

# Grasping games: The influence of experience with chronic illness and gaming on reviewing the persuasive game Robin

**Master's thesis**



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### Abstract

There are millions of people who struggle with a chronic illness or disability in the Netherlands and approximately one third of them is unable to perform basic tasks due to their condition. Additionally, almost half of the Dutch chronically ill population feels isolated due to having an unsupportive social environment, meaning that they are misunderstood by the people around them. These statistics show that on a societal level, it is necessary to find a solution to increase understanding for people with a chronic illness. A tool that could be helpful is the use of persuasive games: a form of serious games that is designed to change the attitude of the player towards a certain subject. Four students from Auckland launched a game called *Robin*, which was created with the purpose of increasing awareness and understanding for one problematic symptom that many chronically ill people deal with: fatigue. The aim of this study is to determine what influences the judgment of players on *Robin* by picking two aspects that are related to this game, namely gaming background and experience with chronic illness. These players are placed in the role of amateur critics to get a new perspective on what is important in games like these, as they are the people that need to be persuaded by them. This resulted in the following research question: How do amateur critics' gaming background and their experiences with chronic illness influence how they review the impact of the persuasive game *Robin*? A qualitative method has been chosen to perform the research, as it is focused on the experiences and perspectives of the participants. More specifically, qualitative interviews were found to be the most fitting approach for data gathering, as it gives the participants the chance to speak freely on what they find important. Two different groups of seven participants have taken the place of amateur critics, namely people with and without a chronic illness. Additionally, an expert interview was conducted with one of *Robin*'s developers, to see in what aspects the developers and the amateur critics differed in their views on features of the game. The results of this thesis show that experience with chronic illness is influential on the judgments of the amateur critics due to prior knowledge and the personal relevance in relation to the subject. Furthermore, the criticisms in their reviews were based on features that did not resemble their own lives, meaning that the amateur critics found it important to identify with the protagonist in order to feel more impacted by the game.

KEYWORDS: Persuasive games, amateur critics, identification, personal relevance, prior knowledge

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## 1. Introduction

On August 4<sup>th</sup>, 2016, four second year game design students of the Media Design School in Auckland, New Zealand launched *Robin*, a persuasive game that teaches about the effects of chronic fatigue syndrome (or: myalgic encephalomyelitis). The intention of the developers is to give the players of the game a look into the life of someone with a severely decreased level of energy, which makes the playable character unable to perform their daily tasks. As a result, choices need to be made and it is up to the player what tasks will be performed and which will not. The idea behind the game is related to a theory, commonly known as ‘the spoon theory’. This is a metaphor for chronically ill people to measure their energy and the ability to finish tasks in everyday life (Haghighi, Kang, Buchbinder, Burstein, & Whittle, 2017). Every person gets a specific number of spoons per day and every task costs a certain number of spoons. Using up too many could cause a shortage of spoons for the next day, meaning that there is fewer energy left and thus, the person is unable to do as much as usual.

The simple point-and-click game starts off by showing Robin Summers with a doctor, who explains what it means to have chronic fatigue syndrome. Nothing could be found in the other tests; thus, this is the definite diagnosis. Defeated and in doubt of her own body, Robin has a three-day weekend to get ‘rest’ from the appointment and work. However, in the room that the character lives in, there are tasks that need to be done, such as feeding the bird, cooking, cleaning and showering. Far more tasks than Robin can perform in a day due to her chronic illness. After picking some of them, the character is ‘too tired to do anything’ and can only decide to go to bed eventually. The tasks that have been neglected have consequences, such as going to bed being hungry. This could lead to even less energy for the next day. After three days, Robin can either dread the upcoming week, be unhappy with the weekend but well prepared for the upcoming week or actually be content with her productivity and having hope for the work week. This means that the game has three different endings and what ending the players get depends on the decisions they make. However, although there are several endings, the developers state on their website (<https://robingame.itch.io/robin>), that “*there is never such a thing as a perfect ending*” which is a statement that fits the seriousness of the invisible illness: no matter how hard you try, there is no approach that will lead to a perfect result or a solution.

### 1.1 Persuasive games

The game *Robin* can be called a persuasive game. Persuasive games are a form of serious games, which are described as games that are designed with an educational purpose (Mortara, Catalano, Bellotti, Fiucci, Houry-Panchetti, & Petridis, 2015). However, persuasive games are seen as a separate category because there is a more specific intention, namely not only to teach, but to change or reinforce an attitude of the player (Jacobs, Jansz & De la Hera Conde-Pumpido, 2017). What makes a persuasive game unique in comparison to documentaries or other forms of media with an educational

purpose is that players are actively interacting with the content and get the chance to experience their actions having consequences. A research done by Jacobs (2017), examines the effectiveness of these games and found that, although small, long exposure to interacting with the content had a greater effect than watching a clip of the same content.

Due to the small amount of awareness for chronic fatigue syndrome in society, there is little understanding for the people who suffer from it. By giving the players a sense of frustration that these patients feel on a daily basis, the developers hope for certain realisation and a change of attitude towards people with chronic fatigue syndrome.

### 1.2 Players as amateur critics

The players of persuasive games are an important aspect, as the interaction between the game and the player could lead to the goal the developers want to achieve: a change in behaviour and/or attitude. However, the players can serve an additional purpose, namely the role of amateur critics. Usually, a critic is defined as the gatekeeper of a certain field, who decides what is worth spending time on within a certain field (Gursoy, 2011). Usually, these critics are professionals who base their opinions on their education (which should be related to this field) and/or from working in the video gaming sector. Amateur critics, however, base their judgments solely on knowledge they acquired from previous experiences from playing other games. This could result in different interpretations and views from both sides. In relation to *Robin*, there is a possibility that the reviews of the players could lead to interesting insights, which might have been overlooked by the developers. However, the role of the developers should not be dismissed when it comes to the reviews of these amateur critics: the thought process of the developers is visible in their game through the decisions that have been made in terms of game characteristics. Whether this has been done successfully can be found in the differences in views on various aspects of the game, as this shows if the amateur critics understand the intentions of the developers.

### 1.3 Involvement and identification

There are two key concepts that are of importance when it comes to judgments from amateur critics, namely involvement and identification. Involvement is described as the “state of motivation, arousal or interest towards a particular situation or stimulus” (Takatalo, Häkkinen, Komulainen, Särkelä & Nyman, 2006, p. 393). In this case, two types of stimuli can be determined, namely games and the specific subject of *Robin*, which is chronic fatigue or chronic illness in general. It can be argued that involvement in either of these things is necessary to form a judgment on the content of *Robin*,

especially as an amateur critic. This is because they have no professional knowledge on either of those subjects.

Identification in gaming is visible when the player is able to place themselves in the position of the character (Soutter and Hitchens, 2017). According to Van Looy, Courtois, De Vocht and De Marez (2012), identification is considered to be a key element in digital games: it is proven to be of importance for players to enjoy their games. Additionally, it can result in elevated state of attention in players towards the game (Soutter & Hitchens, 2017). This shows that identification is also a prominent element in the judgment towards *Robin*, as it influences players in their enthusiasm towards the game.

#### 1.4 Societal relevance

Although the game is specifically focused on chronic fatigue syndrome, it can be argued that the lesson in *Robin* is applicable to more disabilities and chronic illnesses: a lower level of energy is a consequence of battling against symptoms for many patients, leading them to make compromises in task handling and how they schedule their time. In 2016, 5.3 million people in the Netherlands struggled with a chronic illness or disability (Coalitie Erbij, 2016). The Rijksinstituut voor Volksgezondheid en Milieu (RIVM) expects this number to go up, forecasting that 8 million people will have one or more chronic illnesses in 2030 (RIVM, 2014). According to a study performed by Van Houtum, Rijken and Groenewegen (2015), one third of those chronic illness patients have trouble balancing basic and social tasks in their everyday life. For people in this type of situation, social support is an important contributing factor to how well a person can deal with their illness: Gallant (2003) states there is a positive relationship between the self-management of a chronically ill person and a supportive social environment. When social support is not present, this could lead to loneliness. Almost half of chronic illnesses visible in the Netherlands are accompanied by feelings of loneliness, both in old and young people, and in regular and occasional forms (Coalitie Erbij, 2016). Therefore, if a game about chronic illness is able to raise awareness and increase understanding towards patients, *Robin* could be a helpful tool in reducing the negative effects of unsupportiveness or incomprehension of this matter within society.

#### 1.5 Scientific relevance

In addition to societal importance, there is scientific relevance. Previous research on persuasive gaming mostly focus on different themes. Orji, Mandryk, Vassileva and Gerling (2013) mention health behaviour in terms of eating habits; Khaled, Barr, Noble, Fischer and Biddle (2007) target smoking; Jacobs, Jansz and De la Hera Conde-Pumpido (2017) do mention disorders, but focus more on topics

such as depression and autism. An explanation for this could be that there are barely any games about living with chronic illness. Furthermore, previous research specifically targets underlying theory in persuasive games. For example, Busch, and colleagues (2015) mention the effects of personalization in persuasive games, Jacobs, Jansz and De la Hera Conde-Pumpido (2017) discuss the key elements in persuasive games, and Jacobs (2017) focuses on whether this form of media works in reaching their goal, what the mechanisms are and how it differs in comparison to different types of media. However, there is barely any research on this topic that makes use of amateur critics. Thus, although previous findings are a helpful tool in analysing persuasive games and the effect it has on players, it can be concluded that previous conducted research is lacking the incorporation of respondents' judgments on persuasive games and its features as a whole. This makes the subject of this thesis a relevant one to current scientific literature.

### 1.6 Research question and sub-questions

The above-mentioned information resulted in the following research question:

*How do amateur critics' gaming background and their experiences with chronic illness influence how they review the impact of the persuasive game Robin?*

The participants in this research have served as amateur critics, meaning that their insights told us what their judgment of the game and its features is, and what their expectations are of the impact of the game. Firstly, the gaming background of the participants has been analysed to see whether preferences, motivations and involvement in the gaming industry were an influence on the reviews of *Robin*. This resulted in the first sub-question:

- *How does gaming background influence amateur critics in how they review the persuasive game Robin?*

Secondly, chronically ill people and people without a chronic illness could have differed in reviews due to their own experiences. Therefore, it was important to compare these groups, which lead to the second sub-question:

- *How does experience with chronic illness influence amateur critics in how they evaluate the persuasive game Robin?*

Lastly, the decisions made by the game developers have been examined, as this elaborates on the decisions made in regard of the game. By comparing the answers given by the developers and the judgments of the amateur critics, this might lead to differences in views from both groups. This result could show what the amateur critics find important in persuasive games like this. Therefore, the third and last sub-question is as follows:



- *What are the differences between the views of the amateur critics and the developers on the features of the persuasive game Robin?*

### 1.7 Chapter outline

The upcoming chapters will explain the process from question to answer. First, the theoretical framework will be discussed. This encompasses the concepts that can be deemed relevant to understand the data that will be gathered. This means that even though the research question is aimed at the players, underlying theories that are related to persuasive games, such as key features and the player-oriented persuasive game elaboration model, are essential knowledge for the interpretation of the answers of the players. Moreover, theories about gamers needed to be addressed to understand the differences between certain motivations and levels of dedication towards this particular medium. Additionally, the effects of chronic illness have been explored more deeply to understand the process that may lead to self-help and the consequences of (lack of) social support.

Second, the method of the research is explained. This entails different aspects, such as the decision for qualitative research and why that is the appropriate approach for answering the research question. Furthermore, there will be a description of how the data will be collected, namely through qualitative interviews. Additionally, the target group will be explained in detail and how they will be reached. Finally, an explanation of how the data are going to be analysed is included in this chapter, which will be done through thematic analysis.

The fourth chapter is dedicated to the results. Before discussing the sub-questions, the reviewing themes will be elaborated on to give an understanding on the patterns within the data. Next to themes, this has also resulted in specific subthemes. The majority have been discussed a level further by adding extra information on the subthemes. Additionally, the results are discussed in this chapter. This means that in this chapter, the patterns between levels of gaming background and experiences with chronic illness have been analysed. Furthermore, the answers by the developer and the amateur critics have been examined. The findings have been interpreted through the theory that has been discussed in the theory chapter. This will lead to the outcome of the three sub-questions.

Lastly, there will be a conclusion. This summarizes the findings of this research and an answer to the main question and theoretical implications. Moreover, it includes final thoughts and limitations of the research. Additionally, implications for further research related to this subject will be discussed in this chapter.

## 2. Theoretical framework

The purpose of the theoretical framework is to present the information from previous research on persuasive gaming or other related fields. The concepts that are relevant to this thesis are the persuasive elements and persuasive technologies, which are likely incorporated into *Robin* by the developers. Furthermore, theories about the players will be addressed as well and this will be done through discussing the player experience, personalization and how persuasion is achieved through a medium like gaming. Additionally, the gaming experience is being examined by various theories on the preferences, motivations and involvement. Lastly, experiencing a chronic illness will be discussed. However, before continuing with these concepts, serious and persuasive games need to be examined more thoroughly.

### 2.1 The game

Video games can be seen as a flexible medium, as they can be designed to serve different purposes. While video games are often still perceived as leisure activities alone, and considered to be an unproductive way of spending one's time in general (Bogost, 2007), games are not always created with the sole purpose of entertainment. A genre within this medium is serious gaming, which is meant to learn, teach and educate players. The distinction between serious and entertainment games is important, as *Robin* is created to educate players on living with chronic fatigue due to illness; entertainment is not what they aim for and the game should therefore not be perceived as a form of leisure.

Overlapping characteristics of learning and gaming are that both are difficult and time-consuming, but the traits of these activities are viewed differently: it keeps people motivated while gaming, but demotivate them while learning (Breuer & Bente, 2010). Because of this, serious games can be viewed as a helpful tool for educating. Serious games are defined as “video games with a useful purpose, e.g. for training, education, knowledge acquisition, skill development, etc.” (Girard, Ecalle, & Magnant, 2013, p. 208). This means that the genre entails much more than one specific type of game or goal and therefore, many subcategories exist in serious games. One of those subcategories, the persuasive game, is defined by Jacobs, Jansz and De la Hera Conde-Pumpido (2017) as “serious games made with the primary intention of changing or reinforcing specific attitudes” (p. 153).

Persuasive games differ from video games that focus specifically on the entertainment value, in a sense that there is a different objective. While entertainment games are focusing on the entertainment aspect, persuasive game are created to convince the players of a certain message. Thus, the developers of persuasive games will make different decisions than developers of entertainment games.

### *Persuasive element model*

De la Hera Conde-Pumpido (2015) designed a model that visualizes the persuasive elements, the dimensions within persuasive games that contribute to the purpose of the game. As she describes, these elements can be divided into three categories: the signs, the system and the context.

There can be many individual signs within a game, but De la Hera Conde-Pumpido (2015) mentions four 'modes'. Firstly, language is one of them; this can be present in both written and spoken form. The second mode can be found in the visual features that can contribute to persuasion within a game, for example through images or colours. Sound is the third mode, which is often expressed through noise, music or even silence. The last mode is persuasion through haptic elements, which contain all communication through touch (De la Hera Conde-Pumpido, 2015). Thus, the sign category is focused on the aspects that are related to the senses, which a player will notice while playing the game (Jacobs et al., 2017).

The category of the system is concerned with how the game is designed to work. Additionally, De la Hera Conde-Pumpido (2015) states that the system is needed to give meaning to the signs. An example of how the system can contribute to the persuasion of the player is through the rules of the game, which is called procedural persuasion. This persuasion happens through the interactive elements and how these rules influence the performance of the player (De la Hera Conde-Pumpido, 2015). Another aspect within the category of the system, is the narrative of the game, that is important for how the players interpret the signs (De la Hera Conde-Pumpido, 2015; Elson, Breuer, Ivory, & Quandt, 2014). This feature can be divided into two separate types: interactive narratives, and narratives in which a player can only advance or fail. Although games without interactive narratives are able to reach the goal of persuasion, interaction is considered to be strategically more successful due to the increased feeling of the identification with characters. This makes players more attached to the protagonist (Jacobs, 2017). Thus, by letting the player interact more, it could increase the level of persuasion. The last facet of the system is cinematic persuasion, which is also related to the language, visual, audio and haptic elements of the game (De la Hera Conde-Pumpido, 2015). As Jacobs (2017) states, the way these elements are presented in the game can influence the interpretation of the player. This is due to the atmosphere that is being created, which helps the player in interpreting the message in the way it was intended by the developers. Furthermore, these elements can make it more appealing to invest time in when they are presented in a pleasant way for the player (Jacobs, 2017).

The context of the game is the last component in the model of De la Hera Conde-Pumpido (2015). As she explains, the signs which players are confronted with are shown in a certain context and affects how these are interpreted. However, De la Hera Conde-Pumpido (2015) discusses that there is a deeper layer, namely metacommunication: the ability of a game to reach the emotions of a player. In this level, four manners of persuasion can be found: sensorial, affective, tactical and social

persuasion. Sensorial is, again, focused on hearing, seeing, reading and feeling; affective persuasion is about reaching the feelings and emotions of the player, which can trigger a change in their attitude; with tactical persuasion, players are fascinated by the element of surprise or provocation; social persuasion is reached when players are stimulated enough to engage in relationships with a brand or other people (De la Hera Conde-Pumpido, 2015). The context contributes to how these elements are interpreted.

In this research, the signs, narrative and procedural persuasion are most relevant aspects, as these features are clear components within the game. This means that the players are able to discuss these characteristics without needing a professional background in gaming. This is also the case for *Robin*. The signs are directly visible to the players, as this entails aspects such as the style of the game and the (lack of) music that is incorporated in the game. The narrative is focused on the storyline within the game, which in this case is the three-day weekend of the protagonist. Lastly, procedural persuasion can be discussed through the rules of the game, which the developers intended to lead to feelings of frustration.

## 2.2 The player

As mentioned earlier, persuasion through games can be more successful than persuasion by other types of educational media due to the interaction that is needed between the game and the player. The game responds to the input that the player delivers and vice versa. Lieberman (2006) compares it to the conversation of a student and a teacher: games are able to adapt to the abilities of the player, meaning that they can adjust to the person playing and also respond to the change in one's actions. On top of that, the player gets to be in control with an appropriate amount of help. Thus, they are assisted in the process, but given enough freedom to increase their ability to solve problems and think creatively (Lieberman, 2006). This characteristic of gaming is related to the system as described in the persuasive element model of De la Hera Conde-Pompidu (2015); specifically, procedural persuasion through the rules and mechanisms of the game. Bogost's (2007) procedural rhetoric is a key concept that can be connected to the interactive nature of games, which he describes as: "a technique for making arguments with computational systems and for unpacking computational arguments others have created" (p. 3). In this concept, procedure explains the process of how things work, and rhetoric stands for persuasiveness within these explanations. However, instead of speaking, writing or looking at images, the persuasion is done through games (Bogost, 2007). The problem with this concept is that it overlooks the contribution of the player. Sicart (2011) argues that values, opinions and cultural capital of players will influence the interpretation of the message that the game tries to get across, while the theory does not include the fact that all players are different, with all kinds of backgrounds and thus, can interpret the message of the game differently. This is what the contextual element of De

la Hera's persuasive model entails, as one's viewpoint can be seen as the context in which a player is exposed to the developers' attempt to deliver the intended message. The player (and their experience) is at the centre of this thesis, as the interpretation of the players will be compared to the intentions of the game developers.

#### *Player-oriented persuasive game elaboration model*

The features within the game alone are not the only contributors to the success of the goal of a persuasive game. In this thesis, a broader view is needed due to the inclusion of players and their experience. The elaboration likelihood model by Petty and Cacioppo (1986) describes how attitudes are shaped in general when it comes to persuasion. The player-oriented persuasive game elaboration model is derived from Petty and Cacioppo's (1986) model, except made applicable to persuasive games. In POPGEm, three elements are described that are deciding aspects how much persuasion is achieved by the game: game characteristics (or: persuasive elements as explained above), player characteristics and play session characteristics (Jacobs, 2017). Thus, with this model the scope is broadened and includes the player as an agent, meaning that there is an audience that decodes the message actively, instead of passively viewing what is being shown by the game.

Player characteristics is the first influence on the way the game is received by the gamer. The first aspects are prior knowledge and personal relevance in relation to the message (Jacobs, 2017). According to Petty and Cacioppo (1986), someone's involvement in the matter is "important in affecting the likelihood of message elaboration" (p.144), meaning that it gives players a way of interacting with the message. In this context, interaction is the processing of information, which could lead to persuasion. The second aspect is the player's need for cognition (Jacobs, 2017), which is described by Booth-Butterfield and Welbourne (2002) as "the degree to which people enjoy thinking and exerting cognitive effort" (p.160). Thus, how motivated players are to continue thinking about the message that the game tries to communicate.

Play session characteristics is the second influence on the effect of a persuasive game. As Jacobs (2017) discusses, this is the context that is being generated by the interaction between game and player. This entails the physical and social context, and the settings in which the game is played. As Elson et al. (2014) state, location, setting and the presence of others can influence the experience of the player, as these are aspects that affect the concentration of the player. Thus, their focus on the message is influenced.

The play context is third influence on the persuasiveness of a game on the player, which Jacobs (2017) explains as the experience of the gamer during the play session. According to him, this is where the difference between persuasive games and entertainment games becomes apparent:

“persuasive games in many cases do not need to be enjoyable to get the message across and are free from other restraints such as having to be beatable” (p. 44). This means that the success of a persuasive game is not dependent on the value of winning or having fun. Lastly, there is elaboration of the message, which could eventually lead to attitude change. However, the depth of the elaboration depends on the message itself, and the ability and motivation of the player to elaborate (Jacobs, 2017).

The player-oriented persuasive game elaboration model is relevant, as it surpasses the gaming features, and also includes the players, how they interact with the game and what happens after the play session. This is valuable for analysing the gaming process of the participants in this thesis.

### *Identification*

The interaction that is part of the gaming experience increases feelings of identification, as the players are given the ability to experience the situations of the character they play (Cohen, 2001; Soutter & Hitchens, 2016). As Hefner, Klimmt and Vorderer (2007) state, the combination between identification and interactivity are directly linked to enjoyment, meaning that both are valuable in making the experience of gaming more pleasant to the player. According to Khaled et al. (2007), it is crucial in persuasive games, as it increases the chance that players will elaborate on the message it tries to communicate and motivate them to perform well. Eventually, this leads to them learning more from the game.

In research about identification, there is a common distinction between two types. Firstly, there is wishful identification, meaning that there is a desire from the player’s side to be like the character they are playing (Konijn, Bijvank & Bushman, 2007; Van Looy et al., 2012). The second type is similarity identification, which is identification through recognition due to comparable experiences from the player (Van Looy et al., 2012). Since the protagonist of *Robin* is battling a chronic illness and struggles to do regular tasks, it is unlikely that players will experience wishful identification. However, similarity identification is a possible outcome within the group of chronically ill participants, as they might find Robin’s situation to be relatable.

### *Gaming involvement*

Previous gaming experience has an influence on the judgment of the player, which can be discussed in terms of dedication that is already present. Four levels have been distinguished in previous research, which are currently most used to describe the involvement of a player. As Poels, Annema, Verstraete, Zaman and De Grooff (2012) explain, these categories are based on average playing time, the length

of their playing sessions, their attitude in games and how much time is spend on activities that are related.

The lowest level is the newbie, the players that are considered inexperienced and very new to gaming in general. Additionally, they are not up to date on the products that the gaming industry has to offer and only play in moments of boredom (Rogers, 2012). Thus, their investment is small and irregular, showing that their interest in games is minimal. The next category is the casual gamer, which are defined as the players that play occasionally, but are not greatly involved in gaming (Poels et al., 2012; Scharnow, Festl, Vogelgesang & Quandt, 2015). These people are likely to play for distraction and choose their games based on popularity (Rogers, 2012). The (mid)core gamer is one level higher and is described by Rogers (2012) as gaming enthusiasts, which like games that are considered as more complex. They have more playing time than casual gamers, but not as much as the last category, namely the hardcore gamer (Scharnow et al., 2015). According to Poels et al. (2012), the hardcore gamers play at least one hour per day. However, it can be argued that this is not a typical trait for this group exclusively: the others could be involved in gaming daily in public transport, for instance to simply pass time. Therefore, in this thesis, hardcore gamers are chosen for their activities beyond games themselves: although for most this means participating in online gaming communities, others extend their involvement by engaging in real life tournaments or visiting conventions revolving around their favourite games (Poels et al., 2012).

There is a possibility that the involvement of the participants is influential on their reviews on *Robin*. For instance, the fact that midcore and hardcore gamers are greatly invested in the gaming industry could lead them being more critical, while the newbies and casual gamers do not have strong judgments due to their lack of knowledge on the possibilities within gaming. Therefore, this aspect is of importance within the gaming background of the participants.

### *Gaming motivations*

Gamers can also be distinguished based on the motivations they have for playing games. Schuurman, De Moor and De Marez (2008) state that there are four clusters that can be seen as categories for these motivations. The first group is the ‘overall convinced gamer’, which is described by the authors as the cluster that has many different motivations for playing their games, but the most important characteristic is that these players see games as part of their identity. The ‘convinced competitive gamer’ also has many motivations, but gets most satisfaction out the competition with others and challenging themselves. The players that have less motivation and enjoy being someone else, the exploration of the virtual worlds and the feeling of freedom they experience belong to the cluster of the ‘escapist gamer’ (Schuurman et al., 2008). The last category is the ‘pass-time gamer’, also called the ‘time-killer’, which is described by Schuurman et al. (2008) as a “nice way to spend some time,

but has no other outspoken motivations for playing video games” (p. 13). Thus, there is no specific interest in the world of gaming; the activity is merely seen as a leisure activity for every once in a while. A weakness of these four clusters is that the motivations that players’ mention might be overlapping in various categories, making it difficult to classify them based on what motivates them most (e.g. escaping). Therefore, to be able to place them in one of these clusters, the division should be primarily focused on the amount of different types of motivations (e.g. competition, freedom, identity) mentioned by the amateur critics.

Lee, Clarke, Cho and Windleharth (2017) discuss sixteen specified appeals towards video gaming that can be seen as motivations. Five of these can be related to the craving for achieving: challenge is focused on getting high scores and finishing games perfectly; being the best player is the goal in competition; accomplishments come through levelling up and rewards; learning is specifically about acquiring knowledge from games; mastery has the improvement of skills as goal (Lee et al., 2017). Another five of them can be assigned to the experience of freedom through games: fantasy to let go of reality; exploration to discover all the aspects of the game; depth is the ability to have control over a game through decision-making; expression is visible in the form of customization; creativity is achieved in by the ability to create things such as characters or buildings (Lee et al., 2017). Three of these are related to the player: submission is seen as the motivation to sit back or to kill time; the role of mood can be influential in what players want to play at certain times; nostalgia can be important for some due to the positive previous experience they have had with certain games or game series (Lee et al., 2017). Furthermore, there are some motivations that cannot be assigned to the previous characteristics. One of them is fellowship, in which the social aspect is considered to be important, whether it is through friends or befriending new people online. Additionally, many players find a narrative important, making some sort of storyline appealing to support the game. The mood of the player can be seen as a motivation to pick specific games that fit their state of mind. The last motivation is sensation, which relates to the sensory aspects of the game such as quality and use of music (Lee et al., 2017).

All of these motivations can influence the participants in how they will review *Robin*, as it is possible that they have a strong desire for specific aspects in games. If these are not met in *Robin*, this might lead to a more critical judgment of the game. Therefore, these should be taken into account.

### *Personalization*

A discussion within existing research on persuasive gaming is whether or not personalization has a positive influence in reaching the audience in a way that could change their attitude (Orji, Mandryk, Vassileva & Gerling, 2013; Orji, Vassileva & Mandryk, 2013; Busch, Mattheiss, Orji, Marczweksi, Hochleitner, Lankes, Nacke & Tscheligi, 2015). This can be related to what Jacobs (2017) mentioned



in regard to the persuasive elements, namely that identification of a player can increase the effect of persuasion in a game.

As Orji et al. (2013) state, gamers should not be treated as a homogenic group, as none of them are actually the same. Thus, this means that each gamer can respond differently to certain types of games due to their preference. The BrainHex model discusses seven types of gamers based on neurobiological factors, which explains them based on typologies of the players and their experience (Bateman, Lowenhaupt, & Nacke, 2011); Nacke, Bateman, & Mandryk, 2011; Orji et al., 2013). First, there is the *seeker*, who appreciates the ability to explore in the world of the game the most (Orji et al., 2013). These gamers receive an endorphin rush from “richly interpretable patterns” (Nacke et al., 2011, p. 299). The second type is the *mastermind*, namely gamers who get pleasure from solving puzzles and designing efficient strategies to overcome difficult situations (Orji et al., 2013). According to Nacke et al. (2011), this comes from the close connection between the part of the brain that makes decisions and the pleasure centre. The third type is the *achiever*, namely the gamers who feel most rewarded when they are able to achieve long-term objectives. The cause of the satisfaction is caused by the release of dopamine after finishing the goals they have focused on for some time. The *daredevil* is the fourth type, who enjoys the excitement coming from risks and speed and that stems from the adrenaline rush that is released in thrilling situations (Orji et al., 2013; Nacke et al., 2011). Next, there is the *survivor* and people of that type like the intense feeling of fear while gaming and the accomplishment of escaping. As a result, adrenaline is accompanied with the feeling of arousal and this could be satisfying to the player due to the intensity of the experience or the feeling of relief when it is over (Nacke et al., 2011; Orji et al., 2013). The sixth gamer type is the *conqueror*. These gamers can only enjoy a game when they are challenged and have to fight for their victory (Nacke et al., 2011). Orji et al. (2013) state that these players experience a state that is called “fiero” (p. 2470), which can be described as the intertwined feeling of pride and emotion. According to Nacke et al. (2011), testosterone is one of the biggest causes of the emotion, specifically the hostile tendencies that are caused during gaming. Although this sounds negative, the authors state that this gives people the motivation to continue and stimulate them into pursuing their goal. The last gamer type is the *socializer*, which explains itself: they love to interact with other players and are often mad at others who betray their trust (Orji et al., 2013; Nacke et al., 2013). The social centre in the brain is triggered in this type of player, which is the source of oxytocin, a hormone that results in feelings of trust (Nacke et al., 2011).

Another division is the one by Bartle (1996). His distinction between different types of players is based on the inter-relationships between playing style dimensions: “actions versus interactions, and world-oriented versus player-oriented” (Bartle, 1996, p. 1). The balance between these dimensions is what is deciding in what category a player fits best. This approach resulted in four types, instead of seven: achievers, explorers, socialisers and killers (Bartle, 1996). According to Yee (2005), the model

by Bartle can be seen as a good foundation on players' motivations, but suffers from weaknesses: it overlaps too much and does not provide practical points to assess to what type a player belongs. Yee (2005) has three main components (and additional subcomponents) that resonate with the categories achievers, socialisers and explorers from Bartle (1996).

The achievers specifically focus on reaching higher levels and getting higher amounts of points while playing games. (Bartle, 1996). This means that progressing in skill and getting rewarded for this are the main points for these types of players. The component that belongs to the achievers is the achievement component, which has satisfaction from advancement, the understanding of mechanics and enjoyment of competition with others as characteristics (Yee, 2005). Socialisers find satisfaction in the contact with others, but differently than achievers. Instead of rivalry, this interaction is built on teamwork and other (positive) forms of communication, like befriending and finding fulfilment in seeing others grow (Bartle, 1996). Typical traits belonging to the social component are socializing, building relationships with other players that they consider to be very meaningful and the preference of collaboration with others in-game (Yee, 2005). The explorers are typically busy with the bigger picture of the game: the features that are not well-known yet, the borders of the virtual world and other aspects that involve deep investigation to figure out (Bartle, 1996). The search for hidden messages or jokes within games, called 'Easter eggs', are interesting to them as well. Yee (2005) called this the immersion component and players with this type like to discover, customize and role-play. Additionally, these gamers often use games as a way to escape (the struggles of) real life.

For this thesis, the player types by Bartle (1996) and Yee (2005) seem to be more fitting, as they are based on specific indications that makes it possible to determine what type the participants are based on what they say in the interviews. However, the BrainHex model can be considered of importance still, as this provides a clear explanation on what leads players to enjoy certain aspects in games. Furthermore, these gamer types may seem to be more relevant to games with the purpose of entertainment, but the judgment of the respondents on the game *Robin* might be influenced by the preference that fits their type.

#### *Amateur game criticism*

Overall, professional critics are expected to form an objective judgment on the products they review, as this makes their review more focused on the quality, instead of their own preferences. A difficulty with video gaming is that this medium has features that make objectivity troublesome. An example is skill. Lacking in-game skills does not only result in inaccessibility to the full content of the game, it also changes the experience of the player (Gursoy, 2011). Konzack (2002) proposes a strategy to circumvent these problematic aspects with the use of in-depth description and subjectivity. The description can consist of various subjects, such as the gameplay, meaning and characteristics such as

genre. Instead of knowledge, experience is the base of the review, which gives more amateurs the opportunity to serve as critics (Gursoy, 2011). Thus, this will lead them to judge subjectively, which is fitting in this thesis, as the goal is to see whether gaming background or experience with chronic illness influences their reviews.

An additional discussion is whether or not the judgments of amateur critics are helpful. As Marbach and colleagues (2011) discuss, a community is able to give valuable information, as long as it is collective knowledge. This is the principle of ‘wisdom of a crowd’: the knowledge of an individual is far less useful and extensive than knowledge of a community (Marbach et al., 2011). Crowdsourcing is term coined by Howe and Robinson, which is a strategy based on the concept of the wisdom of a crowd, and defined as: “(...) the act of a company or an institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people” (as cited in Brabham, 2008). Thus, the opinions and ideas of outsiders are used to improve a product or service. In the context of this thesis, the reviews of the amateur critics are meant as an assessment of *Robin*’s qualities. However, a weakness of this approach is that the crowd might not be competent enough to come up with constructive feedback that can be used to improve a product or service. Therefore, Mannes, Soll and Larrick (2014) state that the crowdsourcing strategy could be more useful by picking the most qualified people within a crowd. In the case of *Robin*, which was created to simulate the struggle of decreased energy levels of a chronically ill person, people who experience this struggle could be deemed more qualified. However, with people without a chronic illness it is possible to determine whether they understand the struggle more due to playing the game. Therefore, both types of insights will show if the game is successful in reaching its goal and why (not).

An essential characteristic which differs from person to person, is taste. The process of forming judgment based on these factors, is called consecration (Bourdieu, 1984). As Bourdieu (1984) describes, taste is formed by one’s education and upbringing and thus, their acquired cultural capital. The two relevant forms of cultural capital in this context are embodied and institutionalized cultural capital. Embodied cultural capital is knowledge which is acquired due to the disposition of a person’s body and mind, which can be acquired both passive as active. Institutionalized cultural capital is considered to be the recognized form of knowledge, which are for example professional or academic qualifications (Throsby, 1999). In the context of gaming, this could mean for example one’s previous experience with video games, following a related education or working in this sector.

### *Experiencing chronic illness*

The experience that can influence one’s judgment of *Robin* most is chronic illness, since this is what the game is trying to portray. Therefore, it is important to discuss how people deal with being in this type of situation. Many chronic illness patients encounter the struggle of being limited in their ability

to work, manage their household and maintain a social life on a daily basis. To cope with this reality, these people often develop a certain mechanism to handle their condition in a way that reduces their helplessness and improve the quality of their life. Braden (1993) created a self-help model, which describes this response of people with a chronic illness to their situation. The results of her research show that the main motivation for self-help is the severity of the condition, of which the perception can alter other factors within the model. However, the characteristics of the disease, information seeking, and background characteristics also contribute to that motivation (LeFort, 2000; Braden, 1993). Variables that can be negatively influenced by that perception are limitations (or dependency) and uncertainty. LeFort (2000) describes limitation as the inability to do what a patient wants and needs to do, thus which can be visible in both the work-related area, as in activities in one's free time. Mishel (1990) conceptualized uncertainty of a long-term illness and states that this entails the unpredictability of the symptoms, concern about the results of treatment and worry about the future in terms of ambition. Additionally, she concludes that this can lead to a sense of instability, which can only be controlled by adapting to the uncertainty and "(...) accepted as the natural rhythm of life" (p. 260). This aspect is called 'enabling skills' in the self-help model by Braden (1993). As LeFort (2000) concludes, these skills will give chronically ill people the power to increase the quality of life. This is related to Bandura's (1982) theory of self-efficacy, in which it is stated that one does not automatically know how to respond to certain situations: their response depends on acquired skills on social, cognitive and behavioural level.

The relevance of the self-help model lies in the fact that self-management influences how chronic illness patients experience their illness. If amateur critics with a chronic illness review the persuasive game *Robin*, they simultaneously reflect on their own experiences in a similar situation and thus, their own response to their illness might be revealed. Therefore, this model serves as an indication of why the participants in this group might view the depiction of the protagonist's life in the game as (un)realistic. Additionally, Gallant (2003) found that social support motivates people with a chronic illness to engage more in self-help, which means that understanding could possibly influence their quality of life positively. Thus, if *Robin* is able to increase understanding, this could lead to chronically ill people having a more positive outlook on their situation.

In addition to the experience of chronic illness from their point of view, the understanding of others plays an important role in the lives of chronically ill patients. Gallant (2003) found that social support motivates people with a chronic illness to engage more in self-help, which means that understanding could possibly influence their quality of life positively. The research performed by Symister and Friend (2003) shows that positive social support can increase the self-esteem of chronic illness patients and as a result, lead to a more positive outlook on the future. These findings indicate that understanding and support from both direct and indirect social environments have a great influence on how well a person with chronic illness is able to deal with their situation. The

development-conceptual model on coping with chronic illness by couples designed by Berg and Upchurch (2007) is an example of how people in the direct environment of the patient cope with their situation. In this model there is a focus on the interaction between the chronic illness patient and their partner. Hereby collective coping is seen as a positive influence on the well-being of the patient, which entails the ability to talk openly about the situation, the assistance in reducing symptoms such as pain and motivating in improving health and lifestyle. Negative behaviour is linked to a lower relationship quality and shows to be a bad influence on the management of chronic disease (Checton, Greene, Magsamen-Conrad & Venetis, 2014). As some of the participant might have a loved one with a chronic illness, this is relevant information to understand their indirect experience with the situation.

In addition to direct involvement, Greenhalgh (2009) discusses the involvement of the public. She states that a whole system approach, that includes the entire community, could lead to decreasing shame, insecurity and isolation for chronic illness patients. This is done by turning self-help into societal goals, which means that developing social capital and networks would become important tools to increase the support on a societal level (Greenhalgh, 2009). An example could be increasing the understanding towards patients with a chronic illness.

### 2.3 Conclusion

The concepts, models and theories discussed in the theoretical framework present several insights on the four main topics within this thesis, namely persuasive games, gaming background, amateur critics and the experience of chronic illness.

In the first part of the theoretical framework it has become clear that aspects of the game are of importance, as these have to be carefully picked to result in a persuasive game to reach the intended goal. However, the second part has shown that the player should not be dismissed as an essential component that needs to be considered in the decision-making: on the contrary, the personal relevance and previous knowledge on the subject might be valuable for how a player responds to the message. These concepts and theories could be useful for understanding why the amateur critics review *Robin* in certain ways.

In addition to the information on persuasive games and how the player plays their part in being persuaded, gaming background and experience with chronic illness have been discussed as context for the first two sub-questions. These are helpful in understanding where the judgments of the amateur critics might be based on, as this elaborates on their previous experiences and knowledge.

### 3. Method

This chapter is dedicated to the method of data gathering, the operationalization of the concepts and the manner of analysis that has been used during the research process. This thesis sought to find out to what extent amateur critics are influenced by their gaming background and experiences with chronic illness, by how they review the persuasive game *Robin*. Previous research has not focused on the input of amateur critics on persuasive games; it is focused primarily on the gaming aspects, instead of the judgments of players. Therefore, this research can be marked as exploratory. Moreover, the qualitative approach was chosen to gather and analyse data.

#### 3.1 Gathering of data

Lindlof and Taylor (2011) identified six purposes of qualitative research. The one which is most relevant for this study is as follows: “understanding the social actor’s experience and perspective through stories, accounts and explanations” (p. 173). To fully understand what the participants share, it is necessary to interpret them correctly through a framework, which will be elaborated on later in this chapter. This research is built on the reviews of amateur critics, on how they perceive the game, and how their gaming background and experience in chronic illness influences their judgment of *Robin*. Therefore, qualitative research was an appropriate method for gathering the necessary information from the participants.

To give the participants enough space to elaborate on their reviews on *Robin*, the qualitative strategy of in-depth interviews has been chosen. By doing this, they were given the chance to speak out their minds about different aspects of the game. Interviews are seen as a useful procedure to acquire information on the worldview and perspectives of others (Lindlof & Taylor, 2011; Qu & Dumay, 2011).

The amateur critics are divided in two separate groups, namely the participants who have been diagnosed with a chronic illness and those who are not. For the group of chronically ill participants, there was a case of purposive sampling, which Babbie (2014) describes as the selection of people based on characteristics. In this case, the search for participants who are chronically ill and have an official diagnosis was based on specific criteria. To find these participants, a Dutch Facebook group called *Onzichtbaar Ziek* (which translates to *Invisibly Ill*), was contacted. Their goal (as group and organization) is to help people with a chronic illness by giving them tips on how to cope and informing them about news that might influence them (*Onzichtbaar Ziek*, 2011). The group has over 30.000 members with all sorts of illnesses and disabilities. To reach their members, the researcher requested the administrators to post a message. This message stated information on what was expected of them, namely discussing their experience with their chronic illness, their gaming background and

that they had to play *Robin*. Additionally, general information was mentioned, such as how long an interview approximately had to be. Members who were interested (and wanted more information) were able to message the researcher. Out of the members who wanted to participate, seven were picked randomly. The remaining group of people who were not picked were asked whether they wanted to be updated on the research. In that case, the final results were sent. The interview took place in the homes of the participants, to limit any problematic situations due to their illness. Furthermore, the interviews were face-to-face, to increase a trustworthy environment (Knox & Burkard, 2008; Leech, 2002) due to the sensitive subject. Lastly, the interviews were in Dutch to not limit the participants in their expression, since all interviewees were Dutch themselves.

For the group of participants without a chronic illness, snowball sampling was used. This is the gathering of participants through recommendations within social networks (Browne, 2002; Noy, 2008). In this case, the researcher used her own social network to receive recommendations on unacquainted people who had an interest in participating. A similar message to the one for chronically ill participants was posted on Facebook and others have responded with recommendations by tagging people they know, who were interested and able to get involved in the research. Even though these participants were not struggling with chronic illness themselves, the subject was still a sensitive one. The location of the interview was therefore also in the homes of these participants, to make them feel more comfortable. These interviews have the same characteristics as those of the other group, namely face-to-face and in Dutch.

Furthermore, one developer was questioned in an expert-interview, in order to compare their intentions with the views of the amateur critics. Although there were four developers involved in the creation of *Robin*, one person was sufficient to discuss what lead them to decide on certain aspects of the game. Due to this fact, this interview is an expert interview. The developer was reached through an official social media account of the developer's team of *Robin*, on which they usually keep players updated on news on or changes in the game. Since this developer is stationed in New Zealand and the time difference was problematic, it was decided to do the interview through e-mail. The questions were sent to her and within a couple of weeks, the answers were received. As they were elaborate enough to answer the related sub-question, there was no need for further clarification.

According to Kuzel (1992), six to eight interviews within a homogenous group of participants is necessary to reach saturation in the answers. Guest, Bunce and Johnson (2006) state that a total of twelve interviews is necessary to have a large enough basis of information to analyse. Therefore, it was decided to interview seven amateur critics per group, which totals into fourteen critics. With the expert interview included, fifteen interviews have been conducted in this research.

### *Ethical guidelines*

As the subject of chronic illness is a sensitive one, discussing the ethical aspect of performing this method of research is crucial. According to Babbie (2014), there are some guidelines that researchers need to respect. First of all, participation had to be voluntary, as the gathered data consist of personal information (Babbie, 2014). To avoid disagreement on the aspect, all participants have consented verbally that they agreed on participating and that the use of their information for this research is allowed, which has been recorded. The second agreement is related to the first, namely that the information given by the participant will remain confidential; the answers that are used in the results have been stripped off identifying information. (Babbie, 2014; Kvale, 2007). Lastly, participants should not be harmed by the research. Showing respect and making sure they fully understood what was asked from them did seem to help in reducing the risk of putting participants in positions they did not want to be in (Babbie, 2014). Thus, briefing and debriefing was a necessary step to make interviewees aware of the process and the purpose of the research (Kvale, 2007). As this is a sensitive subject, especially to those who suffer from a chronic illness, debriefing was crucial. To minimize any harm influenced on the participants, they were given the opportunity to discuss their questions or critiques after the interview. However, all of the participants seemed to be satisfied by how the interview went. Furthermore, the participants who wanted to be kept updated received the information that they wanted; for those who were interested rereading what has been discussed, the transcripts have been sent to. Since the intimacy of the interview could have led to saying things that the participants later regretted (Kvale, 2007), they had the opportunity to express what answer they did not want to be included. This has been requested once for a specific remark, which has been left out of the transcript.

### **3.2 Operationalization**

As Babbie (2014) states, operationalization is “the development of specific research procedures that will result in empirical observations representing those concepts in the real world” (p.142). In other words, it is the development of clear concepts that have been used in the interviews by including them into the topic list. An important aspect of the interviews is that they are semi-structured, meaning that the questions are primarily open-ended (Knox & Burkard, 2009; Leech, 2002). By doing this, the amateur critics are able to express what comes to mind, which is important in case of reviewing.

Chronic illness is relevant for the first sub-question of this thesis. It is meant to discover the contextual information on how the participants experienced chronic illness. In the topic list, there is a distinction between participant who experience chronic illness themselves, those who have loved ones close to them with a chronic illness (second-hand experience) and those who do not, as there is a difference in what questions are fitting to each group. Chronic illness patients have been asked about



their disease(s), their symptoms and the way they deal with those on a daily basis. The participants who have a chronically ill partner, family member or friend close to them were questioned about the illness, what symptoms are most apparent and in what way they assist the other (if they do). The last group are participants who have no one close to them with a chronic illness and thus, were assumed to have little knowledge on the struggle of patients. This is due to the fact that they are (often) not confronted with it. These participants were asked about what they think they would do if they had chronic fatigue and why. This gave a sense of how seriously they viewed this symptom.

Topic	Category in topic	Examples
Chronic illness	Direct experience	<ul style="list-style-type: none"> <li>• Own illness</li> <li>• Symptoms</li> <li>• Self-help</li> </ul>
	Indirect experience	<ul style="list-style-type: none"> <li>• Illness loved one</li> <li>• Symptoms</li> <li>• Assistance</li> </ul>
	No experience	<ul style="list-style-type: none"> <li>• Idea of chronic fatigue</li> </ul>

Table 1: Topic chronic illness

Previous gaming experience is relevant for the second sub-question, and is also considered to be contextual information. It might be an influence on the judgment of all the participants on *Robin*, as there might be preferences that do not coincide with the characteristics of the game. The level of involvement in games has been discussed by asking the amateur critics how often they play games and their preferred devices. Moreover, the favourite activities of the participants and their favourite games were relevant to understand their preferences.

Topic	Category in topic	Examples
Previous gaming experience	Regularity	<ul style="list-style-type: none"> <li>• Daily</li> <li>• Weekly</li> <li>• Monthly</li> <li>• Never</li> </ul>
	Device	<ul style="list-style-type: none"> <li>• Console</li> <li>• PC</li> <li>• Phone</li> </ul>
	Preferred activity	<ul style="list-style-type: none"> <li>• Teamwork</li> <li>• Winning</li> <li>• Exploring</li> </ul>
	Favourite game(s)	(Specific per player)

Table 2: Topic previous gaming experience

The judgment of the amateur critics are crucial to the research, as this is of importance for all questions. These judgments become most visible in the topic of the characteristics of *Robin*. Hereby,

the three elements of the persuasive element model by De la Hera Conde-Pumpido (2015) have been used within this topic: the signs, the narrative and procedural persuasion. The decision for using these specific elements lies in the fact that these were easily detectable for the participants while playing *Robin*. To discover the judgment of the sign element the participants were questioned about use of language, style and sound. The narrative has been discussed by asking them if they were able to empathize and what their judgment was of the ending they received. Furthermore, asking participants about the rules was done to discover their review of the procedural persuasion of *Robin*. Feelings of frustration were a relevant element to procedural persuasion, as the rules were intended to give players a sense of the frustration that people in similar situations as Robin get.

Topic	Category within topic	Examples
Characteristics of Robin	Signs	<ul style="list-style-type: none"> <li>• Language</li> <li>• Art style/design</li> <li>• Sound/music</li> </ul>
	Narrative	<ul style="list-style-type: none"> <li>• Empathizing</li> <li>• Ending</li> </ul>
	Procedural persuasion	<ul style="list-style-type: none"> <li>• Rules</li> <li>• Frustration</li> </ul>

Table 3: Topic characteristics of *Robin*

Lastly, the message of the game has been discussed, which is also an essential part of the reviews of the participants. The most important aspect is what the amateur critics thought that the developers wanted to communicate to them with their game as this showed whether Robin's message is clear to players or not. Therefore, their own interpretation is a necessary category within this topic. In addition to their own interpretation, the participants were asked to conclude whether they found the message of *Robin* to be convincing enough to reach their goal. Moreover, the participants were asked to compare *Robin* and the trailer of a documentary called *Unrest*, which is also about Chronic Fatigue Syndrome. That way, their judgment of the strength of the game in relation to different media types were discussed.

Topic	Category within topic	Examples
Message of the game	Interpretation	<ul style="list-style-type: none"> <li>• Message of the game</li> <li>• Goal of the game</li> </ul>
	Strength	<ul style="list-style-type: none"> <li>• Convincement</li> <li>• Realism</li> <li>• Media type</li> </ul>

Table 4: Topic message of the game

### *Test interviews*

As Qu and Dumay (2011) state, preparation is an essential step in conducting interviews. Therefore, after creating the first topic list, three test interviews were conducted for two reasons. Firstly, to get familiar with the activity of interviewing and secondly, to examine if the questions in the topic list resulted in data that answered the sub-questions and main research question. This resulted in adding three components that were not discussed earlier. In the topic ‘chronic illness’, the discussion of chronic fatigue was missing. However, the experience or expectations on this particular symptom was relevant, as it is the subject of *Robin*. Furthermore, the element of social support has been included in the same topic, since that is what the developers of the game are trying to reach. The last addition was the spoon theory, which is discussed in the topic of the message, as this is what the game represents. The final version of the topic list can be found in the appendix.

### *Game developer*

Due to the fact that the expert interview with the game developer had to be done over e-mail, this was limited in comparison to the face-to-face interviews. Therefore, it was necessary to ask questions that were open-ended and were inviting to give elaborate answers with much detail. To stimulate it even more, the developer was specifically asked to be as thorough as possible in the information she provided. Additionally, it was necessary to make the questions clear to decrease the risk that the developer does not understand what was being asked of them.

The questions for the expert interview with the game developer were derived from the questions of the topic list for the amateur critics, and their responses on these questions and the game itself. Thus, the developer primarily has been asked about decisions considering the design, rules, ending and message. Additionally, the proposed changes from the amateur critics have been included as questions on why the developers have decided to not include these aspects or have included them differently. By doing this, a comparison can be made between the reviews of the amateur critics and the thought process of the developer while creating the game. In that way, the level of understanding of the participants from both groups could be determined. The list of questions can be found in the appendix.

## 3.3 Data-analysis

Thematic analysis was used to analyse the information shared in the interviews. Braun and Clarke (2006) define thematic analysis as “a method for identifying, analysing and reporting patterns (themes) within data” (p.79). This method of analysis fits the research, as it helps exploring the data thoroughly

and in much detail (Braun & Clarke, 2006). Thematic analysis includes six steps, which all have been applied. First, data were transcribed from recordings and these transcriptions have been read multiple times to get familiar with the information that has been gathered in the interviews. Next, initial codes were created by systematically assigning features to the data (Braun & Clarke, 2006). The first round of labelling the data is called open coding (Boeije, 2014) and has been done by using the Atlas.ti software, which resulted in many open codes. By doing this, there was a clear overview of all the information that was usable for the research. Due to the fact that writing is a helpful factor in memorizing information better than typing (Smoker, Murphy & Rockwell, 2009), the researcher continued on paper after open coding to increase efficiency in the organisation of the information. The third step was determining whether there were patterns in these loose codes, which resulted in the codes that belonged together (Braun & Clarke, 2006). Finding relations between the codes from the open coding round is called axial coding (Boeije, 2014), which resulted in fewer and more systemized codes with meaning and thus, the first themes. This was done by creating a list of the codes and writing the related ones on a separate piece of paper. The next step according to Braun and Clarke (2006) was reviewing these initial themes and determine whether this has been done correctly, followed by naming and defining them when that is the case. This means that selective coding was performed (Boeije, 2014). The very last step in the development of the themes was to write the report (Braun & Clarke, 2006), which has been done in the next chapter. As some of the themes overlapped greatly with the theory that has been discussed earlier, there is a combination of data-driven and concept-driven themes and subthemes. Many have been created based on the information that has been collected from the data itself, but a few have been immediately connected with previous discussed theory (Schreier, 2012).

In the analysis of data, sensitizing concepts play an important role. These concepts are described as guiding tools in data-analysis and used to interpret the information that the researcher gathers from participants (Bowen, 2006). The concepts are derived from the previous discussed theory and give direction in the specific context the data should be analysed (Vermeeren, 2006; Bowen, 2006). In this thesis, there were several concepts that had this purpose which were helpful in understanding how the critics formed their judgments, which were not specifically discussed in the interviews.

The first sub-question discussed how participants' gaming background influenced their review of *Robin*. Hereby, the concept of player types by Bartle (1996) and Yee (2005) was relevant, as this previous experience and the preferences of the amateur critics were influential for their judgment. Furthermore, the involvement in gaming has been determined through the categories of the newbie, casual, midcore and hardcore gamer as discussed by Scharkow et al. (2015), Poels et al (2012) and Rogers (2012). Additionally, the motivations of the player were relevant to discuss, meaning that those discussed by Lee et al. (2017) were crucial. To categorize the participants in different levels of

motivation, the clusters of Schuurman et al. (2008) were used. Not only were these concepts important to analyse what the experience of the participants was in terms of games, it also resulted in various categories for each participant, which made it possible to compare the participants in a more organized fashion.

The second sub-question was meant to discover whether the two groups of critics, with and without a chronic illness, differed in their judgment of *Robin*. The main concept that is related to this difference is understanding for chronic illness. Understanding can be interpreted here as both the knowledge on chronic illness and the social support from others for the situation that patients live in. In the analysis, the answers related to *Robin*'s message were most useful, as these showed whether the participants without chronic illness understood the struggle of chronic fatigue and what their judgment was. The concept that was most relevant for comparing the two groups was the player-oriented persuasive game elaboration model, as the level of experience from the participants were player characteristics that could have had an influence on the judgment of the persuasive game. Additionally, the similarity identification type was of importance, since there was a possibility of the participants with a chronic illness being able to relate to protagonist Robin.

The third sub-question sought to discover the differences and communalities between the amateur critics and the game developer. These were able to explain to what degree the amateur critics understood what the developers tried to achieve through the decisions they have made throughout the entire process of creating *Robin*. Here, the player characteristics and identification are relevant again, since their concern with the subject are considered again in what was influential on how they perceived the aspects of the game.

The answer to the main question is derived from the previous three questions, meaning that the same concepts were relevant. This is because the necessary findings for the research question were already discussed in the sub-questions and eventually formed into one interpretation of the data.

### 3.4 Validity and reliability

Two aspects that are of importance in research are the validity and reliability. Validity describes whether the method is able to provide information that is needed to answer the sub-questions and research question (Silverman, 2011; Golafshani, 2003). Since qualitative data consists of interpretive data, it is necessary to safeguard this. According to Silverman (2011), there are several strategies to make sure the validity is up to par, one of which is the inclusion of test interviews. As described previously, this was used as a manner to determine whether questions result in data that were useful for the research. Furthermore, constant comparison was used as part of the thematic analysis

procedure: in the step of axial coding, themes were compared continually to reassure that the themes and subthemes were fitting for the research questions.

Reliability is defined as the level of reproducibility of the research under a similar methodology (Golafshani, 2003). In other words, the ability to repeat the method and receive the same results (Silverman, 2011). The description of how the data was gathered and within what framework it was analysed, which makes the decisions within this thesis on how the method has been applied transparent: repeating is possible since all steps have been discussed. The only problematic feature for reliability was the fact that it is impossible to have the exact same interviews, especially with the use of a semi structured type. Leung (2015) states that consistency is essential, which is done by using the same topic list for every participant. Although the interviewees were able to express what they wanted to share, the same composition was used. This means that the topic list was followed in every interview, but not strictly: the amateur critics were given the opportunity to go more in-depth on aspects they found important to incorporate in their reviews, even if it was not included in the topic list.

### 3.5 Conclusion

The use of qualitative interviews were most fitting for the participants to be able to assume their role as a reviewer. They were given space to talk freely, which was encouraged by using open-ended questions. The gathered data has been organised and analysed through the six steps of thematic analysis by Braun and Clarke (2006), with the guidance of previous discussed theory. This resulted in sensitizing concepts, which were the most relevant for the information that has been gathered through the interviews.

## 4. Results

This chapter is dedicated to the findings that became apparent after conducting the thematic analysis. Per sub-question, the fitting themes and subthemes are discussed, which describe the patterns that were visible within the gathered data. As discussed in the previous chapter, qualitative research is about the interpretation of what participants say in their interviews. Therefore, every subtheme is accompanied with a quote. Most of them are visible within the data more than once, and thus, these quotes are called examples: more than one is applicable, but the quotes that are being shown serve as an illustration to what statements fit that specific subtheme. Since the reviewing themes are relevant for all three sub-questions, they need to be discussed first to grasp the judgments of the amateur critics.

### 4.1 Reviewing themes

The intention of this research was to put an audience in the position of the critic. The themes that are going to be discussed in this part of the chapter are based on the thoughts and expectations of the amateur critics in relation to the game *Robin*. They expressed their judgments on the characteristics of the game, the purpose it has according to them and the expected impact.

The first theme is the proposed changes that the amateur critics came up with. In their reviews they criticized various aspects of the game that they found could have been better or which they thought were lacking. This theme can be seen as the criticism the amateur critics had on *Robin*, as they mentioned these as aspects they would change themselves. Hereby, components of the gameplay were named most often, which is the first subtheme. Energy was discussed most frequently, namely by seven of the fourteen amateur critics. The remarks they had on this aspect was that all tasks cost the same amount of energy and that it was unclear how much that specifically was. Additionally, two of those participants stated that they found it unrealistic that there was no possibility to rest in between tasks, which they felt would have made the game better. Next to the aspect of energy, the tasks themselves were criticized by six of the amateur critics: they would have added more diverse tasks, included a work or social element, and expected different tasks per day. Similarly to the energy aspect, the judgment towards the tasks was also based on the fact that it would seem more realistic to them. Furthermore, six amateur critics stated that they would make changes in terms of the length. Four of them meant the length of the game itself; one proposed a shorter intro; one would add a longer ending. The last component of this subtheme is the ending. Four participants did not find the ending fit their choices: either it was too negative or not negative enough.

Example quotes:

“Because now it looks like watering plants or feeding the bird, that that costs an equal amount of energy as preparing food or taking a shower or something. (...) Yeah, it is not in proportion in my opinion.” – S.

“Yeah, because now she only sits at home. (...) If you only see this, you will not get a good perspective on what it all means, because you also have obligatory things to do every now and then.” – B.

“I was surprised by that [ending]... Well, because I thought that if you have slept so badly for so many nights, then you are not well-rested.” – S.

“It is only two or three days. It is pretty short and.. Maybe that people will not realize that it is always like this.” – J.

The second subtheme is the aspect of information, which can be split up in two separate components. Seven of the amateur critics expressed that they missed information on how the game works and thus, *Robin* lacked instructions on what was expected of them. This caused some of them to wait on something to happen, instead of instantly exploring the options that were given at that point. Another problem with information was mentioned by four amateur critics: they stated that the game lacked explanation on Chronic Fatigue Syndrome. They either proposed to add that within the game itself or link to other sources with information on the illness.

Example quotes:

“More of an indication like, okay, you can start now. That is not related to the chronic fatigue- it is more of an explanation of the steps to.. this is what we expect from you.” – ML.

“But I missed a lot of information. And about why something is tiring. Or something.” – B.

The design of the game is the next subtheme, which are critiques focused on the look and feel of the game. Four amateur critics stated that they wanted to see more of the protagonist herself, Robin. Two expressed this through the idea of adding her in the room and letting her perform the tasks that are chosen by the player. The other two stated that they would have visualized the tiredness of Robin more by showing the differences between her face before and after her day more clearly. Moreover, two amateur critics did not like the style, as it just did not fit their own preference. Lastly, one participant did not like the choice of music, as they he thought it was unfitting.

Example quotes:

“Well, it would have eh, probably been more realistic if the character walked to the fridge or [sighed] Like, groaning and panting and.. doing the dishes like, ‘oh my god’.” – SA.

“Yeah, I do not think the style is very nice. Not that I thought it was ugly, but.. it looked old-fashioned.” – D.

“I have to say that I did think the music in the beginning was annoying. (...) It was not inviting.” – SE.

The last subtheme within the proposed changes is the suggested additions. A total of six amateur critics came up with components that were not incorporated in the game, but thought it would make a



good addition. Two of them stated that they thought that adding more languages would expand the reach of the game, as they expected not everyone to understand the game completely in English. Another two amateur critics mentioned the element of time, as they did not find it realistic that after a few chores, it was already dark outside. Furthermore, one participant came up with the idea of adding another version of the game, so players can compare: Robin as a healthy character and as a character with Chronic Fatigue Syndrome. Lastly, one amateur critic expected an option of personalization would help with the impact. Her idea was that changing Robin's name into that of someone with similar symptoms and showing it to their loved ones would create more of a bond.

Example quotes:

“Maybe that in the future you can look into translating it to Dutch. (...) For some the English language is too difficult. So that could be a solution.” – I.

“But I think because when you do two things.. it is immediately dark. And then your only option is the bed. It is not like that in real life.” – M.

“So, I would add another version, that you do this version like, how it actually is. (...) That is your own version.. this is my version.” – P.

“For example, if a friend of mine would play this and I could change the name to [own name], or something. (...) I think it would be on their mind longer if they can see how it is for me specifically.” – S.

The second reviewing theme is the interpretation of Robin. During the interviews, the amateur critics expressed their views on what they thought the purpose of the game was. Hereby, the first subtheme is the message: what do the developers want to communicate to their audience? Except for one amateur critic, all of them viewed the message as informing. According to them, the message was directed at people who are not experiencing similar symptoms themselves and the game explains to them what it is like to be chronically fatigued. There was one amateur critic who thought there was a double message and her second message resonated with the view of the remaining participant, namely that the purpose of the game trying to reach people who are chronically fatigued. In this case, the message is interpreted as acceptance towards similar symptoms that they experience.

Example quotes:

“How the life of someone with this type of illness.. looks like.” – D.

“The message I get out of it is what I have done myself.. Find a balance and that what is in your head, is not always.. do-able.” – C.

The next subtheme is the goal of Robin. The amateur critics all had an idea on what the developers want to achieve with their game. Half of them expected that the goal was to create more awareness for chronic fatigue and Chronic Fatigue Syndrome. Thus, to make players more conscious on the existence of these problems. The other half of the amateur critics expressed that they thought the goal

of the game was to increase understanding towards the people who experience these symptoms. This can be seen as a step further, as these amateur critics expect a more active result, namely a change in attitude.

Example quotes:

“At least making aware of.. that chronically fatigued people it cost more energy to do particular things.” – MI.

“That people are going to understand and that they will.. respect each other.” – I.

The last reviewing theme is the expected influence on Robin’s impact. The amateur critics expressed what they expected to have an effect on whether the player is impacted by the game or not. Hereby, the first subtheme is the player, which means that their traits is an influence according to the amateur critics. The most discussed trait was age, which nine of the amateur critics mentioned as an influence. Most of them stated that older players, with more life experience, would be able to understand the game better. Two amateur critics, however, thought younger players would understand it more. One stated it was due to their knowledge on technology, while the others thinks younger people are less judgmental towards these types of symptoms. The next trait is empathy level, which was discussed by half of the amateur critics. It was stated that people who find placing themselves in the shoes of others difficult, will barely be impacted. Furthermore, the experience of a chronic illness is seen as an influence on the impact. The seven amateur critics who named this, stated that it could either be direct or indirect experience, but it was a necessary factor to understand the game. The last component is occupation, which two amateur critics mentioned. They expressed that they thought people with a job would understand it better, as they know the difficulty of not having enough time to do things.

Example quotes:

“For younger people, I think this is a laughable matter. Yeah, they are pretty naïve. So, I think that there is not a lot of impact there.” – P.

“Only people who are not able to place themselves in others.. it is not a game for them.” – MA.

“I think that if you know someone close to you that is dealing with that.. then there is a bigger concern than when you are not confronted by it.” – P.

“Because they [people with a job] need to do.. more things in the weekend, because there is less time throughout the week.” – J.

The last subtheme is the type of medium. All of the amateur critics judged on whether this was the right medium to successfully promote the message that they think *Robin* has. To determine this, they were shown a trailer of a documentary that has the same subject, namely Chronic Fatigue Syndrome. Nine of the amateur critics stated that they thought the documentary has more impact, as it was

realistic and contained more emotion. The five remaining amateur critics expected more impact through the game, due to the interactivity and the shortness.

Example quotes:

“Well, this is out of the life of real people, the images, the people around it. Realism. (...) Reality says more than something digital. To me.” – MI.

“You are doing this yourself, you can make the choices yourself and therefore, you are more concerned with it than if you are looking at a tv.” – P.

The reviewing themes have been placed into a table to create a clearer overview of what has been discussed:

Theme	Subtheme	Elaboration
Proposed changes to Robin	Gameplay	Tasks Ending Energy Length of game
	Information	Game instructions Chronic Fatigue Syndrome
	Design	Protagonist Style Music
	Suggested additions	Language Time Personalization Two versions
Interpretation of Robin	Message	Inform Acceptance
	Goal	Awareness Understanding
Expected influences on Robin’s impact	Player	Age Empathy level Experience with chronic illness Occupation
	Medium	Documentary Game

Table 5: Overview reviewing themes

The reviewing themes will return in all three of the sub-questions. These judgments of the amateur critics will be discussed in terms of gaming background, chronic illness and the decisions of the developers.

## 4.2 Gaming background

The first sub-question is focused on the gaming background of the participants and how this influences them in how they review *Robin*. Hereby, the participants are placed into three different categories: gamer type, motivation cluster and gaming involvement. As these categories are focused on different aspects of the player, the participants are compared based on various components of their gaming background. After discussing the contextual themes and the elaboration on the categorization of the participants, the reviewing themes are discussed per category to demonstrate the result of this sub-question.

### 4.2.1 Contextual themes

The contextual themes related to this sub-question entail various aspects of the amateur critics' gaming background. The participants shared one trait in relation to gaming and that is that all of them regularly spend time on gaming. However, how the gaming background has taken shape for each participant differs greatly from each other due to several facets. These are discussed through two overarching themes.

The first contextual theme is gaming preference. What became visible in the interviews is that the participants differ in what they find important within their gaming experience and this was expressed through their preferences. The gaming device is one of the choices that the participants consciously make in order to enhance their experience. Although twelve out of fourteen participants explained that they use several types of gaming devices, they do prefer one over the rest. Laptops and consoles are scored highest in popularity within the group. Laptops are preferred due to their bigger screen and options to add different types of controls, such as a mouse. The popularity of the console mostly lies in their ability to play higher quality games. These two are followed by mobile devices. Often it was said to be handy due to their portability and therefore, does not limit the participant in their capability to play wherever and whenever they want. Only one participant stated that they favour PC over other gaming devices, and this is because it is the gaming device he grew up with.

Example quotes:

“My laptop, because it, yeah, is bigger and.. you can use a mouse and that sort of stuff.” – J.

“My preference is definitely the PlayStation 4.” – P.

“No, everything on my phone, I always have it with me, nicely small.” – Q.

“PC all the way.” – MI.

In addition to devices, the preference in the gaming selection of the participants is diverse. Half of the participants has a diversified taste in games, meaning that they are not simply drawn to one specific

type of game and do not mind taking time in searching for new games. These participants mentioned many games that they liked, and often stated themselves that they appreciate a wide range of genres. The other half of the participants is focused on very similar games, which means that they do not deviate from their specific taste in games. Additionally, while looking for new games to play, they often rely on popularity in their decision.

Example quotes:

“Sometimes I want to play light-hearted games and then there is a period in which I play a lot of Nintendo. But now I am more into the- those shooters.” – MA.

“Well, always what is new in the top ten list.” – B.

Furthermore, the participants elaborated on their motivations for playing games, which is the second contextual theme. All of them mentioned more than one motivation, meaning that the participants did not necessarily stuck to one specific type. The names of the (types of) motivations have been derived from the previous discussed sixteen appeals from by Lee et al. (2017). Fifteen of those appeals were visible in the gathered data, which are discussed through the four subthemes that they belong to. The first subtheme is the achieving motivation, which has been mentioned eighteen times. This motivation is focused on the satisfaction of progression and has been expressed through five separate appeals: *accomplishment*, *challenge*, *competition*, *learning* and *mastery*. Participants stated that they feel fulfilment when they level-up, reach high scores, win from others or find that their skills or knowledge has improved.

Example quotes:

“Reaching every level, that is also basically a reward.” – C.

“I like it a lot to achieve something in a game. Also collecting.. achievements and those types of things.” – MI.

“I always want to win.” – Q.

“For example, with The Sims, you know, that you are able to do new things and learn, and I really like that.” – SE.

The next subtheme was mentioned sixteen times, namely the remaining category of the appeals from Lee et al. (2017). Hereby, *fellowship* was named most frequently, and this desired motivation is met in two different ways: playing with others that the participants already know and meeting new people through their game. Next was the *narrative*. The participants who mentioned this motivation expressed the need for a storyline to enjoy their game, as it makes them feel more invested and it otherwise feels pointless to them. *Sensation* is the last motivation within this subtheme, which was fuelled by the love for high quality games of some participants. Good graphics, realism and overall beauty of the game were mentioned as examples of what they deemed as important.

Example quotes:

“Usually something that I can play with my boyfriend, because he also really loves gaming.” – S.

“It has to have a story. A pointless game where you eh, collect balls and level-up (...) I see nothing in those.” – MI.

“For instance, those- those 8-bit things, I cannot play those.” – K.

The third subtheme is the motivation of freedom, which was named a total of fourteen times. In this category, participants found *fantasy* most appealing: especially escaping their own situation is most important, but also being able to do things that they cannot in real life were mentioned a few times. Also, *exploration* was seen as valuable asset. Participants who named this motivation stated that they liked to discover both fantasy worlds and maps that are recreated from real life places: fantasy worlds are considered unique and the recreated maps are more easily reached through their game than by actually visiting them. Another part of freedom within games is visible in the aspect of *creativity*, which gives participants the ability to incorporate their own vision in their games. The examples that were given, were based on games that give the players the opportunity to build their own houses or cities, or has the option to customize characters. *Depth* was mentioned once, and this participant stated that they really enjoy having control on the character or the storyline by the choices they make.

Example quotes:

“I find that an important aspect, that you.. do not have to be eh, in this world.” – MI.

“This has a massive map and you can go everywhere and you will constantly meet people, animals or other things, and that seems cool to me.” – K.

“Yeah, you can do a lot with it and you can put all your own creativity in it in what it will look like and building houses and such.” – SE

“Especially games in which you eh.. can make life decisions. So, you can sort of form a personality.” – MA.

The last subtheme is the category player, of which the motivations was mentioned twelve times by the participants. These motivations are strongly related and influenced by the participants themselves. Hereby, *submission* was considered to be most important and was expressed to give these participants a way to unwind or kill time. Additionally, *mood* was also considered to be influential on participants' decisions considering games, especially on what type of game they feel like playing. Lastly, *nostalgia* was mentioned by some as a motivation for playing certain games. For the participants who named this as a motivation stated that this lead them to favour certain game-series due to having good memories accompanied with them or just like to see the progress it has made throughout the years.

Example quotes:

“And I play that eh.. mostly because it- well, sometimes- travel time in the bus and stuff.. to get rid of it.” – MI.

“It can be fun, that is just a state of mind eh, moment.” – MI.

“Yeah, that is so nostalgic, and I think also my first real game, which I experienced very consciously, ever since I was little.” – MA.

#### 4.2.2 Categorization of amateur critics

Based on their preferences in and motivations for gaming, the participants have been placed in various categories. To determine their gamer type, motivation and involvement, the answers of the participants have been analysed based on previous discussed theory.

To discover the gamer type of the participants, the characteristics as described by Bartle (1996) and Yee (2005) have been used, which lead to these participants being categorized as achievers, socialisers and explorers. The participants who fit in more than one type were further analysed in their answering to discover which activities they preferred more. Out of fourteen participants, seven fit the *achiever* type. The motivations that are included in the achiever category from Lee et al. (2017) are the motivations that are related to this type. This means the satisfaction they receive for advancement is seen as the prominent reason for them to engage in the games they play. Four participants stated that they find the socializing aspect to be most important in games, meaning that they are the *social* gamer type. This is related to the motivation of fellowship by Lee et al. (2017). Although they enjoy more features of gaming, they find that the involvement of other players is crucial in their experience. The last gamer type is the *explorer*. These three participants expressed that the motivations within the freedom category by Lee et al. (2017) are the main reasons for them to play games. They are more interested in the discovery of new features and places, than in the main purpose of the game.

Example quotes:

Achiever: “Sort of having a purpose, see the characters become stronger. (...) Yeah, it needs to have progress.” – MI.

Social: “I am not going to play games by myself or anything (...) It is a social thing.” – S.

Explorer: “Those side quests, that interests me way more than the main stories usually.” – K.

The participants’ involvement in games is determined through the four categories as discussed in the theory: newbie, casual, midcore and hardcore gamers (Poels et al., 2012; Scharnow et al., 2015; Rogers, 2012). Since all of the participants are regular players and have been gaming for a while, none of them has been labelled as newbie. Half of the participants were categorized as casual gamers, due to the fact that they primarily play mobile or browser games. Additionally, they did not show any

additional interest in complex games or the gaming industry in general. Instead, their focus is on very similar (popular) games and are not diverse in their picks. Five of the participants were classified as midcore gamers. One of the reasons is due to their increased interest in games that they play, as well as the gaming industry itself. Furthermore, both their device usage and selection in games was more diverse than that of the casual gamers. The determination of the two hardcore gamers within the group of participants was based on their additional activities behind games. Instead of simply playing the game, they pay more attention towards the entirety of the industry. For one participant this became visible before he started playing *Robin* and chose to read up on all the information first, instead of directly continuing to the game. The other interviewee who was classified as hardcore gamer was categorized in this group due to her love for visiting conventions.

Example quotes:

Casual: “Yeah, Candy Crush, certainly. Or.. Let me see. Yes, those types of games. Pet Store, Candy Crush, Cookie Baking, something like that. That is similar to Candy Crush.” – SA.

Midcore: “I mostly play PC games.. But I also have a PlayStation 4. (...) And sometimes, when you have nothing to do, in the plane or something, or in the car, a little game on your phone of course.” – P.

Hardcore: [clicks on about *Robin*] “Hm, the spoon theory.” [clicks on credits of *Robin*] “Let’s see who made this. Hmm.” – MI.

The appeals that have been discussed by Lee, Clarke, Cho and Windleharth (2017) have been used to determine the motivations of the participants. How this was determined specifically has been discussed in the themes. The sixteen appeals have been categorized into four different groups: achieve, freedom, player and remaining. This is done due to the similarities that they have, making the different types of motivations stand out more. These four groups have been linked to the four clusters by Schuurman, De Moor and De Marez (2008): the diversity of the motivations has been checked, meaning that it has been analysed how many types of motivations each participant has. For example, where some stuck to only motivations related to achieving, others mentioned motivations that belong to freedom and player as well. Additionally, the participants’ involvement in games has been taken into account. Although some of the participants overlapped in different clusters, the best fitting category has been chosen.

Due to the similarities of the descriptions, the *time-killer* (or pass-time gamer) and casual gamer seemed to be linked: their involvement is superficial, and they rather play to keep themselves busy instead of other outstanding motivations such as an interest in the medium itself (Rogers, 2012; Schuurman et al., 2008). The majority only wanted to achieve and otherwise used their game as a way to not feel isolated. Therefore, the seven participants that have been categorized as casual gamers have been classified as *time-killers*. The five participants categorized as *escapist* gamers have been chosen based on the main inclusion of motivations that fit the appeals of Lee et al. (2017) in the freedom



classification, and statements that show their specific motivation of escaping through their games. The categorization of the *overall convinced gamer* (OCG) was based on the extensive list of different motivations. There were two participants who fit in all four types of motivations (freedom, achieve, player and remaining), showing that these gamers are very diverse in what they like to do with this specific medium. Additionally, they did not seem to have one preferred goal in their game, but are satisfied fairly equally by different types of motivations. For one remaining participant, none of these categories fit due the fact that she did not mention various motivations to play games, but she is interested in the gaming industry. Since she mentioned that she likes to indulge, and the cluster of the *escapist* gamer is also characterized by the indulging, it was decided that she fit best in this cluster.

Example quotes:

Time-killer: “It is more to pass time.” – B.

Escapist: “But if I go play a game for a little, then eh.. I am somewhere else for a while.” – P.

Overall convinced gamer: “Sometimes I really want to play Sims (...) Online we play with friends. (...)

Whoever reaches 75 first, wins. So, you go for it. (...) Assassin’s Creed is mostly about exploring. (...)” – M.

These analyses led to an eventual overview of the participants:

	<b>Preferred Device</b>	<b>Gamer type</b>	<b>Additional activities</b>	<b>Involvement in games</b>	<b>Motivation cluster</b>
<b>P</b>	Console	Social	-	Midcore	Escapist
<b>S</b>	Laptop	Social	-	Midcore	Escapist
<b>Q</b>	Mobile	Achiever	-	Casual	Time-killer
<b>M</b>	Console	Social	-	Midcore	OCG
<b>MA</b>	Console	Explorer	-	Midcore	Escapist
<b>MI</b>	PC	Achiever	Interest information behind games	Hardcore	OCG
<b>K</b>	Console	Explorer	Visiting conventions	Hardcore	Escapist
<b>D</b>	Console	Explorer	-	Midcore	Escapist
<b>I</b>	Mobile	Social	-	Casual	Time-killer
<b>C</b>	Mobile	Achiever	-	Casual	Time-killer
<b>B</b>	Laptop	Achiever	-	Casual	Time-killer
<b>SE</b>	Laptop	Achiever	-	Casual	Time-killer
<b>J</b>	Laptop	Achiever	-	Casual	Time-killer
<b>SA</b>	Laptop	Achiever	-	Casual	Time-killer

Table 6: Gaming background of all participants

### 4.2.3 Findings

After the placement of these amateur critics into the categories they belong to, their judgments have been compared. Thus, patterns have been searched between gamer type, gaming involvement, the gaming motivation clusters and the reviews of the amateur critics.

The reviewing themes have been discussed earlier, but for the comparison it is necessary to specify to whom these judgments belong to. Therefore, some tables have been made to give an overview. The first one is based on the proposed changes. Here, only the components that have been mentioned twice or more are included, as one comment on it cannot result in a pattern:

	Tasks	Ending	Energy	Length	Info game	Info CFS	Character Robin	Style	Language	Time
<b>P</b>			X							X
<b>S</b>	X		X							
<b>Q</b>			X		X					
<b>M</b>	X									X
<b>MA</b>			X							
<b>MI</b>	X		X	X	X	X	X			
<b>K</b>					X					
<b>D</b>		X					X	X		
<b>I</b>	X		X						X	
<b>C</b>					X					
<b>B</b>	X				X	X				
<b>SE</b>					X		X	X		
<b>J</b>	X	X	X	X	X	X			X	
<b>SA</b>							X			

Table 7: Overview proposed changes

The comparison of the proposed changes with the three categories results in only one finding: all but one of the amateur critics that have been placed in the gamer type achiever wished for more information on the instructions of the game. This could be the result of their eagerness to perform well in their games. As discussed by Yee (2005), one of the feelings of satisfaction for achievers is reached by the understanding of the game mechanism. The lack of explanation and the fact that players are immediately asked to start without any preparation could be the cause of wanting more explanation by this specific gamer type.

**Example quotes:**

“Well, more explanation. (...) Pointing out more, like, you can start now. This is separate from the chronic fatigue, it is just clarifying the steps of.. this is what is expected from you.” – MI.

“Yeah, at some point I was in that screen and I did not know what to do. That I was like, I hear a sound, so – maybe something is going to happen, but I did not know – at that point I had to.. move my mouse in the screen, but by then I saw what I had to do. At that point I was like, I do not know what- what is expected of me.” – Q.

The interpretation of *Robin* was the next theme that the amateur critics discussed. These interpretations have also been placed into a table, to see how all of them interpreted the game.

	<b>Inform</b>	<b>Acceptance</b>		<b>Awareness</b>	<b>Understanding</b>
<b>P</b>	X			X	
<b>S</b>	X				X
<b>Q</b>	X	X			X
<b>M</b>	X				X
<b>MA</b>	X			X	
<b>MI</b>	X			X	
<b>K</b>	X				X
<b>D</b>	X			X	
<b>I</b>	X				X
<b>C</b>		X		X	
<b>B</b>	X			X	
<b>SE</b>	X				X
<b>J</b>	X			X	
<b>SA</b>	X				X

Table 8: Overview interpretation of Robin

The comparison between the three categories and the answers included in the two subthemes (message and goal) did not result in any patterns. The amateur critics that have been placed in the previous discussed categories overlapped in their interpretations, meaning that there were no judgments exclusive to a gamer type, gaming involvement or motivation cluster. An explanation for this could be that the interpretation of games is not as important in entertainment games, and therefore, the amateur critics do not link to their experience with entertainment games.

The last theme was the expected influences on *Robin*'s impact. As discussed previously, age, level of empathy, experiences with chronic illness, and occupation were mentioned as influences. Additionally, all amateur critics specifically mentioned what medium they thought is more impactful. These have also been placed into a table for clarity on their judgments:

	<b>Age</b>	<b>Empathy</b>	<b>Experience chronic illness</b>	<b>Occupation</b>	<b>Stronger media type</b>
<b>P</b>	X	X		X	Game
<b>S</b>		X			Game
<b>Q</b>	X		X		Game
<b>M</b>	X		X		Game
<b>MA</b>		X			Documentary
<b>MI</b>	X	X			Documentary

<b>K</b>	X	X			Documentary
<b>D</b>			X		Documentary
<b>I</b>	X		X		Documentary
<b>C</b>	X		X		Documentary
<b>B</b>			X		Documentary
<b>SE</b>	X	X			Documentary
<b>J</b>	X	X		X	Game
<b>SA</b>			X		Documentary

Table 9: Overview expected influenced on Robin's impact

With this reviewing theme, there was also no pattern visible, meaning that these judgments cannot be assigned to the gaming background of the participants. The expectations of age, empathy level, experience with chronic illness, occupation and media type to be influential, might be derived from other knowledge rather than the experiences they have had with gaming.

#### 4.2.4 Conclusion

What the results for this sub-question show is that there are barely any patterns visible when it comes to the relation between gaming background of the participants and their reviews of *Robin*. The only finding was that achievers like to have more explanation on what is being expected of them while playing the game, which is presumably tied to their desire to understand game mechanisms. However, it was specifically stated by them that it would not have any influence on the impact on the message, but would be more helpful. Thus, it can be concluded that the gaming background of the amateur critics has a very minimal to no effect on how they review the persuasive game *Robin*.

### 4.3 Experience chronic illness

In this sub-question, the differences between people with and without a chronic illness are elaborated on to see whether their experience influenced them in their judgment towards *Robin*. Hereby, the themes that describe the experience with chronic illness are viewed as context for the reviews of the participants. The same reviewing themes from the previous sub-question are discussed in relation to these contextual themes.

#### 4.3.1 Contextual themes

There are two themes that belong to this sub-question, which elaborate on the relation between the amateur critics and the subject of chronic illness. The most valuable theme is the experience of chronic

illness: in what way are the amateur critics related to the subject of *Robin*? The first subtheme is direct experience, which half of the participants have. This was expected, as it was the criteria for one of the two groups of participants. There was a wide range of illnesses visible, such as rheumatism, endometriosis and fibromyalgia, but although all of the participants had many different symptoms, there was one specific symptom that they all experience: fatigue. Thus, they are all familiar with the problem that is being portrayed in *Robin*.

Example quotes:

“Fatigue. It takes up a lot of energy, so things just cost a lot of effort.” – M.

“Yeah, especially a lot of fatigue. That is the worst- just always, but almost all people with a chronic illness have that.” – S.

The next subtheme is indirect experience. Four of the participants from the group without an illness know someone who is struggling with a chronic illness. They mentioned either a family member or a partner, meaning that these are people close to them. Here, the participants also spoke about various illnesses, but all noticed that fatigue is a problem that their loved one experiences.

Example quotes:

“From what I notice? With Graves’ disease it is really a fatigue-thing. She has less.. energy.” – MA.

“That she is always very tired. Even though she gets enough rest. And does not do too much.” – P.

Two participants have no experience with chronic illness, which is the third subtheme. Both stated that they do not know, or are not aware, of anyone in their social environment that is chronically ill or experiences similar symptoms as what is shown in *Robin*. This means that none of their family members, friends or anyone close to them have shown any signs of a chronic illness and therefore, they were not familiar with the situation that the game depicts.

Example quote:

“No, indeed. At least, not anyone I am aware of that they have a chronic illness.” – SE.

Lastly, there was one person within the group of participants without a chronic illness who had a past experience. This was the only type of experience that had not been considered beforehand. This participant stated that he has struggled with depression before, which had resulted in apathy and fatigue as symptoms. However, this recognition cannot be seen as identical to the group of chronically ill participants, as he speaks out of a remembrance from years ago and therefore, is not as clear as the experience from the participants with direct experience.

Example quote:

“I was three and a half- four years depressed myself. (...) So, I think that chronic fatigue.. has something to do with similar stuff.” – MI.

The second theme is social support, which is a related aspect to chronic illness. Within this research, social support is the way a social environment responds to someone’s situation with a chronic illness. The first subtheme is experience, which is applicable to the participants with a chronic illness. All of them mentioned mixed responses from others, meaning that they both had negative and positive encounters with others in relation to social support. These participants brought up their negative experiences most, which ranged from some family members and friends, to medical personnel and even unrelated people who did not express understanding for their situation. These participants stated that they disconnect themselves from people who are not accepting of their situation. However, all of the chronically ill participants did mention that they have at least some people close to them who show compassion towards them and their illness.

Examples quotes:

“People all think, like, you are a young woman, so you can do it, you know?” – SA.

“I am more inclined to go to them [people who understand] (...) than to people who tell me to suck it up. (...) Don’t try to understand it then. But then I will not attach any value to you.” – M.

“Well, I am pretty lucky with the people around me.” – S.

The second subtheme is the expectations of social support, which was mentioned by the participants without a chronic illness. They discussed social support only negatively and either stated that the view on people with chronic fatigue was that they exaggerate their symptoms or are just lazy.

Example quotes:

“It is never taken seriously. As in, like, you are overexaggerating.” – MI.

“So, it would be expressed as in, you are lazy, and you do nothing.” – K.

#### 4.3.2 Findings

There are various patterns visible in the comparison between the reviews of the amateur critics and their experiences with chronic illness. They were asked about their judgment on the ending, in which it became visible that the amateur critics who were critical on this aspect, responded differently based on their experience. Two participants with a chronic illness did not find the ending to be negative enough regarding the choices they had made, while two participants without a chronic illness were surprised by how negative their ending was in terms of the tasks they had chosen.

Example quotes:

“I was surprised by that. Well, because I thought that if you have slept so badly for so many nights, then you are not well-rested. (...) How can you be able to be that positive?” – S.

“Really? (...) The worst choices? (...) That I could make? (...) I thought that I made really good choices.” – MA.

This can be assigned to the fact that the participants with a chronic illness have experienced very similar situations with their chronic fatigue, which can be related to what Braden (1999) stated on chronically ill patients reflecting on their own experience in similar situations that they have been in: it makes them more critical on how it is being portrayed. For the participants without a chronic illness it can be argued that they experience something similar, but only in their own situation without chronic fatigue. They have never been in Robin’s position before and, therefore, were not entirely able to visualize the consequences of the choices they made for someone who is chronically fatigued.

Furthermore, there were some differences visible in regard of the reviews of the amateur critics on the themes related to the impact of *Robin*. The first thing that becomes visible is the diversity in views on the target group. Where the group without a chronic illness solely state that they think the game is directed at people without a chronic illness, two participants with a chronic illness think that it could also be aimed at people who live with a chronic disease. This difference was also visible in their view on the message, namely that acceptance is part of what the game developers want to share.

Example quotes:

“I think giving an insight to people who are not understanding it or do not want to understand.” – D.

“The message I get from it is what I have done myself, find a balance.. that what is in your head, is not always.. feasible.” – C.

One of them is certain that only the chronically ill players will understand the message. This expectation could be a result from own experiences with lack of social support in the past or present. The other individual stated that both groups can be taught something through playing *Robin*. The inclusion of the players who are in a similar situation can also be a result of Braden’s (1999) idea of chronically ill participants reflecting on the message with their own experience in mind. Thus, their message is elaborated through two different experiences, namely problematic social support and the need for accepting the situation they are in.

Moreover, there is a difference visible in what the amateur critics with and without a chronic illness expected the goal of *Robin* to be. While five out of seven amateur critics without a chronic illness stated that the goal of the game is to make people aware of the existence of chronic fatigue, five out of seven of the participants with a chronic illness expressed that increasing understanding is what the developers want to achieve with *Robin*.

Example quotes:

“Yeah, I think for people.. to realise.. what chronic illnesses entail. And what it does to you. And how it can influence you.” – P.

“Yeah, increase understanding from the other side. [laughs] From the people who are not chronically fatigued.” – Q.

The players actively think about the message from their own perspective, meaning that this is done through their own personal context. The group without a chronic illness might have been unaware of what living with chronic fatigue is like, even when they experience it indirectly. It could be the case that they expected this to be the main goal, as this has been achieved for them while playing. The chronically ill interviewees already know what it is like to be in Robin’s position and, with their experiences with lack of support from outsiders, they hope that that will be achieved. Thus, own experience with the subject is significantly influential again in this case.

The most striking result is visible in the overall judgment of *Robin* from the participants. Although some expressed critiques and proposed many changes or additions to the game, they were still positive about the game itself, what they perceived to be the eventual goal and how the developers try to reach it. This is the case with the participants who had any form of experience with chronic illness, whether it was direct, indirect or past experience. However, the only two participants who have never dealt with it personally, reviewed the game negatively.

Example quotes:

“Great game.” – K.

“Yeah, I.. [laughs] Yeah. I found- I don’t know. I thought it was quite a shit game to be honest.” – B.

The fact that these amateur critics did not enjoy the game can be related to the concept of identification, as this is of importance in experiencing enjoyment for players (Hefner et al., 2007; Van Looy et al., 2012). There is no direct, indirect or past experience of a similar situation, which makes identification with Robin difficult. These amateur critics expressed that their dislike was generated by different aspects of the game. The first problem being the way chronic fatigue is portrayed by the developers, as they found it to be more about pity than understanding. Furthermore, they thought the instructions of the game were unclear, which led them to not really focus on the choices that they made throughout the game. However, the thing that bothered them most, was the lack of information on Chronic Fatigue Syndrome or chronic fatigue in general.

Example quotes:

“This is actually very mean, but I thought it was a little, boohoo, look this is- we are very miserable. That was basically the feeling I got from it.” – B.



“It is basically very unclear what you are able to do. So, you of course have your own tasks, but you do not know exactly what you can do until you move your mouse over it. I basically figured it out on the third day, how it really worked.” – SE.

“But.. I actually still don’t know anything about.. about being chronically fatigued. Only that it is very, very tiring, but.. yeah, nothing more.” – B.

A few other amateur critics mentioned the lack of information on chronic fatigue, but it did not seem to influence their judgment enough to dislike *Robin* in general. It can be argued that, due to their inexperience with anything related to a chronic illness, which can have chronic fatigue as consequence, these two participants needed more information on what they were experiencing through *Robin* in the game to fully understand it. This is can be tied to the findings of Petty and Cacioppo (1986), namely that prior knowledge and personal relevance are important aspects to shape a preferred attitude. As both of these components are not present in the amateur critics without experience with a chronic illness, the elaboration will likely not persist. This explains the fact that they had no high expectations of a long-term impact. As they stated, they would forget about the game and its message quickly.

Example quotes:

“No, I think I have already forgotten about this by tonight, I think.” – B.

“Thinking about- not meant in a mean way, but I think that after I go to bed tonight I will not think about it anymore by tomorrow.” – SE.

#### 4.3.3 Conclusion

It can be concluded that experience with a chronic illness has an influence on how amateur critics evaluate *Robin*. There were various patterns visible while looking at the reviews of the amateur critics and their experience with chronic illness, especially in the judgments towards the impact of *Robin*. However, the most apparent finding was that the amateur critics without any experience with a chronic illness were the only ones with an overall negative judgment of the game. It is clear that this player characteristic, and identification determine how the game is received and how the achievement of the game is being viewed. Moreover, personal relevance and prior knowledge on the subject are important factors in how the amateur critics review *Robin* as well.

#### 4.4 The developer and the amateur critics

The third and last sub-question discussed the reason behind the differences between the thought process of the developers while creating *Robin*, and the judgments of the amateur critics after playing

the game. The expert-interview was summarized first and afterwards analysed for differences with the views of the amateur critics.

#### 4.4.1 The developer

The developer that answered the questions in the expert interview is Annaliese Bevan, who expressed to have experienced issues with fatigue in the time before making the game, which made her interested in the subject. While following a game design module at her university about ethics, she and her classmates were asked to create a game that was related to this subject. In her search for information, Annaliese stumbled upon the spoon theory. Not only did she find it applicable to her situation with fatigue, but it also seemed like a game mechanism to her. This project resulted in the creation of *Robin*. The intended purpose of the game is to bring awareness to the struggle with chronic illnesses with similar symptoms and they found this to be the best way to achieve it, namely by giving players the opportunity to experience the frustration of living with this struggle:

“Experiencing the frustration can be a great tool for empathy.”

The game is primarily directed at people who have loved ones with Chronic Fatigue Syndrome, but the developers noticed that players with Chronic Fatigue Syndrome or other chronic illnesses felt supported by it due to the recognition for their problematic situation.

As Annaliese explained during the interview, some of the decisions were influenced by time constraints: they were given only five weeks to create it and therefore, had to settle for easier solutions. An example of this is not being able to incorporate Robin’s character in the room to perform these tasks, which the developers had originally planned. The expectation of Annaliese and her team was that it would help with relating to the protagonist more, but it was not possible in the small timeframe. Moreover, the decisions of keeping the game simple and short are partially due to having a limited amount of time. However, the developers expected that both of these decisions would be beneficial for the impact as well: it would not be too complex for players to understand the message and the risk of players losing interest would be reduced. The style and composition are examples of this. Annaliese stated in her interview that the house of Robin is only one room, as this would make the game clear. To strengthen that principle, the developers chose for a (long) weekend, instead of a workweek.

“Because the game is based in her home, we needed a reason for her to be there. So, a long weekend seemed the best solution.”

Additionally, the music was picked to create a certain mood, but they found it most important that it was not distracting the player from the message.

The tasks within the game that symbolize healthy choices (such as making food and taking a shower) were chosen based on them being general and necessary tasks that most have to people do. The tasks that represent relaxation (such as reading and spending time on social media) were chosen to represent the personality of Robin. To increase the difficulty of these choices, the developers have added the bird, as it makes the decision more difficult.

“Looking after yourself is one thing, but having responsibility of another life is another.”

The idea of keeping the same tasks for each day was considered simple and efficient by the developers, but had one other intention: giving the player the opportunity to ‘do better’ than the previous days.

Effectiveness was mentioned by Annaliese a few times for different decisions within the game, the most important one being the decisions around how much energy every task cost. This was done to avoid making the game too complicated, which could have led to a distracting the player from the message. This also applies to the decision to not include the option to rest in between tasks. Furthermore, the developers played with the idea of including a time element. However, according to Annaliese, the current mechanism of passing time through tasks motivates players to think more about the choices they have to make, instead of feeling rushed.

The developers decided to not give any instructions on the game, as they felt like it was self-explanatory. As Annaliese states, players figure out what to do fairly quick and thus, they thought it was unnecessary. Aside from not including information on the game itself, the developers chose not to incorporate information on Chronic Fatigue Syndrome. Their reasoning behind that was to avoid making it too much of an educational tool. Instead, they wanted to give players their space to experience the situation Robin is in.

Annaliese mentioned in the interview that *Robin* has been reviewed mostly positive. The developers feel like they have accomplished more than they originally expected: not only do they notice more awareness, but also an increase in understanding. Critical feedback that they received so far is about the game being too simple, too short or it not covering all the symptoms of Chronic Fatigue Syndrome. Some critical players even mentioned that the game is unfair, as they could not figure out how to win. Annaliese stated that that is the point of the game.

“There is no winning.”

The use of games for this purpose can increase empathy and according to Annaliese, that is due to the interactivity. To boost the engagement of the player, the developers chose for three different endings. She explained that this was either good, bad or balanced, but they all had their pros and cons, and are really not that different. This relates to the statement that there is no winning in *Robin*.

#### 4.4.2 Findings

The comparison between the answers given by game developer Annaliese, and the reviews of the amateur critics, has resulted in various differences. Within the reviewing themes, the proposed changes was the relevant theme for this sub-question.

##### *Information*

There was a difference in the thought-process of the developers, and the reviews of the amateur critics, on the information that is provided in the game. This can be divided in two types: explanation on the game mechanics and information on Chronic Fatigue Syndrome. The amateur critics stated that the lack of explanation on the game either led or could lead to confusion of the player.

##### Example quotes:

“Yeah, so, at some point I was in that screen and I did not know what to do.” – Q.

“Just like I said, that you are randomly placed in that room, that might be too.. big of a step. Maybe add more of an explanation.” – K.

This can be assigned to what has been discussed in the first sub-question, namely that participants with the achieving player type want to understand the gaming mechanism thoroughly and how to get the best outcome. Annaliese stated in her interview that it is a common response from players, as these people focus on the achievement, instead of the message.

The lack of information on Chronic Fatigue Syndrome was mentioned to be a problem, specifically for participants who were not familiar with this illness or any other type of chronic illness. They missed explanation on why things are tiring to people with Chronic Fatigue Syndrome.

##### Example quote:

“Well, yeah, that you do- that she is really exhausted from that. It is just throwing some seeds in a cup, but yeah, that type of thing. Why that is tiring.” – B.

An explanation for this difference is the target group. The amateur critics expected this game to be for people without a chronic illness, in which they also included people who do have no experience with the subject at all. As it is directed at people who have a loved one with chronic fatigue, players are supposed to enter with a certain level of experience to understand what is being shown. Therefore, it can be concluded that the amateur critics would add this to give this type of player more information on something they are not familiar with at all.

## Tasks

Six amateur critics would have changed the tasks. Some of them mentioned that they would have added more tasks, while others stated that they would have liked to have different tasks per day. Examples given by the amateur critics were additional household tasks, an element of work or the inclusion of a social life. The participants who mentioned either of these, expressed that they felt like they did not get the full picture of what living with chronic fatigue is like.

### Example quotes:

“But I think that for some people it needs more [chores]. For example, vacuum cleaning, that is very heavy.” – SA.

“But yeah, if you only see this, you do not really get a good perspective of what it entails, because sometimes you have to do obligatory things. And I am wondering how- how that works.” – B.

The wish for other tasks could be caused by players needing to identify with the protagonist of the game to feel a greater impact. As the participants experience more in their daily lives, they might have felt like adding more diverse tasks, a work aspect or a social life in the game to feel more like they experienced their own life, but with Robin’s problem.

An additional aspect that was criticized by two amateur critics was that time was not incorporated in the game, but that the time per day was dependent of how many tasks *Robin* could do. This was considered to be too unrealistic.

### Example quote:

“But I think that if you did two things.. it is already dark. And then the bed is the only option. That is not the case in daily life. It does cost more energy, but if you, for example, do two things in the morning, it is not already dark, and you go to bed.” – M.

The developers focused on the gameplay by not rushing the players with a time element, but these amateur critics preferred to have a more realistic approach. Again, this can be related to wanting to identify with the character.

## Energy

Three amateur critics stated that they would have included a resting point within the game. Two of them mentioned the choice to lay on the couch, while one specifically recommended the addition of the option to take a nap. The three participants expressed that it is something that they or their loved one with a chronic illness do: taking naps or at least having resting points throughout the day.

### Example quotes:

“When she gets out of bed at eight o’clock and then she usually gets out of bed at ten, but.. (...) then she is already tired at four o’clock. Then she needs to take a nap.” – P.

“A lay on the couch part because it does say browse internet. But that is a little more active than laying on the couch and staring at a screen. (...) It relaxes me, a switch between doing something and sleeping.” – MA.

This shows that their recommendation to add an option to rest is presumably based on their own experiences, meaning that this example is another case of the player’s own experience and their search for something to identify with. Thus, the decision from the developers was based on effectiveness, while the players based their judgment on their desire for identification.

Furthermore, a few participants stated that they did not find the equal amount of energy to be fitting for every task. These amateur critics found this to be out of proportion and, as a result, did not entirely recognize the spoon theory in the game because of it.

Example quotes:

“Because now it looks like watering plants and feeding the bird, that that costs the same amount of energy as making food or taking a shower or something. (...) So, that, yeah, to me, that is not in proportion.” – S.

“Partially, because you really cannot see how much something costs. Because the spoon theory does for example.. this costs four spoons or something.” – S.

The reason why these amateur critics were critical about the energy is presumably due to the lack of realism, which causes them to be able to identify with the character less. In this case, the developers based their decision on effectiveness, while the amateur critics reviewed it in regard of their identity.

#### 4.4.3 Conclusion

There were various decisions made by the developers that the amateur critics reviewed positively, as they understood the intention of these decisions. This is the reason for the communalities. However, some of the decisions made by the developers resulted in critique. What the differences show, is what the amateur critics missed in their game. This finding resulted in the important conclusion of this sub-question, namely that the amateur critics are especially looking for ways to identify with Robin’s character. No matter the level of experience with chronic illness, the participants had suggestions that they are familiar with in their own lives or that of their loved one. As the amateur critics expressed, their changes and additions would make the impact greater than without it. This means they expect that if there are more aspects that they recognize from their daily lives, the game would be more influential.

## 5. Conclusion

This master's thesis sought to find out how the gaming background and experience with chronic illness influence amateur critics in how they review the impact of the persuasive game *Robin*. To formulate an answer to the main question, there were three sub-questions to analyse different aspects of this question. These have resulted in a conclusion for the main research question, which will be discussed in this chapter. Afterwards, the research will be critically discussed. Lastly, the limitations of the research and recommendations for future research will be described.

### 5.1 Main research question

The three conclusions to the sub-questions have resulted in an answer to the main research question: How do amateur critics' gaming background and their experiences with chronic illness influence how they review the impact of the persuasive game *Robin*? The amateur critics have discussed numerous aspects of the game, which demonstrated what each of them found essential in the game. Hereby, it became clear that most judgments were made in terms of impact: instead of focusing on what they did and did not like, their reviews were primarily focused on what parts were helpful in conveying the message and what changes would improve this impact.

Experience with a chronic illness was found to be influential on amateur critics' review of *Robin*. Various results demonstrated that having any level of experience (either direct, indirect or past) had a positive consequence for their judgment, while lacking this experience resulted in the opposite. Furthermore, the analysis of the experience with chronic illness, and the differences between amateur critics and the developer had a similar outcome, namely that player characteristics are of importance in their judgments: their reviews were very much based on their own perspective. This includes that their prior knowledge and the relevancy of the subject that was being discussed in *Robin* influenced them greatly. The amateur critics would have liked the game to resemble their own lives more.

The amateur critics' accumulated experience with gaming had no influence on how they reviewed *Robin*. After placing the participants in different categories, that described particular parts of their previously acquired gaming experience, and comparing their reviews, there was only one pattern visible. However, the amateur critics stated themselves that the lack of game instructions were not considered an influence on the impact that the message has; it was considered to be pure preference. An explanation for the lack of influence of amateur critics' accumulated experience with gaming could be that they did not let their experience with entertainment games lead their judgment, as they were aware that this game had a different purpose than what they are used to.

## 5.2 Theoretical implications

In this thesis, it has become clear that for the success of persuasive games, the characteristics of the players are essential to consider. The critiques of Sicart (2011) on procedural rhetoric are therefore strengthened, as the interpretation of the message of persuasive games are influenced by the (perspective of) players. In this case, the experience with a chronic illness has a powerful effect on the reviews of the amateur critics. Hereby, Petty and Cacioppo's (1986) claim on the relevance of players' involvement in the subject has become very apparent: prior knowledge and personal relevance of the participants on chronic illness were one of the most important factors in their judgments of *Robin*. For the amateur critics with a chronic illness, this depiction of chronic fatigue is something they experience themselves, making the presence of prior knowledge and personal relevance logical. The participants with indirect or past experience with chronic illness have prior knowledge on the subject, as they acquired through their loved one or a previous experience. Moreover, there is personal relevance for these amateur critics, as they were either involved with chronic illness themselves or still are due to having someone close to them in a similar situation as Robin. Amateur critics with these three levels of experience (direct, indirect and past) had an overall positive review. To the two participants without any experience with a chronic illness, there was no personal relevance in the game and they lacked prior knowledge, resulting in negative reviews. Thus, these two factors are noticeably influential on the judgments of the amateur critics.

The reviews were also influenced by the experience of chronic illness, due to the concept of identification. For the amateur critics with either direct, indirect or past experience, the ability to place themselves in the position of the character was easier. Due to being more capable of putting themselves in Robin's place, these amateur critics were able to enjoy the game more than the two with no experience at all. Their enjoyment was visible in their positive view on the game, which was the opposite for the two amateur critics without experience with a chronic illness. This conclusion confirms the statements by Hefner et al. (2007) and Van Looy et al. (2012), namely that identification is a determinant of the enjoyment of the player. In addition, in terms of message elaboration, identification was of importance too: the two amateur critics who were least able to identify with Robin due to their lack of experience, were the only participants who expressed that they would not think about *Robin* and the message of the game for long. This confirms that observation by Khaled et al. (2007), that message elaboration is depending on the level of identification of the player. Furthermore, through the answers of the amateur critics considering their proposed changes, the value of identification has become evident as well. The changes they would have made were either to increase realism or were adjustments that would make the game resemble their own lives more. This indicates that the amateur critics were unable to identify with Robin on certain levels, something that they tried to compensate with their ideas. As the amateur critics stated, they expected their changes to increase the impact of the game, which can be related to Jacob's (2017) conclusion on identification: it



intensifies the persuasion, as the bond with the game's protagonist is strengthened. A further conclusion of the results in term of identification is that the discussion around personalization in persuasive games, as argued by Orji and colleagues (2013) and Bush and colleagues (2015), is a valid one. Examples of personalization could be changing the name of a character and customizing avatars, which could give players a sense of either wishful or similarity identification. By increasing the ability to identify with various aspects in the game, the impact of a persuasive game could be strengthened. As Orji et al. (2013) state, players are not a homogenic group and therefore, should not be approached as one. To resolve this, personalization could be a helpful tool to adjust the game to the different players, which could increase identification in persuasive games.

### 5.3 Limitations and future research

There are some limitations in this thesis that should be addressed. Firstly, while the amateur critics played *Robin*, the researcher was present. This was done to make sure that the amateur critics would have the game freshly in their memory, as they were directly questioned after finishing. Additionally, it was to be available to help if the amateur critics were unable to continue due to problems with the language or the game itself. However, as Jacobs (2017) stated, play session characteristics are an influence on the experience of the game, and the presence of others can affect players' concentration. Although the amateur critics did not mention any problems with the presence of the researcher, it might have affected their focus on *Robin* subconsciously. Furthermore, there was no specific target group chosen in terms of amateur critics' accumulated experience with gaming. As a result, the majority of the amateur critics were not familiar with serious games and none of them had heard of persuasive games before. In line of what Mannes et al. (2014) stated, namely that picking qualified people could result in more useful assessments, it might have been better to pick participants who are familiar with the genre.

As previously discussed in this chapter, personalization might be a feature that has the potential to increase the impact of persuasive games, due to the increase in identification. Therefore, one suggestion for future research is to focus on what types of personalization are most successful for games like these. This could be done by implementing different personalization features to one game and compare the judgments of players. Furthermore, this thesis discussed four different levels of experience in terms of chronic illness. However, instead of distinguishing between participants who have a diagnosis of a chronic illness and participants who do not, it could be interesting for future research to create equal groups for each level of experiences. Thus, an equal number of participants who have direct experience, indirect experience, past experience and no experience with chronic illness. An idea is to discover patterns in judgments with a quantitative method instead, to see clearer relations between the judgments in each level of experience.

This research was meant to take a step in a different direction from what previous research on persuasive games has done so far: instead of analysing the players themselves, their reviews were used as information to find out more about how persuasive games are received by the players. The positive response of the majority of the participants shows that this type of games has the potential to make a change. In this case, the developers of *Robin* wanted to create awareness for the struggle of people with a chronic illness. There is a metaphor in their game that can be used as an example for why persuasive games with subjects like these are important. According to developer Annaliese, the name of the character and of the bird were the same with a specific reason. It is aimed at the consequences of Robin's disease: the bird is stuck in a cage and the protagonist feels similar due to the limitations she experiences as a result of her illness. This additional message within the game explains why further research for games like *Robin* is necessary: increasing knowledge on the impact of these tools might result in increasing their power to educate players and reinforce behaviour. In this case, it can help decrease misunderstanding for people with a chronic illness. It will not set them free entirely, but at least the door to their cage will be opened.

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## Appendix A: Message for gathering chronically ill participants

This text was posted on the Onzichtbaar Ziek Facebook page on March 8:

Hallo allemaal!

Ik ben bezig met mijn master Media en Cultuur aan de Erasmus Universiteit en ga mijn scriptie doen over een spel dat gaat over (vermoeidheid rondom) chronische ziekten. Ik ben op zoek naar personen met een chronische ziekte die geïnterviewd zouden willen worden. Hierbij is het belangrijk dat deze personen in het dagelijks leven problemen ondervinden door de vermoeidheid die hun ziekte met zich meebrengt. Het idee is om de geïnterviewden het spel te laten spelen en hun mening te vragen over de eigenschappen van het spel. Van tevoren wil ik wat vragen stellen over de eigen ervaring met het chronisch ziekzijn.

Het interview duurt ongeveer 45 à 60 minuten en het vindt plaats op de plek die de persoon zelf het fijnst vindt om geïnterviewd te worden. Het is wel belangrijk dat er een computer aanwezig is. Het geluid wordt opgenomen, maar de personen zijn zullen anoniem blijven.

Mocht je interesse hebben of meer informatie willen, stuur mij dan gerust een bericht! Mijn e-mailadres is [kelly\\_vr@outlook.com](mailto:kelly_vr@outlook.com).

Groet,

Kelly Rijsterborgh

## Appendix B: Message for gathering participants without chronic illness

This text was posted on the researchers' own Facebook page on March 6:

Ik ben bezig met mijn master Media en Cultuur aan de Erasmus Universiteit en ga mijn scriptie doen over een spel dat gaat over (vermoeidheid rondom) chronische ziekten. Ik ben op zoek naar personen zonder een chronische ziekte die geïnterviewd zouden willen worden. Het idee is om de geïnterviewden het spel te laten spelen en hun mening te vragen over de eigenschappen van het spel. Van tevoren wil ik wat vragen stellen over de eigen ervaring met chronische ziekten (mocht je iemand in je omgeving hebben die zelf chronisch ziek is).

Het interview duurt ongeveer 45 à 60 minuten en het vindt plaats op de plek die de persoon zelf het fijnst vindt om geïnterviewd te worden. Het is wel belangrijk dat er een computer aanwezig is. Het geluid wordt opgenomen, maar de personen zijn zullen anoniem blijven.

Daarnaast moeten het mensen zijn die ik niet ken, dus graag taggen als je iemand kent die interesse heeft! Diegene kan diegene mij een bericht sturen via Facebook of via mijn e-mail: [kelly\\_vr@outlook.com](mailto:kelly_vr@outlook.com).

## Appendix C: Topic list (final version)

Topics	Categorieën	Voorbeeldvragen
Introductie		<ul style="list-style-type: none"> <li>- Studeer je? Zo ja, wat voor studie doe je?</li> <li>- Werk je? Zo ja, wat voor werk doe je?</li> <li>- Woon je nog thuis of op jezelf?</li> <li>- Wat voor hobby's en interesses heb je?</li> </ul>
Chronische ziekte	Ervaring mee (direct)	<ul style="list-style-type: none"> <li>- Wat voor chronische aandoening heb je?</li> <li>- Welke symptomen heb je daarvan?</li> <li>- Heb je ook last van chronische vermoeidheid?</li> <li>- Hoe ga je om met deze symptomen?</li> <li>- Loop jij tegen onbegrip aan?</li> </ul>
	Ervaring mee (indirect)	<ul style="list-style-type: none"> <li>- Wat voor chronische aandoening heeft deze persoon?</li> <li>- Welke symptomen zijn zichtbaar voor jou?</li> <li>- Hebben zij ook last van chronische vermoeidheid?</li> <li>- Hoe help jij diegene met hun chronische aandoening?</li> </ul>

		<ul style="list-style-type: none"> <li>- Loopt diegene tegen onbegrip aan voor zover je weet?</li> </ul>
	Geen ervaring mee	<ul style="list-style-type: none"> <li>- Wat denk jij dat chronische vermoeidheid inhoudt?</li> <li>- Hoe zie jij het omgaan met chronische vermoeidheid voor je?</li> <li>- Hoe denk je dat jij ermee om zou gaan?</li> <li>- Denk je dat er veel onbegrip is voor dit soort klachten?</li> </ul>
Eerdere ervaring met games		<ul style="list-style-type: none"> <li>- Hoe vaak speel je games?</li> <li>- Op wat voor apparaat speel je games (meestal)?</li> <li>- Wat is je favoriete genre? / Wat doe je het liefst in games?</li> <li>- Wat is (momenteel of in het algemeen) je favoriete spel?</li> </ul>
Eigenschappen van het spel	Signs (sensorieel)	<ul style="list-style-type: none"> <li>- Wat vind je van het taalgebruik in het spel?</li> <li>- Hoe vind je de stijl die in het spel wordt gebruikt?</li> <li>- Wat is je mening over het gebruik van geluid in het spel?</li> </ul>
	Narratief	<ul style="list-style-type: none"> <li>- Kon je je inleven in het karakter?</li> </ul>

		<ul style="list-style-type: none"> <li>- Wat vond je van het einde dat je in het spel kreeg?</li> </ul>
	Procedurele overtuiging	<ul style="list-style-type: none"> <li>- Wat vind je van de regels van het spel?</li> <li>- Vond je dat er opties mistte of niet klopten?</li> <li>- Vond je het frustrerend dat je zo weinig kon doen?</li> <li>- Denk je dat de frustratie helpt bij het begrijpen van de worsteling met chronische vermoeidheid?</li> </ul>
Boodschap van het spel		<ul style="list-style-type: none"> <li>- Wat denk je dat de boodschap is die de spelontwikkelaars willen uitdragen?</li> <li>- Heb je ooit gehoord van de spoon theory?</li> <li>- Vond je (of denk je) dat chronische vermoeidheid op realistische wijze is uitgebeeld?</li> <li>- Wat denk je dat het doel van het spel is?</li> <li>- Vond je de boodschap overtuigend dankzij dit spel?</li> <li>- Denk je dat de boodschap ook blijft</li> </ul>



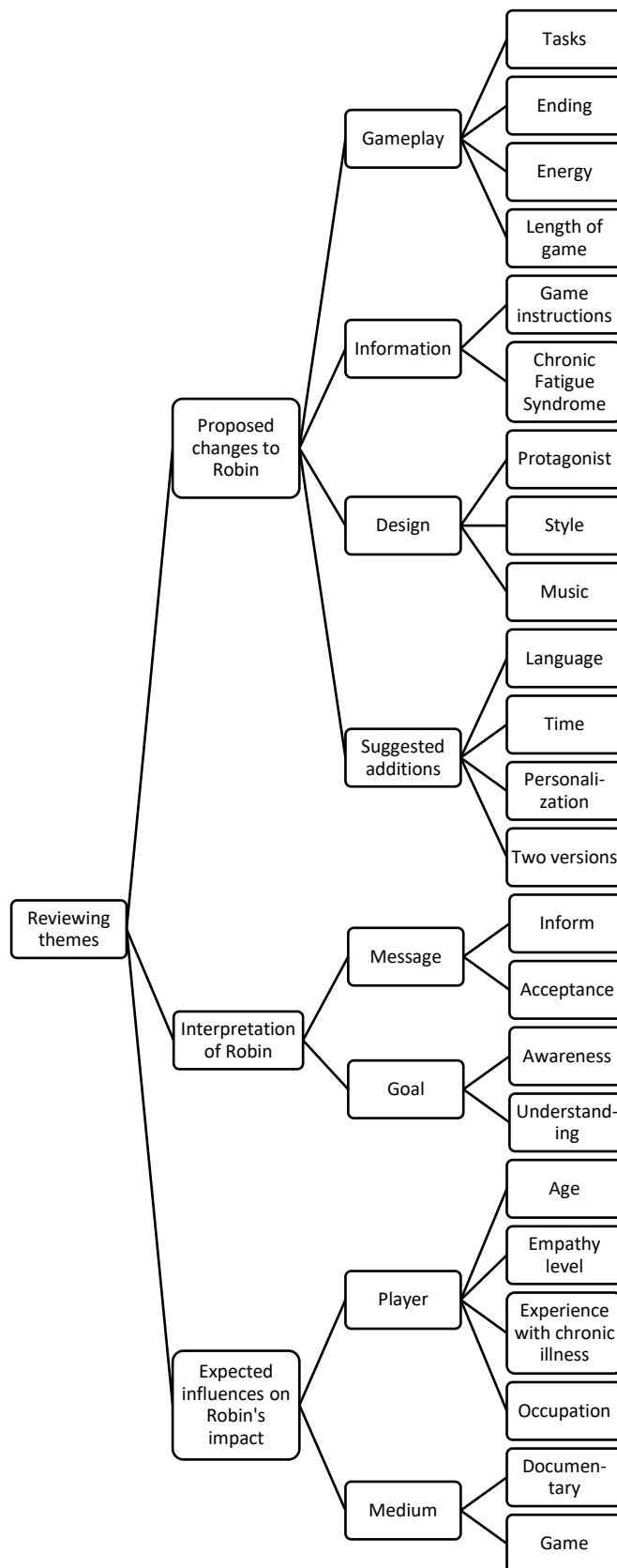
		hangen of dat dit van korte duur is?
Laatste opmerkingen		<ul style="list-style-type: none"> <li>- Is er iets wat je zou veranderen aan het spel?</li> <li>- Is het spel geschikt voor alle doelgroepen volgens jou?</li> <li>- Denk je dat dit soort spellen overtuigender zijn dan andere typen media (zoals documentaires)?</li> <li>- Is er nog iets wat je kwijt zou willen over het spel of de boodschap?</li> </ul>

## Appendix D: Questions for game developer

<ul style="list-style-type: none"><li>- How did you and your team come up with Robin?</li><li>- How well was Robin received so far?</li><li>- What critiques or feedback have you had so far?</li><li>- How did you come up with the name Robin?</li></ul>
<ul style="list-style-type: none"><li>- Is there anything you specifically focused on how everything was described/explained?</li><li>- How did you decide on the look of the game? (f.e. the drawings, angles and room organisation)</li><li>- Was the game purposely kept simple? If so, why?</li><li>- What was the idea behind not putting Robin herself in the room?</li><li>- Why was there no music during the gameplay itself?</li><li>- Why did you decide for that specific music in the starting screen and the introduction?</li></ul>
<ul style="list-style-type: none"><li>- What was the idea behind creating three different endings?</li><li>- How did you come up with the endings?</li><li>- How do players get certain endings?</li><li>- What is the mechanism behind having less energy on certain day?</li><li>- Is there a reason for not adding a resting point in the game, like being able to sleep between tasks?</li><li>- Why did you not specifically mention chronic fatigue syndrome in the introduction?</li></ul>
<ul style="list-style-type: none"><li>- Why was there no explanation on what was expected from the player in the first day?</li><li>- Why did you decide for these specific tasks?</li><li>- Why did you keep the same tasks for each day?</li><li>- Is there a reason for adding a pet in the game, on top of the other tasks?</li><li>- Do different tasks use up different amounts of energy? Why (not)?</li><li>- How did you decide on doing a three-day weekend, instead of a work week or a combination of the two?</li><li>- Was there a reason for not including a clock or something similar to show what time it was?</li><li>- Why was there no extra information on chronic fatigue syndrome in the game itself? (With pop-ups for example)</li></ul>

- What is the message of the game?
  - Who is the target audience? Why?
  - Was the game meant to be played for all ages?
  - What do you think are reasons for players to (not) understand the message?
  - What would you like to accomplish with Robin?
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- Do you expect the game to create more understanding than other types of media?  
Why (not)?
  - Did you intentionally keep the game short? If so, why?
  - Is there any information you would like to add?

## Appendix E: Code tree reviewing themes



## Appendix F: Code tree contextual themes

