified language for science, based on an empirical approach to the world. This language would then serve as the logical basis for science. While some of the premises of this quest were problematic, they have had an enormous influence on the development of philosophy of science and related fields (Creath, 2014).

2.2.2 Later Wittgenstein and *Philosophical Investigations*

About a decade later, Wittgenstein returned to philosophy and began to see problems with the perfectly logical account of language given in the *Tractatus*. Several decades of philosophical work led to *Philosophical Investigations* (1953/2001), which was published only posthumously in 1953. *Philosophical Investigations* consists of two parts, the first of which was put together by Wittgenstein in 1946 and the latter of which was added later by its editors.

The book is formatted in a manner similar to the *Tractatus* in that each paragraph is numbered, but unlike the *Tractatus*, the book does not have a hierarchical structure and each paragraph follows the previous one in numbering. The style is also very different from the *Tractatus*. While the *Tractatus* is written like a list of self-evident statements, *Philosophical Investigations* has a dialogic style with several voices and sudden juxtapositions of different ideas. This is one of the reasons why it is not often easy to say what Wittgenstein actually thought of a particular issue.

Because of the difficulty of his style, Wittgenstein's writings have attracted many different readings and interpretations, and doubt about the coherency of his thoughts (Norris, 1983, pp. 38–39). The most influential of these have

formed traditions of interpretation that disagree on some central points on how *Philosophical Investigations* should be read. It is common to refer to an interpreter of Wittgenstein with a compound of their names, like Kripkenstein for Kripke and Winchgenstein for Winch (cf. Stern, 2004, p. 157). This is to remind the reader that the comments are not aimed at Wittgenstein but Kripke's or Winch's reading of him.

This study does not try to do the discussion on *Philosophical Investigations* justice by going through all of the readings, but instead focuses on using some of Wittgenstein's ideas (for more on how Wittgenstein has been read, see e.g., Goldfarb, 1985; Kremer, 2000; Wilson, 1998). Some of these readings will align with Kripkenstein, some with Winchgenstein, and no great effort has been made to keep these separate. The purpose of this study is not to present an exegesis of Wittgenstein or his commenters but to study games, and Wittgenstein happens to be a useful thinker on issues related to definition, meaning and rules.

2.2.3 Meaning as Use

Later Wittgenstein and *Philosophical Investigations* have a much messier view of language than the *Tractatus*. The clear distinction between things that can be spoken about and things that must be passed over in silence is gone, and Wittgenstein views language much more clearly in relation to its use. He writes:

> For a large class of cases of the employment of the word "meaning"—though not for all—this way can be explained in this way: the meaning of a word is its use in the language. (Wittgenstein, 1953/2001, para. 43)

Wittgenstein opposes the earlier approaches to meaning that place meaning either in some objective space or inside mental representations. This section seems to suggest that philosophers should not try to figure out the meaning, but look at the actual uses of a word. This has interesting implications on how Wittgenstein views definitions. Paper 2 discusses the implications of this to understanding game definitions in more detail, but a short overview of Wittgenstein's thoughts on the matter is provided here.

In Wittgenstein's view, definitions should be viewed in terms of family resemblance. He uses games as an example, asking what is common among all the things that we call games. The answer is, he tells us, nothing. Instead

> we see a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail. (Wittgenstein, 1953/2001, para. 66)

This is the basic idea Wittgenstein's concept of family resemblances. Instead of there being a common core of attributes that define games, they form a family of related things. There are no central attributes, but rather the similarities are overlapping and crisscrossing.

Language-game is Wittgenstein's term for "almost any practice in which language is involved in some way, any interweaving of human life and lan-

guage" (Stern, 2004, p. 88). Language-games are the patterns of activity that are defined by family resemblances. Wittgenstein (1953/2001, para. 23) lists examples of language-games:

> Giving orders, and obeying them—
> Describing the appearance of an object, or giving its measurements—
> Constructing an object from description (a drawing) —
> Reporting an event—
> Speculating about the event—
> Forming and testing a hypothesis—
> Presenting the results of an experiment in tables and diagrams—
> Making up a story; and reading it—
> Play-acting—
> Singing catches—
> Guessing riddles—
> Making a joke; telling it—
> Solving a problem in practical arithmetic—
> Translating from one language into another—
> Requesting, thanking, cursing, greeting, praying—

There are very few areas where human life and language do not interweave. Unlike the earlier Wittgenstein, who tried to define language in terms of logical propositions, the Wittgenstein of *Philosophical Investigations* seems to view language in relation to the social life around it, the forms of life language is used in. Wittgenstein (1953/2001, para. 23) writes:

> Here the term "language-*game*" is meant to bring into prominence the fact that the *speaking* of language is part of an activity, or of a life-form. (italics in original)

Forms of life are the many varied contexts language is used in, ranging from social rituals like greetings to larger scale social institutions like religion.

Coincidentally, this view of language is very close to how Gadamer views language. Both thinkers see language as deeply culturally and contextually conditioned and a shared medium of understanding (Connolly, 1986).

2.2.4 The Rule-Following Paradox

As part of his discussion on language, Wittgenstein also considers rules and rule following. He develops the rule-following paradox in an extended attack against the idea of a private languages (Stern, 2004, pp. 180–181).

The clearest formulation of the rule-following paradox is: a rule does not tell you what counts as following the rule. In other words, for that you need another rule. To interpret that rule, you need another rule, and this would seem to continue recursively and infinitely.

Wittgenstein (1953/2001) goes through many examples, but the clearest is that of a mathematical formula. If you were asked to start from 1 and continue adding 3, you would probably form the following series of numbers: 1, 4, 7 and so on. Anyone following you doing the addition would probably conclude that you understood the rule of "adding 3."

However, should you continue the series with 10, 12, 14 and so on, they would probably change their mind and think that you misunderstood the rule. They could repeat the rule and ask you to try again, but if you again repeated the same mistake, referring back to the rule would not help. The rule of "adding 3" does not tell you how to add 3. Now, another rule could be devised, telling you that "adding 3 means that you continue the series 10, 13, 16 and so on" but again, there would be no guarantee that you understood that rule. Maybe you would again revert to your earlier way of following the rule, starting with 21, 23, 25 and so on. You could again claim to have followed the rule. Wittgenstein (1953/2001, para. 201) expresses it as follows:

> This was our paradox: no course of action could be determined by a rule, because any course of action can be made out to accord with the rule. The answer was: if *any* action can be made out to accord with the rule, then it can also be made out to conflict with it. And so there would be neither accord nor conflict here. (italics in original)

Now, one way of reading this is to see the problem as an infinite regression where any rule needs to be explained with a new rule which explains how to follow that rule. Another is to follow the course established above, with Wittgenstein seeing meaning as a matter of use, and see rule-following as a social practice (Stern, 2004, p. 180). Distinguishing between following a rule correctly and making a mistake is not a logical but a practical question. Rule following is not determined in isolation but as a social practice, where whether somebody follows a rule is decided by whether other people recognize them as following the rule.

This has been a very short introduction to Wittgenstein's notion of language-games, but it should provide enough context for the reader to understand the rest of this study. His thoughts on rule-following are useful when rules are later discussed, but it is his theory of language that is most relevant to this study. Early Wittgenstein can serve as an example of a theory of language that is not useful for discussing the issues of meaning dealt with in this study. We need to turn to the later Wittgenstein of *Philosophical Investigations* and understand language through language-games to appreciate and make sense of the breadth of things that are considered games. Wittgenstein's ideas on definitions are applied later in this study on the issue of defining games.

2.3 Game Studies

Chapter 1.3 contained a brief discussion on game studies, but that chapter did not include any theoretical discussion on the concepts and theories used in this study. This chapter covers game studies, presenting a theory that is necessary for understanding the results and discussion that will follow later. The topics covered here include procedurality and emergence, rules, the magic circle, players, and the relation of games and stories.

2.3.1 Procedurality and Emergence

As was mentioned in the introduction, procedurality is one of the central concepts used when discussing games. Procedurality implies that games are made of processes. Even when designing games that are objects or artifacts, the designer is implicitly designing the processes that are embedded in that object. While there are many different senses of 'process' and 'procedurality', the one most closely related to game studies comes from computing, the platform all digital games run on, but is generalized to apply to all kinds of processes besides digital ones. A very broad description of procedurality is given by Bogost (2007, p. 3):

> processes define the way things work: the methods, techniques, and logics that drive the operation of systems, from mechanical systems like engines to organizational systems like high schools to conceptual systems like religious faith.

At its most basic, a process is a script or a collection of rules for how something is done, be it a mechanical engine, a social organization or a digital game. These processes are defined by the game rules or, sometimes, by external factors like physical laws, social agreements or cultural assumptions. Processes in games are created by somebody to do something:

> To write procedurally, one authors code that enforces rules to generate some kind of representation, rather than authoring the representation itself. (Bogost, 2007, p. 4)

But after the processes have been created, they take on a life of their own and interact with other processes and players. This leads to emergence, the birth of unseen combinations of things happening, based on the simple rules that were authored (Dormans, 2011, p. 1). Juul (2002, p. 324) defines emergence as follows:

> Emergence is the primordial game structure, where a game is specified as a small number of rules that combine and yield large numbers of game variations, which the players then design strategies for dealing with.

A good example of emergency is the traditional game *Go*, where the rules define simple interactions of placing black and white stones on a board one after another. While the rules are simple, the interactions they create are complex, so complex that the number of legal positions in *Go* is almost impossible to compute (Tromp & Farnebäck, 2007, p. 84).

Other games have other types of emergence, most often deriving from social interaction. Any game that has players is going to produce unexpected results since it is hard to predict how people behave, especially in groups. That is part of the charm of playing social games. Massive multiplayer games are going to be even more unpredictable since the amount of players and the possible interactions between them is even larger.

Emergence is not a special feature of games, but appears anywhere where rules are combined. A good example is Raymond Queneau's *A Hundred Thousand Billion Poems* (original title: *Cent mille milliards de poèmes*), a combination of

ten sonnets that have the same rhyme scheme and rhyme sounds, so that they can be combined to produce the hundred thousand billion poems promised in the title. Combined, they produce more text than anyone could ever read, but they can still be printed in a book, with the pages cut into ten different sections that can be turned independently.

2.3.2 Rules

Processes are based on rules that humans, computers or other actors follow and enforce. Rules are often seen as a defining feature of games: "If there is one certainty in game studies, it is that games involve rules" (Deterding, 2013, p. 165). Some scholars even identify games as their rules (e.g., Parlett, 1999, p. 3). Rules, however, are not easy to define. An explication of how rules work in games needs to at least account for different types of rules.

According to Searle (1969) rules can be divided into two categories of regulative and constitutive rules.[23] Regulative rules "regulate antecedently or independently existing forms of behavior" (Searle, 1969, p. 33). These are the rules that are applied to regulate all kinds of human behavior, from bans on theft to the rules of etiquette.

In comparison, constitutive rules "constitute (and also regulate) an activity the existence of which is logically dependent on the rules" or in other words, "create or define new forms of behavior" (Searle, 1969, pp. 33–34). Conveniently, Searle's examples are games like chess and American football.[24] For example, a checkmate in chess assumes the rules of chess – it is impossible to make a checkmate outside chess. In other words, a checkmate is logically dependent on the rules of chess. This is echoed by Bernard Suits (1980, p. 30) who thinks that in games "rules are accepted for the sake of the activity they make possible," a formulation very similar to Searle's constitutive rules.

It is apparent from Searle's examples that games have both constitutive and regulative rules. Constitutive rules are what are generally referred to as the rules of the game. These are the rules that define how the game is intended to be played, what constitutes as playing that game.

However, player behavior during play is also regulated by other rules than the formal rules laid down in manuals and rulebooks, or even computer code. The social rule of "let your little brother occasionally win" might overcome the formal rules of the game in guiding player behavior or even the rules as they are written down. A handicapped player might be given more resources, time or relaxed rules, even if the written or coded rules mention nothing of such

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[23] Salen and Zimmerman (2004, p. 130) use a similar distinction but call them 'operational' and 'constituative' (they do not comment on how 'constituative' is related to 'constitutive'). The following discussion proceeds as if Searle's distinction was unproblematic. For an account of the problems it has, see Cherry (1973). For a sociological criticism of this distinction, see Deterding (2013, pp. 165–167).

[24] Searle's (1969) ideas on speech acts have also been used to study digital games (Cardona-Rivera & Young, 2014).

things. Sometimes these rules for handicaps are included in the constitutive rules, but they may also rise out of necessity or convenience.

Somewhere around regulative rules there is also another, overlapping category of rules. Games are also regulated by a large amount of implicit rules. These might take the form mentioned above, taking handicaps and social relations into account. They are also constituted by cultural contexts and tradition in a manner similar to that discussed in the earlier chapter on hermeneutics. Games may also be used to make some implicit rules more explicit by setting the games rules against or parallel to social rules and conventions (Poremba, 2007, p. 772).

Game scholars seem conflicted on whether computers can be said to follow rules. Researchers more focused on the computational or systemic nature of digital games seem to have no problems with computers following rules (e.g., Eskelinen, 2012, pp. 253–258; Juul, 2005, p. 55, 58–59). Scholars with a more social scientific approach seem to see rules as something people follow, with computers doing something else (e.g., Deterding, 2013, pp. 166–167; Mosca, 2011, p. 8). This might work, for example, by the programmer following rules and implementing them in algorithms for the computer. Game scholars' difference of opinion highlights the different ways of understanding how rules work and what they are. A good way to discuss this is to focus on how rules are learned. Here, we ought to keep in mind Wittgenstein's thoughts on rules previously discussed in this study. If we consider following rules a social practice, then computers are unable to participate in that social practice and therefore are not following rules. It would also be possible to consider the rules computers follow a special case of rules, for example what Juul (2005, pp. 61–64) terms algorithmic rules.

In most cases, we don't learn new games by carefully going through the rules over and over until we know them by heart. This would be unnecessary with games like *Tag* or *Tic-Tac-Toe*,, where the rules are simple enough to start playing almost immediately, and it would be impossible in digital games where the rules are only rarely apparent to the player. Instead we usually approach games with the intent of playing and learn the rules in order to do so. Deterding (2013, p. 171) expresses it thus:

> the meaning of any rule is the practical capacity to 'go on' that is mutually intelligible within a community as 'following the rule'.

It is worth noting that it might not even be clear whether we have learned the rules of a game before we try playing it. Only when that knowledge is tested in practice, it becomes clear whether we understood the rules or not. Rules are learned only to the extent that they are needed for playing, and clarifications are sought in situations where it is not apparent how to continue. In informal social play, like *Tag*, clarifications are asked from other players. In digital games, the answer is usually sought first from the game itself by trying out different things. If that does not work, players turn to alternative sources like other players, game guides or help files.

If I need to figure out how far my digital avatar can jump, I can simply try. To find the most effective weapon against an enemy, I can try several to see which one works best. The exact rules behind the game's logic are not important to me until knowledge of the way they affect my performance becomes important to proceeding in the game. Well-designed games are very good at communicating whether a certain tactic can be used to 'go on.'

Using the distinction mentioned above, it could be said that what the previous paragraph describes is not actually about following rules, since it is not a matter of social practice. With digital systems the arbiter of correct rule following is the system upholding the rules (cf. Myers, 2010, pp. 18–19). Computer systems are usually very vocal about any errors they encounter. The player does not get to choose whether to follow the rules or not, since they are not up for negotiation.

The two possible exceptions to this would be some kind of changes to the game and multiplayer games. A mod, a cheat or a console command could be used to change the rules of a game, making them up for negotiation after all. Another way of framing such changing of the game is to see it as breaking the rules, since the game has been changed from the original state – the rules defined by the designer are no longer in effect (Consalvo, 2007, pp. 90–91). The second example is multiplayer games where players are able to use the commonly shared game to establish social contracts on how the game is played, what is acceptable and what is forbidden (Myers, 2008, pp. 6–10). These rules are closer to the everyday rules social scientists usually discuss and should be understood in a similar way.

In both of these cases, following rules only makes sense in a certain context. One can only play *Tag* in a game of *Tag* with other people, and overcoming enemies in a digital game only makes sense in a digital game with enemies. These contexts are necessary for figuring out what following a rule means.

2.3.3 The Magic Circle

One of the central concepts game studies has borrowed from the cultural historian Johan Huizinga (1938/1949, p. 10) is that of magic circle:

> All play moves and has its being within a playground marked off beforehand either materially or ideally, deliberately or as a matter of course. Just as there is no formal difference between play and ritual, so the "consecrated spot" cannot be formally distinguished from the play-ground. The arena, the card-table, the magic circle, the temple, the stage, the screen, the tennis court, the court of justice, etc., are all in form and function play-grounds, i.e. forbidden spots, isolated, hedged round, hallowed, within which special rules obtain. All are temporary worlds within the ordinary world, dedicated to the performance of an act apart.

Huizinga makes no distinction between a playground, a magic circle and a temple, viewing all of them in similar terms. In fact, a magic circle is only one of the many forms of "temporary worlds" identified by Huizinga. A similar formulation of spatial separation in play is given by Riezler (1941, p. 511):

> An area of playing is isolated by our sovereign whim or by man-made agreement. Things within this area mean what we order them to mean. They are cut off from their meanings in the so-called real world or ordinary life. No chains of causes and effects, means and ends, are supposed to connect the isolated area of play with the real world or ordinary life.

The concept of the magic circle was popularized in game studies by Katie Salen and Eric Zimmerman in their influential book *Rules of Play* (2004), where it received the form most game scholars are familiar with (Stenros, 2014, p. 149). In their simplest formulation, the magic circle is "where the game takes place" (Salen & Zimmerman, 2004, p. 95). For them, the magic circle is the boundary between play and non-play. It is in Salen and Zimmerman's work, where the concept of magic circle is for the first time applied mainly to games.

Often, the magic circle is understood in a spatial sense as the actual playground or playfield, a boxing ring, basketball court or a sumo ring. It is in this very sense that it is applied to the boards used in board games. It is also extended metaphorically to virtual playgrounds and virtual worlds. However, in addition to the spatial sense it has at least two other meanings as the social framings of play and the playful mindset of the players (Stenros, 2014, p. 173).[25] Stenros calls these three senses the arena, the magic circle of play and the psychological bubble. In his choice of terms, he shows what he considers the primary meaning of the term 'magic circle'. All of these concepts may be of use to game scholars as long as they are kept separate from each other.

The magic circle is a contested concept, leading some researchers to criticize it or to deny its value altogether as a concept (Consalvo, 2009; cf. Juul, 2008). Because it is extended metaphorically, it is not always clear what it refers to. The three senses of the magic circle found by Stenros (2014) often mingle, making it unclear which aspect of the circle is being referred to.

There are also forms of play that toy with the boundary or try to expand or break it in some way. These include pervasive and brink games, and the concept of bleed. Pervasive games expand the magic circle spatially, temporally or socially by having the games happen in large areas, over large stretches of time or without clear boundaries between players and non-players (Montola, 2005). They let reality pervade play or vice versa. Examples of these kinds of games are Alternative Reality Games (ARG) like *I Love Bees*.

In comparison, brink games play with the boundary by pitting implicit social rules against implicit or explicit game rules (Poremba, 2007, p. 772, 774). They explore what is socially accepted by using games as an alibi for actions that would normally be socially forbidden or frowned upon. An example is the game *Twister* where the game rules dictate that the players have to get closer to each other than is normally socially acceptable.

Some forms of role-playing aim for what has been called bleed (Montola, 2010, p. 2). Bleed is a form of brink play. Bleed can be divided into types: bleed in and bleed out. Bleed in happens when the player's life outside the game in-

[25] Suits (1980, p. 38) calls the playful mindset the 'lusory attitude'.

fluences the game and bleed out takes place when the player's life outside the game is influenced by the game. Feelings of hopelessness, fear or other strong emotions are acceptable and often desirable when playing games that aim for bleed.[26] The motivation for this type of play is similar to reading books or watching movies that evoke strong negative emotions but nonetheless form a gratifying experience.

There are also situations or contexts in which society recognizes the existence of the magic circle. Probably the most important of these are sports. Lastowka (2009, p. 386) notes how it is usually illegal to punch somebody, but inside the boxing ring one is expected to do so:

> Violent and powerful physical attacks against another person, which are normally forbidden by law and social norms, become the obligatory and consensual mode of conduct. At the same time, polite and acceptable behavior—polite conversation—would be a gross breach of decorum.

The social norms around boxing dictate what is acceptable within the boxing ring, and society respects those norms by not prosecuting a boxer for the violence they commit within the ring. There are other contexts where the magic circle of play precedes everyday social conventions, like in relation to April Fools' Day pranks and festivals.

2.3.4 Players

Understanding players is a central part of understanding play and, subsequently, understanding meaning in games. However, understanding players is not a simple issue. People play games for a variety of reasons and motivations. Player studies is one of the ways used in game studies to untangle these issues and come to a broader understanding of players and their differences and similarities.

Players are often discussed on the basis of player types or typologies. These might be geographic, demographic, psychographic or behavioral (Hamari & Tuunanen, 2014, p. 31). Some typologies have become common parlance regardless of the lack of research. A good example is the distinction between hard-core and casual players. This distinction is based on the perceived difference between people who play games that require more effort and skill, and people who prefer games that are easily approached and learned (cf. Sotamaa, 2007, p. 459). Some typologies are based on psychological theories of personality types that are applied to players (e.g., Bateman, Lowenhaupt, & Nacke, 2011).

Probably the earliest systematic theory of player types is Bartle's (1996) study of MUD players. Following an informal discussion with other MUD-players he summarized different player types into achievers, explorers, social-

[26] As Montola (2010, p. 1) points out, play that aims for bleed is a very effective criticism against the idea that games are always supposed to be fun.

izers and killers. These types differ in their preferred style of play with achievers pursuing game-related goals, explorers exploring the virtual world, socializers communicating with others and killers imposing themselves upon others. Bartle's model has been used extensively since.[27] This might be problematic, since it is based on an informally gathered set of impressions from a MUD.

Fortunately, research into player types did not stop with applications of Bartle's model. Hamari and Tuunanen (2014) review the field of player typologies and synthesize their findings into five motivations or orientations: achievement, exploration, sociability, domination and immersion. It is easy to notice that they are very similar to the original types suggested by Bartle. This means either that Bartle's original findings were surprisingly accurate or that researchers in game studies have had a hard time distancing themselves from his model (cf. Bartle, 2014).

Bartle (1996) already notes that it is important to distinguish between player types and actual players. Actual players may share traits of multiple types and move between them in different contexts and at different times. Typologies should not be read as hard categories that define players, but as typical forms of behavior that players may participate in. However, studies of player typologies do claim that these are relatively stable categories.

Another way of approaching players is to discuss them as groups by studying communities of players. Warmelink and Siitonen (2011, p. 9) review studies of player communities and find that they discuss player communities with a variety of terms: guild, community, group, network, organization, team, raid, party, clan and social formation or unit. All of these terms emphasize how players are socially connected to other players. This approach emphasizes the social nature of play and sees players through the social organizations they form. This might be especially useful for games of highly social nature, like MMORPGs.

While paying attention to the social nature of play is important, this study focuses on players from the perspective of hermeneutics, which highlights the intersubjective and the cultural at the expense of the social. This is not an excuse to ignore the social nature of play and meaning, and in hermeneutic theory these are discussed in relation to the context of interpretation.

This study takes an approach developed by Aarseth (2007) and based on the implied reader model of literary studies and Gadamer's notion of play. Aarseth (2007, pp. 131–132) writes:

> For the humanist game scholar, whether engaged in close playing analysis of a single game, or trying to make sense of games as a complex, multifaceted medium with a huge repertoire of genres, the player is a necessary but uncontrollable part of the process of creating ludic meaning, a function that is created by the gameplay as well as co-creator of it.

[27] Google Scholar lists 780 references.

This approach differs from the empirical social sciences in that it does not look for actual players and their actual play like the approach presented earlier. Instead, the player is a theorized but mandatory part of the system of play. The game sets certain expectations of what the player should or can do, and these guide the implied player onto a pre-set path.

The concept of implied player aligns well with the Gadamerian framework presented earlier in this study. Gadamer's work was also the inspiration for the reception aesthetics of Wolfgang Iser (1976/1990) and Hans Robert Jauss (1982) who theorized the implied reader.

Aarseth (2007, p. 132) also emphasizes that players are occasionally able to transgress the assumptions made regarding the implied player. Players can break rules, exploit bugs and otherwise refuse to co-operate with the game. However, these moments are rare in the larger picture of play, the majority of which follows the rules. The moments of transgression are there to remind us that we have some say in play, but mostly we join the implied player for the ride.

Regardless of the approach taken, game studies seem relatively united in assuming that games require players. Leino (2010, p. 61) writes:

> As long as we are concerning ourselves with games, the player's involvement is a necessity already on a conceptual level: to conceive something as a game necessarily implies filling the position(s) of the player(s) with something, that is, conceiving something as the player(s) of the game.

However, there has also been discussion of zero-player games. Zero-player games are either games where the player only participates in the setup, games played by AI's, games that are completely solved or hypothetical games that are unplayable in practice (Björk & Juul, 2012). They seem to contradict the assumption that games need players. The easy answer would be to claim that they are, in fact, not games. A more sensible stance is perhaps to accept them as a special type of games, games that have zero players.

Zero-player games are an interesting phenomenon, but excluded from the focus of this study. Some of the ways zero-player games create meaning are probably similar to the meaning-making ways of the games concentrated on in this study. Most of them probably are not, since the hermeneutic framework emphasizes the interplay of the context and the interpreter. At least in this study, the player is an important part of the meaning-making process.

2.3.5 Games and Stories

The relation of games and stories has been a longstanding issue within game studies. It would take a much longer study to go into detail about all the different senses of "narrative" and "story." Narratology, literary theory, aesthetics, psychology and other disciplines have many different definitions for these concepts. It would not be beneficial for this study to go through all of these alternatives in order to pick the best. Instead, this study builds upon earlier narratively oriented work within game studies.

FIGURE 4 A continuum from abstract to narrative games

Early game studies formed schools of thought around the issue, usually known as the ludology-narratology debate. This debate was summarized by Jenkins (2002) as follows:

> At a recent academic Games Studies conference, for example, a blood feud threatened to erupt between the self-proclaimed Ludologists, who wanted to see the focus shift onto the mechanics of game play, and the Narratologists, who were interested in studying games alongside other storytelling media.

Along the way, some of the debaters have questioned whether games and stories could be productively combined at all (Juul, 2001), while others have argued that "stories are just uninteresting ornaments or gift-wrappings to games" (Eskelinen, 2001). The discussion has also been labelled as a misunderstanding (Frasca, 2003; cf. Pearce, 2005). Looking back at the issue, it seems that there has been a genuine disagreement on some aspects of games and stories, but also that a large part of the writings were never in genuine dialogue.

Regardless of how one values narrative studies in relation to game studies, it is undeniable that narratology has been used to understand games and it is likely that it will also be used for that purpose in the future. The relation of games to stories might be thorny, but it is also a productive relationship: games have been used to convey narratives, some of them different from the previous narrative forms (cf. Ryan, 2002, pp. 594–595). I will later argue that there are ideas that can only be expressed through games, and some of those ideas are narrative.

Recognizing the relation of games and stories is also important for this study, because it relies on the concept of ludonarratives (Aarseth, 2012). Instead of defining the concept in detail, Aarseth describes it in relation to different kinds of games. He analyses *Oblivion*, *Façade*, *Fahrenheit*, *Half-Life 2* and *Knights of the Old Republic* as ludonarratives. Aarseth (2012, p. 130) argues that:

> It is thus fruitful to give priority to neither games nor stories, but rather to base the model in the primary reality that spawned both, and that they both are part of, in somewhat different ways.

Aarseth (2012) seems to view digital games as containers that contain all kinds of things, games included. Ludonarratives are hybrid objects that contain both

games and stories, and maybe something else too. This study uses the concept of ludonarrative games, but in a way that differs slightly from Aarseth's usage.

Aarseth (2012, p. 133) warns against exactly this kind of metonymic labeling for what he terms "ludonarrative software." Games may be found within these ludonarrative software, but in addition to games they also contain other types of things, so calling them simply games is misleading. He (2012, p. 130) writes:

> What also needs to be realized is that story-game amalgams primarily is [sic] entertainment software, works that contain many forms of media content and because of their computer-based, Turing-complete existence can emulate any kind of semiotic genre, including, of course, traditional stories. Calling works like Max Payne or FallOut 3 [sic] games or stories is a metonymical shorthand usage of the terms that confuses and obscures the composite makeup of these creations.

Aarseth (2012) has a more specific understanding of games in mind, using the concept to refer only to the ludic parts of the ludonarrative software. However, according to the Wittgensteinian definition of games used in this study, games are many things, but what makes them games is the shared understanding of their "gameness," their network of shared family resemblances. The metonymic use is interesting because this study is interested in the meaning-making of that metonym. Views on what are games will differ and change, but this does not give theorists the authority to rule what should and what should not be considered as games. This is, of course, not what Aarseth (2012) is trying to do, and recognizing that digital games are composites of different media forms is a valuable observation.

In Aarseth's (2012) usage, "ludonarrative game" would be a redundant or misleading concept. However, because this study views games slightly differently, this distinction seems necessary. Ludonarrative games differ from abstract games because of their narrative content. It might be enough to follow Aarseth's (2012) use and write solely about "ludonarratives," but this term seems to obscure the main interest of this study: games. Therefore the concept "ludonarrative games" is preferred. The following analysis continues without focusing on the exact ontological categories that are packed into the concept of ludonarrative games. The exact composition of ludonarrative games is unimportant since this study focuses on the meaning created through this form.

Not all games are ludonarrative. While most games contain at least some representational aspects, they are not necessarily narrative. Games could be seen as forming a continuum with abstract games in one end, narrative games in the other and representational games in the middle (FIGURE 4). Games do not necessarily need to be classified this way, and this should not be read as an ontological claim. This distinction is made to make following the analysis easier. On those terms, this study is mostly interested in the narrative end of the continuum. However, it would be completely valid to focus on games on the other end of the continuum. That would simply require a different theoretical focus and methodology (e.g., Begy, 2011).

This chapter has not tried to cover the entirety of game studies, but has instead commented on different interests within game research. The purpose of this overview was to focus on specific aspects of game studies that, combined with the theoretical approaches presented earlier, help us understand meaning in games better. Next, a synthesis of these theoretical approaches is presented.

2.4 Theory Synthesis

Together the aforementioned theoretical approaches form the basis for understanding the rest of this study. The approaches presented earlier are synthesized in this chapter in three ways:

1. By showing how Gadamer's view fits in with Wittgenstein's views of language.
2. By showing how interpretation works in games.
3. By showing how Gadamer's ideas of aesthetics relate to games.

These three are not the only issues discussed in the previous chapters, but they are the most important issues for understanding the rest of this study. This chapter synthesizes the different theoretical approaches used in this study to form three main lines of thought.

2.4.1 Understanding Language

As was already mentioned above, Gadamer's views on language are quite close to the views of later Wittgenstein (Connolly, 1986, p. 272; Malpas, von Arnswald, & Kertscher, 2002, p. 34). Gadamer (1977, p. 126) even wrote about Wittgenstein in a very positive manner. Both view language as inherently social and central to making sense of the world around us. While Wittgenstein is mainly interested in the nature of language, for Gadamer the project of making sense of language is a way of making sense of understanding. Combining both views allows us to make sense of rule-following and issues of meaning in games.

Both Wittgenstein and Gadamer share the idea that language only makes sense in a particular context. Wittgenstein calls these contexts forms of life, while Gadamer terms them horizons.

Forms of life are the social contexts in which language is used. Different social contexts call for different forms of life as the needs are different. These lead to different types of language-games being formed and being useful. The word 'know' is useful in different ways for a fisher and an epistemologist, even though both of them might use it (cf. Paper 2). The fisher and the epistemologist live in different forms of life which makes their language-games differ.

Wittgenstein's forms of life can be compared to Gadamer's horizons. Like forms of life, they also stem from the social history of things which Gadamer calls tradition. Gadamer (1960/2004, p. 303) writes:

> The historical movement of human life consists in the fact that it is never absolutely bound to any one standpoint, and hence can never have a truly closed horizon. The horizon is, rather, something into which we move and that moves with us. Horizons change for a person who is moving. Thus the horizon of the past, out of which all human life lives and which exists in the form of tradition, is always in motion.

Understanding language and people necessitates understanding the living world around them and the social conditions of their life.

As discussed above, Wittgenstein's arguments against rule-following are an effective argument against the idea of private languages. Instead of being the mental constructions of individuals, languages are socially constructed and shared.

Arguing against the private nature of language, Wittgenstein also happens to help Gadamer make an argument against the view according to which the meaning of a work is determined by the author's intent. If one agrees that at least linguistic meaning is socially constructed, it is hard to argue that poems and literary works were somehow determined by the mental intentions of the author instead of the social process of language use of which the work is a part. As Connolly (1986, p. 274) writes:

> But at least in the case of literary interpretation Gadamer is on firm ground, and the language-game approach helps us to see why. On the Wittgensteinian view it is not for philosophers to say a priori what poetic meaning is or whether poems can be given a final, uniquely correct interpretation. Such questions must be addressed to the practice of the literary community.

The philosopher can give no rules on how a work of art is to be finally interpreted and the author has no more say in this. It is for the readers to establish what a work means. To do so, they use their surroundings to make sense of the work and consult the horizon they share with other people.

Incidentally, hermeneutics may also help answer a potential problem in Wittgenstein's thinking. Norris (1983, pp. 34–58) argues that the criticism from the deconstructive side of literary theory has shown the problems of Wittgenstein's view of language. While hermeneutics is not free of the criticism from deconstructionists either, in this case it may stand on a firmer foundation. Norris (1983, pp. 36–37) argues that Wittgenstein relies heavily on metaphor, while not giving an adequate account of what metaphor is or how it works. Incidentally, metaphor is one of the central themes of Ricoeur's thinking (Dauenhauer & Pellauer, 2014). Ricoeur argues that metaphors are ways of renewing language and producing new ways of seeing the world. Perhaps, this is the way forms of life change and evolve.

This study has used the word 'meaning' liberally, but so far has not tried to define it. By now, it should be clear what is meant with the word. Combining Wittgenstein's ideas of meaning as use with Gadamer's idea of horizons shows

how language is shaped by the context of use. Meaning is therefore understood in this study as the socially constructed, contextually conditioned sense or significance given to things.[28] To be clear, it is the thoughts, actions and expressions of human beings that ultimately construct this sense, but this does not mean that humans are free to choose what things mean. Meaning is the result of a hermeneutic process in which humans are only one part, with the object and context also having a definite say on the result.

2.4.2 Game Hermeneutics and Real-Time Hermeneutics

As discussed above, procedural rhetoric has proven to be an influential and compelling approach to understanding how games and other procedural systems persuade and make claims. Bogost (2007, p. 3) defines procedural rhetoric as follows:

> Procedural rhetoric, then, is a practice of using processes persuasively. More specifically, procedural rhetoric is the practice of persuading through processes in general and computational processes in particular.

He goes on to elaborate a theory of how processes can persuade. The core idea, however, is both simple and convincing. Users acting upon processes are also acted upon by those same processes. Processes guide their actions and weigh their options in certain ways. To continue playing the game at least some of the premises of those processes need to be accepted.

While that is a fascinating area of research, this study is more interested in the other side of the coin: When processes persuade, how are they interpreted? More specifically, how does that apply to ludonarrative games? What other factors are relevant? The issue of meaning in games will be discussed in more detail below, together with the results of this study. This chapter presents an overview of how the theoretical approaches used in this study can be combined to answer questions of procedural hermeneutics.

There is a crucial distinction to be made between two types of hermeneutics applicable to games. These two types could be called game hermeneutics and real-time hermeneutics. Game hermeneutics is a more traditional type of hermeneutics, interested in games as objects that need to be interpreted in certain historical contexts. It would be useful, for example, when looking at how the character of Mario has changed from the early days of *Super Mario Bros.* to the present. Here Gadamer's thoughts on the contexts of interpretation are useful.

However, another type of hermeneutics is also relevant to understanding games. This real-time hermeneutics is more concerned with the processes of interpretation that are active when the player plays. This is the sense in which Aarseth (2003, p. 5) uses the concept of real-time hermeneutics:

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[28] Paper 5 uses the more limited concept of "meaning-effect" in referring to the cognitive effects certain meaning-making tools can be used to induce.

> While the interpretation of a literary or filmatic work will require certain analytical skills, the game requires analysis practiced as performance, with direct feedback from the system. This is a dynamic, real-time hermeneutics that lacks a corresponding structure in film or literature.

It is explicated even more clearly by Buse (1996, p. 167) who contrasts it with a hermeneutics searching for the truth:

> Success in a video game demands a rigorous interpretative process: not a hermeneutics aimed at unveiling the truth, but a rapid scanning of specific signs and situations prompting the best possible "moves," which in turn guarantee the continuation of the story.

The player makes the interpretations needed to continue playing the game. Often these interpretations will serve the gameplay in trying to gauge the optimal approach to the problems presented by the game. However, as Sicart (2009, pp. 111–112) points out, that is not the only goal the player may have. He focuses on the ethical dimension of decision-making, but the player may also have other relevant interests. For example, players of role-playing games may try to choose the most appropriate course of action for the type of person they are playing.

As a media for expression, games are not unique in requiring real-time interpretation. Other kinds of interactive media from interactive fiction to interactive works of art also require these kinds of interpretative techniques. However, games seem to be the only media where this hermeneutic is at the core of their being. One can imagine fiction and art without real-time hermeneutics, but not digital games as a medium. Some games do not require real-time interpretation, but most do.

Karhulahti (2012, 2014) takes the idea of double hermeneutic from the theory of social sciences and applies it to games. In the theory of social sciences this double hermeneutic refers to the way theories of social reality inform people of their surroundings and thus give them tools to change that reality. A theory that tries to describe social reality may end up changing it. Karhulahti (2012, p. 20) describes how this double hermeneutic applies to digital games:

> Yet the way in which players interpret videogames differs critically from interpreting most other cultural objects. As the act of game play—the ongoing interpretation of the game—involves configuring the videogame object itself, the altering interpretations affect not only the interpreter's understanding but the interpreted as well.

The double hermeneutic of games means that players need to continually make interpretations of the game, while also acting on those interpretations. Therefore, those interpretations are also turned into applications, as the player configures the game. However, games are also good at refuting wrong interpretations by making the player fail (cf. Paper 1).

There is also the limit-case of interpreting stories within games. That may require both real-time hermeneutics to keep up with the game mechanic and make relevant narrative choices, and the more deliberate game hermeneutics of

contextualizing the story elements into the larger cultural context. In that sense, ludonarrative games are a hermeneutically interesting example.[29]

2.4.3 Gadamerian Game Aesthetics

This chapter applies Gadamer's ideas on aesthetics to games. The game aesthetics discussed in this chapter do not deal with the traditional questions of beauty that are often associated with aesthetics. The approach here is instead to apply Gadamer's thoughts on truth in art to the issues of game studies. Instead of the question, "Are games art?" (Smuts, 2005; Tavinor, 2009), the focus is on what kind of truth games reveal about the world or what kind of "claim to truth" do games have (Gadamer, 1960/2004, p. 84).

What kinds of truths can games tell us? As long as the games in question are ludonarrative, they contain the same forms of expression as cinema and literature, bound into one object which shares qualities of both. However, games have properties that neither cinema nor literature has and these properties affect how and what kind of truths games express.

While interactivity is not unique to games, it does set them apart from most literature and cinema (see Paper 1 for more on interactivity). While the interpretative relationship between a work of art and the person interpreting it has in some cases been dubbed 'interaction' (Jensen, 1998, pp. 188–189), the term is perhaps better reserved for works such as games that are interactive in a different manner.

The interactivity of games means that encountering a game is different from encountering a static work of art. While all works of art have a chance to tell us something about ourselves, games, perhaps, excel in this. In order to play, the player must act, make choices and see what kind of consequences those choices have, while the game evaluates some of those choices (Leino, 2010, p. 127). Often those choices are trivial, but games also have room for exploring more complex choices, like for example ethical questions (Sicart, 2009, p. 123). Not all games support this equally, but again, ludonarrative games have the frameworks required to make ethical and existential questions meaningful.

However, games are also procedural. To play a game, the player must become a part of the process of playing.[30] While the player interacts with the game, the game also interacts with the player.[31] The processes of the game guide the player towards some and away from other actions and choices in a manner described by procedural rhetoric (Bogost, 2007). The processes of the game are not neutral, but contain values and persuade the player to see the world in a certain light. Through their processes games reveal truths about the world – in the

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[29] Karhulahti (2012, p. 24) discusses adventure games as interesting hermeneutic examples of games where time constraints are usually not an issue. He notes that it might be useful to understand them as interactive comics.
[30] Compare to "all playing is a being-played" (Gadamer, 1960/2004, p. 106).
[31] Sicart (2009, pp. 116–117) applies Gadamer in analyzing the ethics of computer games. He calls this to-and-fro movement of interpretation "the ludic hermeneutic circle".

Gadamerian sense of aesthetic truth. Some examples of games that use player choice and procedurality to express things are explored in chapter 4.2.2.

For Gadamer, the truths revealed by works of art are not stable and static but subject to change over the course of history. In elaborating on Gadamer's theory, Weberman (2000, p. 54) argued for a distinction between intrinsic properties that do not (or very rarely) change and extrinsic properties that are subject to change. Games complicate the issue further since even their intrinsic properties may change. Digital games have some fixed limits to their mutability, defined by the code that controls their execution. However, as the player is necessarily part of play, even the intrinsic properties do not guarantee that the contents of the game are always identical, or even significantly similar.

This becomes truer as the number of players increases. The interactions between players create emergent interactions that are next to impossible to fully predict from the constraints set by the code. Some interactions will be more likely than others: a game that revolves around shooting as a central mechanic will involve a lot of shooting on most plays. However, players may find ways of using the game in ways that the designers did not foresee (Myers, 2010, pp. 18–21). These ways of playing may become more important than the ways the designers initially intended.

The truths multiplayer games reveal about the world are even less in the hands of the creators than in most works of art. The social interaction between players may become more meaningful than the constraints and affordances created by the designers. The designers can try to take this into account, and design for emergence to begin with (Dormans, 2011).

This chapter has shown how the theoretical approaches used in this study fit together and complement each other. Together they help form a more comprehensive picture of how games should be understood. Now the combined theoretical framework can be used to discuss the results presented in the papers in more detail. The next chapter presents the results from the included papers.

3 RESULTS

This chapter elaborates on and synthesizes the results from the articles presented at the end of this study. The discussion here also draws on the previous theoretical chapters in a way that was not possible in the articles.

The three research questions answered in this study are presented in the introduction, but are repeated here for the sake of clarity. The three questions are:

1. What are the preconditions for understanding how games create meaning? (Paper 1)
2. How should games be defined and delimited? (Papers 2, 3 and 4)
3. How do ludonarrative games create meaning? (Paper 5)

The following chapters present answers to these questions.

3.1 Preconditions for Games Creating Meaning

As was discussed earlier in this study, games differ from other media by being procedural, interactive systems that have some media-specific ways of meaning-making (see e.g., Bogost, 2007; Kücklich, 2002; Wardrip-Fruin, 2009). This chapter will look at three important aspects of digital games as preconditions for understanding how they create meaning. The three aspects discussed are procedurality, interactivity and temporality (see also Paper 1; cf. Murray, 1997, p. 71).

Previous chapters have highlighted the ways games are procedural. Games are systems that consist of processes. Some of these processes may be simple, but they may also be as complex as the current computing power al-

lows.[32] An average digital game will have a variety of systems handling the different aspects of the game from feedback systems and graphics rendering to world simulation and AI mechanisms.

As was shown in the previous chapters, these systems are not neutral, but necessarily provide a certain perspective to things (e.g., Bogost, 2007, p. 45; Wardrip-Fruin, 2009, pp. 4–5). This should not be construed as negative, since this perspective is a requirement for understanding something in the first place (e.g., Gadamer, 1960/2004, p. 277). Instead of hoping for some kind of impossible objectivity in the processes we create and engage with, we can hope to achieve "informed subjectivity" (Kücklich, 2002, p. 101) that is aware of the perspective from which we approach things.

This is necessary since games are not just procedural but also interactive. The interactivity of games is essential to this study because "in games we have to interpret in order to be able to configure"(Eskelinen, 2001). It is impossible to interact with games without first interpreting them. In this sense, interpretation is the cornerstone of all gameplay (cf. Eskelinen, 2012, pp. 277–279).

However, interactivity is not a simple concept. It helps to consider the different senses in which the concept of interaction is used (see Paper 1; cf. Ryan, 2002, pp. 595–603). Jensen (1998, pp. 188–190) identifies three traditions on how interaction has been understood, originating in sociology, communications and informatics, and their related fields.

The sense of interaction related to sociology refers to two or more people communicating, which is a very human-centric way of understanding interaction. In communications, interaction is further divided into two different approaches. In the cultural studies tradition, interaction has often been used as a way of referring to how people form interpretative relationships with texts. The concept of interaction has also been used in analyzing how people relate to different media, particularly as the consumers of mass media. In informatics, interaction refers to the relation between humans and machines.

While this study is most closely related to the tradition of communications, it benefits the most from the way informatics understands interaction. Jensen (1998, p. 200) also warns against confusing interaction with interactivity. While the former may refer to many kinds of different relations between humans, and humans and machines, interactivity is best reserved as a quality of media.

Interactivity implies that the player has some amount of agency in playing. The player interprets the game, makes choices based on those interpretations and then returns to interpreting the situation based on the consequences of the choices made. The consequences are not always the ones the player envisioned when choosing something. The player may fail to reach the desired goal either through having a flawed interpretation of the situation or by failing to perform

[32] Even that might not be the limit. *Crysis* was known for being too demanding to run on the gaming hardware available at the time of its publication, with technology slowly catching up to meet the game's requirements.

the chosen action adequately. It is also entirely possible for the player to reach the goal by failing (Eskelinen, 2012, pp. 288–289).

For example, in a platformer game, the player may attempt an impossible jump and fail, but still end up on a platform that enables the game to continue. That situation could be described as a failure in both interpretation (which platform to aim for) and performance (how to get there) that nonetheless results in a successful resumption of the game.

The interpretive situation described above is very much like the one portrayed by the hermeneutic circle discussed earlier, except that the player has more power to determine the conditions of the interpretation. This makes the interpretation of games a combination of three different factors: the creative expression of the developers, the context of interpretation, and the player's choices and preferences. This is not radically different from interpretation in other situations, but the configurative power gives the player more space to explore the meanings in a game.

Interactivity also requires considering the issue of temporality. As was discussed earlier, it is important to distinguish between two types of interpretation: the interpretation that is necessary to continue playing the game (real-time hermeneutics) and the interpretation of games as objects with meaning (game hermeneutics).

While the second relies on the first, they have different purposes. Making interpretations while playing a game aims mainly at the continuation of play, while interpreting games outside the moment of play may range from the aesthetic to the critical. The most common example of the second kind of interpretation is probably conducted when reviewing games, although most reviews are more focused on technical execution and entertainment value than aesthetics or critique.

Interpretations that happen during play have time-constraints and are limited by the ability of the player to perceive their surroundings while playing the game. This might mean that there is not enough time to perceive everything that happens in the game, although a well-designed game will provide enough information for a competent player to 'go on'.

The idea that games happen in real-time can have misleading connotations (see also Paper 1). There are important exceptions: many games work with turns without set time limits. Asynchronous games are built on the idea that players can interact with the game when they have the time to do so. It is also possible that the game mixes real-time and turn-based temporalities. A game may proceed in turns, but while the game is processing the commands of the player, it may show animations of what is happening in the game, for example by showing the movements of units. The game is still broken into separate units of time, but those units show the passing of time.

Even games that happen in real-time may not be fast: glaciers melt and mountains erode in real-time. There are different speeds of real-time, so a more fine-grained understanding of temporality is needed to make sense of the issue. One basic distinction to be made is to separate different levels of temporality:

fictional time, game-world time and real-world time (cf. Zagal & Mateas, 2010, pp. 846–851). Real-world time can further be divided into the player's cognitive level and hardware level.

The fictional time of the game relates to the narrative or contextual elements within the game. For example, turns in the game might be called months. Taking 12 turns would then equal a year of fictional time. However, in game time that year might take only a few minutes, with turns flowing by as the player clicks on the button labeled "next turn".

The real-world time of playing through a game sequence might or might not equal the game time. A player having trouble with a particular sequence may need a dozen tries before completing a difficult level. However, in game time only the successful sequence of play might count as game time. On the player's cognitive level all the play-throughs would certainly make an impression, first by frustration and then with triumph.

Focusing on the hardware level is not really worthwhile for the purposes of this study. The hardware level is best measured in units, such as the gigahertz, that are too fast to affect the meaning-making in a concrete way. A notable exception would be a situation in which the hardware is too slow to run the game smoothly enough.

To sum up, games are procedural systems that often work in real-time but may not require fast reactions from players. The processes in games are not neutral, but have certain expectations and conditions built into them. Players make interpretations of the game and act on those interpretations, either succeeding or failing to reach their goals. Depending on the consequences of their actions, players then make new interpretations that take into account the earlier consequences. While interpreting in order to go on in the game, players also create supporting structures that enable them to make critical and evaluative interpretations of the game. This typically happens outside the moment of play when the player has the possibility to reflect on the game as a whole.

This chapter did not discuss narrative games or how narrative affects the meaning-making process of digital games. That will be the focus of a later chapter.

3.2 Defining Games

Up to this point this study has assumed that the reader knows what games are. They have been discussed from many different perspectives with the assumption that the reader has no trouble following the discussion, regardless of the fact that no clear definition of games has been provided.

This approach is in a sense very Wittgensteinian (2001). He thought that in everyday life we rarely have problems in understanding what words mean. It is only when a definition is demanded that we stumble and become unable to explain exactly what a word really means. The rest of this chapter shows how this affects our understanding of games (see also Paper 2).

There is no shortage of game definitions. Both developers and scholars have struggled to understand what games actually are, and this has resulted in a deluge of slightly different definitions. Some of these have tried to define only digital games (Esposito, 2005; Tavinor, 2008), while most try to define games in general (Abt, 1970, pp. 6–9; Avedon & Sutton-Smith, 1971, pp. 2–8; Costikyan, 2002, p. 24; Juul, 2003; Maroney, 2001; Myers, 2009; Salen & Zimmerman, 2004, p. 80, cf. 86–90; Suits, 1980; Waern, 2012; Whitton, 2009, pp. 20–28).

Often these definitions highlight the similar aspects of games: they are systems, have rules, are played and have goals. Sometimes some of these aspects are left out and some other features – like players, competition or detachment from everyday life – are brought to the fore. These are all valid definitions and this study will not try to refute any of them. On the contrary, this study considers all of them as potentially useful and fitting. This should not be read as an endorsement of an "anything goes" mentality. Instead, the focus is on what the definitions are doing and how well they are doing it.

The approach taken here is based on the philosophical research of Ludwig Wittgenstein (1953/2001). While he famously discusses games, his remarks are not to be taken as a theory of games. In short, Wittgenstein is not doing game studies. Instead, his interest in games is simply to provide an example on how language works. While his ideas about games might be of some interest, his ideas about language are much more useful, even for a games scholar. Wittgenstein's ideas have been applied in game studies before (Bojin, 2008; Treanor & Mateas, 2011, p. 8; Whitton, 2009, p. 20).

Wittgenstein's view of language is based on the basic premise that in most cases a word's meaning is its use (Biletzki & Matar, 2014). Words derive their meaning from how they are used by people, which means that the meanings may be contradictory, complex or vague. There is no single core of meaning for any word, but instead their meaning is composed of groupings of related meanings.

This argument is already present in Paper 2, so it will not be repeated here. However, a brief summary of the main results is in place to provide enough context for the discussion that follows.

Games are an example of the type of language-games presented earlier. There is no single core of what it is to be a game, but different types of games are related to each other through some shared features (cf. Bogost, 2006, p. 5). Wittgenstein (1953/2001, para. 67) called these relations family resemblances. Family resemblances are a network of relations where none of the objects share all their features, but all share some features with their nearest relations.

These family relations are understandable because they are embedded in what Wittgenstein (1953/2001, para. 241) called forms of life. Forms of life are all the social surroundings people live and interact in. These forms of life make the family resemblances meaningful by being embedded in different kinds of social relations and contexts.

Because the contexts in which games are played and discussed are different, it is only natural that there is a lot of variation among the types of games

people think of first when thinking of the concept of 'game'. This leads to different views on the things that are considered central to being a game, on different ways of including and excluding phenomena from the notion of games (cf. Juul, 2003, p. 39; Whitton, 2009, pp. 22–23). Interestingly, the act of excluding some forms of games necessarily creates borderline cases of things that are almost, but not quite, games. These are often revealing of the thought processes behind framing games in a particular way.

Role-playing games are an interesting example of game definitions in two senses (see Paper 3 for details). First, they are often seen as a borderline example of games, or simply as non-games (e.g., Juul, 2003, p. 39; Salen & Zimmerman, 2004, pp. 81–82). Second, they are also interesting in that both players and scholars have a hard time agreeing on what constitutes a role-playing game. For example, in their excellent attempt to define role-playing games, Hitchens and Drachen (2008, p. 13) view the gamemaster as a central aspect of role-playing games. Unfortunately, this leaves out examples that many participants of the hobby would be happy to call role-playing games.[33]

While role-playing games have traditionally had a gamemaster, it does not seem like a necessary part of role-playing games today. Role-playing game developers have built all kinds of games, questioning many different traditional aspects of role-playing games, including the role of the gamemaster.

This seems like a fortunate example of the process of definition discussed in the theory section of this study. Role-playing games are a cultural and historical phenomenon, and as such their definition will need to change as time passes by and new kinds of examples of role-playing games surface. This process is exemplified by the variety of different forms of role-playing games found today: when role-playing games grew out of war-gaming in the 1970s, neither live-action nor digital role-playing games were part of the phenomenon, but today it would be impossible to deny their existence as part of the practice of role-playing. Role-playing games are a prime example of why the definition of games needs to be a hermeneutic one.

3.3 Ludonarrative Games and Meaning

While a big part of this study has discussed things relating to games in a broad sense, this chapter focuses on the issues that are particular to ludonarrative games and meaning. To do so, matters relating to narrativity and narration are discussed here. As discussed earlier, ludonarrative games are a particular case of expressive games. While all games may be expressive in some sense, ludonarrative games are so in a particular way.

In Paper 4 it was discussed how the relation of games and stories has been theorized in game studies. The analysis was started out with the controversial

[33] For a discussion of examples, see Paper 3.

statement that "stories are just uninteresting ornaments or gift-wrappings to games, and laying any emphasis on studying these kinds of marketing tools is just a waste of time and energy" (Eskelinen, 2001). The conclusion reached was that there has been a variety of ways of reading this statement, framing it in an assortment of ways. However, a productive way of reading this statement was discovered and different examples, like *Super Mario Bros.*, *World of Warcraft*, chess, text adventure games and digital role-playing games were observed through this lens.

While story-elements are less important for games like chess, they become increasingly important as one comes closer to the ludonarrative end of the spectrum. Text games like *Varicella*, role-playing games like *The Witcher* or detective games like *L.A. Noire* would make little sense without their stories. They would most likely be unplayable, as all the narrative cues for understanding how to play them would be gone. For example, what would interrogating a suspect mean in a game like *L.A. Noire* if the narrative framework for investigating a crime would be removed? Actions like interrogation, accusation and investigation need a framework in order to make sense.

Some readings would claim that ludonarrative games are less 'game-like' than other examples, as they require the narrative aspects in order to be played – the core ludic structures are not enough to play them effectively. Instead, this study simply identifies them as games of one type, ludonarrative games, which are not fundamentally more or less valuable as games. It is not inherently problematic to recognize both chess and digital detective stories as examples of games. It is only problematic if we insist on there being a core for games.

Ludonarrative games have particular tools for expressing meanings. For example, they may employ the mechanic discussed above in relation to temporality. Games may span over years of fictional time, without the player having to grow old waiting for the game to finish. Jumps, pauses, summaries and ellipses provide games with tools to play with time in order to provide certain experiences for the player (see Paper 1). Textual cues like "Earlier…" in a *Spec Ops: The Line* cut-scene can show the player that the game is not played in sequence, hinting at what is going to be experienced later. Or games may intentionally mix the chronology of the narrative, like in the paranormal stealth game *Second Sight* in which the revelation of the actual chronology of the events is a significant plot device.

Games can also use narrative tools familiar from other media, like focalization, mode of narration and granularity (see Paper 5 for details). Because games are a multi-modal media, they can use all the forms of expression available to literature and cinema, but they also have expressive tools not available for the typical examples of those forms of expression.[34]

Focalization is one of the possible tools. Focalization is the perspective from which things are seen. This might not be the literal point of view, especial-

[34] I write "typical examples" because experimental cinema and literature play with interactivity, and can also use the techniques mentioned here. They are just more typical to games.

ly in games in which the point of view can be changed.[35] Instead, focalization refers to the narrative perspective: whose perspective is the game using. Despite the possibility of changing the perspective, games are still often focalized through a central character. Games use focalization in a variety of ways, and some have found ways of using changes in focalization to convey certain experiences. A typical example is the change of perspective that follows the character's death in many of the games portrayed from the first-person point of view: at the moment of death, the perspective floats outside the character's body to signify that the player has lost control of the character.

Games can use narration in a number of manners by combining different modalities in multiple ways. For example, the horror mystery *Alan Wake* combines voice-over and dialogue with texts found in the environment. All of these form parts of the narrative. But games also have at their disposal the possibility of using systems for storytelling. For example, *Dragon Age 2* begins with an unreliable narrator recounting to an interrogator of past events that the player simultaneously plays through. Because of the narrator's tendency to exaggerate, the player can easily mow through the hordes of attacking enemies in a cinematic fashion. The game mechanic corroborates the narration by having the player character cause large amounts of damage with their attacks and by providing access to special attacks. When the interrogator forces the narrator to stay closer to the truth, the player character's attacks become far less impressive.

Games portray things in different granularities. Granularity refers to how fine-grained or detailed some description, graphic, sound or simulation is. Games can vary all of them, choosing an appropriate – or intentionally inappropriate – granularity for each. These are often determined by the conventions inherent to the genre or the media. Some research in game studies uses the concept of fidelity in the same or similar sense than I use granularity (e.g., Breuer, 2010, p. 7; Möring, 2012, p. 2). The difference is slight, but relates to two things: First, fidelity seems to imply a simulation of a "real world" (Breuer, 2010, p. 7), while granularity does not rely on such relation. Second, fidelity is more related to visual studies and cinema, while granularity has its roots in narratology.

A good example of simulative granularity is how a significant portion of games handle character health. Health is often reduced to hit points, one quantity that is easily tracked, simulated, and visualized for the player (Jørgensen, 2013, p. 9, 41). Different attacks on the body are then quantified as loss of hit points.

First-person shooters are a good example, with different games quantifying the hit point loss from gunshots differently. Some games handle all damage from bullets in the same way: each hit is worth a certain number of points. A typical additional detail is to add damage to those shots that hit a character in

[35] The exact meaning of focalization is slightly different in cinema studies and narratology. Importing the contested concept into game studies is still in progress, even though some headway has already been made (Ciccoricco, 2012; Nitsche, 2005). This study follows the usage found in narratology more closely.

the head – headshots, as they all called in the gaming lingo. Some games take this logic further, simulating different amounts of damage to different parts of the body. For example, *Counter-Strike: Source* awards different amounts of damage from hits to the chest, arms, stomach, legs and head.

As was discussed above, choices about what and how to simulate are also rhetorical choices, since they determine what kind of things the game expresses through its processes. For example, the turn-based strategy game *Civilization IV* simulates pollution and its adverse effects on living in cities. *Civilization V* removes this feature, removing environmental considerations from the things the rulers of civilizations need to consider. Intentional or not, this has an effect on how the environment is viewed in the game.[36] A simulation can be more or less fine-grained and focus on different aspects of the system it is simulating. In the *Civilization* example, the simulation is less fine-grained in *Civilization V*, but this has other effects than simply making the game less complex than its predecessor.

Despite the variety of tools available, games tend to utilize only a small set of established forms of narration, perspective and choices in granularity. This is understandable, as the narrative language of games has developed over time and has become bound to certain genre- and style-related expectations. However, the few notable exceptions to these established forms reveal that it is possible to play with conventions and create new kinds of gaming experiences.

3.4 Results Summary

Games comprise a variety of different forms, which are clustered in groups that share qualities. For example, role-playing games share more qualities with larp than *Tetris*. This sharing of qualities can be understood through the concept of family resemblance. Our current concept of games should be understood as culturally conditioned and historical, and suspect to change as the culture around games changes. An example of this kind of change is the way role-playing games grew out of war gaming and then spread to digital platforms as technology enabled this change.

Games have elements that make them distinguishable from other media, but these elements may overlap with other playful or procedural forms of media, for example experimental literature. The distinction between games and other media is not clear-cut and it is conditioned by the surrounding culture that views some media or activity as games and others through a different lens. That distinction may soon become obsolete as the lines may be redrawn when interpreted from some future perspective.

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[36] The *Civilization* series of games is not a typical example of ludonarrative games, but the mechanic discussed is a good example of how the focus of simulation creates certain types of rhetoric effects.

The elements used to identify games include procedurality, interactivity and some special types of temporality. The systems perspective is typical to game studies and it highlights how games are complex systems that consist of processes. These processes codify a certain perspective into the world and may represent ideas to the player who enters an interpretive cycle while interacting with the game. This interpretation works in real-time as the player tries to understand the game through their earlier experiences and prejudices in order to continue playing. This real-time interpretation can then work as a platform on which the player builds an interpretation of the game as an object with cultural meaning.

Ludonarrative games are a particular form of games. They combine generally large amounts of narrative elements to ludic elements. Despite some earlier definitions, they should not be understood as a marginal or an exceptional form of games. Games contain many things and different forms of games can contain different things. In ludonarrative games, the narrative aspects are more prominent than in many other forms of games. This should not affect the evaluations of their value as games any more than the digitality of digital games does.

Ludonarrative games also have certain types of tools for meaning-making that they share with other forms of media, like literature and cinema. Perspective, granularity and narration can be used to convey certain meaning effects to the player. Using these as narrative tools gives designers ways of designing meaning into their games.

4 DISCUSSION

This chapter discusses the theoretical and practical implications of the research. The reliability and validity of the results is also discussed and some suggestions for future research are given.

4.1 Theoretical Implications

This study has three types of theoretical implications. First, it broadens the range of phenomena that can be analyzed with hermeneutic tools and provides an example of applying hermeneutics to games. Second, it presents a Wittgensteinian framework for approaching the theoretical discussion of defining games. Third, this study provides tools for constructing a theory of meaning for games. These three points are discussed next.

4.1.1 Hermeneutics Applied

Over the course of its long history, hermeneutics has been applied to many different things. As discussed in the theory section, it was originally conceived as a tool to answer the difficult questions evoked by the proper reading of holy texts, but has since been broadened to answer many types of questions relating to understanding and interpretation.

This study provides a hermeneutical perspective on games. While the perspective is not completely lacking in game studies, this approach is still relatively rare (e.g., Aarseth, 2007; Harviainen, 2008, 2012; Karhulahti, 2012, 2014; Lemke, 2010; Lindley, Nacke, & Sennersten, 2007). This study agrees with the previous researchers on the possibilities of the hermeneutic method. While it is not desirable to try to stretch hermeneutics to cover all possible phenomena, the research shows that games are a media that would benefit from a more hermeneutical analysis. Hermeneutics may not be the tool for all possible questions on

meaning and interpretation, but it certainly seems like a promising tool for understanding games.

Therefore, one of the theoretical implications of this study is to show one possible avenue for extending hermeneutics. There is a need for more real-time hermeneutics and game hermeneutics, as was discussed earlier. Real-time hermeneutics helps to understand how players make interpretations during play, and game hermeneutics helps to illuminate how games are understood as cultural objects with meaning. This study lays the groundwork for answering both of these interesting questions. The approaches to hermeneutics conceived while building a theory of game hermeneutics can also be applied to other subjects, thereby benefiting research outside game studies.

4.1.2 Understanding Games through Language-Games

The theoretical discussion on how games should be defined has been going on for a long time, building initially upon the works of play theorists (e.g., Avedon & Sutton-Smith, 1971; Caillois, 1961; Huizinga, 1938/1949). Since both the needs and the discourses of the participants have been very different, there has been little agreement beyond the fixation on some qualities that are seen as essential to games (e.g., Juul, 2003, p. 35; Salen & Zimmerman, 2004, p. 80).

This study provides a different approach, showing how the theory of language-games can help us understand games as being related through family resemblances. This approach enables seeing games as consisting of many related phenomena, and will be of help in the endless pursuit for the core of games. The core is nowhere to be found since it shifts in relation to what is being searched for. It is not helpful for the understanding of the medium to try to limit the cultural category of games in advance.

This approach is beneficial since it enables a theoretical openness to looking at games. Instead of trying to focus myopically on the core of games, the approach enables us to look at the similarities and to understand games in relation to other things. Seeing games in relation to experimental literature, sports, play and the wealth of digital applications can enhance the understanding of the different aspects of games.

This approach is also essentially hermeneutical, emphasizing how games are the products of their surrounding cultures and how they change together with those surroundings. Elevating the current understanding of what games are to a logical or ontological necessity needlessly emphasizes the current form of games over all the potential forms they could take. Digital games would have been impossible a century ago; augmented reality games became viable only recently. Predicting what future games are like is an exciting exercise, but such predictions should not be considered to contain normative definitions. Doing so would mean closing some doors even before they are built.

4.1.3 A Theory of Meaning in Games

By now, there should not be any doubt that games convey and express meaning in a variety of ways. However, the exact ways they do so is still relatively unexplored. Books had been in existence for centuries before hermeneutics was generalized into a formal theory of interpreting them. However, the questions related to understanding books did not end with the first theorists. Experimental literature still tests the limits of what it means for something to be a book, simultaneously challenging any theory that tries to explain how these texts work. Aarseth's (1997) theory of cybertexts is an illuminating approach, showing how most texts fit within few categories of a multitude of different options.

Games have been around for a very long time, in one form or another. Yet formal approaches to understanding meaning in games are relatively new (e.g., Sutton-Smith, 1959). The current form of digital games is even newer, having taken its first steps around the same time Sutton-Smith started to look into folk play and only becoming a major cultural force much later. In order to understand digital games, we need a theory of game meaning. Building such a theory is not a small task, just as it has not been a small task to build all the theoretical tools for understanding texts.

Game hermeneutics would be a good candidate for a theory of game meaning, since it can be built upon earlier theories of meaning that have been extensively theorized and validated (e.g., Bernstein, 1982; Gjesdal, 2006; Harrington, 2000; Lammi, 1991; Linge, 1973; Mendelson, 1979; Weberman, 2000). That would give the theory of game meaning a solid foundation without having to reinvent the wheel just for games.

While this study does not provide a general theory of game hermeneutics, it is a step along the way towards such a theory. By taking the tools and theories provided in this study, researchers can further the understanding of meaning in games and build upon the already established foundation instead of trying to build a parallel structure.

4.2 Practical Implications

The main practical results of this study are related to designing games. Using the theoretical concepts and analyses presented in this study will enable designers to more effectively design for specific meanings. The analysis also provides ways of seeing what kind of factors affect the ways people will interpret games. This chapter discusses meaning as a game mechanic, things that games are especially good at expressing and comments on designing meaning for games.

4.2.1 Meaning as a Game Mechanic

Meaning is not only something that is created as an outcome of playing games. It can also be part of the game, and work as a game mechanic. One of the ways this happens can be illuminated by discussing contingency in games.

In analyzing different types of contingencies, Malaby (2007, pp. 107–108) finds games to contain four different varieties: stochastic, social, performative and semiotic. Contingency is, following Malaby's (2007, p. 107) definition, "*that which could have been otherwise*, that is, that which was not necessary, in a philosophical sense" (italics in the original). In other words, contingency is the unpredictability of games. Semiotic contingency is of special interest here, but the other forms are introduced first in order to make the semiotic contingency easier to understand.

Stochastic contingency is the unpredictability produced by random processes or tools, like dice. It also covers the unpredictability introduced by unpredictable conditions, like equipment breaking, the weather changing and so on. Digital games often rely on random elements that would also be covered by stochastic contingency. Social contingency is studied by game theory, and it is the unpredictability introduced by our inability to be certain of what other people think or how they will react to situations. Performative contingency is created by the fact that humans tend not to perform equally well or predictably each time. In other words, actions may succeed or fail and it can be hard to predict which one of the outcomes will occur.

Semiotic contingency is produced by the possibility of interpreting things differently. Meaning is not a stable, inevitable thing, but may shift depending on the interpreter and the context of interpretation (e.g., Gadamer, 1960/2004, p. 302, 312). Malaby (2007, p. 108) limits semiotic contingency to interpreting the outcome of a game, but here it is broadened to include the moves, actions and events of the game that are subject to interpretation. This enables discussing meaning and interpretation as a game mechanic.

One of the games that employs semiotic contingency as a game mechanic is the card game *Dixit*. A game of *Dixit* begins with one player secretly choosing a card and then stating a word or phrase describing that card. Then every other player picks a card which they think fits the description and places it into a pile with the original card. The cards are shuffled, and those players who do not know the correct answer will try to guess the original card. The game is complicated by the scoring system, which rewards the players for describing their card in sufficiently vague terms: they only get points if some, but not all, of the players get it right.

The players are free to choose any phrase to describe a card by focusing on details in the card, making allusions or using metaphors. The cards have evocative and fantastic illustrations, making them a rich source for metaphoric interpretation. This also makes interpretation a central game mechanic. The only way to win the game is by interpreting how other people will see the cards and understand the verbal clues. Because meaning is such an integral aspect to the

way the game is played, programming a computer to successfully play the game would be a challenging task. It would require creating a system that is aware of the cultural context around the game and capable of reading allusions and metaphors – in other words, a hermeneutic machine.

However, there is a category of contingency that is both related to meaning and suitable for digital games: narrative contingency. It is best exemplified by the types of games discussed in this study, the ludonarrative games. Narrative contingency relates to the way a narrative will turn out in the end and what kind of twists will lead to that end. In most cases, the answer to this question is preset before the first word is read or the first frame is seen, but in interactive works like ludonarrative games the answer remains contingent. Usually ludonarrative games are not contingent in the sense that the outcome might be anything at all, but that narrative might have several endings or the ending may consist of a combination of several things.

Often the player has to work in order to access the whole story. Games hide bits and pieces of narrative in journal entries, off-hand comments by non-player characters and dialogue options players may never choose. The story is there, but the player has to earn the right to witness the entirety of it by examining the environment with enough attention to detail (cf. Fernández-Vara, 2011, p. 6). In this form, gathering information about the story is a mechanic itself with the narrative being a form of reward for the player. Usually this is reserved for the bits of narrative that are not central to understanding the story, but give a wider or deeper understanding of what is going on.

An example of this is the Heart in *Dishonored.* It is a mystical object, literally a detached heart that has the magical power to reveal secrets. When the main character, Corvo, points the Heart towards a person, the Heart reveals secrets about them. Knowing the secrets is not necessary for completing the game, but using the Heart gives out more background information about the people Corvo is dealing with. Some of these secrets help in understanding the choices the non-player characters make in the game narrative.

FIGURE 5 A narrative choice screen from *King of Dragon Pass*

A good example of the way digital ludonarrative games can use meaning as a game mechanic is the classic *King of Dragon Pass*. *King of Dragon Pass* is a narrative strategy game where you control a barbarian clan settling a new area. The game play consists of a combination of strategic choices (how much crops do I plant this year) and narrative choices (should the clan ring punish a young warrior for taking the law into his own hands). The narrative choices are presented as few options with the clan ring (chosen by the player) giving advice on what they think the player should choose (see FIGURE 5).

King of Dragon Pass is an interesting example, because it requires the player to adopt a hermeneutic stance to the game world. It is not enough to understand the situations in the game, but they must be understood from the perspective of the Orlanthi clan ruled by the player (Orlanthi is how the clan self-identifies their culture). Trying to lead the clan like a group of modern citizens will lead into frustration and failure. In order to succeed, the player must learn and accept the Orlanthi values the clan lives by. How many cows must be paid to the relatives of someone killed outside battle? What is a proper punishment for adultery? Or murder? What about defiling a temple, when the gods can and will punish the whole clan for the actions of the few?

The player may start the game with an assumption on how law and justice works and how people should govern themselves, but in order to finish the game successfully, they must learn what it is to be an Orlanthi. The player starts with prejudices learnt from the modern world, but must correct them in a hermeneutic circle as they learn about the game and its world. Learning what it means to be an Orlanthi is as central to playing *King of Dragon Pass* as learning to aim a gun is to playing many FPS games.

4.2.2 Things That Can Only Be Expressed With Games

In addition to the features that games have in common with other media, they are also apt in expressing ideas in particular ways. One of the ways this works is through what Bogost (2007, p. 85) calls the rhetoric of failure:

> If procedural rhetorics function by operationalizing claims about how things work, then videogames can also make claims about how things *don't* work. (italics in the original)

The rhetoric of failure works by creating situations that cannot be solved or won. The player may try, but the game is written into such form that winning is either impossible to begin with or that success only makes the game harder until it becomes too hard to beat. Weise (2003, pp. 10–11) describes such a situation in *Fallout 2*, simultaneously showing the unique rhetorical effect this has:

> Although this entire sequence has a satirical appeal, it becomes rather scathing in the conversation with "Vice-President Bird" an obvious parody of real life Republican Vice-President Dan Quayle. The rule-based system here is the conversation itself. The joke is that trying to have an intelligent conversation with Mr. Bird is itself a game… a game that's impossible to win. The player can to try [sic] reason with him by choosing seemingly "correct" responses in the conversation, but every avenue disintegrates into non-sensical rambling by the Vice-President, and the player's options are reduced to responses like "What the hell is wrong with you?" or "You're out of your mind!" The real gag, however, is that all Mr. Bird's silly responses are actual statements made by Vice-President Quayle during his time in office. In other words, what the designers of Fallout 2 did was make a "Dan Quayle AI" which, the player would inevitably discover, was a raving loon unfit for any sort of political office. Of course, the fact that the player can only discover this via interacting with the Vice-President ads the finishing touch which makes this social commentary unique to videogames.

Of course, it would be possible to make this argument in other media too, by for example citing Quayle and then arguing that the quotations are nonsensical. Yet this would constitute a different kind of argument from the one *Fallout 2* presents, which makes the player experience the frustration of trying and failing to make sense of Vice-President Bird.

Weise comments that this form of satire is unique to videogames, but that again depends on how videogames are framed. It could also be possible to use the rhetoric of failure in other interactive media, like electronic literature. However, in that case we might also be willing to call such literary works games.[37]

Other games use a similar rhetoric. The anti-advergame *McDonald's Video Game* by Molleindustria has the player in charge of the fast-food chain McDonald's, controlling all aspects of the business from agricultural production and

[37] Crookall, Oxford and Saunders (1987, p. 152, 161) argue that simulations are a safe way of experiencing failure. In contrast, they do not see games as simulations exactly because there are consequences for failure in games. They seem to be mostly concerned with games like poker, where losing means losing money. Other scholars argue that part of why games are enjoyable is exactly because they are a safe place to fail (cf. Juul, 2013, p. 4).

FIGURE 6 Happy customers in *McDonald's Videogame*

slaughtering of animals to food service and marketing (see FIGURE 6). The game promises that through playing it,

> You'll discover all the dirty secrets that made us one of the biggest company [sic] of the world.

The rhetoric of failure shows the player how running McDonald's in an ethical manner is impossible. In order to make the company profitable, it is necessary to employ tactics from an array of unethical means from media spinning and firing angry employees to giving growth hormones to the cows and clearing an indigenous tribe's village to make room for cattle and soy fields.

Again, this is different from criticizing the fast-food chain in any other media. Extensive written reports about the harmful nature of their business practices could be written, but these would have a different effect than experiencing the rhetoric of failure first hand. The player may start the game with noble intentions of running the business in an ethical manner, but they will need either to compromise their morals or see the company fail. The rhetoric of failure argues that McDonald's is run in an unethical manner because there are no other options. Experientially that is significantly different from reading a written criticism or seeing a documentary about the practices of the fast-food company.

Another game that uses the rhetoric of failure is *September 12th: A Toy World*.[38] It uses a very simple, yet effective, rhetoric. Groups of civilians walk

[38] The introductory text in September 12th states that it is not a game, but a simulation. For the current purpose, the distinction is irrelevant.

FIGURE 7 The aftermath of a missile attack in *September 12th*

around in a town that also contains armed figures identified as terrorists (see FIGURE 7). The player controls a targeting reticule that can be used to launch missiles into the town. If the missile hits a terrorist, the terrorist is killed. However, any civilian hit by a missile is also killed in the explosion. When other civilians happen upon the bodies of dead civilians, they bow down to mourn those that died – and turn into terrorists themselves.

Because there is a slight delay between clicking a mouse button and the missile hitting its target, and because the explosion is bigger than a terrorist, it is almost inevitable that the explosion kills more than just the intended target. Any attempt to quell the flood of new terrorists created by the effects of the previous attack only ends up creating more terrorists. The rhetoric of failure argues that attempting to use missile strikes against terrorism creates more problems than it solves. The player may again start with the best of intentions, only to realize that the tools at hand do not allow for the problem to be solved. The only solution is to adopt other tools.

The rhetoric of failure is not the only form of expression that is typical of games but rarely found in other media. Paper 5 describes a form of focalization that provides the player with access to the player character's actions, but not to their motivations. The game can present clear goals for the player to pursue, while reserving some of the reasons and justifications for doing so. This allows games to make the player feel complicity in a way that other media have a hard time producing. This could be seen as a variant of the rhetoric of failure, tentatively called here the rhetoric of ethical failure.

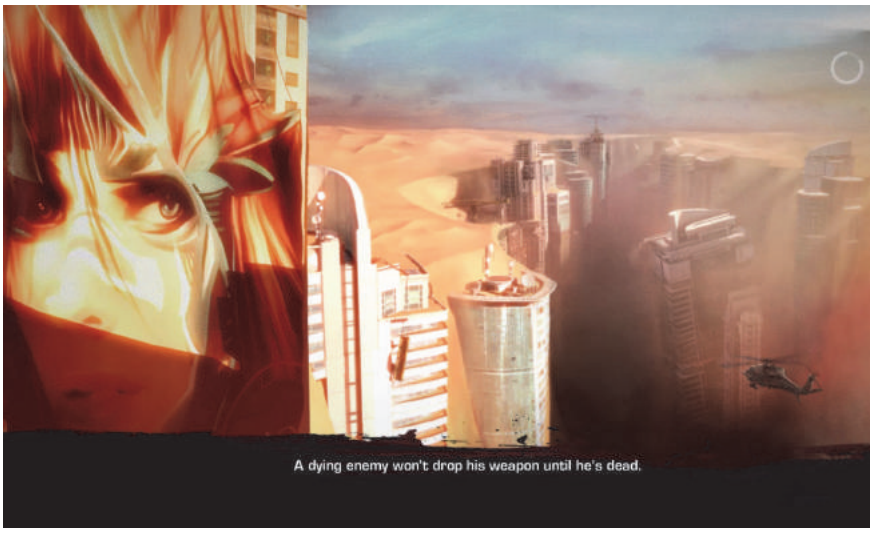

FIGURE 8 A loading screen from *Spec Ops: The Line*

For example, the military shooter *Spec Ops: The Line* follows Captain Martin Walker's slow descent into depravity as a series of unavoidable and necessary steps. The game tries to turn the tropes of modern military shooters into a narrative of ethical failure (Heron & Belford, 2014, pp. 16–18). The enemies attack in endless waves and must be killed in order to proceed. Walker and his companions start out with tactical precision and the goal is self-defense, but eventually they become accustomed to the killing and finally revel in it. Walker's statements of neutralizing an enemy turn into aggressive shouts. Violence becomes an end, not just the means. Heron and Belford (2014, p. 18) describe the distinction between the player's intentions and the actions they guide Walker to make:

> The nature of the game is such that it becomes an intensely disquieting experience after a while. We do not control Walker—at best we point him in a direction. We are responsible for driving him, and yet we may find ourselves repulsed by what he does.

However, the game is not content with maintaining that distinction. Soon it starts hinting that the player is complicit in Walker's actions by guiding him deeper into the violence. This is done through meta-textual commentary on the game's loading screens (see FIGURE 8). In the beginning of the game, the loading screens contain standard textual summaries of the events of the game, but by the end of the game, their tone has shifted. One loading screen asks:

> How many Americans have you killed today?

It questions the actions taken for Walker's quest, which was originally about gathering information, then about saving American lives and finally only about finding absolution through revenge. A later loading screen accuses:

> This is all your fault.

Since the comment is meta-textual, it is directed at the player, not just at Walker. In addition to the change in tone, the text starts directly questioning the player's choices. The loading screens use the meta-textual level to comment on the ethics of killing:

> To kill for yourself is murder. To kill for your government is heroic. To kill for entertainment is harmless.

By stating that all the killing done in the game is harmless, the game ironically questions the player's actions. Is the killing harmless? The game never provides an answer, but by posing the question to the player it forces them to ponder the ethics of the game. The commentary is very aware of the medium that is being used for delivering the comments:

> The US military does not condone the killing of unarmed combatants. But this isn't real, so why should you care?

Videogames are not real and thereby the killing does not matter, the game again suggests with an ironic undertone. Heron and Belford (2014, p. 18) argue that the only ethical choice left to the player is to stop playing, which can also seem like a problematic argument for a videogame to make.

For the purposes of this study, it is irrelevant what the ethics of *Spec Ops: The Line* is. The important part is that it seems to be posing an ethical question, and it does so in a way that is hard or impossible to do in another medium. While *Spec Ops: The Line* relies on the narrative structure of Joseph Conrad's *Heart of Darkness*, as a ludonarrative game it necessitates complicity from the player in a way that is impossible to achieve in literature.

In order to make its point, *Spec Ops: The Line* uses a sophisticated approach that is aware of operating on several levels at the same time. Narratively, it follows a storyline that has already been captured in multiple media, relying both on the cultural reading of the events it portrays and the allusions to earlier depictions of similar events. In a reference to American military campaigns, the game is set in the Middle East instead of the Africa of *Heart of Darkness*.

However, as shown by the quotes above, the game is also very conscious of its nature as a game. It uses the standard mechanic of the games of its genre and a set of familiar tropes from cover-based shooting to endless waves of interchangeable enemies that seem to appear out of nowhere. The main character is a standard American hero-soldier that commonly stars in the military shooters. *Spec Ops: The Line* uses these genre assumptions consciously, highlighting the assumed heroic nature of these kinds of quests in one of the loading screens at the end of the game:

Do you feel like a hero yet?

Considering the actions the player has to take in order to reach that point in the game, there is only one possible answer. The use of multiple layers of meaning, from the cultural status of the American hero in the Middle East to the nature of the heroic main character in most action shooters, necessitates a complex hermeneutics that takes into account all these levels and their interplay. The horizon of interpretation is necessarily complex, as it must account for a diverse set of cultural contexts from military politics to videogame tropes. It is also difficult to see this message conveyed in any other media, partially because it is a message so wrapped up in being about videogames. However, this does not restrict it completely into the confined territory of things only relevant to videogames, as it manages simultaneously to engage in a discourse about the nature of choice, heroism and morality.

4.2.3 Designing Meaning

Games do not present or convey certain meanings or values simply because they are games, although the structures of the media affect the ways those meanings or values can be transmitted. Games embody the values and choices of the people that made them, the culture that surrounds them and the prejudgments of the people playing them.

Being aware of how interpretation works helps to better design meaning. This includes an understanding of how cultural prejudices work and how tradition can be both a source of knowledge and a limit to one's perspective. This study has not focused on the practical design challenges, so not many practical tools for design have been introduced. Instead, it has focused on the conditions for interpreting games, leaving the design of practical tools to others. However, based on the research done here, some guidelines and suggestions can be given.

One of the central strands going through this study is the argument that trying to understand all games through a single filter is going to do more harm than good. Games are a cultural category that is constructed of many types of phenomena, and not all of them can be understood in the same way (see Paper 2). Therefore the guidelines given here pertain mostly to ludonarrative digital games and less to other forms of games. The suggestions should be framed through language-games: the more a game resembles a ludonarrative digital game, the more likely it is for the suggestions to remain valid.

The five guidelines or theses for designers discussed in this chapter are:

1. The designer does not get to choose what a game means.
2. The context of interpretation matters.
3. Interpretation happens in a circle and prejudices matter.
4. Borrowing techniques from other media is possible, if you know how to adapt them.
5. Games are better suited for expressing some things than others.

First, the designer has some influence on what a game will mean, but they are not the sole authority on its meaning. One of the things Gadamerian aesthetics shows is that meaning is not something predetermined by the artist, but something that grows out of the interplay between the artwork, the interpreter and the context (Gadamer, 1960/2004, p. 115, 157). Asking the artist what they meant with an artwork can be informative, but they do not have the final say on the work's meaning.

This is even truer with games for two reasons. Firstly, games are usually made in teams. Even the games with auteur-designers who try to control the overall vision are products of collaboration. It is a combination of many visions, all building into one product. If the game is well made, those visions match and produce something greater than the sum of the visions of individual makers. If not, the result is a conflict of clashing visions, all building up their own meanings, which may nonetheless result in something that is interesting in its own way. Additionally, the player(s) will necessarily act within the game and affect the way it plays out (cf. Sicart, 2011). Trying to limit this in service of some greater vision will not end well, but can instead act as a source of meaning if used well. The previous chapter gives some examples on how that might work.

Second, the context of interpretation makes a big difference on how the game will be interpreted. The context does not consist only of the physical location of play, but also of the cultural and historical surroundings. Playing *Pac-Man* in a museum is significantly different from playing it in an arcade when it was initially released. Playing it in a Japanese arcade will be different from playing it in an American or a Finnish arcade. The game may be the same, but the meaning of playing it is not.

The context of interpretation also includes application, which is the purpose of the interpretation (e.g., Gadamer, 1960/2004, p. 305). A cultural critique of a game will contain different things than a game review, and understanding the differences in application will help in understanding how to relate to these texts. This matters for the designer since they cannot control how the game will be interpreted. Instead, they must be willing to welcome, or at least accept, the multitude of different interpretations. Understanding the purpose of different interpretations can help in forming expectations of what they will say.

Third, interpretation does not happen in an instant or only after playing. Instead it takes place throughout the game. The player enters the game with prejudices formed by their previous experiences of games and life, and then tests these prejudices against the game to see whether they hold true. This can be used for surprises, like in *Spec Ops: The Line* where the game initially confirms the player's prejudices, but then uses those same prejudices to subvert the initial interpretation of the game. The experience will be significantly different with a different set of prejudices. For this reason, making assumptions about the player can be dangerous. Incorrectly identifying the cultural prejudices of the player can make the experience of playing a game confusing or even offensive.

Furthermore, understanding the cyclical nature of interpretation helps in designing meanings that gradually unfold to invoke the desired effect. Rather than building upon the assumed initial prejudices of the player, designers can intentionally use the structure of the hermeneutic circle to first introduce elements that are then used to build upon later. This can also be formulated in the inverse: players will necessarily use what has happened previously to frame what happens later, whether this was intended or not. Good design will take this into account.

Fourth, the designer does not need to re-invent the wheel when making ludonarrative games. There are well-established techniques and methods that work in cinema and literature, and that can be also used in games. For example, game designers may directly benefit from understanding perspective, narration and granularity, and how these contribute to the meaning conveyed by the game (see Paper 5 for some examples). These techniques do need some translation in order to work effectively in a new media. They were not built with games in mind and so may not accurately reflect what happens in games. That is why we need research on how the translation is done.

Fifth, although game designers can borrow tools from other media, games are better suited for expressing some things than others. Because of the procedural and interactive nature of games, they work best when the expression tries to use these features instead of going against them (cf. Bogost, 2007, pp. 44–46). The examples in the previous chapter all use the fact that they are games as a way of conveying the meaning they try to convey. If they were trying to make the same argument in some other media, they would be better off using a different rhetoric. Games are better at conveying things that consist of processes and parts that move to-and-fro and that need to be interacted with in order to be grasped. Conversely, games are worse when it comes to strictly linear narratives and conveying large amounts of factual information. This has direct consequences for example on how educational games should be designed.

Overall, these five points mean that games are similar to other media when it comes to meaning, but they still have some factors that make them sufficiently different to require designers to think differently than authors or directors.

4.3 Evaluation of the Results

This study presents a new approach, combining philosophical hermeneutics with game studies. This favors certain aspects of games, most importantly structures that relate to meaning. However, the approach marginalizes other aspects, like players, material components and visual representation. It does not follow that the results are not applicable beyond the examples discussed here, but there are certainly limits to the possible application of the results.

The approach taken in this study relies on several perspectives that share a common goal but vary in methods. Papers 1 and 2 focus on understanding

games on a very general level. They comment on what games are from a hermeneutical perspective. Paper 3 applies those insights into a particular case of role-playing games. Paper 4 takes a meta-approach, applying hermeneutics to the discussion on games and narratives, instead of commenting games directly. And finally, Paper 5 focuses on specific aspects of ludonarrative games and shows how they work as tools for meaning-making.

The papers move on three levels by commenting games, specific aspects of games and the academic discussion on games. While this provides a varied and comprehensive overview of the issues discussed here, it leaves gaps that need to be filled in future research (cf. 4.4). As was already mentioned above, this study does not provide a comprehensive theory of game hermeneutics, but focuses on providing a foundation that can be built upon with further research. Additionally, there are some possible pitfalls and challenges for the approach taken here. These are discussed next.

4.3.1 Combining Philosophical Hermeneutics and Wittgenstein

This study revolves mostly around two philosophical figures, Hans-Georg Gadamer and Ludwig Wittgenstein. While it is argued here that their thinking is compatible, even complementary, this argument is not explored in great detail. The argument is based on established work (Connolly, 1986; see also Paper 2), but research might reveal that there are aspects to their thinking that would be difficult to reconcile.

However, while the possibility of irreconcilable differences remains, this study is not concerned with an exegesis on either Gadamer or Wittgenstein. Unless further research shows that there are some contradictions in their approaches that would undermine this study, the exact nature of how their approaches are compatible is not relevant regarding the argument presented here. Considering that both thinkers view language as inherently social, it is unlikely that such incompatibilities exist. While their theories of language and interpretation remain interesting in their own right, applying and further developing their research is the primary focus of this study.

4.3.2 Applying Text-Theory to Games

As discussed in the theory section of this study, hermeneutics has traditionally been a theory of interpreting texts. It started with holy books and then gradually extended to all kinds of texts. There should be serious reservations about using a theory of texts to understanding something like games because of the differences between the two media. A theory of texts applied to games needs to account for the interactive, procedural parts of games (e.g., Aarseth, 1997). Furthermore, when applying textual theory to games, the addition of visual representation needs also to be addressed (Treanor et al., 2010, pp. 225–226).

Fortunately the hermeneutics invoked here is not simply of the textual variety. Gadamer's philosophical hermeneutics makes claims mainly about three things: the structure of understanding in general, historical understanding in

particular and the ontology of experiencing artworks. The hermeneutics of history is of lesser interest in relation to this particular study, but both the hermeneutics of understanding in general and the ontology of artworks informs the way this study approaches games. Additionally, as was mentioned before, this is not the first time scholars of hermeneutics have extended hermeneutics beyond texts. Researchers like Ricoeur and Habermas have studied subjects like metaphor and communication with the aid of hermeneutic theory (Habermas, 1984; Ricoeur, 1975/1993).

However, this study must still meet the challenges of applying hermeneutics to a multimedial, interactive medium. As mentioned above, this study relies on Aarseth's (2007, p. 132) concept of implied player, in turn borrowed from the implied reader theorized in literary studies. The approach limits this study by making the player a theoretical construct rather than an empirical part of the research. Actual players are complex and contradictory beings, while the implied player is a more defined collection of actions and expectations. Therefore, the arguments presented here should not be read as claims about empirical players but as claims about games and their modes of operation.

4.3.3 Application to Games without Narratives

This study has focused on ludonarrative games, but some of its insights can be applied to other games. Ludonarrative games are not the only games that need to be interpreted (cf. Begy, 2011). However, using the theories presented here to games that are not ludonarrative requires some special precautions.

The analysis of the hermeneutic process largely relies on the concept of ludonarrative games. Therefore, it will not be pertinent to abstract games that lack the cultural and narrative aspects on which this analysis has focused. Instead, analyses of abstract games need to concentrate more on the form and the processes of the game (Treanor et al., 2010; Treanor & Mateas, 2011). This does not make hermeneutic analysis useless, just less relevant.

The Gadamer-based remarks on the structure of understanding are significant to all games since they are philosophical arguments about human understanding, not about games. Additionally, the discussion on game aesthetics has aspects that are relevant to all kinds of games. The historical nature of interpretation will necessarily affect how games will be interpreted as part of culture. This is true even of abstract games if they take on a cultural significance, like for example *Go*.

The language-game approach taken to game definitions in this study is also relevant to all kinds of games. Regardless of their exact features, games will be grouped based on those features and the similarity of those features. What are considered important features for certain types of games is a cultural, contingent quality.

4.3.4 Ludo-Narratological Hermeneutics

This study combines game studies, hermeneutics and narratology in a manner that leaves all of their nuances and distinctions mostly unexamined. However, in building a solid foundation, those distinctions can be crucial. It would have been also possible to focus on simpler examples by analyzing only the hermeneutic dimensions of games while leaving the narratological unexamined. As a hermeneutic theory of games, it would have been narrower, but perhaps more solid.

Instead, the approach taken in this study combines both hermeneutic and narratological approaches in order to cover a larger territory, thereby gaining in breadth and applicability. Observations on meaning-making tools would have been also more limited with a strictly hermeneutic approach, as that aspect of the study relies heavily on narratological studies.

However, combining the study of narrative to hermeneutics is hardly unique (cf. Pettersson, 2009). One of the key hermeneutic philosophers, Paul Ricoeur, has combined his work in hermeneutics with writing about narrative and narrativity (Dauenhauer & Pellauer, 2014; e.g., Ricoeur, 1981, pp. 274–296). Using Ricoeur's philosophical work has already been adopted in games studies for examining game narratology (Chen, 2014).

4.4 Recommendations for Further Research

Future research can build upon the theory established in this study to further the understanding of interpretation of games. This can be done in several different ways.

The hermeneutic theory discussed in this study focuses mostly on the philosophical hermeneutics of Gadamer. However, he is not the only hermeneutic thinker whose work can be applied to games. The works of hermeneutic philosophers like Habermas and Ricoeur can also be relevant (e.g., Balzer, 2011; Harviainen, 2012). Integrating the different branches of hermeneutic philosophy into game studies would broaden the scope of available analytical tools. Ricoeur's (1975/1993) work on metaphor and Habermas' (1984) research into communication would both surely present insights not discussed in this study. It is also likely that, despite their age, the works of classical hermeneutical thinkers (e.g., Schleiermacher, 1838/1998) would contain theoretical insights that would be possible to apply in game hermeneutics.

Combining the perspectives of different hermeneutical approaches would be the first step in building a more comprehensive theory of game hermeneutics. However, that would only be a single, albeit necessary, step in that direction. Other compulsory steps would still need to be taken. Research into game hermeneutics will also need to focus on issues that are specific to understanding games. In many aspects, games are like other media, but they have some specific features that they do not share with most other types of media. For example,

a better understanding of the implied player (Aarseth, 2007, p. 132) and its effects on the preconditions for understanding the ways games create meaning would benefit the theory of game hermeneutics. Perhaps taking the example of procedural rhetoric would help here (e.g., Bogost, 2007). As a theory, it manages to combine the long tradition of rhetoric with a new approach to procedural systems.

The designers of games would also benefit from building more tools for creating meaning. The theoretical work on perspective, narration and granularity helps in using those particular aspects of games to create the meanings the designers desire to convey. However, those three aspects are only a limited part of the creative palette games can utilize. Further exploration of the possibilities of using creative tools from other media, and applying them to ludonarrative games, would require more research. Promising avenues need to be distinguished from dead ends. Furthermore, there are obstacles that need to be overcome for the translation of meaning-making tools from other media to games. The differences between games and other media need to be bridged with theoretical work.

However, that is not the only possible way of broadening the approach taken here to game hermeneutics. Another possible approach would be to try to expand game hermeneutics beyond ludonarrative games. That would require a careful analysis of the critical aspects of the context that survive in more abstract games. Abstract games do not have the ludonarrative structures analyzed here. The analysis of more abstract games would be possible, perhaps, by focusing on Gadamer's (2004) philosophical arguments on the ontology of understanding, although that is certainly only one possible approach.

YHTEENVETO (FINNISH SUMMARY)

Digitaaliset pelit ovat suhteellisen uusi media. Ne ovat olleet olemassa nykyisessä muodossaan jo yli puoli vuosisataa, mutta ne nousivat merkittäväksi osaksi kulttuuria vasta paljon myöhemmin. Kuten kaikki aiemmat mediat, pelit ovat joutuneet etsimään omaa kieltään. Jotkin aiempien medioiden käyttämistä ilmaisutavoista ovat yhä käyttökelpoisia, mutta pelit mahdollistavat myös uusia ilmaisumuotoja.

Tämä artikkeliväitöskirja tutkii, miten pelielementtejä ja tarinoita yhdistävät digitaaliset pelit muodostavat ja välittävät merkityksiä. Väitöskirja sijoittuu osaksi monitieteistä pelitutkimuksen tutkimusalaa. Tutkimuksella on kaksi tavoitetta: luoda perusteita teorialle pelien merkitysten ymmärtämiseen ja tarjota pelisuunnittelijoille työkaluja, joiden avulla pelien merkitysten käsittely ja suunnittelu on helpompaa.

Tutkimuksen lähestymistapa on filosofinen ja nojaa ensisijaisesti filosofiseen hermeneutiikkaan. Hans-Georg Gadamerin hermeneutiikkaa käytetään vertailemaan pelien merkitysten muodostusta siihen, miten taidetta tulkitaan. Lisäksi pelien tulkintaa analysoidaan hermeneuttisen kehän perusteella. Tutkimus käyttää myös Wittgensteinin kielipelin käsitettä esittämään, miten pelien määrittely tulisi ymmärtää. Nämä filosofiset lähestymistavat yhdistetään pelitutkimuksesta lainattuun teoriaan prosessuaalisuudesta, narratiivisuudesta ja pelaajista.

Tutkimus osoittaa, että tarinallisia elementtejä sisältävät digitaaliset pelit ovat prosessuaalisia järjestelmiä joita tulkitaan sekä pelaamisen aikana että osana ympäröivää kulttuurista kontekstia. Tulkinnan tulosta eivät määrää yksinomaan pelin kehittäjien pyrkimykset tai pelin tapahtumat. Niin kauan kuin peliä voidaan pelata uudella tavalla tai uudessa kulttuurisessa kontekstissa, siitä tehtävät tulkinnat voivat muuttua. Lisäksi tutkimus osoittaa, miten tarinalliset digitaaliset pelit voivat käyttää muissa medioissa käytettyjä ilmaisukeinoja, esimerkiksi lainaten perspektiivin käytön elokuvista.

Tämä tutkimus antaa myös ohjeita, joiden avulla peleihin voidaan pyrkiä suunnittelemaan merkityksiä. Tutkimus osoittaa, miten merkitystä voidaan käyttää pelimekaniikkana ja miten pelit voivat ilmaista asioita, joita olisi joko erittäin haastavaa tai mahdotonta ilmaista muissa medioissa.

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ORIGINAL PAPERS

I

DO WE NEED REAL-TIMEHERMENEUTICS? STRUCTURES OF MEANING IN GAMES

by

Jonne Arjoranta, 2011

Proceedings of DiGRA 2011 Conference: Think Design Play

Do We Need Real-Time Hermeneutics? Structures of Meaning in Games

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ABSTRACT
Games differ from most other forms of media by being procedural and interactive. These qualities change how games create and transmit meaning to their players. The concept of "real-time hermeneutics" (Aarseth 2003) is analysed in order to understand how temporality affects the understanding of games. Temporal frames (Zagal and Mateas 2010) are introduced as an alternative way of understanding time in games.

Keywords
Games, hermeneutics, interpretation, temporality, meaning

INTRODUCTION
Interpretation is a necessary part of how we experience all media. Texts, pictures and videos do not simply show or state something, but they present different possibilities for interpretation. They mean something. What that something is depends on the context of the interpretation (Duchamp's *Fountain*, a urinal in an art gallery), on the person doing the interpreting (a historian of war as opposed to a general commanding an army) and on the object being interpreted (a piece of computer code, an advertisement, a holy text).

Different cultural and historical contexts influence how things are seen, and subsequently, how they are. Theories and paradigms of interpretation are also part of the context of interpretation. These contexts change; so does the meaning of the object. Consider the swastika, a religious symbol whose meaning changed drastically with the events surrounding the Second World War. Not all changes are this drastic. The meaning of all cultural objects is in a (usually) slow, but constant state of flux.

People approach objects of interpretation with different purposes. These purposes inevitably change what the possible meanings of the object can be. Interpretation always includes application, or how the understanding gained from the interpretation is going to be used, and to what end (Gadamer 2004). Application guides the process of interpretation towards some ends, and away from others.

Objects lend themselves to different forms and amounts of interpretation. A statement of propositional logic enables fewer interpretations than a work of art. With respect to meaning, poetry is more ambivalent than prose, which is more ambivalent than scientific literature. This is not a measurement of value, but simply an observation of different qualities in different forms of expression.

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Understanding how meaning is constructed in games enables us to, not only understand games better, but to construct better games. Game development is not only graphical development and coding – creating narratives and worlds of meaning is also important. This is especially central to developing serious games, which often deal with persuasion (advergames, political games, persuasive games etc.) or education (simulations, training scenarios, teaching games etc).

This paper analyses how games as an object of interpretation change this process of meaning-making. This requires understanding the specific properties of games and how they differ from other objects of interpretation, especially other forms of media. In order to do this, the following questions are considered:

1. What is interactivity and how it is understood? How does this affect the understanding of games?
2. Can the concept of "real-time hermeneutics" used in clarifying the meaning-making in games?
3. How can temporality and the concept of real-time further be analysed?

First, the question of how games differ from other forms of representational media is explored.

GAMES AS PROCEDURAL SYSTEMS

Games are a form of procedural media: they are systems with certain internal logics. Salen and Zimmerman (2004, 50) define systems as follows:

> A *system* is a set of things that affect one another within an environment to form a larger pattern that is different from any of the individual parts.

Games as systems can be framed in several different ways, each emphasizing certain aspects of the game. The internal logics of the game are a way of seeing them as (more of less) logical systems. But one can also consider the experiential and cultural aspects of these systems (Salen and Zimmerman 2004). Experiential aspects are those aspects that are created in conjunction with the player (interaction) and cultural aspects are those that relate both to the culture in which the game was created and in which it is played (context).

Games are not just any kinds of systems: they are procedural systems. As Bogost (2007, 4) writes:

> Procedural systems generate behaviors based on rule-based models; they are machines capable of producing many outcomes, each conforming to the same overall guidelines. Procedurality is the principal value of the computer, which creates meaning through the interaction of algorithms.

Games are these types of procedural systems. The internal logics of games are based on algorithms, which create changes in the structures within games. This in turn changes the meanings games create. Thus, we need a procedural understanding of what games are. Wardrip-Fruin (2009, 157) writes that

> -- in the world of digital media, and perhaps especially for digital fictions, we have as much to learn by examining the model that drives the figurative

> planetarium as by looking at a particular image of stars (or even the animation of their movement).

If we only interpret the audio-visual elements of games we miss what really separates them from other forms of media: their procedural nature. He (Wardrip-Fruin 2009, 158) continues:

> Trying to interpret a work of digital media by looking only at the output is like interpreting a model solar system by looking only at the planets.

By concentrating on interpreting the level of presentation the depth beneath is ignored. However, this does not mean that the right level of study always lies at the level of code. Studying the code would be a case of "software studies" (Manovich 2002), which is valuable in itself in understanding digital objects. But in order to understand the meanings created by games, it is usually sufficient to consider the level of mechanics or procedures (Wardrip-Fruin 2009).

Although most of what has been written here pertains to digital games, the same applies in principle to non-digital games. There may not be "code" running the game, but there are rules that govern how the game is played, and this is the level of detail under examination. "Digital" is not a sufficiently analytical category of distinction (Aarseth 1997).

INTERACTIVITY

As shown earlier, and argued more thoroughly by e.g. Crookall et al (1987), Aarseth (1997) and Salen and Zimmerman (2004) games can be seen as interactive systems[1]. In order to understand the different meanings created by these systems, we must also take into account the input of the interpreter – the interaction with a player. As Avedon and Sutton-Smith (1971, 438) write:

> There is overwhelming evidence in all this that the meaning of games is, in part, a function of the ideas of those who think about them.

That meaning is partly a product of the pre-understandings and opinions of the interpreter is in no way a controversial hermeneutic statement (e.g. Grondin 1994). This is true of all objects of interpretation, and thus also of games. In this sense Avedon and Sutton-Smith do not say anything new. What is different is the nature of games as objects of interpretation. Understanding games as interactive systems creating meaning requires understanding their relation to the interpreter, or player. This requires understanding what interaction is with regard to games. But as Aarseth (1997, 48) shows, this is not a simple problem:

> The word *interactive* operates textually rather than analytically, as it connotes various vague ideas of computer screens, user freedom, and personalized media, while denoting nothing. Its ideological implication, however, is clear enough: that humans and machines are equal partners of communication, caused by nothing more than the machine's ability to accept and respond to human input. Once a machine is interactive, the need for human-to-human interaction, sometimes even human action, is viewed radically diminished, or gone altogether, as in interactive pedagogy. To declare a system interactive is to endorse it with magic power.

What then is meant with interactivity is not self-evident, but rather a complex question with no apparent answer (cf. Kiousis 2002). Interactivity has many interconnected meanings, many of which are ideological. To comprehend what interactivity means with regard to games we must separate the ideological meanings from the analytical ones.

Three Forms of Interaction

To understand interactivity, it helps to understand interaction. Jensen (1998) separates three different forms of interaction in three different academic fields: sociology, communications and informatics[2]. Each of these fields emphasizes different aspects of interaction. In sociology, the concept is defined as happening between two or more people, who are in "symbolic interaction" (Jensen 1998). It is related to a certain situation, which usually requires physical proximity and negotiation of meaning, i.e. communication. Interaction requires communication, but not the other way around.

In communications, the idea of interaction is divided. In the cultural studies tradition it relates to the concept of interpretation. The relation of a text to the reader has been characterised as interaction (e.g. Iser 1989, after Jensen 1998). While there certainly is a relation between the text and the reader that shapes the meaning created from this exchange, using the term interaction is probably not the best choice: it can be usually referred to as interpretation.

In the interpersonal communication tradition, interaction acquires a meaning more closely resembling the one found in sociology. This is probably due to the object of study being more closely related to the one in sociology. Other senses of interaction within communication studies relate to the way media messages are distributed and how an illusion of interaction is created in media. More generally, the concept of interaction "in media and communication studies is often used to refer to the actions of an audience or recipients in relation to media content" (Jensen 1998, 189–190). Not surprisingly, in media and communication studies it seems that interaction is often seen in the context of how it relates to media.

Interaction in the informatics is related to interaction between people and machines, usually referred to as human-computer interaction (HCI) or man-machine interaction. Interaction was introduced to informatics as a concept to describe the changes made by a user to batch processing computers during the processing. In this sense, interaction takes place when a person operates a machine. Two humans using computers to communicate is not interaction in this sense, and is referred to as computer mediated communication (CMC). While interaction in informatics is seen in some sense analogous to the way the concept is used in sociology, it also has a meaning of control not very compatible with sociological understanding of interaction. This meaning comes from the view of seeing a human operating – i.e. controlling – a machine as interaction. The distinction Jensen (1998, 200) makes between interaction and interactivity is useful here:

> it would be expedient to retain the concept of 'interaction' in its original, strong sociological sense to refer to 'actions of two or more individuals observed to be mutually interdependent' (but not mediated communication), and to use the concept of 'interactivity' to refer to media use and mediated communication.

In summary, the three forms of interaction are:

1. Social communication between two or more people (in sociology),

2. Audience's relation to media (in media studies), and
3. Human-computer interaction (in informatics).

A Definition of Interactivity

As can be seen from these examples, interactivity carries very different meanings in different fields of study. This work is situated near the cultural studies tradition of communications, but understanding interaction as interpretation or closely relating to interpretation is insufficient if interpretation is the subject being studied, as is the case here. Thus, a different concept of interactivity is needed. Jensen (1998, 201) gives the following definition:

> interactivity may be defined as: a measure of a media's potential ability to let the user exert an influence on the content and/or form of the mediated communication.

He further divides interactivity to four sub-concepts: **transmissional interactivity**, **consultational interactivity**, **conversational interactivity** and **registrational interactivity**. Transmissional and consultational interactivity both relate to making choices. Transmissional interactivity "lets the user choose from a continuous stream of information in a one way media system without a return channel" and consultational interactivity lets the user choose "by request, from an existing selection of preproduced information in a two way media system" (Jensen 1998, 201). Conversational interactivity "lets the user produce and input his/her own information in a two way media system" and registrational interactivity is "a measure of a media's potential ability to register information from and thereby also adapt and/or respond to a given user's needs and actions" (Jensen 1998, 201). The latter applies to both explicit choices and automated adaptation, based on passive surveillance.

A central element of Jensen's (1998) definition is that it relates interactivity to the medium. Interactivity is seen as defining the media, and thus the technology used. This places the definition given by Jensen (1998) close to the informatics branch of interaction studies, as defined by him. Kiousis (2002, 372) gives a similar definition, but adds two elements, third-order dependency and human experience:

> Interactivity can be defined as the degree to which a communication technology can create a mediated environment in which participants can communicate (one-to-one, one-to-many, and many-to-many), both synchronously and asynchronously, and participate in reciprocal message exchanges (third-order dependency). With regard to human users, it additionally refers to their ability to *perceive* the experience as a simulation of interpersonal communication and increase their awareness of telepresence.

Third-order dependency translates as a relationship between exchanged messages, i.e. reference to earlier transmissions. This condition adds the requirement for an exchange of information, e.g. communication. This is appropriate, as the definition explicitly discusses communication technology. Additionally, the definition refers to the ability of human users to identify the exchange as communication, referring back to the concept of CMC. Kiousis defines communication as follows (2002, 372—373):

> Communication, in this context, can range from simple information transfer to sophisticated movements in video games or through the world wide web, thereby encompassing linear and non-linear communication paths.

This seems to cover the different ways interactivity and communications intermingle in Jensen's (1998) model.

This has been a very limited view of how interactivity can be understood, but hopefully sufficient for our purposes (for more on interactivity, see e.g. Bucy 2004; cf. Ricardo 2001; Björk & Holopainen 2003). Our discussion must encompass both HCI and CMC aspects of interactivity, as games are played with and without other players.

REAL-TIME HERMENEUTICS

The fact that games are in constant procedural change and in interaction with their players affect how they can be interpreted. The interaction happens while the game is played, making the time taken to interpret an important issue. The temporality of the interpretation must be taken into account when considering the hermeneutics of games. The real-time hermeneutics under discussion here comes from Aarseth (2003, 5):

> While the interpretation of a literary or filmatic work will require certain analytical skills, the game requires analysis practiced as performance, with direct feedback from the system. This is a dynamic, real-time hermeneutics that lacks a corresponding structure in film or literature.

There is no performance by the audience in cinema or literature[3]. The audience is certainly part of the performance, but not in the same sense as a player is part of the act of playing a game. And while the audience may fail to grasp the meaning of the work, this is in no way evaluated by the work itself. The only way of confirming if one understands a work of literature or cinema is by comparing it to the interpretations of others, and in a wider sense, to the view the culture around one holds.

This is contrary to what happens in games. The interpretations a player makes during the game influence his or her actions, and subsequently, success in the game. For example, if one interprets the Koopa Troopa-turtles in *Super Mario Bros.* (Nintendo Creative Department 1985) as friendly and tries to hug them, it will probably result in the plumber-protagonist Mario losing his life. In this case, we can say that it is the wrong interpretation to make. This does not mean that there is only one possible correct interpretation of the game itself, but that the game supports some and opposes some interpretations.

This is in line with what Jensen (1998) writes: games are an interactive (in the sense of interactivity) media. The example from *Super Mario Bros.* is HCI interactivity, but for example *World of Warcraft* (Blizzard 2004) contains both HCI and CMC interactivity. Both must be taken into account.

Temporality

In order to understand real-time hermeneutics some conception of temporality is required. The simplest way of analysing time in games is to follow Aarseth (1997). One of his traversal functions for cybertexts is transiency (Aarseth 1997, 63). He writes:

> If the mere passing the user's time causes scriptons to appear, the text is transient; if not, it is intransient.

By scriptons Aarseth (1997, 62) means "strings as they appear to readers", as opposed to textons, "strings that exist in the text". The distinction is not relevant to the current question, but Aarseth's conception of temporality is. Games can either be transient or intransient. If we were to translate Aarseth's conception of transiency to games, it would say that in some games things happen if time passes without the player doing anything (transient), and in some games they do not (intransient). In a turn-based strategy game you can take all the time you need to ponder your next move; in a FPS game you will be shot if you hesitate.

Aarseth's categories of temporality are qualities of the text, but it is also possible to extend the examination to level of actual reading. If we look at the level of text, the difference between transient and intransient is a simple binary one: either a text is transient or it is not. But if we look at actual readers the temporality may in some cases be a hybrid of these two categories. In texts where the time limit is sufficiently prolonged the reader may never experience the limit. These texts are theoretically transient, but intransient for all practical intents and purposes.[4]

This leads us to considering time as a quantitative substance. While Aarseth's distinction is qualitative, we may also approach the question as a quantitative one. The distinction is highlighted with the hybrid transient-intransient texts. It is also relevant when examining game temporality.

Different Speeds of Real-Time

The concept of "real-time" obscures different types of temporalities, all more or less real-time. This relates to the discussion on interactivity. Kiousis (2002, 369) points out the relation of interactivity to time:

> Furthermore, scholars have pointed out that interactive experiences do not always have to be 'fast' or in 'real time', as seen in the example of email.

Here, real-time is still seen equal to fast interaction. But this is not always the case. As Kiousis (2002, 369) later writes:

> The notion of real time is also problematic because it suggests that instantaneous feedback is required for an interactive experience. The shift in the literature to discuss 'flexibility' has helped to address such issues. Indeed, many forms of communication with new media, which most researchers would concur are interactive, have delays in response times (e.g. email may be returned after one week, yet is still considered interactive by most).

"Real-time" is not always fast, and certainly not always instantaneous. There are different speeds of interactive, which may still be seen as happening in real-time – just not very quickly. Thus, it is not enough to see things as occurring in real-time or not. There are different speeds of real-time, and these need to be mapped out to reach an understanding how temporality affects interpretation in procedural systems, e.g. games.

Temporal Frames

One of the ways of analysing temporality is by using separate frames of temporality for different aspects of the game (Zagal and Mateas 2010). These can be analysed using the concept of state change. State changes can happen on the hardware level, game world level, and real-world level. The hardware level is in most cases irrelevant, because the changes happen so fast as to be imperceptible to the player. The important exceptions are hardware freezes and crashes. The real-world level changes can relate, for example, to the passing of time outside the game, i.e. changes in the context of gaming. The primary level of temporal frames is the experiential level as this is the level that directly affects the player.

The four temporal frames used in analysing time in video games are **real-world time**, **game world time**, **coordination time**, and **fictive time** (Zagal and Mateas 2010). These relate mostly to the experiential level, but there is some blurring of categories, as some also refer to the real-world level.

Real-world time is defined by the things happening around the player as he or she is playing. The passing of time affects the player and through him or her, the game. Some games (e.g. *Fable*, Lionhead Studios 2004) do this more directly, with the passing of physical time directly affecting the game time. Game world time refers to both abstract game play actions and the events of the simulated or virtual game world. When the passing of physical time in the case of *Fable* affects the time in the game, it affects game world time. Coordination time concerns such concepts as rounds and turn-taking. It coordinates the actions of several actors, whether players or AI. Games may contain systems for limiting player actions in order to keep them synchronised. These forms of temporality differ from fictive time, which is created either by narrative means (story time, discourse time and narrative time) or applying socio-cultural labels e.g. calling turns "years" or "days" (cf. Juul 2001). These frames often co-exist or occur successively, as shown in an example by Zagal and Mateas (2010, 853):

> As a player interacts with the gameworld, she physically manipulates a controller (real-world control events) in order to cause events in the gameworld. When, the player is allowed to cause gameworld events, we say that the gameworld is available. When there is no perceived delay between the control manipulation event (eg. button press) and the corresponding gameworld event (eg. Character jump), her actions are immediate. In PAC-MAN, the gameworld is available because the player is always allowed to move Pac-Man, and he moves immediately because there is no delay between input and action.

This example shows how these frames interact with the player and each other. The frames enable diverse fusions of different categories of time, which may then be used in creating a more fine-grained framework of temporality. Zagal and Mateas (2010) use this framework to show that the simple distinction of real-time–turn-based is not sufficiently analytical. It also helps to show how complex the idea of "real-time" is.

Time and Narration

This discussion on temporal frames can be contrasted with Juul's (2004; 2005) theory of game time. He considers games as **state machines**, with the player initiating changes in the game states that move the game forward. The actions of the player and the changes of the game happen in **play time**; play time is "time span taken to play a game" (Juul 2005, 142). The time that progresses within a game is **fictional time** (Juul 2005). The relation

between play time and event time is **projection** (Juul 2005, 143), "projection of the play time on the event time". For Juul "real-time" means a 1:1 projection of play time to event time. As can be seen from earlier, this relation can be seen as more complex.

Juul's concepts of play time and event time can be contrasted with Genette's (1987) concepts of **narrative time** (time of narrating the story) and **story time** (time within the story)[5]. Genette (1987, 95) analyses different relations between these with the following formulas:[6]

1. Pause: NT = n, ST = 0. Thus: NT ∞ > ST
2. Scene: NT = ST
3. Summary: NT < ST
4. Ellipsis: NT = 0, ST = n. Thus: NT < ∞ ST

These categories can be used in clarifying what Juul (2005, 151) calls "violations of game time", one of the examples being pausing the game. Pauses are not unique to games: they can also occur (for example) in literature (as per Genette 1987). Nor do pauses have to be seen as "violations", but simply variations. According to Juul (2005, 160) there are five important distinctions between the categories of time he uses and the categories of traditional narratology:

1. "The fictional time is not predetermined when the player plays the game.
2. Games tend to be chronological. -- A story is a predetermined sequence, and users are aware of this in their reception of the game/story.
3. The actions of the player have a dual quality of occurring in play time and also being assigned meaning in the fictional time in a game is more direct than the connection between story and discourse.
4. Abstract games do not have a fictional time, and therefore have only one level.
5. Games often project incoherent worlds that cannot be described using a coherent timeline."

These seem to be meaningful differences, although not all of them equally so: literature and cinema tend also to be chronological, with exceptions similar to the ones found in games. The distinction between abstract games and games that contain a fictional narrative is important, but this can further be elaborated with the temporal frames presented earlier. Abstract games have game world time (A happens before B), but do not necessarily have fictive time, e.g. narrative.

Additionally, Juul (2004; 2005) uses the concept of **dead time** to describe time in games that is experienced as dull, repeating and not entertaining. "Dead time is when you have to perform unchallenging activities for the sake of a higher goal" (Juul 2005, 155). This varies from play time and event time by being a category of experience of time, not a category of temporality in the media itself. This highlights the need to separate the experience of time from the passage of (fictional or objective) time, as also Zagal and Mateas (2010) emphasise.

DISCUSSION

Again, how do games differ as objects of interpretation from other hermeneutic objects? First, they are procedural systems. Second, they are interactive. Third, they are temporally complex.

We can clarify these points by turning back to hermeneutics. Understanding games as interactive procedural systems is made easier with the distinction made by Weberman (2000). He distinguishes between **relational** and **intrinsic properties** (Weberman 2000, 54):

> Intrinsic properties are those properties that an object or event has "in virtue of the way that thing itself, and nothing else, is," such as shape, size, chemical composition or having red hair. Extrinsic or relational properties are those properties of an object or event that depend wholly or partly on something other than that thing, such as being an uncle, living next door to a judge, being loved by Joe or having a red-haired brother.

While most objects of interpretation are relatively temporally stable, games change due to their procedural nature. This change may be relatively minor, or may lead to drastic changes in the properties of the game (not on the level of code, but on the level of interaction and experience). In some cases, games may be considered as changing in their intrinsic properties, as procedural interaction creates unforeseen results. This differentiates games from other hermeneutic objects, which do not have changing intrinsic properties.

The temporality found in games is more complex than it first seems. This makes interpretations about them difficult – real-time hermeneutics does not seem a simple concept, but a collection of interrelated concepts. There is also distinct problem with real-time hermeneutics that is highlighted by the concept of incompleteness.

Incompleteness

The idea of intrinsic and relational properties has a temporal dimension. Using the language of Gadamerian hermeneutics (e.g. Gadamer 2004), Weberman (2000, 52) puts it as follows:

> The object of understanding is indeterminate (or underdetermined); it is constituted in part by the horizon of the specific historically situated knower and changes according to what that horizon is.

The object of understanding is underdetermined in the sense that at least some its meaning is determined by the specific historical context (i.e. horizon) in which it is situated. As this context changes, so does the meaning. Weberman (2000, 53) discusses the examples of artworks, texts and historical events, but the same applies to games:

> Consider, an artwork such as a Cubist painting by Picasso or Braque, a text such as the American Constitution, or a historical event such as the Russian Revolution. Our understanding of these "objects" is quite different in virtue of the temporal distance that separates us from them. The importance of temporal distance here consists not in any alleged growth in impartiality, but in the way in which more recent events have brought out new aspects of or "retrodetermined" the earlier phenomena.

It is in this sense that objects of understanding are “incomplete”. Their meaning is never completely exhausted by the interpreter trying to understand the objects in their current context, for it is possible that the context changes, and thus the meaning also changes. This makes the meaning both continually incomplete and inexhaustible.

However, there is a way to enrich the interpretation. While there is no one complete and final interpretation to be made, there is the possibility of improving interpretations. This is made possible by temporal distance. As time goes by, the context of interpretation widens and new relations enter the picture. This enables making new interpretations that take into account earlier ones. Gadamer (2004, 297—298) writes:

> The important thing is to recognize temporal distance as a positive and productive condition. It is not a yawning abyss but is filled with the continuity of custom and tradition, in the light of which everything handed down presents itself to us. -- But the discovery of the true meaning of a text or a work of art is never finished; it is in fact an infinite process. Not only are new sources of error constantly excluded, so that all kinds of things are filtered out that obscure the true meaning; but new sources of understanding are continually emerging that reveal unsuspected elements of meaning.

Time gives room for better interpretations to emerge. This is an encouraging conclusion when history is concerned, but not so when considering real-time game hermeneutics. There is rarely the possibility of temporal distance when playing a game.

However, interpreting games may contain two different questions of interpretation. First, what is the meaning of the game itself as an object of understanding? And second, what interpretations does the player make during the game? The first question helps us in understanding games in general, and shows the relevance of hermeneutic inquiry. The second, however, is not helped particularly by the observations made on temporal distance. This question of player interpretation is perhaps better answered with the help of temporal frames.

CONCLUSION

When considering the meaning in games, we have to take into consideration their procedural nature, interactivity in its full meaning and their temporality. It is not enough to see the surface, but one must go deeper and see the processes that create the meaning – to look not just at the stars, but also at the effects that drive them, as Wardrip-Fruin (2009) put it. This requires understanding games as systems that change at the procedural level.

However, this is not enough, as games are also interactive systems: the player must also be taken into consideration. Games are interactive in two senses: 1) they enable interaction between players i.e. multiplayer games, and 2) they are an interactive media that the user controls. The player affects their operation and therefore their meaning. This makes hermeneutic inquiry a necessary part of understanding games.

The temporal dimension must also be taken into account. Games as objects of understanding have a meaning that changes with time. This makes their meaning constantly incomplete; there is no final interpretation of what a game means. Fortunately, temporal distance gives us a broader horizon of interpretation, enabling better interpretations as time goes by. This should be taken into account when discussing the preservation of games for future research. What seems insignificant for us may prove to be important for later researchers.

Unfortunately, this does not help the player much in forming interpretations during the game. Instead, he or she must rely on different cultural meanings filtered though temporal

frames and the fact that games as interactive systems give feedback on the success of interpretations. Better interpretations lead to better gaming, and so players can know if they are misunderstanding by failing to succeed in their goals.

ENDNOTES

[1] One way of understanding the situation would be seeing games as cybernetic systems, as per Wiener (1965). Cybernetic systems are self-regulating systems that interact with itself, and its surroundings (cf. Salen and Zimmerman 2004).

[2] The rest of this chapter follows closely Jensen (1998). All references are to this work, unless otherwise noted.

[3] This excludes many forms of experimental cinema and literature, which may be interactive (see e.g. Aarseth 1997).

[4] If the reference period is sufficiently long, all texts are transient in the trivial sense of being temporal. All that is material is impermanent. In this sense digital texts may be more lasting, as perfect copies can be created of them. There is also the opposite example of Frasca's (2001) OSGONs (one-session game of narration), games which can be played only once.

[5] Juul (2005) uses the concepts of discourse time and fictional time, but does not explicitly refer to Genette, citing Chatman (1978) instead.

[6] ST = story time, NT = narrative time, 0 = no story or narration progression, n = story or narration progression; happens or is narrated once or several times.

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II

GAME DEFINITIONS: A WITTGENSTEINIAN APPROACH

by

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GAME DEFINITIONS: A WITTGENSTEINIAN APPROACH

ABSTRACT

Games have been defined and redefined many times over, and there seems to be no end to this continual process or any agreement about the definitions. This article argues that such an agreement is not necessary, and presents a Wittgensteinian approach to discussing game definitions. Instead of the common core approach used in most definitions, this article argues for an approach based on language-games. The common core approach is based on a limited number of shared core attributes, while the language-game approach is based on the idea of family resemblances. The language-game approach sees the cycle of redefinition as a hermeneutic circle that advances our understanding of games. This article also clarifies the distinction between nominal and real definitions and shows how they serve different purposes. With the approach suggested here, the focus in research can shift from the essential attributes of games to understanding definitions as tools for practical purposes.

Keywords: game definition, hermeneutic circle, language-game, nominal definition, real definition, Wittgenstein

1 INTRODUCTION

In order to understand games, you must have some idea of what they are. This is the business of definitions: to create boundaries for ideas and phenomena so that you can better know what is being discussed.

But definitions can also limit you. When you create boundaries, you always leave something outside those boundaries. The boundaries need not be final or impermeable, but in order to define things some boundaries must be established. Lines must be drawn somewhere, even if they are drawn on water. In the liminal spaces between definitions live things that resemble the ones you are trying to fence inside your boundaries, but are faulty in some small way.

These bounded cases are often as telling about the definition as the definition itself. What is the thing you are defining, and what is it not? With games, these borderline cases could be forms of gambling or roleplaying games (Juul, 2003), or maybe life itself (Suits, 1967).

There have been many attempts to define games (e.g. Abt, 1970; Avedon & Sutton-Smith, 1971; Costikyan, 1994; Juul, 2003; Maroney, 2001; Myers, 2009; Salen & Zimmerman, 2004; Suits, 1980; Tavinor, 2008; Waern, 2012; Whitton, 2009). The usual approach is to look at previous definitions, find common elements in them, discern problems, and then provide a synthesis that attempts to fix those problems. This form of definition is usually given as a list of features that form the core of what games are. This approach could be called the **common core approach**. This article will not follow this approach, for reasons that will hopefully become apparent.

The purpose of this article is to add clarity to the discussion of definitions in game studies. Currently, producing definitions seems to be a necessary ritual for any scholar discussing games, regardless of how necessary or useful it is for the issue discussed. This article sets out to clarify

1. when using definitions is useful and when is it not, and
2. which kinds of definitions serve which kinds of purposes.

The approach I am arguing for here has been mapped (but not fleshed out) before by Aarseth and Calleja (2009). They argue that definitions are not needed to have a successful field, and that in an interdisciplinary field definitions can actually hinder discussion. Instead, they propose creating a descriptive model of games. Their concerns are valid, but definitions can still be of use, as I show below.

Frasca (2007) highlights an important distinction that is related to defining games: games are both systems and an activity, and any definition that excludes one in favor of the other is looking through a limited lens that does not encompass the entirety of what games are. However, this may be entirely justified, as shown later.

2 DEFINING DEFINITIONS

When defining games, it is enlightening to take a brief look at the traditional theory of definition (Cohen, 2008; Kneale and Kneale, 1991). The most basic aspect of the theory of definition is the twofold division of nominal definitions and real definitions. Nominal definitions are verbal agreements about the use of terms, or suggestions to use an expression in a certain way. These definitions are social, and they depend on the use of language and predominant social conventions. Because nominal definitions are verbal agreements, they cannot be true or false, but they may be more or less useful, and their correspondence with how words are actually used may also vary.[1]

By contrast, real definitions aim not just to tell us about the way words are used, but also to find some attributes that are in some way essential to the object being defined. A chemist trying to find out the structure and properties of matter is trying to form a real definition of the thing studied. However, identifying the essential attributes can be difficult, and the whole idea of trying to find essential attributes can be considered problematic.[2]

There is a difference between trying to identify the discourses (Mills, 2004) surrounding games -- and thus trying to find the current cultural or social (nominal) definition -- and analyzing the structure of games and identifying shared attributes (real definition; see Tavinor, 2009). These might not be mutu-

[1] Whether this is important is another matter, and is related to what kind of epistemology is used. In this sense, epistemology is one's attitude towards questions of knowledge, truth and justification.

[2] Again, whether essentialism is a problem depends on the epistemology to which one subscribes.

ally exclusive goals, but making this difference explicit can help in understanding a definition. Confusing these different types of definitions can lead to serious confusion (Waern, 2012).

If a definition attempts to cover games as a real definition, it should attempt -- at least in theory -- to cover all possible forms of games (and thus serve as a definition for all games). Another possibility would be to use a real definition that delimits certain forms of games, for example only videogames or role-playing games (Hitchens & Drachen, 2009.). This makes choosing the essential attributes significantly easier, but it may still turn out to be difficult to agree on what is essential to some forms of games (as is shown by the multiplicity of definitions).

On the other hand, a nominal definition will change over time as the discourses around the definition shift. This makes nominal definitions more unstable than real definitions, which may or may not be desirable. If one is defining a temporal phenomenon, like culture, then this change may actually reflect a change in the object being defined. This could also lead to a real definition needing to be redefined, as the object itself has changed, and the definition no longer corresponds to it. Another possible example of needing to redefine a real definition would be to correct a previous error in the definition.

3 THE LANGUAGE-GAME OF GAMES

There is also an argument by Wittgenstein (2009 [1953]) against searching for essential (real) definitions in general.[3] Instead of searching for essential definitions for concepts, he suggests that concepts should be understood as sharing **family resemblances** (Wittgenstein, 2009, §67).[4]

The analogy is the resemblance of family members to one other. The father may not greatly resemble the mother, but both of them share characteristics with their children. There can be similarities between their physical characteristics (e.g. facial structure, eye color, manner of walking), but also in temperament.

We understand types of numbers as being similar in the same way (Wittgenstein, 2009, §67). There is a direct affinity with other kinds of things we are used to calling numbers. There are also non-direct similarities with the things we have formerly called numbers, and so we consider any new examples of number-like-objects to also be numbers.

What makes an object number-like may differ from one instance to another, just like attributes differ when comparing children to their mother and father. The children may be blond like their father and have brown eyes like their

[3] This article is based on one reading of Philosophical Investigations (2009). However, there is considerable difference of opinion on the ways to read Wittgenstein (Stern, 2004). This article does not strive to be a definitive reading, but to use Wittgenstein's thoughts in a constructive manner.

[4] The numbers refer to chapters in Philosophical Investigations, which are numbered equivalently in all translations.

mother. These shared concepts are meaningful only in a certain type of commonly shared way of speaking about things, which Wittgenstein (2009) interestingly calls **language-games**. Thus, language-games are ways of understanding concepts that differ from one speech-community[5] (Connolly, 1986) to another, like from one field of research to another.

From Wittgenstein's (2009) concept, it follows that there are no core attributes that can be used in separating games from other phenomena. If Wittgenstein is indeed right, then there may be no single definition for games. Instead of having a common core of attributes, games share attributes as family resemblances, which vary from one instance to another, forming a continuum or a set rather than a single thing called a "game."

The act of defining games can be considered as a language-game in itself. The question then becomes not what games are, but what elements are considered important when you identify games in this language-game. In this game of defining things, emphasizing different aspects brings some forms of games into a more central position. For example, if you emphasize

1. the **narrativity** of games, you will prioritize storytelling games over Chess (Ryan, 2001);
2. the **rules** found in games, you will prioritize Chess over free-form play (Juul, 2003);
3. **playfulness**, you will prioritize free-form play over storytelling games (Sicart, 2011).

The choice of emphasis usually depends on the reasons for making a certain definition, and these reasons may be more interesting or enlightening than the definition itself.

What does this mean in terms of defining games? If one understands the act of defining as Wittgenstein (2009) does, it follows that:

1. **Definitions resemble context.** LARPs (Live Action Role-Playing Games) are discussed with theater analogies, digital games with computer analogies, and board games like Chess and Go with war analogies.
2. **Definitions are distinct.** Different language-games are used when discussing digital games versus board games. There is overlapping in these language-games, but they are distinct because of the differences in context.
3. **Definitions may not be compatible.** It is difficult to discuss board games using terminology that is suitable for an analysis of digital games, given the differences in the media.

Context-sensitive, diverse language-games are what is discussed in Philosophical Investigations as parts of a form of life (Wittgenstein, 2009, §241). A

[5] See also "interpretive communities" (Fish, 1976).

language-game is associated with a certain way of being in the world, and these ways of being in the world are different forms of life.[6] To quote Tilghman (2009):

> What is probably the single most important thing we have learned from Wittgenstein is that an expression can be understood only when it plays a role in a language-game and that our language is intelligible only when seen against the background of human activities and forms of life.

Forms of life are the different ways of relating to the world, depending on social, cultural and historical factors. Forms of life are ways for speech-communities to relate to, and give meaning to, the world around us.

For example, when a fisherman talks about knowing the best places to fish, he probably uses the word 'know' in a different way than a philosopher who specializes in epistemology. The fisherman and the philosopher participate in different language-games, in which the word 'know' is useful in different ways. Neither of these language-games is inherently better than the other, but they are useful for different purposes and in different contexts. Some language-games are better than others for a certain purpose, like describing the qualities of fishing grounds.

Similarly, there are related but different language-games surrounding different forms of games (Bojin, 2008). This is true even if we exclude from the discussion things like cultural differences. The language-games of different forms of game playing are distinct and may diverge from one another, especially over time, unless there is interaction between them. This might happen, for example, between digital games and traditional folk games. The use of different language-games stems from the different cultural and social contexts these activities are associated with. This approach to game definitions could be called the **language-game approach**.

An example of this would be how the criteria of what makes a roleplaying game differ from one media to another. There is a wide variety of roleplaying games ranging from tabletop games to LARP to single-player digital games (Hitchens and Drachen, 2009). In tabletop roleplaying games 'roleplaying' is something that is done verbally, while in a LARP the player enacts their character's actions. In digital games, it is often enough that a game contains some kind of character advancement in order to be said to contain roleplaying elements.

But this is only one way of looking at the situation. There is also the language-game of games that encompasses all forms of playing that are usually considered games.[7] This language-game is part of the form of life that includes game playing, as well as all the typical social characteristics associated with it. Language-games exist in nested hierarchies with porous boundaries. Choosing

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[6] Wittgenstein (2009) emphasizes that language-games are not limited to speaking about things. Our actions are also part of a form of life and, accordingly, language-games (see Bojin, 2008).

[7] This is slightly contradictory, since not all language-games share the same borders. Trying to portray the language-game of games (or game playing) would make a very messy picture.

which level of language-game to employ can be a strategic decision. This decision affects questions of inclusion and exclusion.

Language-games are not necessarily exclusive, but can coexist, even if they are not entirely compatible. An example of this would be the use of several definitions simultaneously in a field of research, such as the way in which genes are understood in biology as both the defining factors and the expressions of specific features (Moss, 2004). There are requirements for definitions, if they are to be used simultaneously: they cannot be completely mutually exclusive, lest they end up defining different phenomena. Additionally, to adhere to the demands of coherency, only one definition can be used per study. The definitions can vary only between different discussions, possibly resulting in completely different language-games.

It might not even be desirable to find a single definition. One is hard-pressed to find a single, commonly accepted definition for such widely used terms as "culture" or "structure" (Rubinstein, 2001). These things are defined and redefined all the time as a part of new research and discussions, creating new approaches, problems and answers along the way. This probably should not be viewed as a shortcoming, but as a consequence of the nature of the things being defined. Our understanding of cultural phenomena is constantly changing, at least partly because those phenomena are also changing, and partly because our own cultural perspective is changing. Our horizon of interpretation is widening, as Gadamer (2004 [1960]) would put it.

Defining things is also using power. "Knowledge is power," was recognized early on by Francis Bacon; later it was more substantially analyzed by thinkers such as Pierre Bourdieu and Michel Foucault (Rodríguez García, 2001). Both show how experts wield power over their fields by defining the terms of the discussion and the dichotomies that organize knowledge. This use of power is not simply formal, as "[t]he power effects that knowledge produces are immediate, for they reside in the categories and classification within a knowledge" (Wong, 2007, p. 11). Definitions are not simply tools for using power over a field, but inherently linked to power by their nature. Tavinor (2008) is worried about what kind of an effect this might have on game studies:

> It seems to me that although ludologists, narratologists, and others would claim to be characterizing the nature of games, there does seem to be a large normative component in their proposals and that this comprises the most significant problem with how the definitional debate concerning videogames has been conducted to date.

However free of normative statements a researcher tries to stay, defining things necessarily frames the issue in a certain way, making certain ontological and epistemological assumptions. Tavinor wishes that "[d]efinitions should stay silent on these normative issues so that we can count as games those which we do not happen to value as games." While Bourdieu and Foucault show how the terms of the discussion are necessarily tied to power, game scholars can at least become aware of the assumptions and norms they are basing their arguments on. Perhaps then game studies can be more open to the inclusive way of defining things Tavinor calls for. However, regardless of how and on what terms the

issue is discussed, participants will be necessarily using their position to wield power.

4 LANGUAGE-GAMES AND HERMENEUTICS

Wittgenstein points out that the act of defining games might not be a very fruitful exercise at all, and that family resemblances may be the only possible way of identifying games (Tilghman, 2009). Not everyone agrees (Suits, 1980; Juul, 2003). Suits (1980) has criticized Wittgenstein for not following his own advice of actually looking at games and seeing if there are similarities between them, rather than assuming that there are none. According to Suits (1980), Wittgenstein seems to assume that there are none, when he should have looked for, and found, some.

In one sense, Suits is right. There is no theory of games to be found in *Philosophical Investigations* (Wittgenstein, 2009). However, it is a mistaken exercise to try to read Wittgenstein as discussing games when he is actually discussing language. Wittgenstein is drawing an analogy between language and playful activity, not claiming anything about games in particular (Stern, 2004). This is more apparent when discussing language-games in German, with the term Sprachspiel. While the term is usually translated as 'language-game,' Spiel translates both to play and game. It is entirely possible for game studies to benefit from Wittgenstein's writings, like this article does, but he should be read as a philosopher of language, not as a game scholar.

The lesson to be learned from Wittgenstein (2009) is not, therefore that games are indefinable. Simply stating that games are indefinable is counterproductive to research (Suits, 1980). A better possibility is to understand Wittgenstein's conception of games as a **hermeneutic** one (Connolly, 1986). Connolly (1986, p. 272) argues that there are good reasons for seeing Wittgenstein's language-philosophy and Gadamer's hermeneutics as similar:

> For one thing Gadamer shares Wittgenstein's metaphysical "anti-realism," for another his insistence that understanding includes the application of what is understood resembles Wittgenstein's view that "an inner process stands in need of outward criteria," where the "outward criteria" give the meaning of psychological terms such as "understanding."

A hermeneutic conception of defining things would mean that each definition is understood as a starting point for a new act of defining, or in other terms, as a pre-understanding for a more complete understanding (Gadamer, 2004). This would make the process of definition basically endless, as it may be continued eternally without reaching any form of finality.

However, this endlessness is not a surrendering to a completely relativistic point of view (Weberman, 2000). Rather, it is a contextual understanding of truth. There may be no final truth, but an understanding may be more or less suitable for a given context. This would give criteria by means of which definitions are judged to be better or worse, but these criteria might change if the context changed.

5 EVALUATING DEFINITIONS

Wittgenstein's (2009) way of defining things is essentially nominal. It means that his way of defining things does not try to find a definition that captures some essential features of things, but discourses, or "ways of speaking" about things (Foucault, 1972, p. 193). As shown above, the key benefits of using a nominal definition are:

1. **Avoiding essentialism.** If definitions are limited to ways of speaking about things, then none of the qualities of the object being defined are taken for granted. All of the qualities are subject to definition and redefinition, highlighting the social nature of these qualities.
2. **Flexibility.** Nominal definitions are, by their nature, sensitive to change and context.

However, there are drawbacks to nominal definitions, namely:

1. **Endlessness of definition.** There are no final nominal definitions as the discourses surrounding things are subject to historical change.
2. **Difficulty of comparison.** If a comparison of definitions is limited to different ways of speaking about things, it is difficult to critique a definition.
3. **Unclear truth-value.** The truth-value of a nominal definition can only be evaluated within that discourse.

The flexibility inherent to nominal definitions stems from the fact that nominal definitions are under constant redefinition. This process of redefinition can be described as a **hermeneutic circle** (e.g., Gadamer, 2004), with the final result of the act of defining serving as the starting point for a new process of definition. A redefinition can also result from changes in the form of life that the definition is part of. Because of this sensitivity to historical change, nominal definitions are more useful in defining cultural objects than in defining, for example, objects studied by natural science, which are more resistant to historical redefinition.

As nominal definitions are part of a discourse, they cannot be verified accurately or judged outside of this discourse. This prevents the formation of nominal definitions that are verifiable independently from the discussion in which the definitions are used. Comparing the value of nominal definitions can be difficult, as not only the definitions themselves but also the surrounding discourses must be evaluated. This leads to a situation where definitions are not judged by their merits, but by the merits of the discourses in which they are situated.

Nominal definitions are defined as verbal agreements that cannot be true or false. They may be more or less useful in a situation, but they cannot be evaluated on the basis of their truth value alone, separate from the rest of the discourse. This may be considered an unfavorable quality when building a theory-base for a new discipline, like game studies. However, the work of defining things must start somewhere, and we are rarely (if ever) in the situation where a theory can be built using only basic concepts relying on real definitions. This is a problem that was encountered by logical positivism, a philosophical

movement stemming from the Vienna Circle, who were drawing inspiration from the early Wittgenstein (1922). Logical positivism tried to produce knowledge from a set of verifiable propositions, based on logical deductions or empirical observations (Passmore, 1943). Unfortunately, the project ended in failure, as the set of propositions that can be derived from these premises is rather limited.

The problem with talking about language-games instead of definitions is the apparent relativism implied. If, rather than searching for a perfect definition, it is conceded that there may be no perfect definition and instead there may be many different definitions, it would appear that there is no way to criticize these definitions. They are different, and that is all.

However, this is a mistaken notion: some language-games are better suited for talking about some phenomena than others, and they may be evaluated based on how well they are suited to the problem at hand. However, this is different from trying to find a single, perfect definition. A definition is always a tool: definitions are used in order to answer certain questions, and depending on those questions, different definitions may be more or less suited to the problem at hand (Wittgenstein, 2009, §23). A definition is a tool also in the sense that unless a definition is necessary, it tends not to be given. And maybe it should not be given: there is a reason why an artisan carries only the tools that are needed for a specific job. The rest can wait in the shop until they are also needed.

Additionally, Cohen (2008, p. 232) remarks that:

> We have drawn a sharp distinction between verbal and real definitions. In practice, however, the distinction is never so sharp, and even in definitions which seem altogether verbal there is generally some reference to the analysis of what the words stand for.

We live in a world filled with language that both mirrors and creates our reality, and neither of these aspects should be forgotten. Language is the medium we use to make sense of the world around us. As Gadamer (2004, p. 470) poetically reminds us: “Being that can be understood is language.”

6 WITTGENSTEIN'S RULER

In regard to definitions, there is one more mechanism to be discussed, called “Wittgenstein's ruler” (see Wittgenstein, 2009, §50). This concept comes from Taleb (2007), who saw it as a probabilistic mechanism. It is appropriated here as a tool for understanding definitions (this approach is also probably closer to Wittgenstein; rules are necessarily related to our understanding of definitions, as Wittgenstein [2009] points out). Taleb (2007, p. 224) formulates the ruler as follows:

> Unless you have confidence in the ruler's reliability, if you use a ruler to measure a table you may also be using the table to measure the ruler.

Any time a definition is compared to a phenomenon, the phenomenon is also compared to the definition. The evaluation must necessarily be a two-way comparison about the similarities of the compared things. This can occasionally be used as practical tool: a definition must encompass the thing that is being defined, and preferably nothing else (Tavinor, 2009). If it is noticed that this is not the case, it is probably an indication that the definition needs to be reappraised. When approaching a new phenomenon with a definition, there are some key questions that can be asked about it:

1. Does the phenomenon being assessed qualify?
2. Is it a borderline case?
3. Or does it fall outside the definition?
4. And most importantly, *why*?

In particular, the last question can reveal something significant about the definition being used. This is also a point raised in discourse analysis: in addition to what we say, it is also noteworthy to pay attention to how we say it (e.g., Mills, 2004). What is emphasized by a definition, and what is downplayed? Most definitions of games pay attention to rules, play and the systemic nature of games. What are the borderline cases, and why? What is trivialized, and what is ignored by the current definitions?

An example of this is the distinction between digital and non-digital games commonly made in game studies (cf. Stenros & Waern, 2011). This distinction is echoed by other categories, like videogames, electronic games, and computer games. At first glance it seems like there is a clear distinction between digital and non-digital games. However, simply evoking the term 'digital' does not do much to clarify the situation. How do digital games differ from non-digital games? Aarseth (1997, p. 14) writes about a similar problem with digital technology in relation to literature:

> The ideological forces surrounding new technology produce a rhetoric of novelty, differentiation, and freedom that works to obscure the more profound structural kinships between superficially heterogeneous media.

Instead of invoking 'digital' as a categorical explanation, it might be more worthwhile to look at family resemblances between forms of games, regardless of their technology. Looking at a group of social games in the same framework might yield insights not available, for example, by only looking at massively multiplayer online role-playing games.

However, it is also enlightening to compare pre-digital definitions to definitions made after digital games became more common. While earlier game definitions emphasized games as an activity, modern definitions highlight games as systems. This could be viewed as a change in the language-game of game definitions, resulting from the form of life around games changing.

7 CONCLUSIONS

This article identifies the usual approach to game definitions as the common core approach, where games are defined by a core of essential attributes. However, this article argues for an approach to game definitions based on Wittgenstein's language-games. Instead of trying to find a common core for all games, it is more useful to look at games through family resemblances, features that connect some, but not necessarily all, games.

This move away from essential definitions also enables researchers to look at definitions as tools for practical purposes. With this approach, researchers can more easily ask what kind of purpose the definition is trying to fulfill, what kind of phenomena it is leaving out, and why. These questions serve to show what aspects of the object the definition is highlighting and what it is downplaying.

It is also shown that this approach to definitions does not lead to relativism, as there are still practical criteria for evaluating some definitions as better than others. However, these criteria may shift, either as the practical needs change or as the context of discussion shifts. It is also entirely possible for games as a cultural category to change, leading to a need to change a definition.

The process of definition is not neutral, and always carries with itself questions of power. Experts and scholars define the terms and limits of how a discussion is carried out. That way, knowledge production is always also use of power.

The nominal definitions this article argues for are not completely unproblematic. They cannot be meaningfully said to reach an end, since the definition may continually need to be revisited. They may also be hard to compare, since they cannot be evaluated outside the discourse they are used in.

Games are a sociocultural phenomenon and, therefore, they should be defined and redefined in a hermeneutic circle that enhances our understanding of them. This process of redefining will tell us valuable things about the discourse of games at any given moment. It will also highlight some aspects of games, some of which may not previously have been discussed, therefore providing more things for scholars to study. This may provide a way out of the established discourses that have become so self-evident that we are no longer able to see them clearly (Stenros and Waern, 2011). A similar conclusion is reached by Ellis (1973, p. 22) in discussing play:

> The perplexing problem of how to define play will only be resolved by continually regenerating new definitions that fit current concepts of play behavior.

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III

DEFINING ROLE-PLAYING GAMES AS LANGUAGE-GAMES

by

Jonne Arjoranta 2011

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Defining Role-Playing Games as Language-Games

Popular Abstract - Role-playing games are a diverse phenomenon, ranging from digital games to live action role-playing. Finding a definition that suits them all is hard, but attempts have been many. All of the definitions emphasize some aspects of role-playing games like rules, the role of players or the story. Many definitions do not describe role-playing games as such, but the activity that is role-playing. This paper looks at one of the latest attempts to define role-playing games, by Hitchens and Drachen (2009), and shows some potential problems with it. As an answer to these problems another definition is proposed, consisting of a game world, participants, shared narrative power and interaction. This definition is given only after discussing the nature of definitions in general. By drawing from the work of Wittgenstein, it is shown that definitions are by their nature bound to language in a way Wittgenstein calls language-games. Language is constantly changing, as the culture surrounding it changes. There are no final definitions for role-playing games, only definitions suited better or worse to a certain historical understanding of role-playing games. However, this does not mean that role-playing games should not be defined, as the definitions given can advance our understanding of what role-playing games are and could be. This paper takes part in the ongoing process of definition.

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ABSTRACT

Finding a definition of role-playing games that is both representative and unambiguous is not simple. The differences among tabletop role-playing games, live-action role-playing and digital role-playing games are remarkable, yet they are all considered role-playing games. Hitchens and Drachen (2009) have proposed a definition of role-playing games comprising of all these types in an attempt to find a definition that could be "commonly accepted". This paper expands upon this definition, exploring its strengths and weaknesses, its relation to digital games and finally suggests an alternative approach. This alternative approach is based on Wittgenstein's works on the nature of language, and the hermeneutic tradition's conception of truth. This should be understood as a continuation of the discussion on defining role-playing games, not as an attempt to end the discussion in some conclusive way. Some general remarks on the problems of exclusive definitions are also presented.

1. INTRODUCTION

As Hitchens and Drachen (2009) show through an in-depth study, the approaches to defining role-playing are diverse and many. They list a broad catalog of different definitions, arranging them according to the target of the definition: is the definition aimed at defining role-playing as activity or role-playing as a game. They also make an important note that not all role-playing is tied to role-playing games. A considerable amount of role-playing, probably most of it, is done outside the sphere of role-playing games.

It is also possible to play role-playing games as regular games, as Montola (2007) notes. This is particularly true of digital role-playing games. The act of defining role-playing games is then separate from defining role-playing as action. In fact, the first instances of defining role-playing predate role-playing games by several decades. The term 'role-playing' was presumably coined by a Viennese psychiatrist, Jacob L. Moreno, in the 1920's, and was related to his conception of theatrical

psychodrama (Gale Encyclopedia of Psychology 2001; Morton 2007). There is also a strong tradition in sociology of studying social interaction through the roles, role-taking, and role-playing involved in everyday social life (Fine 1995). The works of the Erving Goffman in particular have been used in role-playing study (e.g. Fine 1983; Choy 2004; Stenros 2008).

Despite this wide-ranging research on playing roles, the research of role-playing *games* is far more limited. Hitchens and Drachen (2009) show that definitions given in role-playing games research on role-playing in general are not applicable in defining role-playing games. This could probably also be shown on the more wide-ranging sociological and social psychological literature on role-playing in social interaction.

It is also possible that there is no single object, "a role-playing game", but several, and making all games fit a single mold would do them injustice.

Although researchers of role-playing games have tended to concentrate on role-playing as a process, there is also the possibility of looking at role-playing game*s as separate entities. This is regardless of whether one considers role-playing games as the physical objects that are used during the play, or as the fictitious and social products of that process of playing. Role-playing games can perhaps be compared to works of art, as products of the brush-strokes that make them, but separate from the hand that holds the paintbrush. Role-playing games create a fictitious world comparable to the one created in works of literature, although different from it in some ways (Fine 1983). In some sense, there is a role-playing game, but it may also be foolish to look for one too ferociously. It is also possible that there is no single object, "a role-playing game", but several, and making all games fit a single mold would do them injustice.

However, this is not grounds for ending the search for a definition of role-playing games. Defining role-playing games furthers the understanding of what the hobby, craft and art is, and can be. Definitions are mirrors of the actual games in the sense that definitions mirror the actual games played. But the reflection is twofold, as definitions shape how these games are played. Definitions can highlight aspects of games and serve in creating new ways of playing. But games can also show how definitions are flawed or lacking, by breaking them. For these reasons, definitions are useful as long as role-playing games are studied.

2. DEFINITION BY HITCHENS AND DRACHEN

Hitchens and Drachen discuss in length how role-playing games have been and should be defined. They end up giving the following definition, which is paraphrased here for ease of reference. The definition is as follows (Hitchens and Drachen 2009, p.16):

1. "**Game World:** A role-playing game is a game set in an imaginary world. Players are free to choose how to explore the game world, in terms of the path through the world they take, and may revisit areas previously explored. The amount of the game world *potentially* available for exploration is typically large.

2. **Participants:** The participants in the games are divided between players, who control individual characters, and games masters (who may be drepresented in software for digital examples) who control the remainder of the game world beyond the player characters. Players affect the evolution of the game world through the action of their characters.

3. **Characters:** The characters controlled by the players may be defined in quantitative and / or qualitative terms and are defined individuals in the game world, not identified only as roles or functions. These characters can potentially develop, for example in terms skills, abilities or personality, the form of this development is at least partially under player control and the game is capable of reacting to the changes.

4. **Game Master:** At least one, but not all, of the participants has control over the game world beyond a single character. A term commonly used for this function is "game master", although many others exist. The balance of power between players and game masters, and the assignment of these roles, can vary, even within the playing of a single game session. Part of the game master function is typically to adjudicate on the rules of the game, although these rules need not be quantitative in any way or rely on any form of random resolution.

5. **Interaction:** Players have wide range of configurative options for interacting with the game world through their characters, usually including at least combat, dialogue and object interaction. While the range of options is wide, many are handled in a very abstract fashion. The mode of engagement between player and game can shift relatively freely between configurative and interperative.

6. **Narrative:** Role-playing games portray

> some sequence of events within the game world, which gives the game a narrative element. However, given the configurative nature of the players' involvement, these elements cannot be termed narrative according to traditional narrative theory."

When discussing this definition, one must note that the authors (2009, p.16) remind us that "this definition does not provide clear boundaries" and that the line between what are and what are not role-playing games is a blurry one. However, they do hold that "the definition provides very clear support for categorising games" (Hitchens and Drachen 2009, p.16).

In addition to the elements found in their definition Hitchens and Drachen (2009) discuss, and then dismiss, several elements or alternatives commonly found in definitions of role-playing. These include at least: immersion, diegetic framework, adopting roles, structures of power, role-playing, and episodic structure. Some of these are discussed in more length later in this paper.

As Suits (1980, p.41) remarks, the easiest way for a definition to fail is by being either too broad or too narrow. Hitchens and Drachen (2009) hold that earlier definitions are successful in recognizing role-playing games, but they fail the first criterion: they also include games that are not role-playing games. Usually at least some forms of first-person shooter games are easily included, often also other forms of computer games that are not usually regarded as role-playing games. The definitions influenced by theater typically include anything that contain a narrative, and are thus unable to separate role-playing games from other forms of narrative fiction. An example of this is the definition given by Mackay (2001, pp.4-5):

> "I define the role-playing game as an episodic and participatory story-creation system that includes a set of quantified rules that assist a group of players and a gamemaster in determining how their fictional characters' spontaneous interactions are resolved."

In addition to presuming that all games are episodic, this definition places emphasis on the creation of a story. It also takes for granted that all role-playing games include "a set of quantified rules", a claim that is very easily falsified by taking a brief look at different role-playing games and ways of role-playing.

Hitchens and Drachen list (2009) different forms of role-playing, naming pen-and-paper/tabletop, systemless, live-action role-playing, single player digital, massively multi-player online, freeform and pervasive role-playing. This list could be extended with such examples as Jeepform (Wrigstad 2008). There are also styles of play subordinate to the classes given, but significantly different in style from other, similar types of role-play. An example of this would be the Dogma 99 style of live-action role-playing, with its strong ideological separation from tabletop role-playing (Fatland and Wingård 2003). The Dogma 99 style of live-action role-playing strongly favors games with an egalitarian power structure.

3. CRITIQUE OF HITCHENS AND DRACHEN

While the definition Hitchens and Drachen (2009) end up with is a very useful one, it is not entirely unproblematic. They start with examining different types of role-playing games, and looking at features they consider central to role-playing games.

While most of the definition they give is quite accurate, the demand that all role-playing games have a game master, and a game master defined in a particular way, is questionable. Inclusion of a game master in the definition assumes that all role-playing games have game masters, all players are not game masters, and the role of the game master is in some sense uniform. This criterion of separation is also closely tied to what they say about participants. While this is in no way controversial (cf. Hakkarainen and Stenros 2002), it may still be debatable.

What is most problematic about the two criteria is that according to them there must be two types of people participating in role-playing games – players and game masters – and that they must be separated from each other. This blunt binary either-or division

1. seems to exclude those games where the narrative power is evenly divided, and
2. is questionable where the division between game master(s) and players is more complex than presumed here.

An example of the first one is any instance of a live action role-playing game that has been co-written. If all players participate in writing the game collaboratively, then there is no separation between players and game masters, as all participants are both. This is something that is normally thought of as a role-playing game, yet it seems to be excluded by the definition given.

There are actual examples of games written collaboratively, like *#kotikatu*, a live-action role-playing game set in a near future sci-fi-setting, and written collaboratively among the eight participants (Harviainen 2006). A single person handled the necessary tasks of an administrator, but did not control the fictional world or the narrative. In other words, there was no game master. There is also a guide by Martine Svanevik (2005) for organizing live-action role-playing games "with a flat power structure", as she calls it. She lists three "commandments" for organizing collective live-action role-playing games (Svanevik 2005, pp.182-183):

1. *Everyone is responsible for the larp*
2. *There is no organizer*
3. *There are no limits*

The second problem with the binary division of players and game masters occurs with any game, where players have more narrative power than assumed here. It is not enough to note that "the balance of power between players and game masters, and the assignment of these roles, can vary, even within the playing of a single game session". This paints an overtly simplified picture of the *structures of power* within role-playing games. If the definition is to include games that have a non-traditional role for the game master, then the initial inclusion of the requirement for a game master may be misleading.

For an actual role-playing game that has a power structure not properly described by this definition, one could look at the indie tabletop role-playing game *The Mountain Witch*. In *The Mountain Witch* there is a traditional division between the players and the game master: one of the participants is a game master, the rest portray a single character each. There is no re-assignment of these roles over the course of the game. Even so, all of the players have control over the game world beyond their characters, with player narrative control actually more definitive than the game master's. The players have the narrative power to add anything relevant to their characters fate to the game, even overriding something the game master has defined. The game master is supposed to create the background for the story, but the players themselves tell the actual story. Thus, *The Mountain Witch* cannot be successfully captured within the definition by a simple division between players and a game master. The use of actual narrative power is more complex.

An alternative way of looking at the role of narrative power in role-playing games is hinted at by Hitchens and Drachen (2009, p.6) when they quote Montola (2007, p.179):

> "I see roleplaying as an *interactive process* of *defining and re-defining* an *imaginary game world*, done by a *group of participants* according to a *recognised structure of power*. One or more or participants are players, who portray *anthropomorphic characters* that *delimit the players' power* to define."

Instead of talking about the role of game master in role-playing games Montola (2007, p.179) explicitly talks about "a recognised structure of power." This formulation is more flexible, although the definition Montola gives is more ambiguous when used in defining role-playing games than the simple referral to a game master, and thus not as useful in separating role-playing games from other games (Hitchens and Drachen 2009, p.6). This is partly because Montola does not try to define role-playing games, but role-playing. Nevertheless, Montola's conception can be used in analyzing the power structures present in role-playing games. Montola (2007, p.178) expands upon this mention of a structure of power by continuing:

> "[A]ll role-playing is based on a power structure that governs the process of defining. In tabletop games and larps it's especially critical to establish the limitations of each participant's power: The environment is classically controlled by one player (the game master), while the others take over individual persons within the environment [...]. Often some power is allocated to a ruleset or a digital virtual environment, but even in the virtual worlds the players can utilize make-believe techniques to redefine the game world."

Montola's account of the structures of power within role-playing games includes the classic role of a game master, but expands it to include other possibilities, some of which are mentioned earlier. The traditional structure is a binary division into a game master and players, but this is by no means the only possibility. Even this simple relation may contain complex ways in which the narrative power is divided among the participants, as in *The Mountain Witch*. Recognizing that there is a game master may not tell us much about the game. Like Hitchens and Drachen (2009) note, this recognition is not even enough to separate role-playing games

from other games, as many war games typically have a referee comparable to a game master.

The traditional structure is a binary division into a game master and players, but this is by no means the only possibility.

The separation of role-playing games from other games is not entirely unambiguous. As can be seen from Hitchens and Drachen's (2009) definition, such elements as the size of the playing area, and the typical (or possible) forms of interaction with the game world constitute a part of the definition. Here another of Montola's (2009) concepts can be applied to clarify the situation. He separates the defining characteristics of role-playing games from those that are typical to them. This separation helps in finding those elements that are essential to the definition, and separating them from those that are only coincidentally true. Not separating defining characteristics from typical ones introduces ambiguity into any definition.

4. CAN DIGITAL GAMES BE ROLE-PLAYING GAMES?

Digital role-playing games form a non-uniform group. There are great many similarities between single player digital games and massively multiplayer online role-playing games (MMORPG). They are also both recognized as role-playing games in a more general sense, as being alike and sharing qualities for example with tabletop role-playing. Yet there are enough differences that Hitchens and Drachen (2009, p.16) conclude them to "not represent the full spectrum of role-playing games". They continue (Hitchens and Drachen 2009 p.16):

> "For example, some role-playing games blur or even remove the boundary between player and games master. Digital role-playing games are more restrictive, with the software having a non-negotiable role and rely on quantitative character representation and event resolution, while not allowing purely qualitatively description or arbitrary resolution. They also limit, *in advance*, what portions of the game world the characters can engage. Where a human game master can, on the fly, detail and present any aspect of the game world, this cannot be done in the digital realm, if only through the need to prepare the graphical assets."

It is certainly true that digital role-playing games have a qualitative difference from tabletop role-playing games, but the same could be said of tabletop role-playing games and live-action role-playing games. All types of role-playing games have limitations that are hard to overcome within the media, for example:

1. When compared to for example larp and digital role-playing games, tabletop role-playing cannot as effectively convey visual cues, because it depends on verbal discourse.
2. The area of play is necessarily limited in live-action role-playing, where the physical surroundings are part of the play. This is not similarly true in digital role-playing games, where the space is virtual, or tabletop role-playing games where the space is verbally created and imaginary.
3. Online text-based role-playing is limited by lacking the possibility of conveying emotions through facial expressions.[1] This applies also to graphical online games without video-feeds, since the player has to communicate through his or her avatar.

These comments should not be understood as critiques of these forms of playing, but simply as an acknowledgement of the fact that the media through which play happens affects the playing itself (McLuhan 1964). Neither are these observations comprehensive in covering all of the distinctions between forms of play, as such a question is extensive enough to merit it's own discussion.

The line between single player digital role-playing games and other digital games is blurry. Of the six qualities used by Hitchens and Drachen (2009) to define role-playing games, three are particularly useful in separating digital role-playing games from other digital games. These are:

1. Game World,
2. Interaction,
3. Narrative.

Digital role-playing games typically have a large, open game world, which the player may quite freely explore. There are typically more types of

[1] A reviewer pointed out that this may be (and often is) compensated for by using emotes. This is certainly true. It simply takes more conscious effort from the player.

interaction available than in other digital games, and not just limited to a single category of fighting, driving, etc. Role-playing games also often create a much more detailed and meaningful narrative than other digital games (Hitchens and Drachen 2009).

The rest of the three qualities – participants, characters and game master – are not as effective in separating digital role-playing games from other digital games. There tend to be at least two participants in all digital games, the player and the machine operating the game. The machine controls the simulation where the game takes place, effectively handling the duties of the game master. The characters in typical digital games, though not in all digital games, are defined as individuals rather than roles. The existence of individual, potentially developing characters does not separate digital role-playing games from other digital games.

While it is true that digital role-playing games tend to have a large area of possible exploration, using this as a defining quality imposes problems, as it is also typical for genres apart from role-playing games. Games such as the *Far Cry* series include both large areas for exploration, and the possibility to retrace one's steps, which is a quality typical of role-playing games. It may however be that area does not really qualify as a defining characteristic; strategy games typically have a larger area represented in the game, although the scale is different. However, they do not typically include a single anthropomorphic character for the player to play, so the risk of confusion with role-playing games is a minimal one. It is thus probable that it is not the area itself that is important, but rather the possibility of exploration of that area through a single character. It can probably be concluded that the existence of a large area possible for exploration is a typical quality of role-playing games, but it probably should not be included as a defining quality.

One of the qualities typical for role-playing games is the large amount of different types of interaction possible to the players. This is especially useful in separating digital role-playing games from other digital games. One can use this as a separating criterion when showing why the *Far Cry* series is not a series of role-playing games, but a series of FPS-games. The only type of interaction available to the player are forms of combat. There is dialogue present in the game, but the protagonist is mute. The only interaction presented during the dialogue is the possibility of either rejecting or accepting the missions offered. It is perhaps more fitting then to call it monologue rather than dialogue. It does not qualify as meaningful interaction. This is true of most digital games; the types of interaction available is heavily limited by the genre of the game, but this should not be surprising. Games are usually limited to certain types of game play. This is also true of role-playing games, although the types available are typically more varied.

All games can be said to contain narrative elements due to containing consecutive sequences of events given meaning to by the player.[2] It would not then be informative to state that there are narrative elements in role-playing games, unless that is refined to separate role-playing games from other games in some substantial way. According to the definition, the narratives present in role-playing games are not traditional, but that is probably true of all interactive media. The narrative structures are probably especially similar between role-playing games and other games.

A game like *Super Mario Bros* does tell a story of a courageous plumber rescuing a kidnapped princess, although it is probably true that it is not a very complex one as stories go. But the complexity of the story cannot be a deciding factor. Even role-playing games with substandard (whatever the standard may be) narratives are still role-playing games, although not necessarily good ones, and the same probably applies to other forms of games. Other games may have other, redeeming qualities that make them good games regardless of the quality of the narrative. There are also games other than role-playing games with strong narrative elements, like the *Half-Life* series. It can then be said that, in terms of narrative, the difference between role-playing games, especially digital role-playing games, and digital games is not that great.

While there are certainly other examples, *Far Cry* and *Half-Life* are good examples because FPS-games are usually not considered role-playing games yet they seem to fulfill most of the criteria set for role-playing games. The line is especially blurry with *Mass Effect*, which is generally thought to be a role-playing game, but includes elements from FPS-games as well, like real-time FPS-style combat. The question is not if *Mass Effect* is a role-playing game, but what makes games that have

[2] Jesper Juul (2001) has argued that while games and narratives share some structural elements, games and narratives share some structural elements, games and stories do not translate very successfully into each other.

most of the elements employed in *Mass Effect* something other than role-playing games. It would seem that adding very small changes to games like *Half-Life* would make them role-playing games.

For example, *Far Cry* seems to do quite well in meeting the requirements of being a role-playing game:

1. It has a large, imaginary game world.
2. It has the necessary participants, if the platform (computer, console etc.) counts as a participant.
3. The player controls a character that is an individual rather than a role.
4. The player does not have control over the environment, but the platform does, being therefore the game master.
5. There is interaction through combat and rudimentary dialogue.
6. The game creates and delivers a narrative.

While *Far Cry* to passes some of these requirements without problems, some of the others are more doubtful:

1. The player cannot control the development of his character in any meaningful way.
2. The game cannot react to changes in the character, at least to those not already included in the game in development.
3. There is really no interaction outside combat, as the dialogue is more of a monologue.

But these elements are not outside the range of possibilities. The next game in *Far Cry* series could include a system for dialogue that matches or exceeds those used in digital role-playing games. That alone would seem to make it a role-playing game, as the demand for character development is not an absolute requirement for something to be a role-playing game. Other FPS-games, such as the *Call of Duty* series, already include partially player-controlled development.

Is it a problem that FPS-games can be easily altered to match the requirements of role-playing games? Not really, if one is willing to accept that there will always be limit cases to defining role-playing games, and games in general. Salen and Zimmerman (2004; cf. Juul 2003) consider role-playing games to be limit case games; maybe (at least some) FPS-games can be considered limit case role-playing games.

5. DEFINING ROLE-PLAYING GAMES AS LANGUAGE-GAMES

In defining role-playing games, it is enlightening to take a brief look at the traditional theory of definition (Cohen 2008; Kneale and Kneale 1991). The most basic part of the theory of definition is the twofold division into *nominal definitions* and *real definitions*. Nominal definitions are verbal agreements about the use of terms, or suggestions to use an expression in a certain way. These are social definitions, depending on the use of language and the predominant social conventions. Because nominal definitions are verbal agreements, they cannot be true or false, but they may be more or less useful. Real definitions aim not just to tell us about the way words are used, but also to find some attributes that are essential to the object being defined. Should one wish to avoid essentialism in defining real attributes, one could choose minimal factual relations between physical attributes, allowing any of them to be chosen as a point of comparison.

There is difference in trying to identify the discourses surrounding role-playing games, and thus trying to find the current social (nominal) definition, and analyzing the structure of role-playing games and identifying shared attributes (real definition). These might not be mutually exclusive goals, but making this difference explicit will help in understanding a definition.

If a definition attempts to cover role-playing as a real definition, it should attempt – at least in theory – to cover all possible forms of role-playing games. Another possibility is delimiting a real definition to certain forms of role-playing. A nominal definition on the other hand will change over time as the discourses around the definition shift. A real definition can also change over time, but this change is a correction of a previous error in defining the object.

There is also an argument against searching for essential (real) definitions in general. It comes from Wittgenstein (1999), in *Philosophische Untersuchungen* (1953). Instead of searching for essential definitions for concepts, he suggests that concepts should be understood as sharing *family resemblances*. The analogy is the resemblance of family members between each other. The father may not resemble the mother much, but they both share characteristics with their children. There are similarities with their physical characteristics: faces, color of their eyes, and with the way they

walk, but also with their temperament. The same way we understand types of numbers as being similar. There is a direct affinity with the other kinds of things we are used to calling numbers. There are also non-direct similarities to the things we have formerly called "numbers", and so we consider any new examples of number-like-objects numbers. What makes them number-like may differ from one instance to another, just like the attributes differed when comparing children to their mother and father. The children may be blond, like their father, and have brown eyes, like their mother. These shared concepts are meaningful only in a certain type of commonly shared way of speaking about things, Wittgenstein (1999) interestingly calls *language-games*. Language-games are thus ways of understanding concepts, differing from culture to another, but also in smaller scales, like from a field of researcher to another.

From Wittgenstein's (1999) conception follows that there are no core attributes that could be used in separating role-playing games from other phenomena. If Wittgenstein (1999) is indeed right, then there may be no single definition for role-playing games. Instead of having a common core of attributes, role-playing games share attributes as family resemblances that may vary from one instance to another, forming a continuum rather than a single "potentially identifiable object" (Hitchens and Drachen 2009, p.5). The resemblances would probably be stronger between live-action role-playing games and pen-and-paper role-playing games than live-action role-playing games and single player digital role-playing games. Different types of role-playing games could then be understood as a continuum with pen-and-paper role-playing games near the center[3]. The act of defining role-playing games would then be a language-game in itself, and the question not what are role-playing games, but what elements are considered important when we identify role-playing games in this language-game.

Wittgenstein also claims that games cannot be defined, and that family resemblances are the only possible way of identifying games. Not everyone agrees (Suits 1980; Juul 2003). Suits (1980) has criticized Wittgenstein for not following his own advice of actually looking at games and seeing if there are similarities between them, rather than assuming there are none. According to Suits (1980), Wittgenstein seems to assume that there are none, when he should have looked, and found, some.

Instead of having a common core of attributes, role-playing games share attributes as family resemblances that may vary from one instance to another, forming a continuum rather than a single "potentially identifiable object".

It is therefore not the lesson that games are undefinable that is to be learned from Wittgenstein (1999). Simply stating that games are undefinable is counterproductive to their research (cf. Suits 1980). Another possibility is to understand Wittgenstein's conception of games as a *hermeneutic* one (Connolly 1986). A hermeneutic conception means that each definition is understood as a new starting point for a new act of defining, or in other terms, as a pre-understanding for a more complete understanding (Gadamer 2004). This would make the process of definition basically endless, as it may be continued eternally without reaching any form of finality. However, this endlessness is not a surrendering to a completely relativistic point of view (Weberman 2000). Rather, it is a contextual understanding of the truth. There may be no final truth, but an understanding may be more or less suitable for a context.

What does this mean in defining role-playing games? If defining is understood like Wittgenstein (1999) does, it follows that:

1. **Language-games resemble context*:*** Larp is discussed with theater analogies, digital games with computer analogies, and tabletop role-playing games with war-gaming analogies.
2. **Language-games are separate:** Different language-games are used in discussing digital role-playing games and tabletop role-playing games. There is overlapping in these language-games, but they are distinct.

[3] Or perhaps any other style of role-playing at the center? Pen-and-paper role-playing games are generally thought to be the "basic" form of role-playing games, but this is probably mostly because they are the first type of role-playing to be recognized as such. This excludes Happenings (Harviainen 2008), therapeutic role-playing, pedagogic simulations (Crookall, Oxford and Saunders 1987), social play and role-taking rituals, which all easily predate pen-and-paper role-playing (Morton 2007).

3. **Language-games may not be compatible:** Larp is difficult to discuss using terminology suitable in analyzing shooter computer games, while this is notably easier with digital role-playing games.

The context-sensitive, different language-games are what Wittgenstein (1999) had in mind when he called language-games *forms of life*. A language-game is associated with a certain way of being in the world and these ways of being in the world are different forms of life. Forms of life are cultural differences, but in addition they are differences on a smaller scale. Forms of life are the different ways of relating to the world depending on social, cultural and economic status and context. For example, when a fisherman talks about knowing where the best places to fish are, he probably uses the word 'know' in a different way than a philosopher who specializes in epistemology (the theory of knowledge). The fisherman and the philosopher live in different forms of life, where the word 'know' is useful in different ways and thus they participate in different language-games.

Similarly, there are related but different forms of life surrounding different forms of role-playing games. This is true even if we exclude from the discussion such things as culture differences. Live-action role-playing is discussed in different terms than digital role-playing. The use of different terms stems from the different cultural and social contexts these activities are associated with.

The language-games around different forms of role-playing are separate and may diverge from one another, especially over time. An example of this could be the Knutepunkt-tradition of role-playing game theory, which deals almost exclusively with larp (currently encompassing 10 books and several other works, see Larsson 2010, for an example). The Knutepunkt-tradition could be understood as its own language-game, with a connected form of life. This form of life would be the Nordic live-action role-playing culture and its related discussions. Language-games are as dynamic and mutable as the forms of life they surround. Unless there is interaction between different forms of life, the language-games surrounding them may also separate.

But this is only one way of looking at the situation. There is also the language-game of role-playing games that encompasses all of the forms of role-playing usually considered role-playing games.

This language-game is part of the form of life that is role-playing, and all the social characteristics typical to it. An example of this would be the knowledge of fantasy and science-fiction literature typically considered relevant to role-playing games, like cyberpunk, the works of Tolkien and the Cthulhu-mythos. Language-games exist in nested hierarchies with porous boundaries. Choosing which level of language-games to employ is a strategic decision. This decision affects questions of inclusion and exclusion.

There is also the language-game of role-playing games that encompasses all of the forms of role-playing usually considered role-playing games.

There is also the possibility of using several definitions simultaneously in a field of research. An example of this is the way genes are understood in biology (Moss 2004). Instead of giving a single definition variable over time, the alternative would be using several at the same time. There are requirements on the definitions if they are to be used simultaneously: they cannot be completely mutually exclusive, lest they end up defining different phenomena. Additionally, only one definition can be used in one study, to adhere to the demands of coherency. The definitions can vary only between different discussions, which could end up being completely different language-games.

There is also the possibility that the search for a "commonly accepted definition" (Hitchens and Drachen 2009, p.3) is not a meaningful one, at least yet. One is hard pressed to find a commonly accepted definition for such widely used terms as "culture", "structure" (Rubinstein 2001) or "game". These things are defined and redefined all the time as part of new research, creating new approaches, problems and answers along the way. This probably should not be viewed as a lack in research, but as a consequence of the nature of the things being defined. Our understanding of cultural phenomena is constantly changing, at least partly because those phenomena are also changing, and partly because our cultural perspective is changing.

Wittgenstein's (1999) way of defining things is essentially nominal. It means that his way of defining things does not try to find a definition that

can be compared to reality, but to discourses[4], ways of speaking about things (Mills 2004). As shown before, the key benefits to using a nominal definition are:

1. **Avoiding essentialism.** If definitions are limited to ways of speaking about things, then none of the qualities of the object being defined are taken for granted. All of the qualities are subject to definition and re-definition, highlighting the social nature of these qualities.
2. **Flexibility.** Nominal definitions are by their nature sensitive to change and context.

However, there are drawbacks to nominal definitions, namely:

1. **Endlessness of definition.** There are no final nominal definitions as the discourses surrounding things are subject to historical change.
2. **Difficulty of comparison.** If definitions are ways of speaking about things, it is difficult to critique a definition.
3. **Correspondence to reality.** Discourses are distinct from the reality they portray, and it may be possible that a discourse does not reflect the nature of reality very accurately.

The flexibility inherent to nominal definitions stems from the fact nominal definitions are under constant re-definition. This re-definition is the result of the changes in the form of life the definition is part of. Because of this sensitivity to historical change nominal definitions are more useful in defining cultural objects than they are in defining for example objects studied by natural science, which are more resistant to historical re-definition.

As nominal definitions are part of a discourse, they cannot be verified accurately or judged outside this discourse. This prevents forming nominal definitions that are verifiable separately from the discussion the definitions are used in. Comparing the value of nominal definitions can be difficult, as not only the definitions themselves, but also the surrounding discourses must be evaluated. This leads to a situation where the definitions are not judged by their merits, but on the merits of the discourses in which they are situated.

Nominal definitions are defined as verbal agreements that cannot be truth or false. They may be more or less useful in a situation, but they cannot be evaluated as true or false. This may be considered an unfavorable quality when building a theory-base for a new discipline, like role-playing game theory.

Additionally, Cohen (2008, p.232) remarks that:

> "We have drawn a sharp distinction between verbal [nominal] and real definitions. In practice, however, the distinction is never so sharp, and even in definitions which seem altogether verbal there is generally some reference to the analysis of what the words stand for."

6. DISCUSSION

The definition given by Hitchens and Drachen (2009) is a useful one, but it may not be the only useful one, especially if one is interested in different aspects of the game than they are. For example, there is no mention of immersion (or engrossment, cf. Fine 1983) in their definition. This is considered by many to be an important part role-playing games, and could be part of an alternative definition, one probably more interested in the process of role-playing (e.g. Mäkelä et al. 2005).

The process of role-playing is easier to identify and define than role-playing games, as shown by the plurality of process-definitions and relative lack of role-playing games definitions. This is partly because the question of defining role-playing games is a normative one. Defining role-playing games enables making normative decisions about concrete publications that are considered role-playing games. Including and excluding some phenomena from a definition is an act of power: it has political (in a wide sense of the term) and normative consequences. Language-games can be seen as expressions of this power: choices about the way terms are used change the way these terms are defined and how they related to each other. Cohen (2008, p.233) remarks the following on the ways religion has been discussed:

> "Religion, for example, has sometimes been defined in terms of some dogma, sometime in terms of a social organization and ritual, and sometimes in terms of emotional

[4] 'Discourse' is used in this context as a non-technical term, roughly synonymous with language-game. This corresponds loosely with Foucault's use of discourse as "individualizable group of statements" (Foucault 1972, p.80 cited in Mills 2004, p.6).

> experiences. The resulting conflicts over the meaning or essence of religion have been regarded, perhaps not without some justice, as conflicts over words. But this is only a half-truth. For the disputants frequently have their eye on a concrete phenomenon which presents all these aspects. The quarrels over the right definition of religion are attempts to locate the fundamental features of a social phenomenon."

There is a concrete phenomenon at the heart of these discussions, but the definitions given on religion pick out only parts of it. These parts are emphasized as ways of enhancing arguments about the nature of the subject.

Similarly, it is a question of power who gets to decide what games actually are role-playing games. There is power in being able to say: "That is no role-playing game, this is!" It can also be useful to publishers of games to be able to market some games as "role-playing games", even if the connection to role-playing is a tenuous one at best.

It is analytically useful to be able to exclude some things from role-playing games, but what those things happen to be depends at least partly on the purpose of the definition. When one sets out to find a definition that is better able to separate role-playing games from other games, it follows that the definition will be an exclusive one. Exactly how exclusive it is depends, in addition to the findings of the analysis, on the implicit goals of the definition. As an example, *Dungeons & Dragons* is the first published fantasy role-playing game (Fine 1983), and a model for countless others, but regardless of the fact some people could criticize it for not being a particularly good *role-playing* game. This criticism must stem from a conception of role-playing games that excludes things present in *Dungeons & Dragons*, and includes things not present in it. This should not be understood as a critique of *Dungeons & Dragons*, but as an acknowledgement that tastes differ, as do the criteria used for counting something a role-playing game.

It is perhaps because of these problems with exclusion that Sutton-Smith (1997) calls for inclusive definitions on a related phenomenon: play. There is not a clear enough consensus of what to call play that exclusive definitions should be created, and start ruling things out too harshly (Sutton-Smith 1997). An example of exclusion probably not based on analytical grounds is the famous play theorist Roger Caillois' (2001) view on gambling. Caillois (2001) holds that gambling is not a type of play, but a corruption of play. He claims that gambling leads to debts, and other social problems. This may be true, but it does not rule out the possibility that gambling is play. Caillois' view might be interpreted as not something stemming from play itself, but from a bias on his part.

A more inclusive concept of play would include gambling regardless of its social effects. Perhaps we should for similar reasons use inclusive definitions of role-playing games. Even if an inclusive definition is not adopted, there are different ways definitions could be formulated. These alternative definitions depend on the viewpoint used and the language-games surrounding the phenomenon under discussion, as shown by Wittgenstein (1999). An example of theoretical plurality among role-playing theory is the difference between academic role-playing theory and the theory created on The Forge Forums, often called the Forge theory (Boss 2008).

The problem with talking about language-games instead of definitions is the apparent relativism implied. If instead of searching for a perfect definition it is conceded that there may be no perfect definition, and that there may be many different definitions, it seems that there are no ways of criticizing these definitions. They are different, and that is all. But this is a mistaken notion: some language-games are better suited for talking about some phenomena than others, and they may be evaluated based on how well they are suited to the problem at hand. However, this is different from trying to find a single, perfect definition. A definition is always a tool: definitions are used trying to answer certain questions, and depending on those questions, different definitions may be better suited to the problem at hand. It is a tool also in the sense that unless definition is necessary, it tends not to be given.

This approach can be understood as a hermeneutic approach (Gadamer 2004). In addition to having intrinsic attributes, cultural phenomena also have relative attributes, which change over time and in different contexts (Weberman 2000). This makes truth a context-dependent concept, when talking about historical and cultural objects. This applies in the larger cultural context, where history slowly changes the conditions in which objects are evaluated. But it also applies on a more specific level where individual studies are conducted.

Earlier in this paper there has been a critique of the various aspects of the definition given by Hitchens and Drachen (2009). Analysis shows that some of its aspects are more problematic than others. But simply removing parts of the definition do not make it better. A definition that aims to rectify the problematic parts is presented next. This definition aims to encompass the whole phenomenon of role-playing, so it is situated on the language-game level of role-playing in general. Suggestion for a definition modeled after Hitchens and Drachen (2009):

1. **Game World:** There is a game world, which is defined at least partially in the act of role-playing. This game world is at least partially separate from the players ordinary life, and exists within a magic circle of play.
2. **Participants:** There are more than one participant, which may include computers.
3. **Shared Narrative Power:** More than one player can alter the narrative, or it is not role-playing, but storytelling. Shared narrative power implies narrative.
4. **Interaction:** There are varying modes of interaction with the game world. Conventions of play influence these forms of interaction, limiting the scope (What can I change in the game world?) and modes (How can I change it?) of interaction.

Role-playing games happen in a world "outside 'ordinary' life" (Huizinga 1949, p.13), in an imaginary world that exists within a limited realm of its own (Salen and Zimmerman 2004). However, this separation is not complete in the sense that "ordinary" life could not influence the game; this is even truer in the case of pervasive games[5] (Montola 2005). Nevertheless, there is a game world created during play that is separate from the reality of the players (Hakkarainen and Stenros 2003).

This makes truth a context-dependent concept, when talking about historical and cultural objects.

The imagined world of play is constructed (more or less) in unison with several participants (Fine 1983). This makes role-playing games social. In the case of digital games, the participants creating the world are the game itself (or the computer running the game), with its pre-programmed rules of simulation, and the player interacting with these rules. This need for (at least) two participants separates role-playing games from works of fiction, such as books, where typically, but not necessarily, a single person creates the narrative. The narrative power is shared between participants in various ways, depending on the system of rules used and the social rules surrounding the play. The structure of power can be anything from egalitarian to autocratic, and can change according to rules of the game or due to changes in the surrounding social relations.

Mackay (2001, p.134) states that "the role-playing game, like hypertext, consists of description, narration, and ergodics". He studies role-playing from a performative point of view, so the difference between description and narration is important for his study. In the definition being formulated here those two are essentially the same thing, as they are both participants using their shared narrative power to shape the game world. The important part is what Mackay (2001, p.134) calls "ergodics". This is Aarseth's (1997) term for interactive literature, where the reader must participate in creating the text. In this sense, role-playing games are deeply ergodic. The interaction of different participants is needed to create the "text" of role-playing narrative. The text in question is not the printed text of the rulebook, but the narrative that is created during play. Aarseth (1997, p.64) lists four modes of interaction:

1. Interpretative
2. Explorative
3. Configurative
4. Textonic

All texts have the interpretative function, which is the possibility of the reader to make different interpretations of the text. In the explorative function the user must choose which path to take through the text. In the configurative function the user can make changes to the text during the reading, but can make no permanent changes to the text. If permanent changes can be made – which carry over to subsequent readers – the function is textonic. Like all texts, role-playing games contain the interpretative function. In order for something to be a role-playing game, it must

[5] Pervasive games are defined by Montola (2005, p.3) as follows: "Pervasive game is a game that has one or more salient features that expand the contractual magic circle of play socially, spatially or temporally".

additionally contain at least the explorative mode of interaction. This is to say that role-playing games must be interactive. If one would like to create more exclusive definitions, one could also require that at least the configurative mode of interaction would be present. If the participants cannot change anything within the game, it could be argued that it is not properly a role-playing game, as the narrative power is not shared.

Elements not included in this definition, but part of the definition it is modeled after (Hitchens and Drachen 2009) are:

1. Game Master
2. Characters
3. Narrative

Game master is replaced with shared narrative power, as a more flexible expression of the structures of power within role-playing games. The definition given in this paper does not define characters as required qualities of role-playing games. However, they are as common in role-playing as they are in narratives in general. It is just this commonality that makes them not qualities of role-playing, but of all things narrative. Characters, therefore, cannot be effectively used in separating role-playing games from others forms of narrative. If characters are not deemed necessary, it blurs the line between shared storytelling and role-playing. This may be a disadvantage in the definition given here, if studying elements in role-playing games more related to characters, like engrossment (cf. Fine 1983). Narrative is not defined here as a quality of role-playing games; however, it is implied by shared narrative power.

7. CONCLUSION

Role-playing has been defined in a multitude of ways. All of these perform a function in an ongoing discourse on role-playing, and role-playing games. Different definitions are better in different functions; there is no final definition, applicable to all possible situations, and in all contexts (Wittgenstein 1999; Weberman 2000). This is due to our changing historical and cultural context of playing, creating and researching role-playing games. However, there are ways of speaking about role-playing games better or worse suited to those contexts. This non-objective, but ultimately also non-relativistic conception of truth could be described as hermeneutic (cf. Harviainen 2009).

Regardless of this impossibility of a final definition, the definition given by Hitchens and Drachen (2009) performs well as general view on role-playing. It aims to be exclusive, and succeeds in this. However, exclusive definitions do have their problems (Sutton-Smith 1997). If one sets out to find a "commonly accepted definition" (Hitchens and Drachen 2009, p.3) it is highly unlikely that this is possible with an exclusive approach. The definition given by Hitchens and Drachen (2009) includes elements that could be described as typical, rather than defining (Montola 2009). Examples of these kinds of elements is the potential area of the playing world and character development. Most problematic of these is the inclusion of game master in the definition. Analysis shows that rather than a game master, role-playing games necessarily contain a structure of power (Montola 2007). A structure of power covers the different possible ways that power may be divided among the participants in a game.

Role-playing is deeply social in its nature (Fine 1983). It is defined in the social contexts where it is played. There is no "pure" role-playing that the theorist can find and then rule out other forms of role-playing as less pure. What we consider role-playing is the product of historical and social happenstance. But this does not mean that anything can be called role-playing, as it is a very distinct historical and social process that has formed a certain understanding of role-playing.

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IV

LUDOLOGY, NARRATOLOGY AND PHILOSOPHICAL HERMENEUTICS

by

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Ludology, Narratology and Philosophical Hermeneutics

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ABSTRACT
In this article we present the hermeneutic method as a tool for analyzing game studies discourses. We use Markku Eskelinen's profusely interpreted "The Gaming Situation" (2001) as a case study. Our premise is that whereas the hermeneutic method is academically well-established, its conscious application is not. It is suggested that with conscious application of the hermeneutic method the persistent and problematic questions in game studies, like those related to narrative, definition, and art, gain potential to be treated with increased sophistication.

Keywords
Hermeneutics, hermeneutic circle, horizon, ludology, narrative, narratology, philosophical hermeneutics, story

INTRODUCTION
Each communicative utterance, the present article included, is destined to unavoidable misunderstanding. This unfortunate state of affairs gave birth to what is today called hermeneutics, that is, the art of understanding:

> "Hermeneutics rests on the fact of the non-understanding of discourse… The goal of hermeneutics is understanding in the highest sense." (Schleiermacher 1838/1998, 227–8)

Because game studies is a nascent field, with no strong consensus of concepts yet, its discourses need to be interpreted with particularly versatile and sensitive methods. The aim of this article is to introduce hermeneutics and philosophical hermeneutics in particular as one such method. The goal is thus not to contribute to our understanding of *games* but to our understanding of *texts that understand games*.

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Hermeneutics is a recognized method outside game studies, with a research tradition dating back centuries. It provides cohesion not available through deconstruction, and methodological tools not present in most close-reading techniques. As such, it is useful for interpreting texts that have been proven problematic.

As a case study we review a section from Markku Eskelinen's 'The Gaming Situation' (2001) because of the rich interpretational diversity the essay has produced. In the first part of the review we analyze the interpretive tools that scholars have been using for understanding that essay. In the second part of the review we provide some notes on the essay from the perspective of philosophical hermeneutics. At first, however, the concept of hermeneutics is opened up.

HERMENEUTICS

Hermeneutics is a theory of interpretation. Generally it focuses on written texts, yet modern applications of hermeneutics have broadened the topics it covers to almost anything that can or needs to be interpreted (see Grondin 1994). In modern hermeneutics, 'text' can thus be any object of interpretation, and as such includes all verbal and nonverbal communication; without excluding the possibility of interpreting non-communicative objects. Recently, hermeneutics has been applied, for example, to law, social sciences, psychology and architecture.

Our focus is on what is generally known as *philosophical hermeneutics*. The term is mostly associated with the work of Martin Heidegger, Hans-Georg Gadamer, and Paul Ricoeur. Since we are presently concerned with written texts, we also draw upon earlier hermeneutics, first and foremost upon the work of Friedrich Schleiermacher (1768–1834). For presentation purposes we simplify the matter and discuss the latter in terms of *classical hermeneutics*. (Cf. Gadamer 2006.)

Classical Hermeneutics

Hermeneutics became a general theory of interpretation already in the 19th century. The credit for this is often given to two major hermeneutic philosophers, Friedrich Schleiermacher and Wilhelm Dilthey (see Schmidt 2006). Because Schleiermacher's work is more centered on written texts, we apply his classical terminology for our analysis.

Departing from the premise that "one only understands partially and incompletely" (Schleiermacher 1838/1998, 231), Schleiermacher went on to pursue a practical interpretive method that would enable one to understand texts "at first just as well as and then better than its author" (23). He divides hermeneutic interpretation into two simultaneously operating types: *grammatical* and *psychological*.

Grammatical interpretation concerns understanding language. This does not refer merely to the decoding of linguistic signs, but also to the understanding of those signs in some closed context. For instance, when Espen Aarseth (2002) states that "*Quake III* is not a game," our interpretation of that statement is not valid if we do not take into consideration the rest of the statement: "it is a technology for spawning countless games with little passages, all alike/different." Yet even with the above complete statement, the interpreter might still be perplexed. A full understanding of the claim entails reading Aarseth's entire essay, which we do not cite here.

Psychological interpretation concerns taking into consideration the author's personal psychology, the time and place of writing and other extra-textual facts. Since the interpreter is normally capable of gathering more extra-textual facts of the text than its author, the interpreter is normally also capable of understanding the text better that its author. The finest understanding by these psychological means is achieved via two interpretive sub-methods: *divinatory* and *comparative*. In the first case the interpreter "transforms oneself into the other person and tries to understand the individual element directly" (Schleiermacher 1838/1998, 92). In the second case the interpreter "finds the individual aspect by comparison with other things included under the same universal" (23).

Interpreting Aarseth (2002) from a divinatory perspective would thus mean gathering and studying all possible information on Aarseth in order to enter his ultimate thoughts; whereas a comparative perspective would mean comparing his thoughts (expressed in the text) to as many extra-textual facts as possible. With these processes together we would eventually end up with a rich variety of more and less significant meanings; for instance, knowledge of Aarseth's long gamer history combined with knowledge of the famous 'twisty little passages all alike' labyrinth in *Zork* (Infocom 1980) would refine our understanding of the latter part: "countless games with little passages, all alike/different."

Undoubtedly the most well-known aspect of all of these interpretive processes is their circular nature. This circularity is often referred to as the *hermeneutic circle*: in order to understand a detail of a text, the interpreter must relate the detail to the whole of the text. But in order to understand the whole text, the interpreter must understand the detail. We already proved the validity of this observation as we interpreted Aarseth: if we want to understand what he means by a word, clause, or sentence, we must understand the complete essay – which in turn requires understanding single words, clauses and sentences. Note that the same circularity operates also on a more universal scale: understanding a single essay as parts of its author's all texts, and the author perhaps as part of a larger academic community, and so on.

Philosophical Hermeneutics

The term philosophical hermeneutics is first associated with the works of Martin Heidegger. His ground-breaking but simple insight was to connect textual interpretation to everyday understanding: our daily sensemaking of perceptions, events and activities are all likewise guided by interpretive hermeneutic principles. This extending of hermeneutics from textual to general interpretation became the aspect that Heidegger's follower, Hans-Georg Gadamer (1960/2004), later recognized as the factor that made modern hermeneutics 'philosophical.' We choose Gadamer to represent philosophical hermeneutics here, as the best fit for the problems we are addressing.

For Gadamer, hermeneutics becomes not a process of understanding preceding ideas but of refining those ideas, that is, pursuing truth. What makes his theory of interest to those who seek to understand academic texts is that it liberates them from the limits that rule classical theories of interpretation. In classical hermeneutics the interpreter is continuously digging a fixed meaning by means, for instance, of

> "recourse to similar passages, and then in favourable circumstances just as much outside the work as outside the writer, but *always within the same language area* (Schleiermacher 1983/1998, 45; italics added)."

While classical approaches may go beyond texts, authors, and even eras, they are nevertheless always delimited by the premise that the object of interpretation can be exhausted with proper tools. This is where Gadamer's (1960/2004) theory breaks off by asserting that "the discovery of the true meaning of a text or a work of art is never finished" (298). He does not see time as a barrier to be overcome but as a vantage that makes it possible to understand the object of interpretation in a wider context. Consequently, whereas classical hermeneutics conceive of interpretation as *reconstruction*, in philosophical hermeneutics the process is defined by *recreation*.

The recreative interpretive activity is always done from a limited point of view, a *horizon*. With the help of time, horizons slowly broaden as we move away from the object of interpretation and see more of the things that surround it. So while your interpretation of this paragraph is unavoidably affected by your history (what have you read before), motives (why are you reading this) and many other factors, becoming aware of those factors enables you to understand that that particular interpretation is only one of many—ideally the best one that is constructible from your specific horizon. This awareness, as per Gadamer, is a *fusion of horizons*.

INTERPRETING ESKELINEN

In order to see hermeneutics at work, we now proceed to review Eskelinen (2001), starting from its interpretations. To be clear, our present interest is not in the object of interpretation, but in the discovery of the means and methods that game scholars have been using in their interpretations. As a side note, we ask the reader to pay careful attention to how the present article ignores all judgments on the 'correctness' of the interpretations that follow.

Previous Interpretations of Eskelinen

To begin with, we evoke Schleiermacher's (1998) notions of *grammatical* and *psychological* interpretation, the former by which he means the explication of actual linguistic referents, and the latter by which he means the explication of extra-linguistic referents. Eskelinen's (2001) statement that stories are mere "uninteresting ornaments or gift-wrappings to games" is put in focus.

Let us first interpret the phrase with a grammatical approach. An example can be drawn from Aki Järvinen (2008), who employs the citation to explain his working methodology, 'applied ludology:'

> "The form of moderate, applied ludology presented in the thesis at hand means that 'ornaments' are addressed as a set of elements in games, among other elements, with particular consequences for players' experience of the game." (23)

Here we observe how Järvinen interprets Eskelinen's figurative 'ornament' as an instance of applied ludology. In this case the metaphorical units 'ornament' and 'gift-wrapping' are disconnected from their evaluating context; the preceding adjective 'uninteresting' plays no role.

It is important to recall that grammatical interpretation does not operate alone. We understand that the grammatical interpretation of 'ornament' and other words are only one part in Järvinen's overall hermeneutic interpretation of the essay. Because of his wish to explicate applied ludology, this small part becomes of use, nonetheless. We cannot

know of the origins of his hermeneutic circle—was Järvinen looking for a metaphor for applied ludology as he was reading, or did he come up with the idea of the metaphor as he read?—and that is not important. What is important is that Järvinen did have some preconceptions and motives for reading, which together made him apply this specific part to his own work.

Our second take on the statement comes from Patrick Crogan (2003), who refers to the same metaphors in his discussion of game manual functions:

> "Consideration of the 'packaging' of a computer game (in such elements as the manual, the literal packaging of the software, or the accompanying media marketing) is irrelevant in the view of Markku Eskelinen, who argues … that computer game studies must concentrate on theorizing the gaming experience in order to delineate what makes games a unique form of practice." (298)

Here we see ornaments and wrappings interpreted not only as separate metaphorical units but also in relation to literal ornaments and wrappings that come with games. Unlike in our previous case, this interpretation also takes into consideration the metaphors' value charge. For Crogan to whom the manual is an important component of the game at his hand, *Microsoft Flight Simulator 2* (Microsoft 1984), the reference functions as a rival statement. In this context Eskelinen's essay is interpreted primarily as an anti-paratextual account. We notice how motives have significant effects even on grammatical interpretations.

Let us move on to a third interpretation. This time the interpreter, Marie-Laure Ryan (2006), is interested first and foremost in the statement's negative position towards videogame narrativity. That premise leads her to interpret the statement as follows:

> "Games are games, they are not narratives … [the two] cannot truly hybridize." (183)

Ryan employs her interpretation to bring out ludology as a game theoretical school with an agenda that ignores narratological concerns. What is of particular interests to us is Ryan's strong bias on *comparative* psychological interpretation. For her the word 'ornament' is secondary as she pursues to understand the claim not so much as a grammatical proposition but as a general view in relation to the tradition of narratology, a field to which she has contributed from the 1970s.

For the sake of comprehensiveness, we also provide an example of *divinatory* psychological interpretation. One scholar with this emphasis is Gonzalo Frasca (2003), a sworn ludologist, who believes that Eskelinen

> "was referring to what the focus of game scholarship should be. The author personally confirmed this to me when I asked him to clarify what he had meant." (5)

We immediately notice the exceptional means by which Frasca has gathered supporting extra-textual information: he performs an actual correspondence with the author. This functions as a supporting tool for his particular interest in understanding the essay not better than its author understands himself nor in relation to other phenomena but 'directly,' in Schleiermacher's terms.

We finish this section with a fifth interpretation, by Eskelinen himself. The motive of this interpretation is obviously a dialectical one, that is, to understand the text in the light of its other interpretations. Eskelinen (2006) writes:

> "I don't say there can't (or shouldn't) be narrative elements in games, I just say they are not central or interesting in any scholarly sense, and I also give a list of key things that are not explained or even taken up by any sophisticated narrative theory."

This contributes to the present discussion by illustrating how contextual changes affect interpretations. No two interpretations ever share the same context. What has obviously shaped Eskelinen's above interpretation of his own text is the flood of other interpretations. In another context, say, right after the text's publication in 2001, this kind of interpretation would have been rather unimaginable.

Philosophically Hermeneutic Notes on Eskelinen

In the present subsection we make some notes on Eskelinen (2001) from the perspective of philosophical hermeneutics. This means two things: surveying the variables that affect the essay's interpretation, and constructing an interpretation of the essay's controversial phrase "stories are just uninteresting ornaments or gift-wrappings to games." With reference to Gadamer, the variables that we consider most influential in the present case include, but are hardly limited to,

i. temporal distance;
ii. contextual factors; and
iii. reading motivations.

All of the factors relate to our horizon of interpretation, as elaborated previously. The horizon is necessarily limited by these factors, but it also enables us to make interpretations that meaningful for our particular purposes.

From the position of (i) temporal distance we are able to survey the discussion and grasp a wider context than earlier interpreters. We recognize that our interpretation takes place at a time when the question has been declared dead by many of our colleagues, which must have a great effect on us. We also recognize our (ii) personal academic positions: we are game scholars with previous education in philosophy and also currently involved with narratology. Based on this, we are aware that for those scholars working, for instance, on the field of game design the word 'story' may have a somewhat different meaning.

Lastly, we are not interested in the phrase as a communicator of meaning but as a source of meaning. We try to make it speak to us so that it would provide "something new to our curiosity" (Gadamer 1976, 9). Hence we consciously ignore the words "In this scenario" that precede the phrase "stories are just uninteresting ornaments or gift-wrappings to games"—because we do not try to understand what Eskelinen originally meant with the phrase, but instead (iii) interpret it from the present horizon and try to see what it has to give us here.

We initiate our actual interpretive process by transforming the phrase into a question: *Can story components be important in understanding games?* This question realizes our desire to understand the phrase so that it coheres with and contributes to our previous

understanding of games. Since it is rather obvious for us that story components can play important roles in games and videogames in particular, what interests us is rather whether story components are important in understanding the concept of 'game' in general. We proceed by testing our question against some canonized games that have story or story-related components: *Super Mario Bros.* (Nintendo 1985), *World of Warcraft* (Blizzard Entertainment 2004) and chess.

It soon becomes clear to us that understanding *Mario as a game* has very little to do with its story components. Whereas *Mario* does have story components that can be assembled into a coherent save-the-princess story, we both consider that story potential insignificant for understanding the artifact *as a game*. For us, the gameness of *Mario* is found in its mechanics, first and foremost in its kinesthetic patterns that the player must exert if she or he wishes to keep on playing. At this point we remind ourselves that the game's ludically insignificant story components may not be insignificant from other horizons, e.g. when analyzing *Mario* as a cultural product (see Kinder 1991; Sheff 1993).

In *World of Warcraft* story components appear to play a more substantial role. The game has plenty of cut-scenes, characters, written dialogue and other components that all encourage the player to show story-constructing interest to it. Notwithstanding the presence of these components, which we call story components for lack of a better term, it appears to us that understanding *World of Warcraft as a game* does not entail recognizing those components as parts of actual stories. While story components are undeniably present and they may and do have major importance in the ludic experience of the game, the gameness of *World of Warcraft*—in this case, that what separates it from *Second Life* and other virtual simulations—is not in those components but in the overcoming of enemies and developing the avatar, to mention the most manifest points. Understanding *World of Warcraft* as a general phenomenon requires an understanding of its story components; understanding *World of Warcraft as a game* does not.

We also discuss the pieces of chess as story components. This enables us to recognize the fact that when game scholars talk about 'narratives,' 'stories,' and 'fiction' they actually refer to game components that have some representative features. The foregone conclusion that the representative features of chess do not matter for its players is thus irrelevant for us; what is relevant for us is the observation that representative features do often seem to facilitate comprehending more and less complex game rules and interacting with more and less virtualized game entities. In practice this could refer to the distinguishing between different pieces in chess, or between the differing behavioral functions of enemies and friends in *Mario* and *World of Warcraft*. In this sense we consider 'story components as ornaments' a fruitful notion: they often seem to appear as features that do not play major roles in the 'gameness' of games.

We conclude the line of thought by reminding ourselves of the fact that the above is not true of all games. Story component may be crucial in understanding the gameness of games too. Such cases would include text adventures like Adam Cadre's *Varicella* (1999) in which the ludics of solving fiction puzzles entail serious interpretation of personalities (Montfort & Moulthrop 2003); role-playing games like *The Witcher* (CD Project RED 2007) in which story-related choices have serious effects on game states (Iversen 2010); or storygames like *L.A. Noire* (Team Bondi 2011) in which successful interrogations of suspects require constructing coherent sequences of events (Karhulahti 2013).

Asking what kind of story components, what they are used for and how seem like meaningful questions. Acknowledging that some games have meaningful story components and some do not allows us to ask what the difference between these two types of games ultimately is.

CONCLUSION

We began by showing how Schleiermacher's notions of different types of interpretations are useful in understanding game studies discourses. Departing from a phrase in Eskelinen (2001), we ended up reinterpreting the question of story functionality in 'gameness.' Our interpretation indicated that the function of story components is protean, and the most interesting questions concerning them lie on exploring these protean functionalities. This procedure was not, nevertheless, executed for the purpose of contributing to the analytical discussion of storygames, but to demonstrate hermeneutical reinterpretation in practice.

The most important contribution of this article has been to show how an interpretation of a 'text that understands games' need not always be a reconstruction of the author's intended meaning, but it can also be a recreation of meaning that may be useful solely for the purposes of a particular horizon. Regardless, all interpretations live in time, being subject to revisions in later contexts—to be reinterpreted.

With few exceptions, abandoning prominent academic questions is merely a result of deficient interpretation. What every academic discipline requires in front of its vicious dilemmas is not turning its back on them but reinterpreting them. In addition to our case study, it is possible to find equally complex issues in game studies under topics like *What is a game?* or *Are games art?* Dismissing these questions as irrelevant means that the interpreter is only incapable of interpreting them productively. Instead of abandoning questions that have proved themselves problematic, it is more fruitful to *reinterpret* them.

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V

NARRATIVE TOOLS FOR GAMES: FOCALIZATION, GRANULARITY AND MODE OF NARRATION IN GAMES

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NARRATIVE TOOLS FOR GAMES
Focalization, Granularity and the Mode of Narration in Games

ABSTRACT

This paper looks at three narratological concepts – focalization, granularity and the mode of narration – and explores how these concepts apply to games. It is shown how these concepts can be used as tools for creating meaning-effects, which are understood here as cognitive responses from the player. Focalization is shown to have a hybrid form in games. This paper also explores the different types of narrators and granularities in games, and how these three concepts can be used to create meaning-effects. This is done by discussing examples from several games, e.g. Assassin's Creed III, Skyrim, Fallout: New Vegas, and Civilization.

Keywords: focalization, granularity, narrative, meaning-effect, mode of narration, perspective

1 INTRODUCTION

Video games have advanced with great strides since their inception. Things like graphical fidelity and the level of simulation achievable in modern games are both awe-inspiring and evolving fast enough to make yesterday's games appear dated. Yet, the area where games with multi-million dollar budgets still seem to struggle the most appears to be the story. Telling good stories is not easy; telling them in games seems to be even harder. Hopefully, a better understanding of games and the stories in them will make that task easier. This paper provides tools of narratological theory for that task and shows how these tools can be applied to games.

The term 'video game' is here used as a general descriptor for games played on typically digital platforms like game consoles or personal computers. There are significant differences between platforms that are not considered here, but which may affect the way games are experienced. This is especially true with the rise of new types of play (e.g. casual, asynchronous) and new platforms (e.g. the smart phone). Discussing these differences would be outside the scope of this paper. For the same reason, this paper will not discuss non-digital games, even if the differences would arguably be even greater than between different digital platforms. While this article focuses on video games, it is not argued that these meaning-effects are limited to digital games. On the contrary, similar meaning-effects could be achieved in analog games.

Aarseth (2003) underlines the importance of the game scholar's personal experience of playing games. I have played most of the games discussed here, but not all of them. As Aarseth (2003) suggests, more emphasis is given to the examples I am more familiar with.

2 GAME NARRATOLOGY

To understand games using narratological concepts, one has to take special care in applying them. The narratological concepts used here were not created with games in mind and instead of games, narratological research has mostly been conducted on other media. However, using narratological theory to understand games has a long, if contested, tradition in the short history of game studies (e.g. Frasca, 2003; Simons, 2006).

The analysis in this article borrows heavily from the literary strand of narratological theory. This foregrounds games as forms of storytelling, as opposed to discussing them as drama (Ryan, 2002). Other approaches building on, for example, cinema, theatre or role-play could also be used, but would require a different analytical framework. This article uses the concepts of focalization, granularity, mode of narration and meaning-effects, all borrowed from literary studies.

Some researchers have expressed a worry of game studies being "colonized" by other fields with their own interests, issues, and framings, and thereby translating games into terms that are ill-equipped to handle them (e.g. Aarseth, 1997; 2001). However, it has been pointed out that although classical narratological concepts are not perhaps applicable to games as such, this does not delimit narratology to the world outside games. The application just needs to be aware of the differences between games and other media, and perhaps the limitations those differences cause (Aarseth, 2012; Calleja, 2013; Pearce, 2005; Ryan, 2002, 2013; Tavinor, 2009).

One example is the difference between scripted narratives and emergent or interactive narratives, as described by Tavinor (2009). Ryan (2002, 594) follows a similar line of thought when she emphasizes how some media are better suited for some narratives than others: "there are plot types and character types that are best for the novel, others are best for oral storytelling, and yet others are best for the stage or the cinema. The question, then, is to decide which types of stories are suitable for digital media." When discussing game narratives, it is also important to acknowledge the limits that player freedom sets to narration. It may be that narrative is in a more or less permanent contradiction with play (Sicart, 2011) or interactivity (Ryan, 2002).

One distinction that may help understand this analysis is the difference between content and expression (Montfort, 2007). While this is not the only way to make this distinction (cf. Genette, 1980), it is useful enough for the purposes of this article. Following this distinction, this article is more interested in expression than content: *how* things are expressed, rather than *what* is being expressed. The focus is on methods that could be used to express all kinds of things, and the examples highlight specific illustrations of this.

There are many strands of narrativity in narratology, with some approaches likening all human meaning-making to a form of narration (e.g. Flanagan, 1992). Even highly abstract games can be analyzed with narratological tools, like analyzing Space Invaders (Taito Corporation, 1978) as a narrative

about aliens (in either sense of the word) or Tetris (Pajitnov, 1984) as a portrayal of the "overtasked lives of Americans in the 1990s" (Murray, 1997). However, the value of such analyses is far from self-evident. The tools presented below could be used to analyze either one of the previous examples, but that would probably only be useful as a scholarly exercise.

This paper evokes Ryan (2002, 583) in noting that narrative "is a mental representation that can be evoked by many media" and that "narrativity is a matter of degree". The analysis here tries to focus on games with a clearer narrative content, even if the clarity is often just a matter of degree. Games combining narrative content with gameplay are here called ludonarrative games (Aarseth, 2012).

The current analysis tries to steer away from other senses of narrativity, like the retroactive attribution of a story to a sequence of events or the reporting of game events to other people (cf. Herman, 1997). However, a thorough examination of what narrativity and narratives in games are is outside the scope of this paper. Since the focus is on the semiotics of the tools discussed, any concept of narrativity that is compatible with the following conception of narrativity should be compatible with the tools presented in this paper:

1. Narratives can exist in any media, but vary in realization.
2. Narrativity exists in degrees.
3. Games can be combined with stories in different ways. Different combinations lead to different meanings.
4. Not all that happens in a game is narrative, but most events have a narrative aspect to them.

This is obviously not meant to be a complete explanation of game narrativity, but provides a framework within which meaning effects can be understood. For a more comprehensive account of games and narratives, see for example Aarseth (2012), Calleja (2013), Frasca (2003), and Ryan (2002).

3 MEANING EFFECTS

This paper shows how focalization, mode of narration, and granularity can be used to create meaning-effects in video games. Varying the use of these tools produces different meanings in literature, and should therefore do so also in video games. However, it is not claimed that these meaning-effects are stable, or that they can be said to produce consistently the same meaning-effects regardless of context (Bundgaard, 2013). Rather, these meaning-effects are highly context-dependent.

A meaning-effect is defined by Bundgaard (2010, 5) as "a cognitive response to a textual stimulus". Meaning-effects "cover the whole spectrum going from purely emotional responses to highly elaborate interpretations" (Bundgaard, 2010, 5). Here, a meaning-effect is not limited to a textual stimulus, but understood analogously as something that is caused by a stimulus from a video game. This stimulus may be for example textual or something like spoken language or haptic feedback from a controller.

Understanding meaning as a cognitive response grounds meaning firmly in the cognitive processes of the player. Players are here understood as a more or less uniform group, with relatively similar cognitive processes. However, limiting the meaning in games to cognitive processes of a single isolated person does not do the concept justice (Mäyrä, 2007). Instead, these cognitive processes should be seen as happening in a complex context of (social) relations, ultimately making meaning a contextual and social concept. The approach taken here leaves out all consideration for cultural differences, but assumes that such differences would exist.

Studying how games can be used to create the meaning wanted by a designer, how they create meaning despite the intentions of the designer, and how players create meaning from the games they play is a large and complex set of questions, which is why the focus is here limited to the more limited sense of meaning-effect. Meaning-effects are one way meaning is created in relation to games, but not the only way.

4 TOOLS FOR MEANING-MAKING

Video games differ from literature in several aspects, for example by being multimodal. The approach taken in this paper does not deal with the ontology of games – trying to map out all the possible values of the variables discussed here – but rather the focus is on the semiotics of these tools. The concepts discussed are focalization, mode of narration, and granularity. These three concepts are discussed together because they all pertain to the perspective and the way of telling the player/reader what it is that they are seeing and how. They all concern the perspective of telling: the way, distance, and the point of view the narrative is told from. Understanding how to vary the perspective enables designers to make the stories they tell more effective in conveying the meanings they want to convey. This does not mean that they are the only significant narratological tools useful for understanding games. Development of other narratological tools is left for future research.

In addition to showing how these concepts apply to video games, they are extended to cover cases that are not found in literature, but are present in games. The central differences requiring this extension are player agency, interactivity and multimodality (Arjoranta, 2011). These concepts are discussed in order to give game scholars a more comprehensive vocabulary for studying how games create and contain stories. Hopefully, these three concepts shed some light on how specific types of meaning-effects are created in games. Designers can use these tools to convey the things they want to convey in a consistent and effective manner.

Of course, the designer is not the sole authority on the meaning of a game. Both the player's interpretation and the context of play do shape the meaning. The final result is necessarily a combination of authorial intent and player agen-

cy (Bizzocchi & Tanenbaum, 2012). What designers can do is to aim for the best possible representation of their intent.[1]

4.1 Focalization

Focalization is the point of view things are seen from (Bundgaard, 2010; see also Evans & Green, 2006, p.196; cf. Ciccoricco, 2012). This can be the point of view of a character present in the story, those of several characters, or even outside any sentient being, a point in space. Any of these can include evaluations, judgments or feelings. In the case of a point-in-space perspective, the evaluations can be those of a narrator.

Genette (1988) calls this perspective. He classifies perspective into three categories: zero focalization, external focalization and internal focalization (cf. Ryan, 2002; Elverdam & Aarseth, 2007). With zero focalization, Genette means that the story is not focalized into a character, but is told from outside any of them. The difference between external and internal focalization is whether there is access to the characters' thoughts and emotions. External focalization gives a behavioristic view on the characters, while internal focalization grants access to their mental landscapes. These can be mixed in a single narrative, and all three can be present. This full scale of perspectives can be found in video games.

Nitsche (2005) uses a similar approach, basing his analysis on Mieke Bal's (1997) application of Genette's terminology to visual perspectives. Nitsche makes an important distinction between focalization and narrating voice. No strong narrating voice may be present in a game, but the perspective can still be clear and distinct. A full review of all possible perspectives in games would be beyond the scope of this paper. Some selected examples are discussed instead.

Games that are focused on the strategic level tend to have zero focalization. An example would be the real-time strategy game Command & Conquer (Westwood Studios, 1995), where the game is portrayed from a free-floating isometric view. It can freely shift around the map, paying attention to areas chosen by the player. Because of technical limitations, the point of view was limited to movement in two dimensions, with the third dimension and the ability to zoom only added to later games in the same genre.

The literal point of view of the camera angle should not be confused with the narrative perspective, even though they often coincide. An abstract game may have very little narrative content, in which case varying the perspective does not make the game suddenly narrative; but in cases where the game has narrative content, choices of perspective have narrative consequences.

A game may have a strategic level of abstraction and still utilize forms of focalization other than zero focalization. Dawn of War II (Relic Entertainment, 2009) is a strategy game that continues the same genre as Command & Conquer,

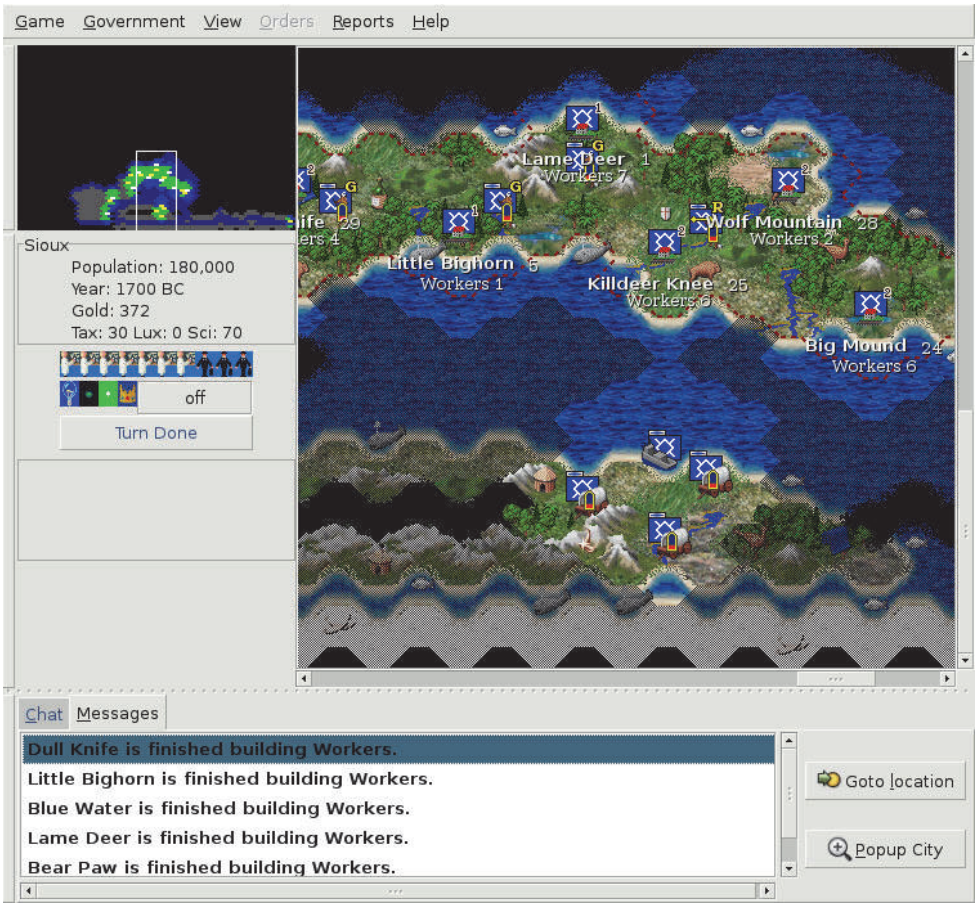
[1] For practical approaches designers use to aspire for a commonly shared vision, see e.g. Hagen (2010).

but focalizes the single player game through a central protagonist. However, when playing other modes (e.g. multiplayer), there is zero focalization.

Real-time strategy games use a ludic mechanics related to the point of view. It is commonplace for the view of the player to be limited to a small area. This limitation is described with a term borrowed from military theory, "fog of war." The fog of war works in two similar manners. First, only the area that the player's units are able to see is revealed to them. To learn about the surrounding terrain, it is necessary to explore the game map. Second, when no units can see a certain area, changes in that area are not shown to the player and that area is shown as partially hidden. Enemy movement, new buildings and other changes become evident only when the player sends units to scout the area (see Figure 1).

This means that while the literal point of view might be a bird's-eye view of the map, the perspective at least partially blends with that of the commanded troops. Only information available to them is available to the commander. This

Figure 1 Fog of war in Freeciv (The Freeciv project, 1996). The two different shades of fog of war show two different types of visibility



might be explained in diegetic terms with communications technology or magic, or seen as an extradiegetic game mechanics.[2]

External focalization is typical to video games: the story is told from the perspective of a central protagonist, but from a behaviorist point of view, without access to the character's consciousness. A player may control the actions of the protagonist without having access to their mental landscape.

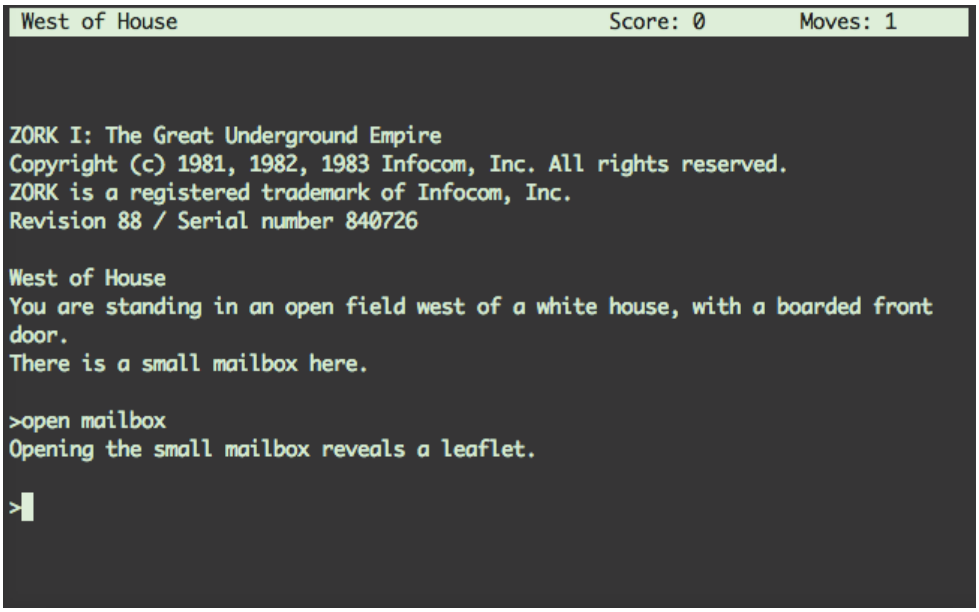
This is where games differ from literature. The player's perspective may be inside the body of a character (i.e. first-person perspective), up to and including having control of all of their actions, without having any access to their mental perspective.

An early example of this is the text adventure game Zork (Personal Software, 1977). The game is seen from the perspective of "you", but this "you" lacks any distinct qualities (see Figure 2). This featureless "you" is used also in other text adventure games (Karhulahti, 2012).

A later example of external focalization would be Half-Life (Valve Corporation, 1998). In Half-Life, the player controls the actions of Dr. Gordon Freeman. Because Freeman stays completely silent during the game, his implied agency is based solely on his actions. But the actions are almost completely controlled by the player, even during the scripted sequences where the player's own agency is limited.

This first-person external focalization is usually done for a specific meaning-making effect: the player is supposed to identify with the tabula rasa-like character (the anonymous "you") through viewing the actions of that character as their own. Whether this is successful depends heavily on other factors like the coherence of the character's actions when the player is not controlling them,

Figure 2 The opening of Zork (Personal Software, 1977)



the actions of other characters within the storyline, and their reactions to the player's character. It is not enough to consider the player's character in a vacuum, even if they are portrayed as a blank slate, but as a reactive part of the game world.

It can be argued that video games can make use of the character-internal perspective to achieve a perspective not available in literature. This perspective is embodied in the physical perspective of the character being played, but does not allow access to their mental landscape in the manner of internal focalization. In other words, the player has control over a character's actions while not having access to the character's mental landscape. This can be used, for example, to deceive the player (cf. unreliable narration, below).

An example of this is Assassin's Creed III (Ubisoft Montreal, 2012). The Assassin's Creed series uses a metanarrative in which the player controls a protagonist called Desmond in the games' near-future present and Desmond's different ancestors in their historical environments. A machine called Animus lets Desmond relive the lives of his ancestors. Desmond is part of an organization known as the Assassins, who fight against their eternal enemies, the Templars. Different games have different ancestors fighting for the Assassins' cause.[3]

Assassin's Creed III uses the player's expectations against them, by starting the game off with a Templar protagonist, Haytham Kenway. In a clever narrative trick, the player is made to play through missions that are essentially identical to the ones carried out as an Assassin in previous games. The two factions are shown to be functionally identical in their methods and pursuits. In the narrative, Haytham's allegiance is neatly side-stepped: "Who should I say you are?" a character asks him. "You don't. They'll know," Haytham answers. He is aware that he is working for the Templars, but the player is not. Haytham does not need to state aloud something that is obvious to him. It is only after few hours of play that the game reveals Haytham's allegiance: he initiates another character into the Templar order and at the end of the ceremony states, "You are a Templar."

Interestingly, the game's user interface is complicit in this deceit. When Haytham is escorted by Templar allies in disguise, they are marked with a symbol over their head to make sure the player knows which ones are allies and which ones are enemies. However, the symbol over their head is not the symbol of the Templars, but that of the Assassins. This might be narratively explained in the game with the fact that at least part of the game's interface is part of the Animus, visible both to the player and Desmond. The assassin symbol might be there for Desmond's sake.

Assassin's Creed III is an example of the perspective described above, since it lets the player pursue all kinds of goals as Haytham, but has them unknowingly help the Templars. If the player had access to Haytham's knowledge,

[3] Assassin's Creed III is actually the fifth game in the main series. The second game in the series received two sequels. Additionally, there were already three games for hand-held consoles and few more for mobile devices.

they would learn about his allegiance, since it is his central driving force and defining characteristic. Instead, every strike the player strikes for the Assassins' cause while playing Haytham, is actually a strike against them.

Some games use external focalization, but place a filter of character emotion or experience on what the player sees or hears (Nitsche, 2005). The perspective is external to the character played, but the character's emotions and experiences still color the player experience. This is used for great effect in Max Payne (Remedy Entertainment, 2001) and Dead Space 3 (Visceral Games, 2013).

In Max Payne, the player plays through Payne's dream sequences. The first one is a labyrinth of identical hallways that seem to lead nowhere. The screen is murky and ominous, with the lighting reflecting Payne's experience of the situation. Eventually, the screen is tinted red as Payne approaches the bloody finale of the sequence. The camera stays external, but is very much affected by Payne's experiences.

Dead Space 3 has a co-operative play mode, where two players control the characters Isaac Clarke and John Carver. Both are controlled from the external perspective, but the players are still occasionally shown different things when the characters' experiences of the game world differ. This is significantly impacted by Carver's mental instability, forcing the player controlling him to play through episodes of dementia.

Internal focalization can be achieved in games with measures similar to those in literature. Presenting internal dialogue or describing a character's experiences can be done in different modalities in games. A direct analogue to literature would be a written description of the character's emotions embedded within the game, but the same effect can also be achieved with spoken internal dialogue.

Video games may also describe a character's internal state by suddenly removing player control and having the character act regardless of the player's wishes, perhaps in a harmful or destructive manner, a technique not available in literature. This sudden removal of control limits the player's agency (Tanenbaum & Tanenbaum, 2009) and can be used to highlight the player's helplessness in the situation. Sicart's (2009) analysis of Bioshock (2K Boston, 2007) shows how this can be used to create ethical meaning-effects.

Figure 3 The mighty Dragonborn, dead from falling down a cliff in The Elder Scrolls V: Skyrim (Bethesda Game Studios, 2011)

Some games move the focalization from inside the character's viewpoint to outside it when the character dies or goes unconscious. This disassociates the perspective from the character and signals that the player has lost control of the character's actions. An example of this is The Elder Scrolls V: Skyrim (Bethesda Game Studios, 2011). It is possible to play Skyrim from a third person perspective, with the player character visible on the screen, but the camera defaults to a first person perspective. However, when the player character dies, the camera moves away from behind the character's eyes and shows the character's dead body (see Figure 3).

Another example of this change in perspective is usually known as the "kill cam". It is used in multiplayer modes of first-person shooters, like for example in Call of Duty: World at War (Treyarch, 2008). A kill cam uses the same disassociated perspective discussed above, showing you the death of your character from an outside perspective. But it places the perspective so that it follows your killer, showing you the moments before your character's death and the actions that lead to it. This can be even more disassociating than simply witnessing the death of your character from outside, because in this case the perspective is placed in the eyes of your character's killer. In this example, the mode of focalization stays the same, but the focalizer changes.

There seems to be a possible meaning-effect related to this. The technique shows how the controlled character is essentially interchangeable with other characters in the game. The actions of your killer are similar or identical to the ones you were undertaking trying to kill them. They happened to be faster, more accurate or better positioned than you, and managed to kill you before you killed them, but it could have been the other way round. You might even

infer some hints as to what would have changed the situation from seeing the world from your killer's eyes for a few seconds. While the feeling of embodiment may be strong when controlling a character in a first-person shooter, the last minute change of perspective reminds you that the character is one of many, discarded as soon as it becomes unusable.

Both Mass Effect 2 (BioWare, 2010) and Tomb Raider (Crystal Dynamics, 2013) use an opposite technique in their introduction. Both games are played from an external perspective, with the player character portrayed on the screen. But both games show parts of the introductory cinematic from an internal perspective, with the camera situated where the character's eyes would be. Again, it is an exception to the way most of the game is portrayed, and perhaps an attempt to make the player identify with the perspective of the character (soon to be) played.

These two contrary examples show how changing the focalization can be used to create meaning effects: to create a distancing effect, move the perspective from an inside perspective to outside the character's body or to an another body. Coupled with a loss of control this can be used to convey helplessness. To create the opposite effect of identifying with a character, move the perspective inside the character's body.

It seems that games have all the same perspectives as literature (zero, external and internal focalization) at their disposal and an additional one. This embodied focalization places the player in control of the actions of a character (or several characters), and places the physical perspective inside the body of the character, but does not grant access to that character's mental landscape. This is usually because that character is created as a tabula rasa, a blank slate for the player to identify with and to fill out as the game progresses.

4.2 Mode of narration

Stanzel (1981) makes a central distinction in modes of narration by dividing narrating characters to teller-characters and reflector-characters. These can be equated with Genette's (1988) narrator and focalizer, respectively. The distinction between teller-characters and reflector-characters does not necessarily follow the division to first- and third-person narrators. First-person narrators that do not verbalize their thoughts are not teller-characters, if they do not communicate with the reader, but only talk to themselves (Stanzel, 1981).

The teller-character is a narrator, somebody who conveys or reports the story, and communicates with the reader in this manner. They are more or less conscious of the fact that they are conveying a story to somebody, and may comment, anticipate or otherwise make sure that the reader can follow what is being told. They may also be unreliable by telling things that are not true in the narrative world or misdirect the reader in some other manner.

An example of a game with an unreliable narrator is Call of Juarez: Gunslinger (Techland, 2013). The game is narrated by the protagonist gunslinger, and the events of the game consist of his narration, and the speculations of his listeners. This means that the facts of the game fiction change whenever the nar-

Figure 4 Winning a duel that never happened in Call of Juarez: Gunslinger (Techland, 2013)

ration is questioned (e.g. Indians turn into bandits in the middle of a fight), or the narrator corrects someone else speculating on the events (e.g. a duel already won never happened; see Figure 4).

Dragon Age 2 (BioWare, 2011) uses a similar technique. At the beginning of the game, the player character appears very powerful, killing groups of enemies with ease. This is because the beginning is narrated by an exaggerating narrator, later coerced to remain closer to the truth. This change in narration is reflected on two levels: in the game's rules and visual depiction. The rules are changed so that the main character loses access to powers that were available in the beginning and does less damage to the enemies. The visual depiction also becomes less hyperbolic. This is even reflected in the breast-size of a female character, with the breasts portrayed significantly larger in the introduction than later on in the game.

In comparison, a reflector-character is not a narrator and is not responsible for conveying the tale. Instead, they experience it. The reader is presented with a description of the character's experiences as they experience them. This also means that they cannot properly be considered deceitful, with the exception of self-deceit (Stanzel, 1978). A reflector-character can be confused or misled or they may refuse to accept the truth, but they do not deceive the reader intentionally.

It is also important to make a distinction regarding what Stanzel (1978) calls the person. He divides a person into the categories of identity and non-identity. This has to do with the worlds of the narrator and the fiction, which can be either identical (homodiegetic) or separate (heterodiegetic), depending on whether the narrator inhabits the world they narrate (Genette, 1980).

Video games make use of both teller-characters and reflector-characters. Both types of characters can also be used in several modalities. The modality in games most similar to literature is the written text, which is present in most games. It can be present as written dialogue, which may or may not be also voice-acted, and vice versa. This is common enough to be a feature of almost any game with discernible characters, and even of many games with no characters. For example, in Eufloria (May, Kremers & Grainger, 2009), the narrating mother tree is the only character with a distinct personality, but it is only present in the game through textual narration.

Written text may also be present in the form of journals or similar texts that provide direct access to either a character's thoughts or story events. It is common especially in role-playing games to have an in-game-journal that catalogues both the past events and the future goals of the player character (e.g. Skyrim [Bethesda Game Studios, 2011]). A journal can be diegetic (internal to the game world), extradiegetic (external to the game world) or combine aspects of both, for example by chronicling the events of the story and providing instructions for the player.

Narration in games can also be done using a voice, for example with a voice-over. This form of explicit narration can be used either by teller-characters or reflector-characters, depending on whether the character is simply verbalizing their thoughts for themselves or for the benefit of the player.[4] Alan Wake (Remedy Entertainment, 2010) has both textual and verbal narration. The textual narration is encountered in the game as loose pages of a book that the player may pick up. The voice-over is performed by Alan Wake, the game's teller-character.

It is also possible to break what is seemingly logical or possible within the game world and produce different kinds of impossible narrators. This is often done in literature and cinema, for example with narrators that survive their own deaths and continue narrating the story. This can create surprise or amazement in readers/viewers witnessing this impossibility.

It is not necessary for the narrating character to be the protagonist, or even a character the player plays. Bastion (Supergiant Games, 2011) features a seemingly omniscient teller-character that follows the actions of the protagonist from an outside point of view, but who is nevertheless a character within the fictional world.[5] Bastion is also a good example when discussing something Tavinor (2009) points out: the events that happen in a video game are at least partially chosen by the player, and in that sense might not be chosen for their narrative function. The actions players do in games may instead serve a tactical or playful purpose.

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[4] Of course, all narration is ultimately for the benefit of the player, but analytically this distinction can still be made.

[5] When the protagonist first finds the narrator, he comments: "He finds me. We talk for a spell."

This is highlighted in Bastion, when the narrator starts commenting on the player's repeated actions, like destroying the scenery. Destroying scenery instead of proceeding in the game's story serves less and less narrative purpose. Bastion shows that the role of the narrator might not be limited to conveying the narrative. While the narrator is important in relaying the story of the game, it also spends large portions of the game describing seemingly inconsequential events. This serves as a reminder of the arguments Sicart (2011) and Ryan (2002) present on the contradiction of play, interactivity and narrativity.

It seems that video games can use both teller-characters and reflector-characters in ways similar to literature. Teller-characters and reflector-characters can use text, but games also offer other means to convey their meanings. A common way of doing this is by using spoken language. Additionally, a teller-character could for example break the fourth wall by pointing at things, gesturing, or making faces at the player. This would imply that they acknowledge the presence of someone witnessing the events taking place, even if the fictive world is incapable of perceiving them.

Because games generally require some kind of input from the player to proceed, it follows that games as systems are built with the assumption that there is a person witnessing the events of the game. If there is not, the game either does not continue, waiting for the player to do something, or it will end very quickly, often with the demise of the player character. This could be used for different kinds of meaning-effects by varying the amount the characters are aware of and interact with the player.

4.3 Granularity

According to Bundgaard (2010, 26), "[g]ranularity and density capture the fineness/coarseness of a description and its richness with respect to elements mentioned within it." There is a natural level of granularity in literary description that corresponds to how perception works (Bundgaard, 2013). There is a basic phenomenological level on which humans are aware of their surroundings even when they are not paying special attention to anything. By using this level of description, narration creates the impression that the described events correspond to the level of detail of human perceptual experience.

Fictional worlds in both literary works and games are incomplete in the sense that they never specify everything about the world (Juul, 2005). Another way of saying this is to call fiction indeterminate, since they are never defined in perfect detail and could correspond with many different states of being: there is no determinate way to interpret fiction (Ingarden, Frizer, Chipp, 1970). Juul (2005) also argues that some games have what he calls incoherent worlds, where the rules and fiction of the game clash. His example is Donkey Kong (Nintendo, 1981) in which Mario has three lives for no apparent fictional reason.

By relying on expectations regarding how perception works, narration can omit many things and still remain coherent. For example, a text does not need to explicitly mention that people are clothed, because that is the assumption of

most readers. A lengthy literary work could omit all descriptions of clothing without the readers assuming that the characters are naked.

Only deviations from the assumption of the basic level of description need to be specified (Walton, 1990). In most contexts, being clothed hardly requires a mention. Being clothed is the assumed standard because it reflects our everyday experiences of people and their tendency to wear clothes. Ryan (1980) argues that interpreting fiction, we use the principle of minimal departure to make sense of the world. The principle states that we interpret fiction as being the closest equivalent to the reality we know. Different contexts create different expectations: we cannot assume equivalence as freely when discussing works of fantasy or science fiction.

Deviations from the norm can also be used to create meaning-effects. Sudden changes in specificity can, for example, focus the reader's or player's attention to some particular detail or object. This might signal focused attention from the character narrating the events. Constant focused attention or attention to things that feels unnatural to the reader or player can create a feeling of alienation and possibly reflect a distorted view of the world.

Games contain different types of granularity. It is possible to differentiate between, for example, visual granularity and granularity of textual description, sound and simulation. These types of granularity need not reflect the same level of detail, but can differ from each other by design.

Both visual granularity and granularity of simulation are issues that are associated with the discussion of realism in games. Visual realism is often seen as an ideal to aim for in games, something that increasing computing power is providing to a degree higher than ever before. This emphasis on visual veracity reflects the discourses on virtual reality or cyberspace, where the central purpose of technology is to create a space where reality and representation become inseparable (e.g. Featherstone & Burrows, 1995). These discourses seem to imply that as granularity increases, mediation decreases (Ryan, 1999).

It is typical that a game portrays a level of visual granularity throughout or changes between a few. Good examples are the normal view and the strategic map of Civilization V (Firaxis Games, 2010). The first gives more fine-grained information about the game world, portraying things in more detail, with the latter switching to more iconic representations of the objects in the game world. In theory, the game would be playable with just the icons, as they contain all the necessary information for playing the game. This would lessen the visual granularity of the game and remove things like character animations that are not necessary for playing the game but add to the feel of it.

Usually the levels of granularity stay constant throughout the game, and different levels serve different purposes, like commanding troops within a sector or seeing the overall situation of a war in a strategic war game with two levels.

Games differ greatly in what they choose to simulate, if they simulate anything at all (entirely abstract games may not be simulations of anything else). This choice is usually associated with the genre and theme of the game. What

would be of major importance in one game, is insignificant or even banal in another. For example, SimCity 4 (Maxis, 2003) features simulations of waste management, but most games do not. Simulating waste management is interesting only in the context of city management, even if a simulation that aspired for realism would need to include it. The choice of granularity focuses attention on specific elements of the game, highlighting waste management as something necessary in understanding how cities work, but as an unimportant concern in most games.

An illustrative comparison can be made between Civilization IV (Firaxis Games, 2005) and Civilization V. While pollution is simulated in Civilization IV, it is absent from Civilization V. While the two games still simulate the same thing (empires), players of Civilization V are free from environmental concerns. It would be tempting to read a political statement into this. However, the game was simplified in many aspects between its fourth and fifth instances. A likely explanation is that pollution was one of the many systems that were deemed unnecessarily complex and removed for that reason.

Another example can be found by looking at how games simulate the workings of the human body. Skyrim and Fallout: New Vegas (Obsidian Entertainment, 2010) simulate how the human body handles nutrition and rest in a similar manner, but with small differences.

In Skyrim, the player character will receive either stamina points, health points or both from eating and drinking different foods and drinks. The character will also heal from sleeping, and may receive a bonus to experience gain for sleeping in a bed owned by the character. This is beneficial for surviving in the game, but not necessary for completing it.

A player could, for example, choose to have their character in Skyrim eat nothing during the game. While this would destroy the believability of the game as a simulation, it would not have any effect on the game on the level of game mechanics, except by making the game more difficult. In addition, the benefit gained from food and drink is relatively minor when compared to healing and stamina potions. This makes the incentive to spend time gathering and consuming food and drink small in comparison to potions.

To understand the world of Skyrim we would need to assume that it differs from our own in how nutrition works and depart from Ryan's (1980) principle of minimal departure. Another way of reading the situation would be to assume that the world's fiction is incoherent in Juul's (2005) terms. The second reading would make sense, considering that most of the world's inhabitants are involved with farming, even if it is both ineffectual and unnecessary. It could be argued that the game world has different rules for the protagonist than for the rest of the population in order to accommodate the needs of playability.

If the player chooses the optional hardcore mode in Fallout: New Vegas, the player character must eat, drink and sleep. With this option enabled, it is necessary to pay attention to the basic human needs of the character in order to complete the game. Eating, drinking and sleeping are no longer things that make the game easier, but become something that is necessary to keep the play-

er character alive and well. Thematically appropriately Fallout: New Vegas also simulates radiation. Exposure to radiation has harmful effects on the player character's body that will slowly harm and eventually kill them.

The granularity of simulation in Fallout: New Vegas is more detailed than in Skyrim when it comes to simulating human bodily functions. This change in specificity gives rise to different experiences of the game world: in Skyrim, the player character may suddenly die from damage, but unless a tough monster or a misstep from a high cliff kills them, they will continue to get stronger, eventually becoming powerful enough to overcome any obstacle. Walking around the game world is an adventure, and the game encourages bold exploration: even if the player encounters something too dangerous to challenge, they have the option of running away and returning when their character is more experienced, better equipped, and more powerful.

In contrast, exploration in Fallout: New Vegas is a more perilous activity. In addition to bandits and monsters, the player must be aware of the character's need for sustenance and of the harmful effects of radiation. Exploration can still be profitable (and often is), yielding better equipment or wealth, but has an added layer of danger: venture too far and too boldly, and you might not make it back. Running out of anti-radiation medicine, food and water while too far away from the nearest town can lead to a death that is only reversible by returning to an earlier save game. Gaining better equipment does not help if you die in the radioactive wasteland.

This contrast between Skyrim and Fallout: New Vegas shows a meaning-effect that is achieved by altering the level of granulation in simulation. By simulating human needs, Fallout: New Vegas places more emphasis on survival than Skyrim. Of course, a cautious approach to save games make either game less likely to lead to a dead end, lessening the effect in Fallout: New Vegas.

Here, developers of Fallout: New Vegas could have used similar game mechanics than the makers of XCOM: Enemy Unknown (Firaxis Games, 2012). XCOM has a game mode called Ironman, where the player is prevented from keeping more than one saved game. All choices in the game are final, and the player simply has to accept any failures. This gives all choices weight that is lacking from the games which accept repeated cycles of saving and loading.

Both Skyrim and Fallout: New Vegas have one thing in common in their simulation of the human body: both use the abstract measure of hit points to simulate character health. Regardless of what other simulation systems these games use for measuring health, loss of hit points is the most common cause of a character's death. In both games, characters can go through truckloads of food and drink in a matter of minutes in order to get more hit points. This causes no ill effect on their stomach or digestive system – things not simulated in the game.

The examples discussing SimCity 4 and the two Civilization games and comparing Skyrim to Fallout: New Vegas are just some of the ways different granularities of simulation can lead to the player experiencing the game differ-

Meaning-making tool	Modes
Focalization	Zero, external, internal, hybrid
Mode of narration	Teller-character, reflector-character, different modalities
Granularity	Visual, textual, sound, simulative

Table 1 Meaning-making tools summarized

ently. Even small differences in simulation can lead to large differences in experience, as is the case with Skyrim and Fallout: New Vegas.

5 CONCLUSIONS

This article presents three concepts originating in literature studies and shows how these concepts can be used to create meaning-effects, which are understood as cognitive responses from the player. Focalization, mode of narration and granularity are shown to work similarly in video games and literature, with the exceptions that follow from the multimodal, interactive nature of video games (see Table 1).

In addition to the focalizations also found in literature, video games utilize a unique form of focalization. This hybrid focalization provides complete control of a character's actions, but does not grant access to their mental landscape. Information about the nature of the player character's actions can also be withheld from the player, misleading them about the intentions of the character. Focalization provides several ways of creating meaning-effects. Playable characters are often presented as featureless tabula rasa to make identification with them easier. The player is occasionally addressed as "you" in these cases.

Video games use changes in focalization to signal changes in play. Games portrayed from the first person perspective use the change to a third person perspective to convey the loss of control over the character. Most often this is connected to the death of the character, but can also be used for characters that are under some form of mind control or other outside controlling force. First-person shooters use the technique known as kill cam to show players how their character died. Kill cam shows a player the death of their character through the eyes of their killer. Perspective is here kept in first person, but is moved outside the body of the character whose death is portrayed.

Both Mass Effect 2 and Tomb Raider use a change in perspective from the first person to the third. They show parts of the introduction through a first person perspective, even though the game itself is shown through a third person perspective. This is done in order to make the player identify with the perspective of the main character.

Games that use a perspective that is outside the body of the player character can still focalize the narration through them. This can be done by coloring

what the player sees and hears with the character's experiences, for example by making the picture blurry or distorted when the character is confused.[6]

Video games use many forms of narration. Games have both teller- and reflector-characters, characters that are, and characters that are not aware that they are conveying a story. Characters that know that they are narrating may be unreliable, coloring what the player experiences, sees or hears, or outright lying about the events of the story. Games can use a form of unreliable narration not existing in other media by having the unreliable narration affect how the game systems work.

Narrators can be heard through voice-over, but narration also often happens through text. Voice-over can be used by both teller- and reflector-characters. Teller-characters are narrating to an audience, but reflector-characters are simply vocalizing their thoughts, possibly only to themselves. Games can also have different kinds of impossible narrators. Impossible narrators can break the fourth wall, survive their own death, or otherwise break the coherence of the game world.

As a multimodal medium, games have different forms of granularity. Granularity concerns the level of detail the game presents, either in visual, textual, sound or simulation. There is a basic phenomenological level of granularity that corresponds to the human everyday experience. Deviations from this level can be used to highlight something in the game or to show a distorted or weird view of the world.

The choice of what to simulate and in what granularity creates different kinds of game experiences. Most games have no need for simulating waste management, but SimCity 4 would feel incomplete without it. Skyrim and Fallout: New Vegas are similar in game mechanics, but they simulate the functioning of the human body with a different amount of detail. Because Fallout: New Vegas simulates hunger, thirst, need for sleep and radiation, it creates an experience of a world that is more dangerous and threatening than the world of Skyrim. If the player character ventures too far, they might not be able to make it back, even if no monsters attack them. However, both games rely on the classic abstraction of health into hit points.

This article has listed a number of specific techniques games have used to create what are here called meaning-effects. Designers can hopefully look at these techniques and see the possibilities they offer, but also notice what has not been done. Focalizations still tend to follow one character, narration usually stays safely within four walls and hit points are an enduring abstraction. Experimental literature breaks conventions with admirable reliability. One hopes games would have even more room for play.

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[6] This can be likened to the literary concept of free indirect discourse.

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