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"True gamer" culture on Twitch and its effect on female streamers

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Abstract

The aim of this thesis has been to explore how messages in Twitch chats are affected by the gender of the streamer and the type of game that they are playing. Using a quantitative method, messages from twelve different streamers, male and female were downloaded and categorised depending on their content. The analysis used theories on game categorisation in order to understand the complexity of the games that the broadcasters were playing, and in combination with this knowledge and the results of the data collection conclusions could be drawn between the complexity of a game and the amount of comments regarding gameplay or appearance in female streams.

The analysis used feminist theories in order to understand the underlying reasons for the observed exclusion of women in both the gaming world in general, and in the Twitch streams. This analysis showed tendencies in the Twitch audience to adapt a male gaze as they were more prone to comment on passive aspects of the female streamers. The thesis concluded that the "true gamer" culture seems to be affecting female streamer son Twitch in several ways, and that the exclusion of female streamers takes different forms depending on the game they are playing.

Keywords: Twitch, female streamers, digital games, gaming culture, audience behaviour

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1 Introduction

Digital games has for a long time been viewed as something belonging to male culture, or as part of the childhood for many boys. Women have often been encounters of resistance when trying to enter the gaming world, because of presumptions that they do not understand it or that they are not good at playing the games. Nowadays figures (Entertainment Software Association, 2017) are showing that females make up approximately half of the players of digital games. However their preferences in games often differ from the male players, which has lead to the expression "true gamer" being used as a description for gamers who play more advanced and often competitive games. These are the games that are largest within the male population of gamers (Paaßen et. al. 2017).

On the gaming devoted streaming platform Twitch the term "fake gamer" has been used towards female players of more complex games, often with the argument that they are focusing too much attention on their looks rather than the game, and thus cannot be considered "true gamers" even though they are playing the same complex games as many male streamers. There have been cases when female streamers on Twitch has used videos of other playing games instead of playing themselves in which cases the term "fake gamer" could perhaps be justified, but in many cases female streamers have been called "fake" even though their attention in the stream has directed towards the game.

The debate of "true" versus "fake gamers" has been largely covered in social forums such as Reddit, 4chan and Twitch, which makes it difficult to get a clear view of how the debate has affected female gamers. The aim of this thesis has been to gain a better understanding of how female streamers are treated on Twitch and how the "true gamer" culture manifests itself in the Twitch chat. A quantitative method was used, where chat messages from the streams of male and female streamers on Twitch were downloaded and categorised by their content.

The analysis of the data collection used theories in game categorisation in order to distinguish what properties in games prompted certain behaviours, as well as classic feminist theories in combination with gaming related ones in order to understand the gender premises in the gaming world that may have affected the outcome of the results.

1.1 Problem and research questions

As stated before, marginalization and representation of females in the world of digital games has been, and still is a major problem within the field. Since the rise of games studies as a separate field, this is also a commonly researched subject. Still, the gaming community seems to be reluctant to change and today the anonymity that online forums provide makes it easy for some members of the community to continue the exclusion of women in the gaming world. The Gamergate controversy is one clear example of the toxic environment for women within the gaming industry, and recently the "fake" versus "true gamer" debate on Twitch has led to harassment for many female streamers (Grayson, 2017). The Twitch platform and the live streaming service it provides has sparked an interest amongst researchers and studies of audiences and preferences have been conducted as the platform has grown. The recent "fake streamer" debate has however mostly been covered by members of the community, in live streams or videos, or in social forums such as Reddit. It is therefore quite hard to understand how the debate really has been affecting the community, and especially the women within it. As noted by Fox & Tang (2017) and Paaßen et. al. (2017) it is common amongst female gamers to not speak out against online harassment in gaming environment. Considering this, the views on "fake" female streamers articulated on forums and in videos would consist mostly of male members of the gaming community.

Of course, there are a lot of problems regarding representation and marginalization within the gaming world that are important to consider. I have chosen here to focus on female streamers and the "true gamer" culture that exists in some parts of the community. It seems that there is a lack of research around the roll of the Twitch audience when it comes to harassment of women in gaming. My research questions are as following:

1. How does the Twitch audience comment upon female respectively male streamers on Twitch?
2. How do the comments in Twitch chats differ in streams with various types of games?
3. How is the "true gamer" culture targeting female streamers on Twitch?

2 Background

The gaming world has recently seen a growing interest amongst the community in the live streaming of digital games. From around 2010 and forward commented gaming content in the form of videos (sometimes called let's plays) has become a massive part of the gaming world and industry. Many of the biggest names on Youtube today started out by posting gaming content where they played games and provided commentary for the content. Many may know the biggest star of them all: Pewdiepie, currently with approximately 62 million subscribers on his Youtube channel, the largest amount on all of Youtube. Although the Youtube platform has been and still is a gigantic platform for gaming content, the Twitch platform has recently grown in size and attracted a large following of both content makers and viewers. Where the Youtube platform has been a place to post pre-recorded and edited videos, the Twitch platform has focused on providing a space for people to live stream their content.

2.1 Twitch

Twitch launched in 2011 and has since focused on live streaming digital game content, both from individual streamers and from major e-sports events and competitions in games such as *Counter-Strike, Hearthstone* and *Dota.* It is only recently (in 2017) that Twitch has added an "In-real-life" or "IRL" section on the platform, providing a space for people to stream content not necessarily related to gaming.

Much like on Youtube, the Twitch platform lets users with an account publish video content on their channel, provided they follow the rules and guidelines. On Twitch the users can live stream their choice of games and in addition choose to let the recorded stream be available for people to watch after the live stream is finished. The streams are available for anyone to watch, even if they do not have a Twitch account. People with an account can choose to comment in the live-updated chat, as well as subscribe to channels they like and economically sponsor the streamer.

2.2 Gaming culture and the marginalization of women

The world of digital games has long been a world dominated by men and male values. Carr (2006) states that "As it currently stands the majority of computer games are produced by a primarily male industry that tends to assume a male audience". Although this statement is now twelve years old there is still to this date a large underrepresentation of women working

within the gaming industry. Figures from The Entertainment Software Association (2017) shows that women are playing digital games in almost the same numbers as men, although the number of women working in the industry is according to Statista (2017) considerably lower. Despite that women are now making out approximately half of the players of digital games, issues of sexism and representation are still very common within the gaming community, and it seems difficult for marginalized groups to speak out about these issues in fear of getting further targeted for harassment (Fox & Tang, 2017). While other media industries are acknowledging and discussing female harassment through the recent #metoo movement, the digital games has not yet had its #metoo moment (MacDonald, 2018). Indeed, Shaw (2014) writes that "In many ways, digital games seem to be the least progressive form of media representation, despite being one of the newest mediated forms".

The representation of women in digital games has been one of the more researched subjects in game studies focusing on gender aspects (Carr, 2006), (Malkowski & Russworm, 2017). Historically digital games has the majority of the time featured white, male protagonists as the playable characters, and in many cases females has been represented as objectives for the player to rescue or help as exemplified in the video series *Tropes versus Women in Video Games* by media critic Anita Sarkeesian (2013). And although the gaming industry is now becoming more aware of the issue of gender representation in games (Malkowski & Russworm, 2017) there still seems to linger a presumption within the gaming culture that the average "gamer" is a white, heterosexual male, and therefore a larger amount of game content targeted to this audience (Chess et. al., 2017).

In recent years the gaming world has seen many controversies regarding sexist behaviour towards females and marginalized groups, the largest perhaps being the so called "gamergate" controversy which started as a critique of game developer Zoe Quinns personal relationships and developed under the hashtag #Gamergate to criticize and harass several women related to the gaming world and industry. One of the most recent debates in the gaming community relating to female gamers seem to be the one regarding so called "fake streamers" or "booby streamers" on the Twitch platform.

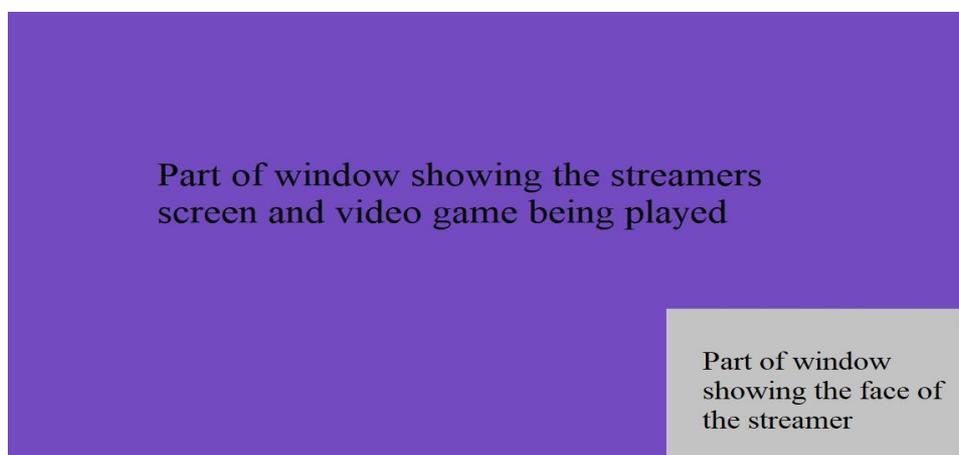## 2.3   The "fake" gamers debate and elitist game culture

Much like the Gamergate controversy the debate on "fake streamers" or "booby streamers" has no real leader or spokesperson but has been a collective discussion within the gaming community on forums such as Reddit, 4chan and, of course, Twitch. The terms "fake

streamers" and "booby streamers" started to appear a few years ago in connection to female streamers of digital games on Twitch wearing what some called "too revealing clothing" that showed cleavage while they were streaming on their channel. The issue some had with such streamers where that they were "stealing views" from more deserving streamers by using their sex appeal rather than their status as gamers to attract viewers (Grayson, 2017). The debate took off especially in October 2017 when a famous Twitch streamer used words such as "sluts" to describe these kinds of streamers on (Grayson, 2017). While parts of the gaming community agreed and backed this streamer others where fast to note that people watching streams merely for the sex appeal of the streamer would not be in the same audience group as people who watches streams only for the game content (Grayson, 2017).

With the recent update on Twitch featuring an "in-real-life" or "IRL" section where people have the opportunity to stream non-game related content, the debate has been fuelled on with some people saying that this makes it possible for "booby streamers" to stream their content there without the need of playing digital games simultaneously, and that this section of Twitch has damaged the platform that many viewed as a place solemnly for gaming.

In the beginning of this debate the term "fake streamer" referred perhaps mainly to streamers not actually playing games but only idling in menus or in some cases showing videos of other playing games on their stream. However the term quickly came to include streamers who actually played digital games but where the window on the stream showing the gameplay was smaller than that showing the streamer. To clarify, Twitch streamers often use a face camera simultaneously as streaming their gameplay as a means of showing their reaction to the game and to communicate better with the audience. Below is an example of how a Twitch stream can look.

Figure 1. Example of how a Twitch stream can look.

Part of window showing the streamers screen and video game being played

Part of window showing the face of the streamer

The term "fake streamer" has been used liberally by the gaming community in forums such as Reddit and it is sometimes hard to understand where the line is drawn between "fake" and "true" gamers or streamers. Some famous female streamers on Twitch has also noted that they get sexist comments on their stream and get called for fake streamer no matter how revealing or non-revealing clothes they wear (Grayson, 2017).

When discussing the now almost equalized number of female versus male gamers there is often a notion from parts of the gaming community that although the numbers may be equal, there is a difference in what kind of games women and men play, and females are said to be playing more causal games, mainly on mobile platforms (Paaßen et al., 2017). The argument is often that the games played by a male majority are more difficult or skill-based and playing these would make you more of a "true gamer" (Paaßen et al., 2017). It is however often the case that the female streamers on Twitch that get called "fake gamers" are in fact playing these more skill-based games. The term "fake" then, it seems, is not referring to the fact that these females are playing games that are not part of a "true gamer" culture, but that they are not focussing enough attention on the game itself.

2.4   Gaming as a medium

Despite being a relative new medium, digital games have quickly become a large industry and subject of studies. The young age of the medium becomes pronounced when looking at the field of computer game studies, a field that has until quite recently struggled to claim its own space in the academic world. The study of games as a separate field from literature or cinema was argued for by Aarseth (2001) who claimed it important to distinguish games from other forms of media, because of the interactive element they possess. He states that "Games are both object and process, they can't be read as texts or listened to as music, they need to be played" (Aarseth, 2001). The study of games as their own form of media and with focus on the rules and mechanics of the games rather than their narrative content came to be associated with the term *ludology*. Murray (2005) describes the term as studies that focuses "on the rules of the games, not on the representation or mimetic elements which are only incidental" (2005), and warns that such an approach is missing important aspects of the game medium. In present time it seems however that the field of game studies has agreed on treating both ludological and narrative elements as important parts of the process of understanding games.

Although the debate between ludology versus narratology within the field of computer game studies may be resolved, the history of it is interesting in relation to the "true gamer" debate. Aarseths (2001) view of computer games as a better or richer form of media than other ones is something that is sometimes reflected in the views of members of game communities on social forums as Reddit. Aarseth (2001) states that "Computer games are perhaps the richest cultural genre we have yet seen, and this challenges our search for a suitable methodological approach". It seems that parts of the gaming world has, and still is viewing the digital game as a medium that is somewhat more interesting than other forms of media.

3 Theoretical framework

Because of the amount of different users expressing their thoughts and opinions in a Twitch chat, a fair analyze of the audiences behaviour needs to include data from as many different users as possible. Such an analyse is made possible by the use of a quantitative approach in which chat messages are collected and analysed by their content. Hodkinson (2017) writes that "content analysts are concerned with the identification of broad empirical trends across a range of texts" and that "through the use of rigorous and systematic *quantitative* methodology, they can produce findings that are empirically verifiable". Considering each chat messages as one text written by a separate author, a content analysis will work as a necessary tool to distinguish broader trends amongst all the different users. By the use of a content analysis of the messages my hope is to provide data that is verifiable. The results of the collected data can then be theorized from a feminist viewpoint as well as a gaming oriented one in order to answer the research questions.

A content analysis requires the use of a coding system in which to code the different data (Hodkinson, 2017), in this case the chat messages. In this study, the coding system was constructed based on the aim of discovering differences in comments of the streams by men compared with women. The focus was on discovering differences that could be tied to the debate on "true gamers", hence it was constructed with categories that focused on the discussions of gameplay, skill, appearance and personality, although other categories such as "general discussion" or "emotes" were also added as comments like these constituted a large part of the messages.

3.1 Feminist theory

Although feminist theory today is largely incorporated in many different fields it is still a widely debated subject in society and in many cases there seems to exist an uncertainty as to what it really stands for. Hooks (1984) states that "A central problem within feminist discourse has been our inability to either arrive at a consensus of opinion about what feminism is or accept definitions(s) that could serve as points of unification". Some view feminism as a radical movement with goals to make women superior over men, and with the social media landscape of today it is easy to those willing to build a picture of feminism as such a movement. With information travelling faster than ever before, a doubtful or radical statement from one woman who claims to be a feminist can suddenly come to represent the

movement as a whole. This affects both men and women and many women are distancing themselves from calling themselves feminist because of either uncertainty about the term or of fear that they would be seen as to radical or political (Hooks, 1984). The feminist movement has also struggled with the debate of being a "white women's rights effort", and has got the stamp of being racist towards black women. In an attempt to clarify the term "feminism" Hooks (1984) describes it as such:

> Feminism is the struggle to end sexist oppression. Its aim is not to benefit solely any specific group of women, any particular race or class of women. It does not privilege women over men.

> Hooks, 1984

In the world of digital games the term feminism can in many cases be the cause of controversy, if being a woman in the gaming world is difficult, being a feminist as well is even harder. During the gamergate conflict feminist media critic Anita Sarkeesian was especially exposed for sexual harassment including rape threats and sexual images, because of her Youtube video series *Tropes versus Women in Video Games* (2013) that examined gender roles in digital games.

Despite being a relative modern and young media form, the gaming world in many cases seems to want to exclude feminists and feminist theory from their community, and if women are to exist within this sphere they must try to fit in into the male gamer norm, but in many cases there is a double standard occurring here. De Beauvoir (2011) writes "Misogynists have often reproached intellectual women for "letting themselves go"; but they also preach to them: if you want to be our equals, stop wearing makeup and polishing your nails". Some parts of the gaming community are telling the female gamers to stop being "fake" and putting so much effort into their looks, to focus on the games instead, while at the same time female streamers and gamers are constantly objects of sexualizing and harassment telling them to do exactly the opposite, and female streamers reports on receiving sexual harassment in chat regardless of the choice of clothes (Grayson, 2017). De Beauvoir writes:

> She refuses to confine herself to her role as female because she does not want to mutilate herself; but it would also be a mutilation to

repudiate her sex. Man is a sexed human being; woman is a complete individual, and equal to the male, only if she too is a sexed human being. Renouncing her femininity means renouncing part of her humanity.

De Beavoir, 2011

In an interview with gaming magazine Kotaku (2017) one female streamer explains that she "used to wear big T-shirts and hoodies because she felt ashamed, but it never made a difference" and that comments about her body kept coming anyway. She goes on to ask "What am I supposed to do? Take my boobs off my body before I stream?"(Grayson, 2017).

3.1.1 The male gaze

"The male gaze" is an expression coined by film critic Laura Mulvey (1975). It refers to the perspective used in film and visual media that often assume a male viewer. This male gaze is often displaying women as objects to be looked at rather than characters who act. Mulvey (1975) writes that:

> In a world ordered by sexual imbalance, pleasure in looking has been split between active/male and passive/female. The determining male gaze projects its phantasy on to the female form which is styled accordingly. In their traditional exhibitionist role women are simultaneously looked at and displayed, with their appearance coded for strong visual and erotic impact so that they can be said to connote to-be-looked-at-ness.

Mulvey, 1975

She goes on to explain that women often are the "bearer of meaning, not maker of meaning", and that women portrayed in visual media are used as a mean of making the male characters act because of the way they feel about the women. "In herself the woman has not the slightest importance" (Mulvey, 1975).

The concept of "the male gaze" is interesting in research related to the game world as it corresponds well with the notions of it being a male world. Using the concept of "the male "gaze" could provide insight in why women are treated different in the game world and how the exclusion of female gamers has been affected by the portrayal of female video game characters, often designed from a male viewpoint.

3.2 Game categorization and "true" gamers

The mention of "true gamers" is something that has established itself in the gaming community and is something often referred to when discussing the number of female gamers. Statistics from the Entertainment Software Association (2017) shows that the number of female versus male gamers is almost equal. Paaßen et. al. (2017) explains that "Although women might play games, they are not considered *true gamers*. This is because women allegedly only play casually, playing "inferior games"", and brings up examples of such games being the likes of *Candy Crush* or *Farmville*. They go on to explain that the view from parts of the gaming community is that "men are thought to be "hard-core" gamers, playing more complex and competitive games on dedicated consoles, identifying with the gaming community, and sometimes even engaging in competitive electronic sports where they can earn prize money in international tournaments". According to Paaßen et. al. (2017) there seems to persist a stereotype of a white male as the typical gamer, even if the gaming world now looks completely different, and that this stereotype makes it harder for women to identify as a gamer, for it conflicts with their identity as a female. The issue of females masking themselves as male or avoiding voice chat or social interaction with other players also makes the female gamers invisible to the community, hence cementing the presumption that there are none or few female gamers in certain game environments (Paaßen et. al. (2017).

Caillois game categorization from 1958 could be used to further understand the different categories of games and help us understand what defines a "hard-core" game, in order to further develop our understanding of the "true gamer". Caillois (2001) defines two types of play, *Paidia* which refers to play forms that are spontaneous and with looser rules, and *Ludus* which are games that have well defined rules and structures. These two types of play can be present in any of the four game forms defined by Caillois as *Agôn, Alea, Mimicry* and *Ilinx.* Bellow is Caillois table defining these game forms and examples of games within each category.

Table 1. Caillois categorization of games.

Agôn (Competition)	*Alea* (Chance)	*Mimicry* (Simulation)	*Ilinx* (Vertigo)
Chess, Football	Betting, Roulette	Games of illusion, disguises	Merry-go-rounds, Swinging

4 Previous Research

Previous research has been made by Fox & Tang (2017) into subjects regarding harassment of females in online gaming environments. The focus in their research is how females are treated by other playing the game, not by people watching. Recktenwald (2017) brings up some interesting thoughts about the behaviour of the Twitch stream audience in relation to the broadcasters actions which may prove useful in the analysis later in this thesis.

4.1 Online culture and harassment

In an era of social media and internet anonymity online harassment has become something many people have to deal with and the gaming world appears to be one of the more hostile environments for women. In a survey by Pew Research Center (2014) gaming was identified as one of the most unequal online environments for women. Fox & Tang (2017) discusses the strategies women use to cope with this online environment and identifies *gender masking* as a more common way for females to avoid gender specific harassment. For Fox & Tang *gender masking* refers to a way of hiding your gender with means such as "using male or gender neutral avatars and screen names, avoiding female avatars, or trying to pass as male", a strategy that they note "makes women invisible not just to harass, but to other players, and likely contribute to perceptions that women are rare or nonexistent in certain gaming environments". They also note other strategies such as avoiding the interaction with other players by choosing single-player games or avoiding talking to other players in the game, and denial in terms of the women trying to forget about the harassment or simply put up with it.

4.2 Twitch audience

In an attempt to analyse the relationship between the reactions of the audience and the broadcaster Recktenwald (2017) conclude that "Audience members mostly produce single-turn messages that are highly context dependent." while "Broadcasters tend to elaborate and respond with several utterances." He also explains that many messages from the audience require extensive knowledge about the game in order for the meaning to be deciphered and gives examples of how specific emoticons unique for the Twitch platform can be carriers of different meanings: "The 'Kappa' emoji stands for sarcasm and the emoji 'FailFish' shows embarrassment" (Recktenwald, 2017).

The emoticons make up a large portion of the chat messages in Twitch and makes for an interesting study, however in this research they have been categorised as one category. This is because of the uncertainty of what they actually mean as well as the amount of time it would take to attempt to categorise such messages. Recktenwalds (2017) notion of the knowledge about games that is necessary to understand the Twitch messages is an important aspect of this research and in time has also been spend at researching specific game terms of each game analysed.

5 Research design

The implementation of the method required a sample to be made both of which games that should be used as well as the streamers of these games. It was also necessary to decide on a specific amount of comments that should be analysed from each of the streamers. The implementation also required a coding scheme to be set up in order to be able to start the process of categorising the messages depending on their subject or meaning. This construction of this coding scheme had to be re-made a couple of times in order to give a fair representation of the meaning of the messages found in the chats.

5.1 Method

Because of the importance of the gender aspect of this work I propose a content analysis of the chat messages in streams by both female and male streamers, as well as an analysis of three popular games on Twitch grounded on Caillois (2001) theories on game categorisation. The analysis will focus on discovering possible differentials between how female and male streamers are treated by the Twitch audience and whether or not the various games attract audiences with different behaviour. With the help of Caillois methods of categorising different types of games, I hope to be able to distinguish what kind of properties in the games that prompt different behaviours in the audience of the Twitch streams.

The data collection will consist of chat messages from twelve streams on Twitch. The Twitch platform provides the possibility to view past live streams including the chat messages sent in the live stream. Using a tool called ReChat makes it possible to download the complete chat log from a chosen video on Twitch and view it as a text file. From three games, chat messages from two female and two male streamers of each of the games was downloaded using the ReChat tool. By analysing these chat logs and looking for certain types of messages concerning aspects such as skill-level and physical attributes, I hope to be able to better understand what the audience members are discussing during the streams and how or if the subjects of discussion differ in the female respectively male streams, as well as the different games.

Browsing the Twitch platform makes it possible for the viewer to sort by popular games. Three of the most popular games were chosen for this analysis, namely *Hearthstone* - a card game where the player collects cards to build decks and compete against other players, *League of Legends* - a fantasy set game where players compete in teams to destroy each

other's bases, and *Fortnite* - a first player survival game which can be played in different modes.

The debate I am trying to shed light on and better understand is that of female streamers being called "fake", and the discussion around female streamers visual appearance contra their skill at playing digital games. The focus when analyzing the chat logs will therefore be on counting messages to do with such aspects, in both the female and male streams, in order to understand whether or not the discussions revolves around different matters in the male respectively female stream. The reason for incorporating Caillois (2001) game categorisation theories is in order to better understand what properties the games that are part of the "true gamer" culture possess and how these are affecting the comments in the Twitch chats.

5.2   Data collection and sample

Twitch offers a wide selection of streams with all kind of different games being represented. The user is able to search for specific games that they want to watch streams off, or browse amongst the most popular games being streamed. At the time of this research the top three games at Twitch were *League of Legends, Fortnite* and *Hearthstone.* These games were chosen as the sample on the grounds that they would represent the most popular part of the Twitch community, and therefore possible display the mainstream or most common type of chat messages occurring at the platform. For each of these games two female and two male streamers were chosen and the chat messages from their streams were downloaded. In total, chat messages from the streams of twelve different streamers were used as the sample. A clearer view of the composition of the sample is shown in the table below.

Table 2. Table of the sample of streamers and games used in the study.

Streamer	Game	Gender	Popularity
St1	*Fortnite*	Female	Higher
St2	*Fortnite*	Female	Lower
St3	*Fortnite*	Male	Higher
St4	*Fortnite*	Male	Lower
St5	*Hearthstone*	Female	Lower
St6	*Hearthstone*	Female	Higher
St7	*Hearthstone*	Male	Lower
St8	*Hearthstone*	Male	Higher
St9	*League of Legends*	Female	Higher
St10	*League of Legends*	Female	Lower
St11	*League of Legends*	Male	Higher
St12	*League of Legends*	Male	Lower

Within each specific game, both streamers with a larger number of subscribers as well as streamers with a smaller number were used in the sample, this in order to be able to spot any differences in the behaviour of the chat depending on the popularity of the streamer. The samples were chosen so that each of the game categories had one male and one female with a higher number of subscribers and one of each with a lower number of subscribers, as shown by the table above.

5.3   Coding process

From each of the twelve streams sampled, the chat messages were downloaded with the help of a program called Rechat which allows the user to download the chat messages from past Twitch streams. Of course, the number of messages was different in every stream and going through them all was not a possibility considering the time schedule for this research. Therefore 500 messages were taken from every stream at a place where the streamer engaged in gameplay and somewhere around the middle of the streamer's broadcast. It was important for the study to have a sample of chat messages that were written during a time in the broadcast when the streamer was actually playing the game, in order to better understand the question about how the audience was reacting to female versus male *gamers.* Of course, the messages were not chosen specifically or individually, the 500 messages from every stream constitutes a complete and linear representation of what has been written by the users for a certain amount of time during that stream.

After sampling the 500 message sections, the comments were categorized into sixteen categories. During this sorting process the categories sometimes had to be changed to better represent the messages that were found, and therefore too the sorting re-done. Although time consuming this process reinsured that the messages really fitted into the categorization created and that there were minimal doubts about which category to place them. The categories and codes for the messages are shown in the table below.

Table 3. The categories that the messages were sorted into and the codes used in the sorting process.

Message category	Code
General comments not related to games or the gameplay	1A
General positive feedback about stream or streamer	1B
General negative feedback about stream or streamer	1C
Comments about games or gameplay	2A
Comments either cheering on the streamer or providing tips or help for her/him	2B
Comments stating that the streamer is good at the game	2C
Comments stating that the streamer is bad at the game	2D
Comments stating that the streamer is lucky or unlucky	2E
Comments about the streamers physical appearance	3A
Comments about the streamers personality or personal information	3B
Comments that could be considered inappropriate or threatening (not sexual)	3C
Comments that could be considered sexual harassment	3D
Comments that only consists of emotes	4A
Web links or comments in which the meaning could not be deciphered	4B
Comments tied to the commands used for information in certain streams	4C
Comments by bots answering the commands or promoting the stream	4D

As shown in the table above, the categories contained four subcategories each focusing on a certain type of comment. The comments with a code starting on "1" were general comments that were not discussing anything game related. Comments in this subcategory could be about just saying hello, users discussing other things amongst each other or asking general questions to the streamer. The comments with a code starting with "2" were comments discussing game related aspects such as the gameplay happening in the stream or the skill of

the streamer. The comments starting with the code "3" were comments discussing personal aspects of the streamer or comments that could be considered inappropriate in threatening or sexual ways. The comments with a code starting on "4" were comments that consisted of either just emotes, commands or comments by bots, as well as comments in consisting of web links or in which the meaning was not clear.

The categories with the codes "4C" and "4D" may need some further explanation. In the Twitch chat the user is often able to type in certain commands to retrieve information about technical aspects of the streams, such as how long the stream has been going on for or what song is playing etcetera. The commands are answered by bots who mediates the information that the user has commanded. Sometimes there are comments by bots that are not answers to the commands of the users, but simply promoting the stream or displaying information that the viewers may find useful. Examples of messages in each category can be seen below. These were messages that were part of the sample although some have here been modified to not reveal the name of the streamer or other users.

Table 4. Examples of the chat messages found in the sample.

Code	Comment	Streamer who received this comment
1A	"Russia playing last gropu match now"	Streamer 5
1B	"You're an inspiration"	Streamer 4
1C	"[SHE] is like "oooh nobody wants to watch me play other things" and we get less streams"	Streamer 6
2A	"i milled my opponents shudderwock SeemsGood"	Streamer 5
2B	" you can do it!"	Streamer 4
2C	"how is he so good"	Streamer 4
2D	"You won but that was still a horseshit last turn LUL "	Streamer 6
2E	"pretty good luck"	Streamer 6
3A	"You look more beautiful with no make up! Kyaaaah!~~"	Streamer 5
3B	"you have a very pleasing voic"	Streamer 10
3C	" So you go by [NAME] now? Whats up douchebag haha. Its [NAME] from highschool. Sorry for picking on you so often with the bros, you were an easy target. Remember [NAME]? We're married now, im making 200k and drive a mustang. I guess youre still off playing video games. Some things never change huh? pathetic.."	Streamer 11
3D	"Show the tits"	Streamer 2
4A	"PepePls PepePls PepePls PepePls PepePls PepePls PepePls"	Streamer 5
4B	"hhhh"	Streamer 2
4C	"!pl"	Streamer 5
4D	"Please keep the chat in English so she can understand everything"	Streamer 5

5.4 Credibility

Considering the amount of messages that a Twitch streamer receives in just one stream session it has to be said that the data collected in this research represents a very small part of say, the weekly amount of comments for a Twitch streamer. Nevertheless some clear differences could be found when comparing the messages of the male and female streamers which could point to these being tendencies that could be found even on a larger scale. When starting the work on this thesis the idea was that only comments from six streamers (three female, and three male) would make up the sample, but in order to increase the credibility of the thesis the number was doubled. Of course, by increasing the numbers of comments and the number of different streamers they are collected from the credibility of the results would rise. In a small scale research there is always a risk of chance in the results; some streamers may be more exposed to certain comments than others. However the streamers that were chosen were streamers I did not know of before, as to minimise the risk of a bias sample.

Choosing only 500 comments from each stream may have influenced the results as these comments do not represent a complete picture of all the comments in a single stream. However by choosing these sections of 500 comments from similar places in each stream, the results should at least display how the comments sections can look like at the middle of a broadcast and in sections where the streamer is engaging in gameplay. The fact that the comments should be collected from a place where the streamer engaged in gameplay was crucial to this research.

Another aspect that could have influenced the result is the choice to not include the different meanings of the emoticons in the coding process. As explained by Recktenwald (2017) these emoticons are also bearers of meaning. The uncertainty as to what they mean however (although some were quite clear) would mean that the data result would also suffer and become less trustworthy. The quantitative approach used in this research demanded the messages to be clearly categorised, something that would have been difficult to do with the messages consisting of emoticons.

A significant portion of the comments had to do with commands for bots and replies by the bots. These were categorised as separate categories as they had little to do with the other categories in the chats. They do however make up a portion of the results that is not very rewarding in terms of answering the research questions. An alternative would have been to remove such comments and replace them with the next following comments in the chat logs; I felt however that this would distort the results as they would not present a coherent

picture of how a chat can look like. I wanted each of the segments of 500 comments to represent an untouched part of the Twitch chat.

5.4.1 Social media and anonymity

The anonymity that the Twitch platform and the online world provide makes it possible for users to express themselves in ways that they in real life perhaps shouldn't. This of course, has been one of the major reasons that harassments towards females in the online world have become such a big problem. Of course there is no way of knowing that the messages reviewed in this analysis are really the views of the users who have written them. There exists a flurry of "troll" accounts in online spaces and aspects such as sarcasm or irony is often difficult to distinguish in text. Nevertheless these difficulties in deciphering the meaning of the messages or whether or not they are really trustworthy exists just as much for the streamer who receives them as they do for me. Therefore one can argue that whether or not they are trustworthy or express what the user really think is rather irrelevant for this type of research. The effect on the streamer will be a reaction to what can be deciphered in the messages.

5.5 Ethical considerations

The use of data from social media sites is of course of ethical concern as neither the streamers or the users in their chats have consented to participate in this research. Of course the nature of Twitch offers anonymity to their users, and the information that they want to share to the public is managed by themselves. This means that user data concerning gender, nationality or age has not been collected in this research, and neither is their username revealed in this study.

The names of the streamers from which the stream messages has been collected is also not shown in this study, instead the streamers are simply labelled by number, gender and what game they played when the chat messages where collected. The streamers has not been asked to be part of a study, hence it would be unethical to mention their names. As there could be a possibility that the identity of the streamers could be found out using the information about their number of subscriber's, a choice was made to exclude this information from the presentation as well.

This ethical approach entails that neither the appendices can include the information about the streamers or users. Therefore the appendix shows only a short, censured paragraph

of each chat to show examples of how the chat looked like and how the coding was used for the messages.

6 Analysis

While some of the different categories of comments were relatively equally divided between the male and female streamers, the data results show some clear differences in some categories, which points to a gendered chat in the Twitch streams. The fact that the gameplay itself is much more commented on in the male streams shows that the game community still is dominated by male values and a sense of a "boys club". Of course, whether it is male or female users that are contributing to this inequality in the discussion is not shown by this data, nevertheless the audience as a whole acts as if the gameplay is less important when it comes to female streamers.

The comments about appearance and personality were also an interesting aspect of the data, and the result confirms the presumption about these comments being more common in female streams, although interestingly not as common in all games. The collected data results also confirmed the presumption that users more often discuss the skill of the male streamers than the female, although this was only true when the users had something positive to say about the skill. Comments that were claiming the streamer was bad at the game were as common in both female and male streams. This was interesting because it suggest that the female streamers were not necessarily viewed as worse than the males.

6.1 Results

One of the main questions posed in this research was how the audience discusses female versus male streamers on Twitch and whether or not any tendencies towards a gendered discussion could be seen in the different chats of the men and women. The results showed a higher number of comments discussing non game related subjects (category 1A) amongst the female streams. There were a similar amount of comments giving positive or negative feedback on the streamers (category 1B and 1C) in both female and male streams.

In the streams with male streamers there was a higher amount of comments about games or the gameplay (category 2A) and there were also more users giving tips or cheering for the male streamers (category 2B). The skill was more frequently commented on positively (category 2C) in the male streams, but the same amount of users had something negative to say about the skill (category 2D) of the streamer in both male and female streams. Comments stating the streamers were lucky or unlucky (category 2E) were uncommon but the same frequency was recorded in both male and female streams.

The appearance or personality of the streamer (categories 3A and 3B) were discussed more often in the female streams. Comments that could be considered inappropriate or threatening in a non-sexual way (category 3C) were slightly more common in the male streams, while comments that could be considered sexual harassment (category 3D) were more common in the streams by females.

The amount of comments consisting of only emotes (category 4A) were more common in streams by men, and content that could not be deciphered (category 4B) were more common in the streams by females. Comments tied to commands (category 4C) were more common in the male streams, as were comments made by bots (category 4D).

The percentage shown in the tables below is the percentage of comments in the sections of the same colour. For example in the table showing the results off all comments men versus women, the percentages in the orange sections shows the share of comments in each specific category counted from all the comments on the female streams.

Table 5. All comments, men versus women.

Comment type	Men		Women	
	Number of comments	Percentage	Number of comments	Percentage
1A	610	20,3 %	1164	38,8 %
1B	23	0,8 %	25	0,8 %
1C	1	0,03 %	2	0,1 %
2A	1116	37,2 %	739	24, 6 %
2B	68	2,3 %	37	1,2 %
2C	60	2,0 %	34	1,1 %
2D	12	0,4 %	12	0,4 %
2E	3	0,1 %	3	0,1 %
3A	5	0,2 %	44	1,5 %
3B	11	0,4 %	29	1,0 %
3C	7	0,2 %	2	0, 1 %
3D	9	0,3 %	21	0, 7 %
4A	818	27,3 %	689	23, 0 %
4B	55	1,8 %	67	2,2 %
4C	77	2, 6 %	50	1, 7 %
4D	125	4, 2 %	82	2, 7 %

6.1.1   Popular versus less popular streams

Comparing the comments of the more popular streams to the less popular shows that users tend to comment more often on general subjects (category 1A) or gameplay (category 2A) in the less popular streams. It is instead more common for people to comment using only emotes (category 4A) in the more popular streams. It is still more common for users in the female stream to comment in the categories 1A, 3A and 3B than for users watching the male

streamers, and the gameplay (category 2A) is commented on more frequently on in the male streams both in the more popular and less popular streams.

Table 6. Popular channels, men versus women.

Comment type	Men		Women	
	Number of comments	Percentage	Number of comments	Percentage
1A	291	19,4 %	522	34,8 %
1B	11	0,7 %	18	1,2 %
1C	1	0,1 %	2	0,1 %
2A	512	34,1 %	334	22,3 %
2B	24	1,6 %	17	1,1 %
2C	31	2,1 %	22	1,5 %
2D	5	0,5 %	4	0,3 %
2E	2	0,1 %	3	0,2 %
3A	1	0,1 %	23	1,5 %
3B	7	0,5 %	11	0,7 %
3C	5	0,3 %	1	0,1 %
3D	7	0,5 %	1	0,1 %
4A	452	30,1 %	466	31,1 %
4B	39	2,6 %	31	2,1 %
4C	54	3,6 %	12	0,8 %
4D	58	3,9 %	33	2,2 %

Table 7. Less popular channels, men versus women.

Comment type	Men		Women	
	Number of comments	Percentage	Number of comments	Percentage
1A	319	21,3 %	642	42,8 %
1B	12	0,8 %	7	0,5 %
1C	0	0 %	0	0 %
2A	604	40,3 %	405	27 %
2B	44	2,9 %	20	1,3 %
2C	29	1,9 %	12	0,8 %
2D	7	0,5 %	8	0,5 %
2E	1	0,1 %	0	0 %
3A	4	0,3 %	21	1,4 %
3B	4	0,3 %	18	1,2 %
3C	2	0,1 %	1	0,1 %
3D	2	0,1 %	20	1,3 %
4A	366	24,4 %	223	14,9 %
4B	16	1,1 %	36	2,4 %
4C	23	1,5 %	38	2,5 %
4D	67	4,5 %	49	3,3 %

6.1.2 *Fortnite*

A comparison between the comments of the different games shows differences mainly in the categories: 1A, 1B, 2A, 2B, 3A, 3B, 3D, 4A and 4D. General discussions (1A) were not as common in the game *Fortnite* as in the other two, and neither discussion about gameplay (2A). Instead users commented more frequently with the use of only emotes (category 4A) in

this game compared to *Hearthstone* and *League of Legends*. Positive feedback on the streamer (category 1B) was most common in the game *Fortnite* and the least common in the game *Hearthstone*. Although general comments about the gameplay or other games were the least common in the *Fortnite* streams, users commented with gameplay tips or cheering (category 2B) the most frequent in this game. Comments on appearance and personality (categories 3A and 3B) were also the most common in the streams of *Fortnite* , as were the comments that could be considered sexual harassment (category 3D).

Table 8. All games, men and women.

Comment type	Fortnite		Hearthstone		League of Legends	
	Number of comments	Percentage	Number of comments	Percentage	Number of comments	Percentage
1A	531	26,6 %	637	31,9 %	606	30,3 %
1B	27	1,4 %	7	0,4 %	14	0,7 %
1C	0	0 %	2	0,1 %	1	0,1 %
2A	526	26,3 %	664	33,2 %	665	33,3 %
2B	56	2,8 %	33	1,7 %	16	0,8 %
2C	28	1,4 %	32	1,6 %	34	1,7 %
2D	6	0,3 %	9	0,5 %	9	0,5 %
2E	1	0,1 %	4	0,2 %	1	0,1 %
3A	26	1,3 %	4	0,2 %	19	1 %
3B	24	1,2 %	7	0,4 %	9	0,5 %
3C	1	0,1 %	6	0,3 %	2	0,1 %
3D	25	1,3 %	3	0,2 %	2	0,1 %
4A	611	30,6 %	426	21,3 %	470	23,5 %
4B	48	2,4 %	33	1,7 %	41	2,1 %
4C	35	1,8 %	38	1,9 %	54	2,7 %
4D	55	2,8 %	95	4,8 %	57	2,9 %

Looking at the comments of male and female *Fortnite* streamers we can see similar results as the ones comparing the comments of male and female streamers of all games (see **table 4.)** Although the category 2A is here somewhat more equalized with a difference of approximately 3,6 percent between men and women in *Fortnite* compared to a difference of 6 percent between men and women in all games. The table below shows that most of the comments having to do with appearance and personality (categories 3A and 3B) have been posted in the female streams.

Table 9. *Fortnite*, men versus women.

Comment type	Men		Women	
	Number of comments	Percentage	Number of comments	Percentage
1A	214	21,4 %	317	31,7 %
1B	12	1,9 %	8	0,8 %
1C	0	0 %	0	0 %
2A	281	28, 1 %	245	24,5 %
2B	42	4,2 %	14	1,4 %
2C	18	1,8 %	10	1,0 %
2D	1	0,1 %	5	0,5 %
2E	1	0,1 %	0	0 %
3A	2	0,2 %	24	2,5 %
3B	5	0,5 %	19	1,9 %
3C	1	0,1 %	0	0 %
3D	6	0,6 %	19	1,9 %
4A	318	31,8	293	29,3
4B	21	2,1	27	2,7
4C	25	2,5	10	1,0
4D	46	4,6	9	0,9

Table 10. *Hearthstone,* men versus women.

Comment type	Men		Women	
	Number of comments	Percentage	Number of comments	Percentage
1A	196	19,6 %	441	44,1 %
1B	2	0,2 %	5	0,5 %
1C	0	0 %	2	0,2 %
2A	477	47,7 %	187	18,7 %
2B	18	1,8 %	15	1,5 %
2C	19	1,9 %	13	1,3 %
2D	6	0,6 %	3	0,3 %
2E	2	0,2 %	2	0,2 %
3A	2	0,2 %	2	0,2 %
3B	0	0 %	7	0,7 %
3C	5	0,5 %	1	0,1 %
3D	2	0,2 %	1	0,1 %
4A	214	21,4 %	212	21,2 %
4B	12	1,2 %	21	2,1 %
4C	9	0,9 %	29	2,9 %
4D	36	3,6 %	59	5,9 %

6.1.3 *Hearthstone*

The comments of the *Hearthstone* streams show the highest divide of all games between men and women in the categories 1A and 2A. The numbers are otherwise relatively similar and the comments about appearance or personality (categories 3A and 3B) are the fewest in the streams of this game.

6.1.4 *League of Legends*

The *League of Legends* streams show high numbers in the category 1A as well as in 2A, and although the first category show a similar divide between men and women to the other games, the comments in category 2A is here more evenly divided than in the game *Hearthstone*. A higher number of comments regarding the appearance of the females is visible (3A) but also a higher number amongst female streamers of people who had general positive feedback about the streamer (1B). The category 4A show a more common trend amongst the audience of the male streamers to comment by simply using emotes.

Table 11. *League of Legends,* men versus women.

Comment type	Men		Women	
	Number of comments	Percentage	Number of comments	Percentage
1A	200	20 %	406	40, 6 %
1B	2	0,2 %	12	1,2 %
1C	1	0,1 %	0	0 %
2A	358	35,8 %	307	30,7 %
2B	8	0,8 %	8	0,8 %
2C	23	2,3 %	11	1,1 %
2D	5	0,5 %	4	0,4 %
2E	0	0 %	1	0,1 %
3A	1	0,1 %	18	1,8 %
3B	6	0,6 %	3	0,3 %
3C	1	0,1 %	1	0,1 %
3D	1	0,1 %	1	0,1 %
4A	286	28,6 %	184	18,4 %
4B	22	2,2 %	19	1,9 %
4C	43	4,3 %	11	1,1 %
4D	43	4,3 %	14	1,4 %

6.2 Game complexity

According to Caillois (2001) theories about game categorization all three of the games used for this study could be considered games close to the *Ludus* spectrum of games, that is, they are governed by rules as opposed to *Paidea* games which are freer in their nature. However some of the games use in this study could be considered to have more strict rules than others.

In the game *Fortnite* all players start with the same character and on the same premises. They then have to freely navigate the landscape and pick which weapons they want to use in the game. These can be switched for new ones that the player finds along the way. In *League of Legends* players must at the beginning of each new game choose a specific hero with certain abilities to play as the whole game. Although the player can also here explore the map freely and use their abilities as they like, the choice of a specific hero makes this game

stricter in its rules than *Fortnite*. In the card game *Hearthstone* players can choose freely which cards to put in their deck, but once starting a game they cannot change them. This game could be considered the most rule oriented out of the three as players do not have a chance to explore a large game world, and by consideration of all the different cards that each works in different ways.

Being perhaps the most ruled based game out of the three *Heartstone* is also the game that has the largest element of chance or *Alea*. A card game of course is often based on the random factor of shuffling and drawing cards without knowing the outcome. However this element of *Alea* does not rule out the fact that *Hearthstone* is a game that requires high logical thinking, tactics, as well as memory. *Hearthstone* as well as the other two games is a game in which the player competes against other players or against the computer, which makes the game part of the *Agôn* category. The games *Hearthstone* and *League of Legends* could also be considered as part of the *Mimicry* category as it lets each player control heroes or characters part of the fictional world. However this aspect of the games serves no real function in the gameplay mechanics and it is therefore doubtful that all players perceive these games as a form of *Mimicry*. The game *Fortnite* also lets the player control a fictional character, but the story or *lore* in this game is not as in depth as in the other two games. The element of chance or *Alea* may also present itself in both *Fortnite* and *League of Legends* in terms of lucky shots or turn of events, but it cannot be considered a major part of the games as in *Hearthstone*.

The form of competition differs somewhat in the three games, or rather what kind of skills that are used to achieve the goal of victory. The game *Hearthstone* is built around tactics and logical thinking and is not a fast paced game; the players each have designated time each turn to think over their decisions. *League of Legends* also requires an amount of logic but this has to be used in combination with fast reflexes in the playing field. In other ways players have to make quicker decisions in their tactical choices in this game, and at the same time have the motor skills to react quickly to the events at the screen. The players of *Fortnite* may need to use some tactics in their gameplay but the main skill needed for this game is fast reactions to what is happening, and the abilities to correctly respond to these. According to the classification of games that Caillois (2001) provides, the three games used in this study possess slightly different properties. A categorization of the games relationship to each other according to Caillois theories would like something like the figure shown below:

Figure 2. The games relationship to each other in Caillois categorisation
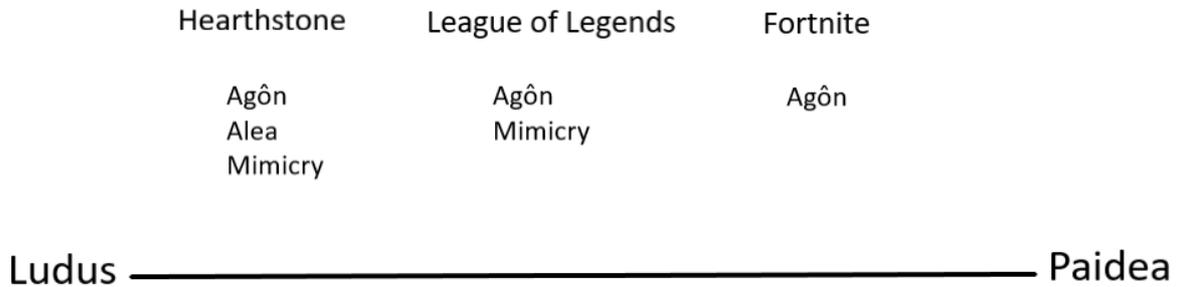
This analysis of the games and their characteristics is important for this study in order to understand the relationship between the comments and the game that is being played. According to Caillois categorization the game that could be considered the most complex of the three games is *Hearthstone,* as it is part of three different categorisations of game types, it is also the game that is the most rule based out of the three. The game *League of Legends* falls in between *Hearthstone* and *Fortnite* both on the *Ludus - Paidea* scale but also in how complex it can be regarded, considering the amount of different game type categories it involves.

6.3 "True" games?

All of the game selected for this study were categorised by the use Caillois theories as games containing elements of *Agôn* or competition, which by Paaßen et. al. (2017) is one of the reoccurring arguments for what defines a "true game". The games were also analysed as being more towards the *Ludus* spectrum than towards the *Paidea.* However they all contain slightly different properties which make it difficult to determine what people really mean by "true". In the case of *Hearthstone* for example there is a large element of chance or *Alea* which affect the gameplay which indicates that for a game to be considered "true" it does not necessarily have to exclude elements of chance. In fact *Hearthstone* is one of the bigger games when it comes to e-sport competitions.

Presuming that the more complex a game is, the more "true" it is *Hearthstone* would be the most "true" out of the three games used in this study, as it contains the most of Caillois

elements (*Agôn, Alea* and *Mimicry*). And if a presumption is made that the more the audience talk about the gameplay in a game stream, the more it could be considered "true", or at least important, then a look at the results of the data collection shows that *Hearthstone* and *League of Legends* are more "true" than *Fortnite*, despite *Fortnite* being the purest *Agôn* oriented game.

6.3.1   *Hearthstone*

Interestingly in the game *Hearthstone* the amount of users discussing the gameplay in the female streams was considerably low. This would suggest that the greater complexion of a game (*Hearthstone* being categorised as having elements of three of Caillois game categories) has a negative impact on how the audience view or discuss the female streamers. *Hearthstone* was also the game analysed as being the most ruled based of the three. The result then would show that the more rule based a game is, the less the gameplay of it is discussed in the female streams. This could be considered proof of how the "true gamer" culture excludes females not based on the facts that they are playing "inferior" games but on the basis that they are just that, females.

Another interesting aspect that separates *Hearthstone* from the other two games is that it is not a skill based game in terms of reaction speed, but rather in the skill of logical and tactical thinking. In this case, the data results would suggest that the exclusion of women is largest in these kinds of games. On the other hand, the exclusion of women in *Hearthstone* is in the form of less discussion about gameplay, not in terms of focus on their appearance or by the use of sexual harassment as the amount of such comments was quite low in the *Hearthstone* streams.

The category 1A had the most amounts of comments in the game *Hearthstone* in the data results; this could perhaps be explained by the game being a slower paced game and giving the audience time to discuss other things in between turns. However the comments discussing general subjects were twice as common in the female's streams, while in the male streams comments about gameplay were more than twice as common than in the female streams. *Hearthstone* was also the game with the largest amount of gameplay comments on the male streams in all of the games, so the theory of people having more time to discuss other things in between turns does not correlate with the results of the male streams.

6.3.2 Fortnite

Fortnite, which by Caillois categorisation would be the game that is least governed by rules, was the game with the least amount of comments overall regarding gameplay. This result corresponds with the results of *Hearthstone*, if rules are viewed as an important part of gameplay discussion. It seems the more rule based a game, the more comments about the gameplay. However, the more rule based a game is also seems to determine the division between the gameplay discussion between male and female streamers. In the less ruled based game *Fortnite* the division of comments in category 2A between male and female streamers is not at all as large is in the game *Hearthstone*.

Unlike *Hearthstone* the number of comments about appearance and personality was much larger in *Fortnite*, and the majority of these were found in the female streams. There were also more comments in *Fortnite* that were of a sexual nature (category 3D), also these most common in the female streams. Both the gameplay and general discussion comments were low in this game, which would suggest that in games with looser rules people tend substitute such comment for sexual harassment and comments about personality and appearance, at least in female streams. It also seems that in games with less strict rules such as *Fortnite* comments are less oriented towards discussion (in general or about gameplay) and more towards messages consisting of simply emotes or short tips, in other words the communication could be considered more basic than that of the other games. Interestingly although there were not as many comments on the gameplay in *Fortnite*, it had the highest amount of people giving tips or cheering for the streamer (which could be considered reactions to the gameplay of course, but in this study is measured as a different category).

6.3.3 League of Legends

The game *League of Legends* would according to Caillois categorisation be a game with quite strict rules although not as strict as in *Hearthstone*. It also involves elements of both *Agôn* and *Mimicry* which would make it more complex than *Fortnite*. The *League of Legends* streams had more amounts of comments regarding gameplay than *Fortnite* but less than *Hearthstone*, which seem to prove that the tendency of commenting on gameplay is associated with both the complexity of the game and the strictness of the rules in it. The division between comments on gameplay between male and female streams is also in this game a little larger than in *Fortnite*, but not at all as large as in *Hearthstone*. The general discussion (category 1A) is also higher in this game, which would suggest that this category also is affected by the strictness of the rules or *Ludus* element in the game.

There were more comments about appearance in the *League of Legends* streams than in *Hearthstone*, but not as many as in the *Fortnite* streams. Comments about personality (3B) as well as threatening or sexual comments (3C and 3B) were not common in the *League of Legends* stream, neither for men nor women.

6.3.4   The effect of stricter rules and complexity on the comments in Twitch streams

By comparing the data results of the different games and with the help of Caillois categorisation there were some interesting trends that became visible. The amount of comments on gameplay (2a) as well as comments on general subjects (1A) seems to be connected to the complexity and the strictness of the rules of the game, as more of these comments were found in the stricter and more complex games *Hearthstone* and *League of Legends.*

As stated earlier all of the three games could be, or perhaps should be considered as "true games", as they all fall in the competitive category of *Agon,* and because they are all games for which major tournaments exists. The "true gamer" elitism seems then to be affecting the female streamers in two ways. In the more complex and rule based games such as *Hearthstone* the female streamers do not suffer from as many comments on their appearance or personality, neither do they receive as many sexual or threatening comments. However, their gameplay is less commented upon in these games while the male streamers are getting a lot of comments on this matter.

On the other hand in the less complex games with looser rules such as *Fortnite* the data showed that females received a more equal amount of comments on their gameplay to the males, but comments on appearance, personality and sexual harassment were more common for the female streamers of this game. In the game *League of Legends* that according to Caillois theories on game categorisation would fall somewhere between *Fortnite* and *Hearthstone* in terms of both complexity and strictness of rules, the data showed results that were also correspondent to somewhere in between these games when it came to matters of appearance and gameplay discussions amongst the females streamers.

6.4   The effects of popularity

Some interesting differences were found when comparing the less popular streamers with the more popular ones. In the streams by less popular streamers it was mainly more common for users to comment in the categories 1A and 2A which suggest that the audience of smaller streams are more prone to engage in both general and gameplay specific discussions, while in the streams by more popular streamers the audience tend to comments more using simply emotes. One of the reasons for this could be that the audiences of smaller streams have more time to read the chat and get to know each other while audiences of more popular streams

have to deal with a faster moving chat and more different users. This would mean that it would be harder to have a discussion in more populated chats as messages tend to disappear in the crowd of messages.

For female streamers the less popular streams showed a slight increase in the number of comments of positive feedback on the streamer (1B) as well as positive feedback on their skill (2C). There was no significant difference in the amount of comments on appearance and personality (3A and 3B) in the smaller female streams; however the amount of comments that could be considered sexual harassment were interestingly higher in the less popular streams. This was however due to one of the streamers receiving much more comments in this category than the others. In the less popular male streams it was less common to receive sexual harassment than in the popular male streams. It seems that the less popular streams are providing a better space for discussion, both general and game based. They do not however seem to be helping women escape from comments about their appearance or personality.

6.5 Feminist perspective

The unwillingness to discuss the skill of a woman or her profession is not only something shown by the data results in this study. De Beauvoir (2011) writes "It is through work that woman has been able, to a large extent, to close the gap separating her from the male; work alone can guarantee her concrete freedom.", however she goes on to say the relationship between women's freedom and work is never simple, and that women has had to struggle when entering workplaces historically dominated by men. Although of course much has happened in the terms of workplace equality since Beauvoir's text was published, the computer game world still suffers from inequity in many forms. The figures from the Entertainment Software Association (2017) showing an equal number of female players overall is unfortunately not the same as the figures showing the number of female employers in video game industry or the amount of female streamers on Twitch (Statista, 2017).

Considering information presented in the studies on online harassment against women in gaming environments (Fox & Tang, 2017), the occupation of being a Twitch streamer must be considered a hostile one for women. The gendered discussion discovered in the data results is a sign of how the exclusion of women continues in the gaming world, and the fact that the male and female streamers were playing the same game shows that this is actually not an exclusion that is based entirely on the assumption that female players cannot play the

games. The number of comments stating the streamer were bad at the game were the same for female and male streamers. Instead the exclusion seems to depend on an unwillingness to discuss females as players in the same terms as their male counterparts.

While all the streamers had video feeds showing their appearance the fact that appearance and personality was more commented on in the female streams cements the stereotypes that females are first and foremost their sex rather than a gamer. De Beauvoir writes: "most working women do not escape the traditional feminine world; neither society nor their husbands give them the help needed to become, in concrete terms, the equals of men.". Women trying to exist on equal terms in the gaming world are being fought back by the community itself.

As Grayson (2017) notes, a large argument for calling female streamers "fake" has been that their behaviour in the streams has been different to that previously seen on Twitch (mainly consisting of streams with male broadcasters), for example that they have paid too much attention to their looks and too little attention to the game. Shown by the data results here is that it is in fact the attention of the audience that is directed to these things, as in female streams they were more interested in appearance and less in gameplay. In fact the streamers were all concentrated on the gameplay and not their appearance in the sections from where the messages where collected. So even if female are adapting to fit a male gamer norm in their behaviour they are still receiving different comments than the males.

6.5.1   The male gaze

Although the term "the male gaze" is first and foremost connected to visual media and film it is possible to make some connections to the behaviour of the game community when it comes to how female gamers are treated. The portrayal of women as objects or passive characters in video games has often been present even thought the industry has lately paid attention to this, and according to Mulvey (1975) women are often portrayed to be a symbol of the male attraction. A common and popular happening at gaming events today is *cosplaying* which means to dress up as characters from different games often with the use of elaborate costume designs made at home. Some game companies are even hiring cosplayers to promote their games at events. The cosplaying is often a fun aspects of these events and it invites everyone to participate, however the case is often that stereotypical portrays of female characters, with often minimal amount of clothes are displayed and praised at such events. Of course, the cosplayers should have the right to be able to dress up however they want, but many of the

characters were most likely originally designed with a male gaze in order to attract male players and benefit from their attraction to the females characters.

This entails a problematic to the gaming community as the male gaze is reinforced as the normative viewpoint, which may lead to the behaviour of the community that is visible in the data results collected in this study. If the male gaze is the normative way of viewing things in the game community, then this would mean that the female Twitch streamers receive comments mainly written from this viewpoint. The presence of the male gaze was visible in the Twitch chat in the categories to do with appearance and personality (passive characteristics) contra gameplay and skill (active characteristics). The passive characteristics were more common in the female streams while the active were more common in the male streams. This displays tendencies amongst the Twitch audience to view the female streamers as what Mulvey (1975) describes as "bearer of meaning, not maker of meaning.",

6.5.2 The effect of "true gamer" culture on women

As Paaßen et. al. (2017) has noted there seems to exist a perception in the gaming world as women not being "true gamers" because they play "inferior" games that are not complex enough in their construction or not competitive enough. If this is the definition of a "true gamer" then members of the game community should also consider women who play more complex games, such as the games analysed in this thesis, as "true gamers" and treat them equally to the men playing the same games. However as shown by the data results and analyse in this thesis women on Twitch who engage in "true gaming" are not treated equally to men. This suggests that the "true gaming" culture is not targeting women simply because they play less complex games but also because of their gender.

The data results also showed that the more complex a game, the less the gameplay is discussed in the female streams, which would indicate that the larger the complexity of a game, the larger the exclusion of female players. In other words, the more elitist the game community gets the lesser willing it is to discuss the play of female players. Of course on Twitch women have the opportunity to engage in "true gaming" without the need of asking men for permission. This intrusion into a historically male space may be one of the reasons women are being harassed or why they are receiving comments on their looks, as parts of the gaming community feel that they are taking over a space that has belonged to them.

The continuation of the excluding tendencies of women in the gaming world and on Twitch leads to women taking precautions against the harassment in such ways discussed by Fox & Tang (2017). But by hiding their female identity they are not only devaluing their

gender but also making the presence of female gamers more invisible. It is however important to note that female streamers on Twitch have become more common recently, which is a sign that the gaming world may be on its way to a more gender equal representation.

7 Summary and discussion

This thesis took ground in the debate on "true" versus "fake" gamers and tried understand how female streamers on Twitch are treated and how different type of games and the "true gamer" culture affected the discussion in male and female chats and tried to answer these questions with the use of a quantitative content analysis of chat logs from male and female streamers on Twitch. Caillois (2001) theories on game categorisation were also used as a means of distinguishing different elements of the games, which could have affected the results of the data collection. The games used in the sample were *Fortnite, Hearthstone* and *League of Legends.*

7.1 Summary

The sample consisted of twelve sections of 500 Twitch messages, each from a different streamer where 3000 messages were collected from female broadcasters and 3000 from male ones. Three different games were played in these streams, and from each game messages from two female streamers and two male streamers were downloaded. For each gender in each of the games one with a higher number of subscribers and one with a lower number were chosen. The categorisation of the messages focussed on distinguishing aspects such as gameplay, skill, appearance or personality.

The results showed that comments regarding gameplay and skill were more common in the male streams, while general discussion and comments on appearance and personality were more common in the streams by female gamers. The results also showed differences in the behaviour of the chat depending on what game they were watching. For example, overall comments on gameplay were the most common in *Hearthstone,* while comments consisting of emoticons were the most common in the game *Fortnite.*

The analyse showed that all of the three games used in the sample could be considered "true games" as they contained large elements of competition as well as well defined rules. Caillois (2001) categorisation showed that the game *Hearthstone* could be considered the most complex as well as the most rule based of the three games, while the game *Fortnite* could be regarded as the least complex and least rule based out of the three. The game *League of Legends* was categorised as somewhere in between these two games in terms of complexity and rule strictness.

The analysis could conclude that the complexity and strictness of rules in a game affected the behaviour of the audience. In more complex games the gameplay was highly commented in male streams, while fewer commented on this in the female streams. The "true gamer" culture was shown to affect female streamers in two ways in the Twitch chat. While their gameplay was a more common subject of discussion in the less complex games, they received more comments on their looks or personality. On the contrary to this, in the more complex games female streamers received fewer comments on looks and personality, but also less comments about their gameplay.

The analysis concluded that the exclusion and harassment of women on Twitch contribute to problems for female gamers overall. The need to conform to male norms in order to not be subject of exclusion means that female gamers are themselves participating in a culture that devalues their gender. This leads to the continuation female players and their experiences being made invisible which in turn cements the norm of a male gamer. The male gaze (Mulvey, 1975) was made visible in the Twitch chats as women received more comments about their passive characteristics (appearance and personality) rather than their actions in the game.

7.2   Conclusions

The results showed that a gendered discussion could be found on the Twitch chats which displayed that overall the audience was more interested in the gameplay and skill of the male streamers, while more interested in the appearance and personality of the female streamers. As all of the comments were collected from the same games in male and female streams and from sections were the streamers were concentrating on the game, this concludes that even if female streamers are playing "true games" and paying attention to the gameplay they are still treated differently in the Twitch chat. Although a large portion of the gaming community on forums such as Reddit claims that female streamers are treated differently because their focus on looks or lack of attention to the game, it is clear that this is not true, it is simply the audience that chooses to focus on these things.

The analysis has shown that the greater complexity of a game, the less was the chances of the gameplay being discussing in streams by females. Presuming the view of a "true game" has to do with its complexity, these results would indicate that the more "true" a game is, the more women are excluded in terms of them being talked about as players. However the results also showed that the more complex a game, the fewer comments on

appearance and personality were recorded in the female streams. A conclusion can be drawn that females on Twitch are excluded in different ways depending on what type of game they are playing. While playing a more complex game women can avoid sexual harassment and comments on appearance to a larger degree, they suffer in the aspect that their gameplay is a main part of the discussion, hence their status as a gamer becomes lower. On the other hand while they may receive more comments regarding their gameplay in less complex games such as *Fortnite* they are more likely to be exposed to sexual harassment or receive comments on their physical appearance or their personality. The "true gamer" culture on Twitch is hence affecting women in different ways, but all in ways that are excluding them from being equal to their male counterparts.

The effect that this has on the gaming world overall is that it encourages female gamers to take counter actions against exclusion with means that are devaluing their gender, and shuts them off from full participation in the gaming world. By conforming to norms set by men women in the gaming world contribute to a distorted view of how the gaming world looks. Female streamers on Twitch have shown that by participating in the gaming community on their own terms, as women, they are becoming subjects of harassment an objectification. And the notion of "true gamers" seems to be more of an excuse to devalue female gamers, than an argument that there exists differenced between male and female gamers.

7.3   Discussion

A quantitative method proved a useful tool to distinguish broader trends within the Twitch chats, nevertheless the sample of messages analysed in this thesis is only a small portion of the messages that Twitch streamers receive. In a larger scale study gendered tendencies in Twitch discussions would of course be easier to spot. However the data collection presented some results that showed clear differences between the behaviour of the audience in male and female streams.

For further research into this subjects data related to the gender and age of the Twitch audience would contribute to a greater knowledge of which members of the audience who are taking part of the gendered discussions. Considering the "true" versus "fake" gamer debate it would also be interesting to study the behaviour of the Twitch audience in games that are considered more casual. It would also have been fruitful to collect information about the

average age group and gender of the people playing the three games in this study however this information was not available at the time of conducting this research.

The use of a larger coding system with more categories would work as a tool to discover more aspects of the behaviour in the chats. Due to having a rather small sample of text in this study, such a large coding scheme would not have helped in the means of trying to discover larger trends in the chats. As mentioned in the analysis it would also have been interesting to analyse the emoticons as carriers of meanings, as they made up such a large portion of the messages, and because there was a clear difference in the amount of these comments when comparing the different games. Unfortunately due to time limitations this was not possible. Another common type of comment where the ones to do with commands for bots and the replies from them, these served no real function in the analysis as they were not messages directed towards the streamer. In further research an approach to consider would be to remove such messages from the sample collection.

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Appendix A - **Description of games mentioned**

Game	Description
Candy crush	A game where the player moves candies around in order to match them with each other and score points.
Counter-strike	A game where players compete in teams of "terrorists" and "counter-terrorist" by trying to either detonate a bomb or defuse it.
Dota	A game where two teams compete against each other with the goal of destroying the other team's base.
Farmville	A game where the player manages a farm by taking care of livestock or growing crops.
Fortnite	A game where players compete against each other or in teams, where the goal is to be the last survivor.
Hearthstone	A deck building game where players collect cards and compete against each other with their handmade decks.
League of Legends	A game similar to *Dota* where two teams of players try to win by destroying the other team's base.

Appendix B - **Description of programs and online forums mentioned**

Forum or program	Description
ReChat	A program used for downloading chat logs from past streams on platforms such as Twitch
Reddit	A social media platform with different "sub-Reddits" devoted to various subjects. Available at: www.Reddit.com
Twitch	A platform mainly devoted to the live streaming of games from major e-sport events or from private users. Available at: www.Twitch.com
Youtube	A platform for posting video content online. Available at: www.youtube.com
4chan	A social media platform for sharing pictures online. Available at: www.4chan.org

Appendix C - **Examples of the chat forums samples and the coding used for categorisation**

Streamer 7 - Male, playing *Hearthstone*

2A[02:19:09.331]███████: curve dafranP1

1A[02:19:37.310███████ HeyGuys HeyGuys helllo guys

2A[02:19:43.198███████: Hmmm, I guess if you were on 9 mana u can blizzard and next turn polly + blizzzard but u were on 8 mana

2A[02:20:06.905███████s: is there anyway to know how many People are in legend? besides losing every game till you dont drop anymore?

4D[02:20:38.918███████ Do you want to challenge████ to play your deck at high legend?! For a Subscription, 5€ tip or 500 bits,██████ will deck doctor your request, walk through all of the changes to make the deck viable, and play it! Bring it on!!

4D[02:20:39.095███████ Follow████ on other social media! Facebook: https://www.facebook.com███████ https://www.instagram.com██████ https://www.youtube.com████████

2A[02:21:53.910███████shudderwock monkaSHAKE

2A[02:22:03.021███████marin the fox for memes? or actually better than alana

1A[02:23:16.853██████ Hail

2A[02:23:34.797██████why do lifesteal minions have shit stats

2A[02:23:46.305███████: bc they have lifesteal

2A[02:23:51.474███████ when is next expansion

4A[02:23:51.808███████: Jebaited

1A[02:24:09.537██████████ ate couple fo months from now

2A[02:26:29.290██████ Baron gedtons

2A[04:19:05.328] ▓▓▓▓▓ was silver and dropped to b3 and now im stuck

2A[04:19:06.896] ▓▓▓▓▓ ... i did 10k

4B[04:19:08.592] ▓▓▓▓▓ ?

2A[04:19:13.374] ▓▓▓▓▓ about to be b2 tho

1A[04:19:14.015] ▓▓▓▓▓ hmm weedGasm

2A[04:19:14.428] ▓▓▓▓▓ I main sup so basically I'm screwed if i don't duo then right?

2A[04:19:25.214] ▓▓▓▓▓ gold is just bronze players with better cs

2A[04:19:26.219] ▓▓▓▓▓ my bronze friend are playing wit hme rn

1A[04:19:28.098] ▓▓▓▓▓ @▓▓▓▓▓ yeeh

2A[04:19:28.116] ▓▓▓▓▓ dota 2 leggo!!!! @▓▓▓▓▓

1A[04:19:28.706] ▓▓▓▓▓ what you mean

4A[04:19:34.895] ▓▓▓▓▓ Gasm

1A[04:19:37.313] ▓▓▓▓▓ haha fair

2A[04:19:50.375] ▓▓▓▓▓ Top 1%

4A[04:19:53.858] ▓▓▓▓▓ Sip

2A[04:19:54.623] ▓▓▓▓▓ I just have this thing where I want to see where my actual elo is, but I can't get tf outta bronze

2A[04:20:01.439] ▓▓▓▓▓ so maybe this is where I belong lmao

2A[04:20:09.368] ▓▓▓▓▓ Accept the request

4A[04:20:12.547] ▓▓▓▓▓ BloodTrail

Streamer 2 - Female, Playing *Fortnite*

2C [01:15:30.983] ██████████████ Ah! Good try

1A [01:15:32.283 ██████████ noooo despacitooo

1A [01:15:33.101] ██████████: im a bit dissapointed

4A [01:15:34.779 ██████████: LUL

2A [01:15:39.566 ████████ at least he won

2A [01:15:41.218 █████████: awww... allmost

2A [01:15:41.255 ████████ ahhh so close

2A [01:15:41.450 ████████ close bro

2A [01:15:44.966 ███████: Rip

2A [01:15:48.378 ███████: that was close

2A [01:15:51.27 █████████ you're either the belgium or england of this game. it's fine

2A [01:15:53.756 █████████ shoot first build later lol

4A [01:15:59.875 ██████ tfueCUTIE

3A [01:16:12.656 ████████ i likes dem pants

1A [01:16:21.471 ███████ woah im glad i found this stream!! :D

4A [01:16:25.084 ██████ lol yh

1A [01:16:29.413 ██████████ man i mis the indo baord

4A [01:16:30.31 █████████ bruh

3B [01:16:32.742 ███████ shes a really nice girl :D