Toxic Behavior in Online Games

Abstract

Online gaming is the entertainment of the masses nowadays as it entertains hundreds of millions of players around the world on daily basis. Along with the popularity of online gaming, phenomenon of toxic behavior has also taken root in those games. Toxic behavior is strongly present in current day online games and very few people are spared from it nowadays. The purpose of this study was to take a closer look into the toxic behavior and how it affects those who actively play online games.

This study started by conducting literature review to identify the various different aspects that surround the online gaming in addition to toxic behavior. Different types of toxic behavior were also identified from current literature. The themes that emerged from the literature review formed a backbone for constructing a qualitative interview, the designated data gathering method of this study. Aim of the research interviews was to gather information on how the various different toxic behaviors affect the online gaming of the interviewees who were all active online game players. Data gathered by the interviews was analyzed by conducting inductive content analysis, where prominent themes were brought up for closer inspection and reported in the findings.

On a general level, the results of the current study suggested that toxic behavior affects online gaming in a negative way, with very few exceptions. For example, cheating was seen as a behavior that destroys the competition aspect of the game and ruins the game for all the participants, while flaming was often simply discarded as provocation and simply ignored. Tangible toxic behaviors like cheating and griefing were found to affect the gaming experience and flow sensation found in gaming in a very negative way. Unchecked cheating was even found to be a cause for quitting a game for good for some people. The current study found hints of more organized forms of scamming taking place in online games instead of just act that takes place between two players. Even cyberbullying was reported, as multiple stories of players ganging up on single player of lower skill were heard.

The current study provides the reader with up-to-date information on toxic behavior in online games and how it affects the online gaming, mainly from the viewpoint of veteran players. Additionally, based on the interview data and the content analysis, a three-tier list on how to fight toxic behavior was gathered for the game developers. Based on the results of the current study some future research actions were suggested. Cyberbullying in online games was found to be one area in need of a more in depth look, and the link between toxic behaviour and flow in online games was found to require further studies.

Keywords
online games, online gaming, gameplay experience, flow, toxic behavior, griefing, cheating, flaming

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Foreword

The process of completing this study has been a most insightful trip to doing science on many levels. Everything I have done during the construction of this thesis has provided me with some new information and valuable lessons, ranging from simply reading articles all the way to interviewing people. And not to forget lessons learned on academic writing. Among other things, the process of writing this thesis has also taught me many things about myself. Some lessons learned during this were how to find motivation when there was none, and how to work under pressure when there was plenty.

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Teemu Saarinen

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Abbreviations

CSGO	Counter Strike: Global Offensive
ESA	Entertainment Software Association
EULA	End User License Agreement
FPS	First-Person Shooter
IS	Information Systems
IT	Information Technology
MMOG	Massively Multiplayer Online Game
MMORPG	Massively Multiplayer Online Role-Playing Game
MOBA	Multiplayer Online Battle Arena
ROC	Rules of Conduct
TOS	Terms of Service
VAC	Valve Anti-cheat System
WOT	World of Tanks

Contents

1.   Introduction

The introduction chapter is divided into smaller sections. The first section presents the purpose of the study. The second section describes the motivation behind this study. The third section sheds some light on previous research regarding the studied area. The fourth section lays out the research question and scope of the study, while the fifth section briefly goes over the research methods. The sixth section summarizes the main contribution of this study. Finally, the seventh section outlines the structure of the whole current study.

1.1 Purpose of the study

The purpose of this study was to explore the effects of toxic behavior in multiplayer online gaming environment from the perspective of the player. Under study were also whether the toxic behaviors have any impact on the player's purchases and what are the effects of toxic behavior on flow in online gaming.

While the study interviewed players about their experiences in online gaming in general, part of the focus of the study was in match-based multiplayer online games where teamwork with co-players is highly advisable, while less attention was paid towards massively multiplayer online role playing games (MMORPG) that are a more highly studied area of online gaming. Study subjects were also asked to identify tools and methods they found useful in dealing with the toxic behavior while playing online games, which could be turned into a practical shortlist for game developers fighting to weed out toxic behavior.

1.2 Motivation

The motivation for conducting a study in online gaming area stemmed from a personal background in playing online games for over a decade, all while running into various toxic behaviors, and the sudden realization how big of a business online gaming has grown into. SuperData Research (2016) estimated that online games cover 60% of the revenue in digital PC gaming market, ultimately resulting in roughly 20 billion dollar projected earnings in 2016. The dawning of affordable high bandwidth internet connections has shifted the way video games are played and allowed players to connect and play together (Griffiths, Davies & Chappell 2003). Gaming is no longer activity of a small slice of population sometimes referred as "nerds", but a common leisure-time activity for increasing number of people from all walks of life (Griffiths et al., 2003; ESA, 2016). Playing over the internet with people across the continent while retaining real-time interaction is the reality of online gaming today. Joining the mass playing these games is simple: All you need is a computer and internet connection (Weibel et al., 2008).

Along with popularity and millions of users comes a shadow, the less-than-fun aspects of online gaming like verbal harassment, cheating and scamming attempts. Together these behaviors also go by the name toxic behavior. (Kwak, Blackburn & Han, 2015.) Toxic behavior is often not limited to one-on-one interaction, but it rather affects everyone participating in the current game, as one negative or ill-behaving player can make the whole group dysfunctional (Felps, Mitchell & Byington, 2006). People are prone to toxic behavior in online settings as they do not feel accountable for their behavior while being online and anonymous (Suler, 2004). It is easy for anyone to remain anonymous in an online game

environment as all the action takes place behind online nickname and avatar (Kwak et al., 2015), thus it can be assumed that the toxic behavior in online games is not likely to disappear any time soon.

1.3 Prior research

Gaming and online gaming has been studied from multiple viewpoints like consumer behavior (Badrinarayanan, Sierra & Martin, 2015), player experience (Johnson, Nacke & Wyeth, 2015), player demography (Griffiths et al., 2003), player motivations (Yee, 2006; Frostling-Henningsson, 2009; Hainey, Connolly, Stansfield & Boyle, 2011), role of competition (Vorderer, Hartmann & Klimmt, 2003), flow (Sweetser & Wyeth, 2005) and so forth. Toxic behaviors like cyberbullying, harassment, griefing and cheating (Kwak et al., 2015) have also been studied in various forms and environments, but only few studies have looked into them in faster paced online games that feature team play and competition as core elements. Kwak et al. (2015) ventured into the area of team competition online games where players are in constant interaction throughout the gaming experience and concluded that toxic behavior greatly degrades the user experience in those settings. However, the relationship between flow and toxic behavior in online games is still lacking research.

Griffiths et al. (2003) suggested 4% of players are motivated by anti-social activities. As players of online games are counted in hundreds of millions (SuperData Research, 2016), it can be estimated that players who exhibit toxic behavior in online games are not an uncommon sight, and people affected by such behavior are even more numerous. Some researchers like Kwak et al. (2015) have explored the area further, and already confirmed that playing against human opponent can cause increase in unsavory behavior.

1.4 Research question

Based on the literature review on previous research (e.g. Foo & Koivisto, 2004; Kwak et al., 2015; Sweetser & Wyeth, 2005; Vorderer et al., 2003), certain recurring themes in online gaming like sociality, competition and flow were brought up for closer inspection for this study. In order to get player's perspective to the study, the link between these identified themes and toxic behavior was studied by conducting qualitative interviews on the players themselves. Through the qualitative interviews the study aimed to answer the following research question:

- *How does toxic behavior affect online gaming?*

The main research question was supported by questions that were aimed to study smaller and more specific parts of the online gaming and the effects of toxic behavior in it:

- *Does the toxic behavior affect the flow experience in online games?*
- *Does the toxic behavior affect purchases made by online game players?*

Additionally, to serve the practical side of managing and playing online games, the interviews paid some attention to concrete methods that players use to deal with toxic behavior. However, the scope of the study was limited in few ways. For example, the study focused on games that fit the fourth category of Liu, Li and Santhanam's (2013) framework, the

cooperative-competitive games (see Figure 1) and people who have played these games for at least one year. Therefore, some online games like social browser games were left out of this study, while more attention was paid towards match-based online games (and their players), where player skills and teamwork have larger role in the overall gaming experience.

1.5 Research methods

A suggestion by Flick (2009, p. 48) was followed in this study, as he suggested searching for other studies in the field of the study currently worked on in order to find inspiration and hints. For example, previous literature can help to narrow the focus of the current research, help on how to design the current research and help on formulating interview questions. Existing literature shows the researcher how other people in that area work and what has been studied and in what focus, and what areas still remains unstudied. (Flick, 2009, p. 48-49; Creswell, 2013, p. 57.)

In order to shed more light on the research topic, three methods were used: First, a literature review was conducted on online gaming and toxic behavior in order to find out what is already known and what still remains unexplored, as well as in order to identify what are the core aspects that draw people to play online games. Additionally, the literature review worked as baseline for constructing a semi-structured qualitative interview. Second, data was gathered by conducting qualitative semi-structured interviews with players of online games. Third, the results of the interviews were analyzed by performing inductive content analysis. Based on the content analysis, conclusions were then made and reported.

1.6 Main contribution

Relevance of the topic stems from the fact that online gaming market has been growing for years, and is projected to keep on growing in years to come (ESA, 2016; SuperData Research, 2016). As the player base grows, the number of people affected by toxic behaviors can also be assumed to grow, unless the underlying problems are identified and effective methods to weed out toxic behavior are developed. The current study is part of that puzzle by providing the reader with thoughts and experiences on the toxic behavior from the player's viewpoint.

This study contributes by providing up-to-date information of the current status of toxic behavior in multiplayer online games, especially on the topic how toxic behavior affects players involved and how the players prefer to deal with situations where they encounter toxic behavior. Additionally, the current study provides the reader information on the link between flow and toxic behavior in online games, a previously uncharted area. As a practical outcome, this study provides the game developers with a compact checklist of methods for combatting toxic behavior in their games.

1.7 Structure

The structure of the thesis is as follows. The introduction is followed by the second chapter, where prior research regarding many aspects of online gaming is represented alongside with prior research on toxic behavior. The third chapter describes the employed research methods and the research process of this study in detail. Additionally, the third chapter includes overview of the interviewees who participated the current study. The fourth chapter briefly introduces the match-based online games that served as an inclusion criteria for the

participants of this study and received further inquiry in the research interviews. The fifth chapter presents the empirical findings of the semi-structured research interviews. Next, the sixth chapter discusses the empirical findings and their relevance to existing literature. Additionally, the sixth chapter goes over the practical implications of the current study. Finally, the seventh chapter summarizes the study results and makes note of the limitations of the current study, along with some suggestions for further research.

2. Prior research

In this chapter, the prior research regarding many aspects of online gaming and toxic behavior in online games is introduced. Section 2.1 briefly describes online gaming on a general level. Section 2.2 describes the social aspects of playing games and online games as social systems. Section 2.3 goes over the wide variety of toxic behaviors found in online games and briefly describes their known effects. Section 2.4 introduces the competitive aspect of playing games and its significance in gaming experience. Section 2.5 takes a look into flow sensation and how it is found in games. Section 2.6 outlines managerial aspects in online games and the significance of managing online games. Finally, Section 2.7 puts together a summary of Chapter 2.

2.1 Online gaming in general

Online games can be described as games that are played over computer network of some sorts, in most cases over the internet. In online games it is commonly possible to play versus other human players, and playing competitively against human opponents provides more player enjoyment than playing against computer controlled opponent (Weibel, Wissmath, Habegger, Steiner & Groner, 2008.) Online games have taken their place as important part in global entertainment and media markets in the past decades. Driving forces behind increasing multimedia business are the increasing internet expansion and social media revolution, which are also working in favor of the digital game sector by providing them a platform for massive growth. Game development organizations are constantly looking for new ways to engage more consumers and improve the current user experiences. (Aleem, Capretz & Ahmed, 2016.) Online games enable the user to be entertained, as they are one variety of entertainment-oriented information technology (IT) based on the internet. Internet enables the users of online games to interact with other users while assuming various roles. Intention the play online games is influenced by social norms, attitude and flow experience. (Hsu & Lu, 2004.)

Computer games serve as elaborate socio-technical behavior settings that allow various player behaviors based on the player's decisions, goals, and strategies, how the player uses the game objects and resources, and the cooperative or competitive interactions with other player-controlled or computer-controlled characters (Clarke & Duimering, 2006). Gameplay is a situated sociocultural activity that spans over brain, body and the game environment (Rambusch, 2006). Multiplayer gameplay is coordinated and distributed throughout the game structure, game world, game interface, player and other objects and people (Rambusch, Jakobsson & Pargman, 2007; Clarke & Duimering, 2006).

Playing and mastering games provide the players with experiences of flow, while also offering them a short break from reality and real-life obligations. Among other things, online games provide players with an opportunity to behave in a certain way or do things they would not do in normal circumstances, even in ways that would be considered unacceptable in the real-world settings. (Frostling-Henningsson, 2009.) Overall, games provide more level playing field than real life sports, as they largely remove the requirement for physical attributes like height or strength (Sherry, Lucas, Greenberg & Lachlan, 2006).

Online gamers are motivated by variety of things like cooperation, competition, communication, escapism, flow and sociality (Frostling-Henningsson, 2009). Sherry et al. (2006) found arousal, challenge, competition, diversion, fantasy and social interaction to be the strongest motivations for playing games. They discovered that especially young males found challenge and competition as top reasons for playing games. However, social interaction was among the biggest predictors of time spent on playing games in their study. Challenge was also top ranked motivation in both playing online and offline in study by Hainey et al. (2011). Results of Hainey et al. (2011) also imply that optimal level of challenge or flow has an impact on other motivations of play like competition or cooperation. Study by Clarke and Duimering (2006) found that the first-person-shooter (FPS) game players hold social interaction, such as having fun with friends and chatting with them, and challenge or competition, for example beating others in the game as the most positive experiences in multiplayer games. The opposite end, -negative experiences reported-, were about players using cheats to beat the opponent or players behaving in anti-social manner, like bullying fellow players, having bad attitude, verbally abusing others or team-killing friendly players.

Liu et al. (2013) presented a framework (Figure 1) for studying games that maps the games based on the nature of social interactions. In their framework the IT also plays different roles in the four presented environments, as each of them host different social interactions.
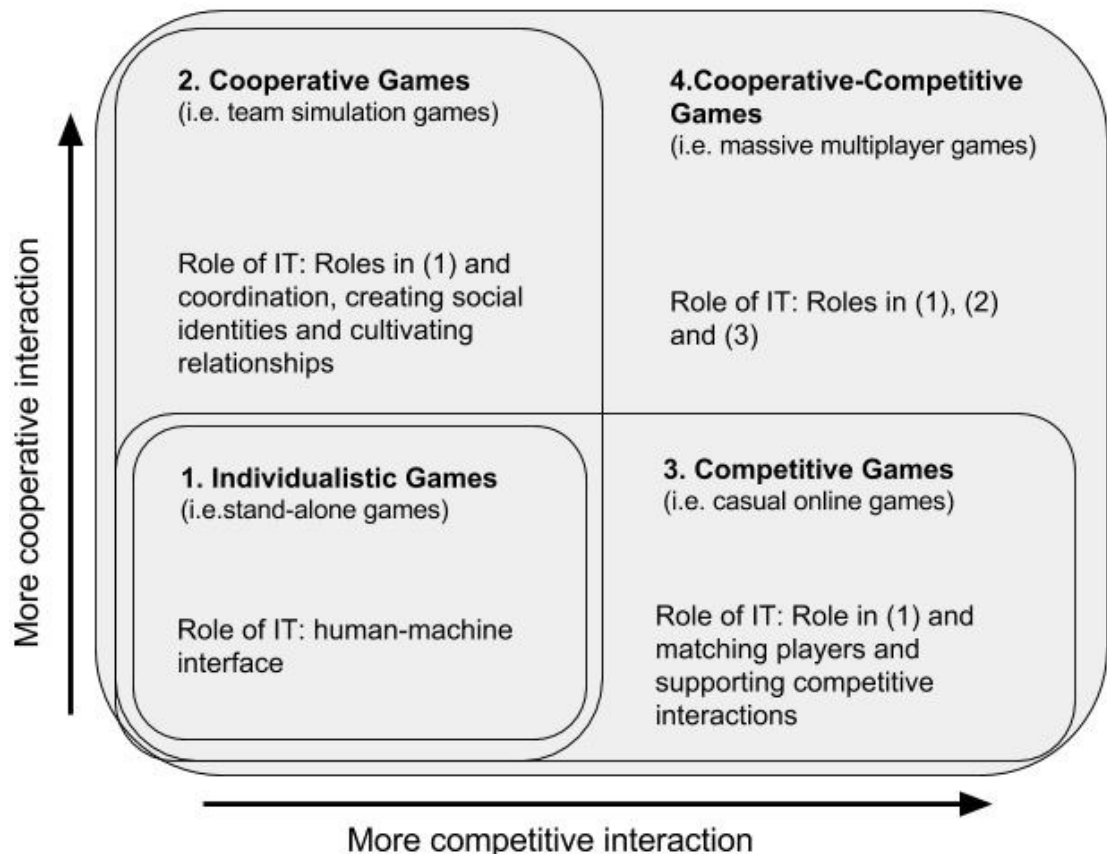

Figure 1. Framework for game-playing research (Liu et al., 2013).

The framework seen in Figure 1 classifies game design either as individualistic (1), cooperative (2), competitive (3) or cooperative-competitive (4). First group, individualistic

games can be for example single player games and the role of IT is to provide human-computer interface. Second group, cooperative games are games where a team faces common challenge and the role of IT is to facilitate coordination, trust and social identities. Third group, the competitive games can be for example a game where two players compete to win over each other, and the role of IT is to provide skill-based matchmaking and enable competitive interactions. Fourth group, cooperative-competitive games are multiplayer games where players are teamed up to fight other team or teams of players, and role of IT is to perform all aforementioned functions. (Liu et al., 2013.)

2.2 Social aspect of gaming

Online games often have various online communities around them, making these games social activity and setting them apart from single player games (Weibel et al., 2008). Vendors should keep maintaining their online game communities to ensure players can enjoy social interaction while gaming (Lu & Wang, 2008). Playing with others can possibly lead to completely new way of experiencing the game compared to a situation where player is playing alone, as player is experiencing the emotions and reactions introduced by the game in the company of others (Sánchez, Vela, Simarro & Padilla-Zea, 2012). Over the last decade, games have shifted from solitary activity to shared social experience where players interact in various ways (Ross & Weaver, 2012).

When a person participates in a social space online or offline, the person agrees to an unspoken social contract that outlines the expected behavior inside that specific context. Implicit in nature, this contract expects every community member to follow it for the good of everyone. (Boucher & Kelly, 2003.) In emerging online communities forming social contracts is more complicated process, as every new member has a cultural background of their own and expectations set by their offline environment culture. Social cultures and norms are often constantly evolving, as tools of communication change and community membership changes over time in online environments. (Kirman, Lineham & Lawson, 2012.) Shores, He, Swanenburg, Kraut and Riedl (2014) argued that developers should be active in encouraging positive community norms, most notably when interacting with those players who are new to the game.

The underlying mechanics of online social systems are important factor in forming of social contracts between users, as those mechanics are the tools that enable communication. For example, in online games communication is often not limited to only traditional written dialogue as players can fight, trade and form communities, which are all forms of social interaction. Online games are often largely designed and built to meet social communication requirements like competition and cooperation. (Kirman et al, 2012.)

Governing online communities around online games is beneficial to both players and game companies, as player behavior is governed by various rules and informal mechanisms. Rules include items like the end user license agreement (EULA), rules of conduct (ROC) and laws like intellectual property law. Informal mechanics include aspects like community guidelines or underlying social norms. (Kou & Nardi, 2014.)

Game companies relying upon the rules crafted by themselves to control player behavior is not without problems: EULAs and ROC allow game companies to discipline players one-sidedly, without player having room to negotiate or discuss the situation. In order to get

access to the online game or community, the player must accept the proposed EULA or ROC. These rules are often in conflict with community norms. (Kou & Nardi, 2014.)

Online gaming is considered to be very socially motivated, as playing together in cooperation and communicating with other players provides the players with a strong sense of togetherness (Frostling-Henningsson, 2009). Lu and Wang (2008) supported the idea that online game players receive more pleasure from playing when their friends also participate. Guo, Shen, Visser and Iosup (2012) also found positive correlation between player lifetime and the number of in-game friends. Shores et al. (2014) argued that playing with friends is a stable predictor of remaining to play the game regardless of the player experience: However, the bond of playing with friends and staying to play is especially strong in more experienced players.

However, group settings do not always foster only positive effects. In work settings dysfunctional groups are often caused by "bad apple" phenomenon, where a group member has powerful detrimental effect on rest of the team or group. In some cases a single toxic team member can result in the whole group dysfunctioning: When one member of a team is expressing negative behavior like violating interpersonal norms, it will result in other members trying to initially change that negative behavior, but failing that the result will be rejecting the negative team member. If the negative behavior is intense and other group members lack coping methods, the group is highly likely to decrease performance in cooperation and coordination, resulting in poor performance. (Felps et al., 2006.)

Domahidi and Quandt (2015) studied heavy gamers who spend at least three hours a day playing games; half of their 35 interviewees highlighted the importance of social components of the game and over half reported playing in online guilds or clans on a regular basis. According to them, building social contacts through the game and playing with other people was considered a strong motivation to play. Studies on MMORPG players (e.g. Yee, 2006; Badrinarayanan et al., 2015) and a study on online browser game Travian (Klimmt, Schmid & Orthmann, 2009) also reported social component to be one of the most important motivator to play online games. Kowert, Festl and Quandt (2014) also found out that people who play online games report greater social motivations and greater problematic play behavior than those who play offline or do not play games at all.

2.3 Toxic behavior in online games

There are many negative behaviors present in online gaming, for example cyberbullying, cheating, harassment and griefing. These terms are often grouped together and called toxic behavior. (Kwak et al., 2015.) Toxic behavior also includes behaviors like sending offensive messages or intentionally helping the opposing team (Shores et al., 2014). The use for word "toxic" to describe bad behavior in multiplayer games comes from the way numerous players are exposed to the bad behavior; Multiplayer games are reliant on player interactions, and the bad behavior does damage to the community involved. (Blackburn & Kwak, 2014.) However, Kirman et al. (2012) added that provoking or violent play is not always considered to destroy the social contract between users if that behavior is considered to be within boundaries of what can be expected by other users in that particular environment. Different communities or parts of community may identify or define toxic behavior in different ways depending on the situation where assumed toxic behavior takes place (Shores et al., 2014).

According to Lin and Sun (2011) and their investigation to Taiwanese massive multiplayer online game (MMOG) players, the single biggest reason for opposing free-to-play games (versus subscription based games that cost money) was maintaining the order and quality of the game. Another common perception among their interviewees was that free games attract too many unsavory player types, like griefers, bullies, harassers, bot users and such, as free games enable the user to simply make a new account if old account is banned for breaking the rules. Ross and Weaver (2012) even suggested that antisocial behavior could possibly become normative in some virtual environment if the starting conditions and context are suitable.

In most cases, online games have rules that players are expected to follow. There are three types of rules in online games: First, what is allowed by program code as in the technical boundaries. Second, online games usually have Terms of Services (TOS), ROC or EULA that player agrees to follow when he or she initially starts to play the game. Third, there are often loosely defined game-specific implicit rules like "fair play" etiquette in place. Game developers are mainly interested in the first two, but often reserve the right to intervene in extreme cases where a player goes again third rule. This is often done by implementing "a catch all phrase" in ROC that, for example, states that player may not play the game in a way that prevents others from enjoying the game. (Foo & Koivisto, 2004.)

According to Kou and Nardi (2014), players often communicate with the game company in order to seek clarification when they perceive the rules set by game company to be ambiguous or leave room for interpretation. This communication often takes place via game forums or in-game channels. Additionally, players often think rules cannot be applied directly in many complex situations, but instead the players then refer to their understanding of the norms to judge certain behaviors. Kirman et al. (2012) argued that implicit rules in social systems often require some negotiation as people have different expectations due their cultural background, and that it can be considered natural that there are people who break those implicit rules either on purpose or by accident. Kowert et al. (2014) found positive relationship between problematic play and involvement among the online players, suggesting that greater involvement in online gaming activity will also increase the probability of problematic play qualities, for example mood swings, withdrawal, conflict and other problems.

Describing one type of toxic behavior, Mulligan and Patrovsky (2003) explained a griefer to be a player who gets enjoyment from performing actions that reduce the enjoyment of the game by others rather than playing the game itself. Foo and Koivisto (2004) underlined three points in the previous definition: Griefer enjoys the act, the griefing act reduces enjoyment of other players and griefers act is intentional. Paul, Bowman and Banks (2015) argued that griefing is often looked down upon and punished in many online games, but regardless it is a common gameplay style for some of the players. According to them, those who identify as griefers receive the same amount of enjoyment from griefing as non-griefing players get from their gameplay, which lines up with the earlier study by Foo and Koivisto (2004). Perception of griefing behavior is different for each individual (Blackburn & Kwak, 2014).

Griefing can be divided into four categories: harassment, power imposition, scamming and greed play. In harassment, griefer's intention is to cause emotional distress to the victim, for example by shouting slurs in chat. In power imposition the griefing player demonstrates superior knowledge of the game mechanics and uses this knowledge to impose power over the victim while receiving very little to no benefit from the act, for example repeatedly killing

a new player. Scamming refers to fraudulent behavior while trading goods with other player or alternatively when a player deceives another player by posing as someone else in order to gain benefits from him or her. Greed play is a sort of unsportsmanlike behavior, where a player goes against the implicit rules in order to maximize their own benefits regardless how other players may feel about their actions. (Foo & Koivisto, 2004.)

Foo and Koivisto (2004) and Lin and Sun (2007) both argued that griefing can be ambiguous in some cases, as players have no explicit intention of griefing, but they end up acting like griefer without acknowledging it. There are self-aware griefers who justify their offensive ways of playing games, but there are also general griefers who are hard to identify. The general griefers may play in selfish way and be perceived as griefers by the others, while remaining unaware of their own bad behavior. (Lin & Sun, 2007.) The general griefers often engage in greed play (Foo & Koivisto, 2004).

In a study by Paul et al. (2015), half of those who reported to engage in griefing were victims of griefing themselves and had done so as retaliation, "to fight fire with fire", in order to stop misbehavior of other player. Ross and Weaver (2012) also found out that victims of griefing were later more likely to engage in griefing than those who were not griefed. In their study, victims of griefing reported decreased enjoyment, increased frustration and increased aggression after falling victim to griefing.

Foo and Koivisto (2004) tested how players react to getting killed by actions of other player: In their test scenario the players often initially forgave other player when he or she got them killed by his or her actions. If the deed occurred again, it was viewed as griefing regardless of the intention of the player behind the cause. (Foo & Koivisto, 2004.) Results of Paul et al. (2015) suggest that those who grief for their own amusement are motivated by proving their competence or skill, while those who grief as retaliation often bring a social element to griefing, like protecting rest of the group from the griefing of others.

Bullying can be defined as an intentional act or behavior that is often aggressive and carried out by individual or group repeatedly and over time against a victim that cannot easily defend oneself. Cyberbullying is a form of bullying that takes place through electronic forms of contact, often involving internet or mobile phones. Cyberbullying has grown as networked computers, internet and mobile phones have become common everyday mediums for young people. (Smith et al., 2008.) Cyberbullying has not been thoroughly studied in online gaming environment. Cyberbullying differs from griefing, as cyberbullying is meant to harm the target, whereas griefing is aimed more towards ruining the enjoyment of the target as a playstyle for certain players. (Paul et al., 2015.) In South Korean culture, a term "wang-tta" has emerged to describe a social phenomenon where the lowest or worst skilled player is isolated and bullied in one's peer group (Chee, 2006).

Cheats (or hacks) in online games refer to software components that give a player unfair advantage over other players while breaking the game rules (Blackburn et al., 2012; Yeung, Lui, Liu and Ya, 2006). Clean players who do not employ cheats have very little to no chance to best a cheater (Yeung et al., 2006). Cheating in a multiplayer game destroys the balance of challenge in the game and spoils the competition factor for human participants (Clarke & Duimering, 2006). For example a cheat can give player ability to see through walls in a shooter game or guarantee that player lands all fired shots, thus giving the player using cheats advantage over non-cheating players. However, the game industry is aware of cheating and

actively using resources to combat cheating in online games. One example of this is Valve Anti-Cheat System (VAC) that uses technical means to identify players using cheats and then proceeds to mark the player profile of those caught cheating. (Blackburn et al., 2012.) Most of online games employ some form of technical anti-cheating software, but that alone is not enough to completely prevent cheating, as new version of cheat is often made available shortly after previous version gets detected (Yeung et al., 2006).

In addition to technical means of detecting cheating, some online games have administrators present in the game servers. Administrator may receive complaints from other players considering a particular player to be cheating or otherwise ill-behaving, or they may observe such action first hand and then proceed to remove the said player. However, this method of monitoring game is very labor intensive and not a scalable solution, thus it is not fit for games where the amount of players range in tens of thousands. (Yeung et al., 2006.) Some solutions employ crowdsourcing in dealing with toxic behavior, like for example League of Legends "Tribunal" system. Player reports bring a player to Tribunal, where a random player council evaluate his or her behavior, and then take a majority vote to judge if the behavior was worthy of punishment. (Blackburn & Kwak, 2014.)

Suler (2004) described a phenomenon called the online disinhibition effect: People say and do things online that they would not do and say in offline environment or in face to face situations. The effect has two opposing ends, the benign disinhibition and toxic disinhibition. In benign disinhibition a person might share very personal things or go out of their way to help a stranger while in cyberspace. In the other end, toxic disinhibition, habits like rude language, anger, hatred or threats are common occurrences that are targeted to damage other users' self-image. As some of the primary factors for these behaviors, Suler (2004) mentioned anonymity provided by internet, physical invisibility while in cyberspace, detaching online persona from real world self and treating cyberspace as a game where normal rules do not apply. Later, Lapidot-Lefler and Barak (2012) underlined the lack of eye-contact as the most essential factor in toxic online disinhibition.

One form of toxic online disinhibition is flaming behavior (Lapidot-Lefler & Barak, 2012). Flaming behavior can be defined as use of hostile expressions in relation to other users in online communication. Common features include various text elements like aggressive language, threats, negative comments, disrespecting names and sexual harassment. (Dyer, Green, Pitts & Millward, 1995.) Summary of toxic behaviors found in literature is presented in Table 1.

Table 1. Short descriptions of toxic behaviors found in literature.

Toxic behavior	Short description	Source
Flaming or Harassment	Sending offensive messages in chat or voice chat	Dyer, et al.,1995;; Lapidot-Lefler & Barak, 2012; Suler, 2004
Griefing	Imposing power over other players while receiving little to no benefit from it, unsportsmanlike behavior where player goes against implicit rules regardless how other players feel about their actions	Foo & Koivisto, 2004; Mulligan & Patrovsky, 2003;
Cheating	Using software that grants unfair advantage over other players while breaking game rules, e.g. see through walls	Blackburn et al., 2012; Yeung et al., 2006
Scamming	Fraudulent behavior while trading goods with other player or posing as someone else to gain benefits, stealing virtual goods	Foo & Koivisto, 2004
Cyberbullying	Act or behavior carried out by individual or group repeatedly and over time, aimed to harm the target. Bullying done by using electronic means of communication	Chee, 2006; Paul et al., 2015; Smith et al., 2008;

Kwak et al. (2015) put forward a term called toxic behavior to describe negative behaviors in online games (Table 1), including for example flaming (e.g. Lapidot-Lefler & Barak, 2012), griefing (e.g. Foo & Koivisto, 2004), cheating (e.g. Blackburn et al., 2012) and cyberbullying (e.g. Smith et al., 2008). These online game behaviors can also be called anti-social behaviors (Kirman et al., 2012) or deviant behavior (Shores et al., 2014). It is estimated that 4% of the players are motivated by anti-social activities while playing online games (Griffiths et al., 2003). Blackburn and Kwak (2014) stated that the impact of toxic players is problematic for the gaming industry.

According study by Shores et al. (2014), players who chose to play more competitive game mode scored higher on toxic behavior than those who chose to play less competitively in normal mode. However, they were not able to prove that players who have played longer would be more toxic than newcomers. They also made several findings on player retention in their study: For example if a newcomer is paired with highly toxic player, the chances that the newcomer quits the game for good are increased. However, seasoned players showed no effects on game retention regardless of toxicity of the other players. They suggested that this is due selection effect against players with low tolerance for toxic behavior, as players must either grow a tolerance for toxic behavior or get driven off from the game.

In addition to behaviors listed in Table 1, there is also the act of mischief. Act of mischief takes place in the grey area between socially acceptable behavior and anti-social behavior. Boundaries of this grey area are often not clear and it takes time for certain behavior to be deemed acceptable or unacceptable within given social context. In tight-knit social communities playful mischief is often present and people have open attitude towards toying with boundaries of acceptability. In online systems the mischievous activity often serves the

purpose of exploring and testing the boundaries of acceptability in the fresh social environments. (Kirman et al., 2012.) The distinct difference between mischief and anti-social behavior is found in attitude of playfulness, as mischievous user has no actual intent of doing harm, unlike a user who is engaged in grief play (Kirman et al., 2012; Foo & Koivisto, 2004).

On a general level, online game players and communities dislike those who break the rules of the game regardless of their cultural background. (Blackburn et al., 2012.) Yeung et al. (2006) argued that cheating in multiplayer games is common due cheats being easily accessible on the internet. Yeung et al. (2006) added that unchecked cheating will ruin the entertainment value of a game, resulting in non-cheating players to eventually abandoning the game and possibly resulting in a monetary loss for the developer. According to Shores et al. (2014) toxic behavior should be addressed directly and not by roundabout methods like decreasing competitiveness, as part of the player base is likely drawn in by the competitive aspect of the game. Additionally, they mentioned that failure to react properly might result in decreased user retention. In the study of Clarke and Duimering (2006), cheating was the most frequently mentioned negative social behavior in online gaming.

User retention is important in online environments, and that retention is threatened by acts of deviant behavior and toxic behavior. Toxic behavior can be seen as subgroup of deviant behavior, and it is often described with word un-sportsmanlike. Designers are attempting to fight deviant behavior in various ways, depending on the platform where the said behavior takes place: In forums there are moderators surveying users and maintaining order by removing inappropriate posts and banning repeated offenders. (Shores et al., 2014.) In several online games there are systems in place that allow players to report ill-behaving players to moderators who judge the case and set punishment if necessary. Most online games also have automatic anti-cheating software in place. (Yeung et al., 2006.)

2.4 Competitive aspect of gaming

Rambusch et al. (2007) discovered that the gameplay changes over time for some players; it starts from fun and leisure but after a while the player gets more serious. For example, in the game Counter-Strike this is enabled by the game design, as it allows competitive play by rewarding good reflexes, dexterity and hand-eye coordination. In some cases it is taken further, as player identity evolves along with increased skill, often leading player to join or create a clan or team. This shifts emphasis from individual play to team play, further highlighting the need for good communication skills and ability to adapt. Players start to view themselves not only as individuals but also part of the team, where their actions also affect other members of the team. (Rambusch et al., 2007.) The common activity for teams is to battle online versus other teams in tactical combat with intention to beat the opponent and win the match (Griffiths et al., 2003).

Jansz and Tanis (2007) surveyed players of FPS games and discovered that most committed players were often part of professional or semi-professional clans and more motivated by the competition and challenge aspects than those players who were part of amateur clans or had no clan affiliations. Overall, their survey strongly suggested that online first person shooter games are not played in isolation, but instead that social interaction motive was the biggest predictor of the time a player spends on gaming activity. Liu et al. (2013) argued that players are also motivated by competition even if there are only symbolic rewards involved. Results

of three separate studies by Hainey et al. (2011) suggested that males play computer games considerably more per week than females of the same age group.

Johnson et al. (2015) interviewed people who play multiplayer online battle arena (MOBA) games on a weekly basis and found three underlying themes: One, competition and sense of achievement are highly valued. Two, players gain satisfaction through sense of mastery (e.g. beating a higher ranked player). Three, teamwork is driving force for the players.

Flow and exploratory behavior in virtual environment are emphasized by the level of individual's skills to handle oneself in interactive virtual environment and the challenges and immersion provided by that environment. Skills involve the individual's capacity for action inside the virtual environment, while challenge refers to the degree of which the environment offers opportunities for taking action. When these two factors are not aligned, the result is likely boredom (skill surpasses challenge) or anxiety (challenge surpasses skill). (Hoffman & Novak, 1996.) Liu, Li and Santhanam (2013) also argued that in competitive games players put more effort into playing and play for longer periods of time if they are equally matched with their opponents, in comparison to players who play against opponent of higher or lower skill.

Large skill gap between the participants of online game match can result in a discouraging experience, as skilled players may lack challenge and those of lesser skill may simply give up (Guo et al., 2012). Mismatched player skills was the most commonly mentioned issue when playing FPS games with other people (Clarke & Duimering, 2006). Match-based online games often have a rating system in place to help players find opponents of a similar skill levels (Guo et al., 2012).

Competitive aspect of gaming is not exclusive to any certain genre of games, but is rather found across the board: For example MMORPG (Yee, 2006), FPS (Jansz & Tanis, 2007; Rambusch et al., 2007; Clarke & Duimering, 2006), MOBA (Johnson et al., 2015) and Strategy (Klimmt et al., 2009). ESA (2016) report on video game industry also stated that 50% of most frequent American gamers are familiar with eSports, also known as "Electronic Sports" or professional gaming, which features playing games as a spectator sports

Adachi and Willoughby (2011) discovered that competitiveness in video games is more related to aggressive behavior than violent content of games. According to their study, violent game content without the presence of competitiveness was not found to cause increased level of aggressive behavior. Instead, games with competitiveness strongly present produced higher levels of aggressive behavior regardless of violent or non-violent content of the games.

2.5 Flow experience in gaming

Csikszentmihalyi (1990) has studied flow, a mental state of operation in which individual is completely absorbed in what he or she is doing. When someone is taking part in an activity for its own sake, a state of flow may occur. The state is so enjoyable that an individual is intrinsically motivated to repeat the performed activity continually. Mental state of flow is characterized by full involvement, the feeling of energized focus and success in the process of the pursued activity. Flow experience is further described with characteristics like intense involvement, concentrating and focusing, clarity of goals and feedback, distorted sense of time, lack of self-consciousness, balance between challenge and skills to match it, and finally

the full control over the pursued activity. (Csikszentmihalyi, 1990, p. 71) Flow experience is one key aspect of predicting intention to play online games (Hsu & Lu, 2004).

Hsu and Lu (2004) and Koufaris (2002) both argued that flow is too broad and often vaguely defined, as it contains many concepts. For the purpose of their study on online gaming, Hsu and Lu (2004) defined flow as "an extremely enjoyable experience, where individual engages in an on-line game activity with total involvement, enjoyment, control, concentration and intrinsic interest". Koufaris (2002) also named intrinsic enjoyment, perceived control and concentration as the most valuable components in flow research. Figure 2 shows a two-dimensional four-channel model of flow commonly used for describing gameplay experience (Nacke & Lindley, 2010).
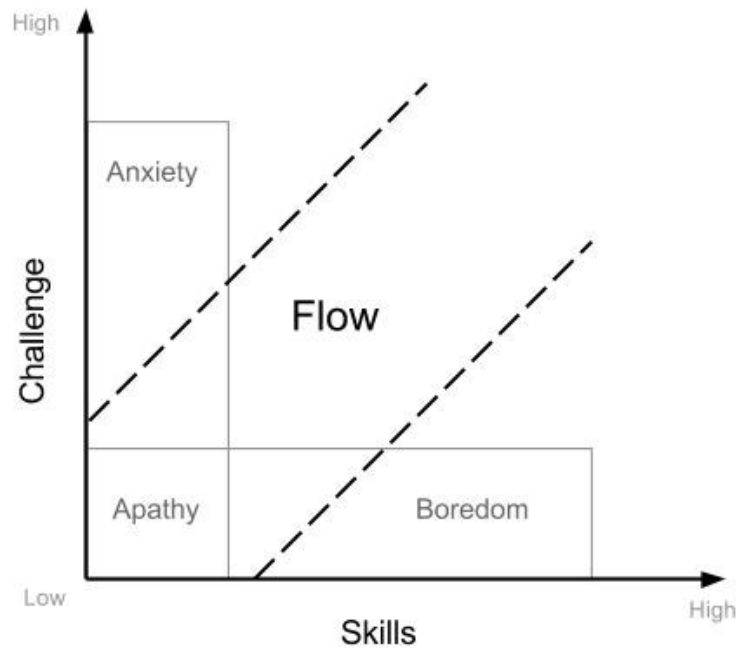
Figure 2. Two-dimensional four-channel model of flow (Nacke & Lindley, 2010).

Hoffman and Novak (1996) described flow in similar manner as Figure 2, as mismatched challenge and skills result to either anxiety or boredom. Hsu and Lu (2004) argued that keeping the users in flow state is essential in entertainment applications like games.

Sweetser and Wyeth (2005) adopted the enjoyment model of flow and evolved it into a model called "GameFlow" that is specifically targeted for reviewing enjoyment in games, while further proving that flow sensation is commonly found in gaming. GameFlow featured following elements: Concentration, challenge, player skills, control, clear goals, feedback, immersion and social interaction. The GameFlow model adds social interaction as a new aspect, which was not mentioned in original concept of flow by Csikszentmihalyi (1990), and adapts rest of the elements from game literature to match the elements of flow. Furthermore, one aspect of social interaction is the social competition, as satisfaction is also drawn from competition and winning versus other people playing (Vorderer et al., 2003; Sweetser & Wyeth, 2005). Players experience more positive emotions from challenging gameplay than very easy gameplay, thus drawing enjoyment more from the challenge than a simple victory or success in a task (Nacke & Lindley, 2010).

Flow experience is important factor predicting intention to play online games. Forming of flow experience is supported by easy-to-use interface. On the other hand, if a user is met with difficulty of use that cannot be overcome, flow and usefulness of the game will not be perceived, potentially leading to user abandoning the online game. (Hsu & Lu, 2004.) Flow experience itself does not greatly vary among online game genres, but all the game genres support flow and competence in equal fashion (Johnson et al., 2015).

Vorderer et al. (2003) claimed that games have become the most interactive instrument in new media. In turn, Sherry (2004) pointed out the significance of flow in media consumption, arguing that media enjoyment is ultimately result of flow experiences. Further, these flow experiences occur especially when playing games: Sherry (2004) states that "Video games possess ideal characteristics to create and maintain flow experiences in that the flow experience of video games is brought on when the skills of the player match the difficulty of the game". Game developers should aim to keep users in a flow state, as flow experience plays key role in applications aimed for entertainment (Hsu & Lu, 2004).

Aspect of competition in games goes along with interaction and enjoyment (Vorderer et al., 2003). Type of the opponent is relevant in online games: Playing against other humans results in more feelings of presence than playing versus the computer, and additionally increases feeling for flow and enjoyment. (Weibel et al., 2008.)

2.6 Managerial aspect in online games

Estimating player lifetime is a crucial task for an online game company, as by successfully predicting the player's game lifetime the company can employ methods to prolong that time and better market in-game items or side products (Guo et al., 2012). Attractiveness of online game experience can be significantly increased by high-quality customer service. Providing unique service in the growing field of online game market is one way for company to increase market share and distinguish themselves from the competitors. (Luo, Liu, Shao, Lu & Ye, 2006; Aleem et al., 2016.) One traditional method of customer support has been call centers that provide customers with primitive support functions, such as account-information retrieval and answering general product questions. However, many online game players consider these functions insufficient as their requests often involve instant in-game support. (Luo et al., 2006.) Lu and Wang (2008) stated that online gaming vendors need to provide services like fraud prevention and cheat detection to improve and retain customer loyalty.

Increasing online game customer loyalty is achieved by providing customers with suitable personal (player-game) and social (player-player) interactions, thus achieving optimal experience. Efficient personal interaction and social interaction have positive effect on how players experience flow, which in turn has a positive effect on forming customer loyalty. (Choi & Kim, 2004.) Most significant factors that affect online game customer loyalty are interaction and communication between people, quality of service and the difficulty and challenge that game provides. More precisely, difficulty and challenge affects image of the game and recommendation desire of the customer, while quality of service has most effect on repurchase and cross-purchase appeal, cross-purchase meaning that if a customer is happy with product or service, he or she is more willing to purchase relevant products or services. (Sheu, Su & Chu, 2009.)

Managers of online games need to be aware of the significance of social influences, as interaction among users of the game can lead to forming of communities and thus bringing in more users. Attracting opinion leaders and community builders affects other players by normative effect, and by keeping in contact with user base the developers can further accelerate word-of-mouth communication. The more users online game attracts, the more experience generated by users it has, again attracting more users. (Hsu & Lu, 2004.) On the other hand, unchecked deviant behavior may have the similar but negative effect, causing players to abandon the game (Yeung et al., 2006).

When an organization has invested in quality customer service and functional promotion of its image, it gains greater benefits from customer's word of mouth activity. If the customers are satisfied with the service or product they are more likely to provide positive word of mouth, and the receiver of the word of mouth recommendation is more likely to act if they already have a good opinion of the product or service provider. Word of mouth is most effective when the receiver needs more information on the product or service and when they wish to reduce the perceived risk of the purchase. (Sweeney, Soutar & Mazzarol, 2008.) Bickart and Schindler (2001) also suggested that electronic word of mouth, like online customer forums, provides more empathy, credibility and relevance than information generated by the organization itself due relating to personal experiences.

2.7 Summary

Online games are games that are played over the internet, usually against other human players (Weibel et al., 2008). Online games are a form of entertainment-oriented IT based on the internet, allowing users to interact with other users while assuming various roles (Hsu & Lu, 2004). Multiplayer gameplay is coordinated action that involves the game structure, game world, game interface, game players and other objects and people (Clarke & Duimering, 2006). Playing online games provides the player with short break from reality and opportunity to behave in a way they would not behave under normal circumstances. Online gamers are motivated by wide range of things, including cooperation, competition, communication, sociality and flow. (Frostling-Henningsson, 2009.)

Online games are set apart from single player games by online interactions and communities grown around them, making them a social activity (Weibel et al., 2008). When participating in social space online, the person agrees to implicit social contracts that outlines the expected behavior inside that context (Boucher & Kelly, 2003). In online communities forming a social contract is complicated process, as members come from different social and cultural backgrounds. Underlying mechanics of online systems like games are also important factor in forming social contracts, as they allow more communication methods than only written dialogue, as players can fight, trade and form communities or groups. (Kirman et al., 2012.)

Online gaming also involves presence of many negative behaviors, such as harassment, griefing, cheating or cyberbullying that are also called toxic behavior (Kwak et al., 2015). Commonly online games have multiple levels rules that players are expected to follow, for example technical boundaries set by programming code, TOS set by the gaming company and sets of implicit rules like the fair play etiquette (Foo & Koivisto, 2004). Some of the toxic behaviors like cheating often directly break the rules of the game (Blackburn et al., 2012), while other behaviors like griefing break the implicit rules in place (Kirman et al.,

2012). Those who break the rules in online games are often disliked by other players and communities regardless of their background (Blackburn et al., 2012).

Toxic behavior can pose a threat to user retention in online games, and developers combat toxic behavior in various ways (Shores et al., 2014). In order to retain customer loyalty, gaming companies need to provide services like fraud prevention and cheat detection (Lu & Wang, 2008). Gaming organization that has invested in customer service and managed to satisfy their customer gains benefits from customer word of mouth activity (Sweeney et al., 2008). Most important factors affecting online game customer loyalty are interaction between people, quality of service and challenge that game provides (Sheu et al., 2009).

Online games enable user to experience flow (Sherry, 2004). Flow is a mental state characterized by feeling of complete focus and full involvement, and additionally involves distorted sense of time and lack of self-consciousness for the person (Csikszentmihalyi, 1990, p. 71). Flow experiences is one key aspect in predicting intention to play online games (Hsu & Lu, 2004) and it is found in all game genres (Johnson et al., 2015). Flow is emphasized by skills to handle oneself and also by the challenge provided by the virtual environment (Hoffman & Novak, 1996). If the skills levels of players in online game match, then they are more likely to put more effort into playing, especially when playing competitively (Liu et al., 2013). Figure 3 summarizes the described online gaming environment.
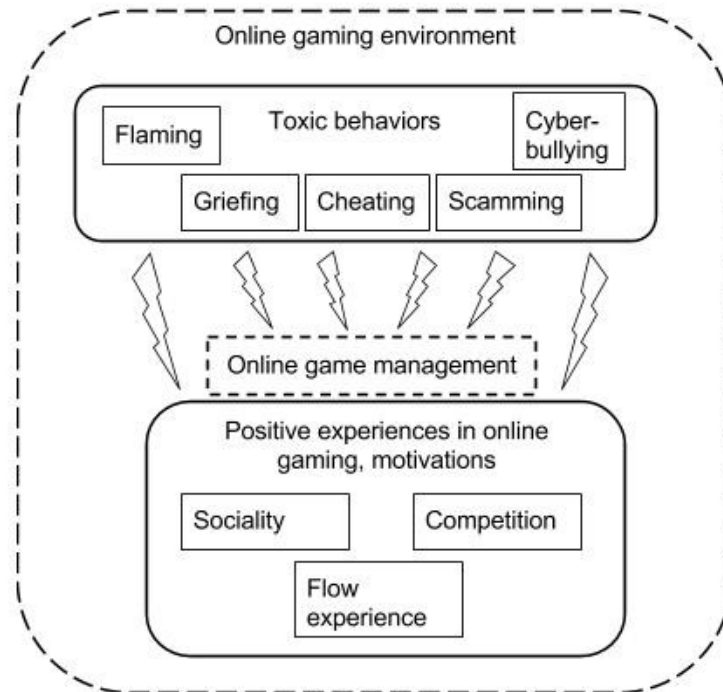
Figure 3. Online gaming environment summary.

As presented in Figure 3, online gamers are motivated by the social and the competitive aspects of gaming, and the gamers often find flow experience from gaming (Frostling-Henningsson, 2009), but there are toxic behaviors like griefing and cheating present (Kwak et al., 2015), that often go against the rules of the game (Blackburn et al., 2012). Developers and administrators of the online games are trying to fight the toxic behaviors with many different methods (Shores et al., 2014).

3.   Research approach

In this chapter, the methodology of the study and chosen research methods are described from theoretical viewpoint, followed by description on how the methods were applied in practice. In the first section considerations on choosing methodology are recapped. In the second section qualitative research and what to consider when conducting qualitative research are briefly outlined on general level. In the third section key points of qualitative interview and semi-structured interview are described. The fourth section goes over a process called "investigate the investigator" that was employed in the current study. The fifth section summarizes the used sampling method, snowball sampling. The sixth section describes qualitative content analysis and the process of conventional inductive content analysis. In the seventh section a short summary of the chapter is represented. Finally, the eighth section describes how the chosen research methods were applied in practice and how the research process progressed.

3.1 Methodological considerations

While planning a study, the philosophical worldview that a researcher brings the study should be taken into consideration. Basic ideas of that worldview shape the approach to the study in practice. Worldview of the researcher rises from their discipline orientations, advisor or mentor inclinations and past research experiences. Four most widely discussed worldviews in literature are postpositivism, constructivism, pragmatism and transformative. (Creswell, 2013, p. 34-36). Constructivism breaks away from traditional positivist assumptions where a single truth that corresponds with singular reality is sought, towards a more flexible and culturally relative perspective where knowledge is constructed based on personal and social experiences (Doolittle & Hicks, 2003).

In addition to selecting between qualitative, quantitative or mixed method, the researcher also has to make a decision on type of study within the chosen method. Research designs are types of inquiry that reside within the qualitative, quantitative and mixed methods, providing for more definite course for procedures in designing the research. (Creswell, 2013, p. 41.) Creswell (2013, p. 41) brought up some inquiry approaches in qualitative research that have gained more visibility in the 1990s and 2000s: Narrative research (e.g. Clandinin & Connelly, 2000), phenomenological research (e.g. Moustakas, 1994), grounded theory (e.g. Corbin & Strauss, 2007), ethnography (e.g. Wolcott, 1999) and case studies (e.g. Yin, 2009).

Case study is a research strategy that tries to examine a currently occurring phenomenon in the real-world context it appears, especially when the boundary between the phenomenon and its context is not apparent. Conducting a case study does not automatically mean using any particular type of evidence, as it can be done using qualitative or quantitative evidence that can come from fieldwork, archival records, verbal reports, observations or combination of these. In the same manner, collection method of the data can also vary. (Yin, 1981.)

3.2 Qualitative research

When researchers takes up qualitative research, they honor inductive style of research, focusing on individual meanings and the value of representing the complexity of a specific situation (Creswell, 2013, p. 32). Reasons for taking up qualitative research can be, for

example, personal preference of the researcher or nature of the research problem (Corbin & Strauss, 2007, p. 11). Qualitative research design can prove to be tricky and complex depending on the experience the researcher has with the chosen type of methodology (Turner, 2010).

The goal of qualitative research is not so much to test what is already known, but to discover and generate new, and to come up with new empirically grounded theories (Flick, 2009, p. 15). Qualitative research is a research approach that aims to explore and understand social or human problems and what those problems mean to individuals or groups involved. Qualitative research process involves developing questions and procedures, collecting data in the participant's settings, inductive data analysis to build from specific to general themes and finally, the researcher making interpretations and deciphering the meaning of the collected data. (Creswell, 2013, p. 32.)

Researcher can collect data by various means, like for example by using instruments, tests or behavioral checklists, or by observing individuals or conducting open interviews at research site (Creswell, 2013, p. 45). Qualitative data gathering and analysis methods have gained popularity over time (Corbin & Strauss, 2007, p. 8). Which data collection method to use depends on whether the intent is to collect pre-defined specific information or allow the information to emerge from the participants in the project. When using qualitative methods, the data is often gathered by open-ended questions, yielding items like interview data, observation data, document data and audiovisual data. These items are then analyzed with the purpose of finding themes and patterns that are then interpreted by the researcher. (Creswell, 2013, p. 45.) One method of analysing qualitative data is the content analysis (Elo & Kyngäs, 2008).

Validity of qualitative study is evaluated with reference to the object being studied and it does not completely follow abstract academic criteria of science: In qualitative research the principal criteria is about 1) whether the methods are suitably selected and applied, 2) whether the findings are grounded in empirical material and relevant and 3) reflexivity of the proceedings. (Flick, 2009, p. 15).

Corbin and Strauss (2007, p. 11-12) summarized that there are three major components in qualitative research: First, data that can be gathered from various sources. Second, the procedures used to interpret and organize the data. Third, the written and verbal reports.

3.3 Qualitative interview

There are multiple established methods of interviewing that can be employed depending on the studied phenomenon (Qu & Dumay, 2011). For example, types of interviews used in the information systems (IS) research include structured interview, unstructured or semi-structured interview and group interview (Myers and Newman, 2007). Qu and Dumay (2011) summarized that interview method can be described as art of questioning and interpreting the answers.

Qualitative interview is used in all kinds of qualitative research (Myers & Newman, 2007). Research interview is widely used when conducting ethnographic research and doing field studies, and it is considered to be one of the most common and most important qualitative data collection method (Qu & Dumay, 2011; Myers & Newman, 2007). Interviews are a way

of learning about the world of others for the researchers. Benefit of the research interview comes from its ability to expose the sometimes hidden social world of the interviewee. A well planned interview can provide a good amount of data even when interviewer and interviewee come from a different cultural backgrounds with different outlooks on the world. (Qu & Dumay, 2011.)

In practice, conducting qualitative research requires use of various skills like intensive listening and note taking, additionally careful planning and preparation is required before and during the interviews (Qu & Dumay, 2011). Qualitative interviews supply the researcher with in-depth information on the viewpoints and experiences of the participant about the topic under study. The interviews are often paired with other data collection methods to give the researcher a versatile collection of information for performing analysis. (Turner, 2010.) On the practical side of conducting interviews, Turner (2010) suggested conducting interviews in an environment that is pleasant or safe for the participants, and where the participants do not feel uncomfortable to share information.

Semi-structured interview resides between structured and unstructured interviews. Semi-structured interview is guided by pre-identified themes and it involves prepared questions done in a systematic style, with additional probing questions in place for seeking more detailed responses. Task of the interviewer is to steer the conversation towards topics of interest from the series of broad themes that are being covered by the interview. The prepared interview structures range from fairly loose to very scripted, while all serving the purpose of ensuring that same thematic approach is applied during the interviews. (Qu & Dumay, 2011.)

Semi-structured interview is considered flexible, accessible and easy to understand, while capable of revealing important aspects of human behavior. Semi-structured interview allows interviewer to adjust the style, pace and ordering of questions to bring forth most comprehensive responses from the interviewee. One important feature of the semi-structured interview is that it allows interviewees to answer in their own terms in the way of used language and how they think on the subject matter, which is very valuable if researcher wants to understand the social world under study. (Qu & Dumay, 2011.) In earlier works, Krippendorff (2004, p. 27) also wrote that in open-ended interviews participants can speak freely using their own terms. Semi-structured interviews use planned and unplanned probes as means of drawing out more detailed information from the interviewee (Qu & Dumay, 2011).

In any form of interview, the preparation for the interview process is critical. If the preparation is handled well, it reduces the impact of problematic circumstances, but if the preparation is poor, it amplifies the problems that occur during the research process. One important element of the interview preparation is conducting the pilot test. Pilot test helps the researcher to perfect the research questions. Participants of the pilot test should have similar interests to those who participate in the finalized version of the study. (Turner, 2010.) Data that is collected from conducting pilot studies is usually not included in the main study (Chenail, 2009).

One key step in the whole interview process and design is to create effective research questions that allow the interviewer to dig deep into the knowledge and experiences of the participants in order to draw as much data as possible from the interview (Turner, 2010; Qu & Dumay, 2011). Interviewee can produce different answers depending on the way questions

and asked and answers further probed (Qu & Dumay, 2011). However, researcher needs to pose questions in a wording that is free of assumptions when conducting interviews. For example, the question "how has your work affected you as a parent?" is loaded with an assumption that the work has indeed had an effect on the parenting of the interviewed person. (Turner, 2010.) In order to ask informed questions and collect meaningful data, it is necessary that researcher develops a great deal of expertise in the topic area prior to conducting the interviews (Flick, 2009, p. 54; Qu & Dumay, 2011). Qualitative interview appears as very straightforward and easy method for gathering data, but it actually contains many difficulties (Myers & Newman, 2007).

Difficulties in conducting interview include aspects like artificiality of the interview while setting a time pressure for interviewee to answer question, researcher potentially interfering with behavior of the interviewee and lack of trust between interviewer and interviewee. There are multiple methods to alleviate difficulties in interviewing process. Ways of minimizing anything that would make the interviewee feel uncomfortable include managing first impressions, dressing appropriately and using the appropriate language or jargon. Other methods include mirroring to the interviewees answers while construct subsequent questions and staying flexible (improvisation and openness) to match the attitude of the subject. (Myers & Newman, 2007.)

Managing bias and maintaining rigor are major challenges in studies that generate their data by conducting interviews. Common method for identifying bias and testing the quality of the interview is the pilot study, where researchers test out their methods to see if the planned strategy works as intended. A pilot study is essentially a test where researchers try out their chosen research method by collecting and analyzing data from a small sample of participants who also meet criteria for the main study. Changes and adjustments are made depending on the results of the pilot. (Chenail, 2009.) Interview is also often employed as a pilot study even when it is not employed as the primary data collection method (Qu & Dumay, 2011).

Interview and focus group data are often researched with content analysis. In structured interviews interviewees are more constricted by predefined question-answer pairs, but in open-ended interviews participants are able speak freely while using their own terms. To explore these open-ended versions and understand what the interviewee is saying, the researchers often need to perform content analysis on the transcript of the interviews. (Krippendorff, 2004, p. 27.)

The interviewees need to be informed about the interview process, roles of the researcher and how the data of the interview will be used; Disclosing these things works for advantage of the researcher by building trust between the interviewer and the interviewee. Interviewees also need know their rights, like for example that they can withdraw their consent at any time or refuse to answer a particular question. (Qu & Dumay, 2011.) Myers and Newman (2007) also mentioned providing confidentiality of disclosure to the interviewee as a way of alleviating difficulties in interviewing process.

3.4 Interview the investigator

Chenail (2009) suggested a method called "interviewing the investigator" to be employed as a first step in assessing potential research bias and creating interview protocols. He argues that the method is especially useful if the original investigator has a strong similarity to

participants being studied or if the investigator is part of the population itself. In this section, interview the investigator by Chenail (2009) is summarized.

General idea of the "interviewing the investigator" approach is that the researcher takes on the role of study participant (interviewee), while a colleague takes the place of the researcher (interviewer) and conducts the interview on the original researcher. Alternatively, the employer of this method can play roles of both the interviewer and the interviewee. The interview process is recorded and researcher then reviews process and its contents to find out what information was generated from the questions, in similar manner to a pilot study.

Interview the investigator process begins with the researcher drafting the research questions for the study. The questions are written out and prepared in the form that they will be used in eventual interviews and the possible follow-up questions should be present as well. It is recommended that space and equipment used in the process to be the same that are to be used in the study interviews. A consent form drafted and then reviewed by both parties involved to make sure it is clear and easy to understand.

Next, when the interviewing the investigator moves on to interview, the process moves on like regular interview by reading out questions and providing responses. The interview can be completed in one go, or participants can stop to discuss and reflect on the proceedings. The interview needs to be timed by some device to assess how much time is spent. Once interview is completed, participants can adjust and try the process again until the results are satisfactory. Previous interview should always be reviewed before re-doing the interview, for example by playing back the recording and making notes of what is working and what is not. While conducting the tests, moments of surprise, frustration and satisfaction are sought and noted as why they are happening and when.

After conducting the interviewing the investigator process, any suggested modifications and confirmed existing questions should be commented or edited if needed. Once the interviewing the investigator cycle reaches a saturation point, the researcher can still choose to run a pilot study or move to the main stage of data collection.

3.5 Snowball sampling

Snowball sampling is a method for finding research subjects. Most bare form of using snowball sampling in a research can consist of identifying respondents who are then asked to refer to other respondents for the researcher. (Atkinson & Flint, 2001.) Snowball sampling method provides a study sample by taking advantage of referrals made among the people who know others who are linked to the area of research interest (Biernacki & Waldorf, 1981). Snowball sampling can be used as an informal method of reaching the target population of a study and it is most commonly used in conducting qualitative research interviews. Snowball sampling has the ability to reveal aspects of social experience that are often hidden from view. (Atkinson & Flint, 2001.)

According to Atkinson and Flint (2001), snowball sampling has the potential to produce in-depth results rapidly and access some hard-to-reach social groups more effectively than traditional techniques like household surveys. Additionally, they mentioned that getting the initial respondents to get the referral chain started might be hard, depending on the studied subject and prior knowledge of the area. Biernacki and Waldorf (1981) also highlighted that

snowball sampling is not a method that magically proceeds on its own, but instead needs active development and control from the researcher.

Using snowball sampling method can bring forth a selection bias, thus limiting the validity of the sample and generalization of results. This bias can be limited by initially generating large sample and secondly replicating results. (Atkinson & Flint, 2001.) One feature of snowball sampling is also that is largely relies on subjective perceptions of initial respondents, as they refer researcher onwards to other people. Samples gathered by snowball sampling often also introduce bias towards inclusion of individuals who have inter-relationships, therefore emphasizing people who are connected in some form of social networks, and leaving out the isolated people. (Atkinson & Flint, 2001; Biernacki & Waldorf, 1981.)

3.6 Content analysis

Qualitative data can be analyzed in numerous different ways. One of these methods is the content analysis, which can be used with both qualitative and quantitative data, and in a deductive or inductive way. (Elo & Kyngäs, 2008.) Corbin and Strauss (2007, p. 13) wrote "analysis is the interplay between researchers and data. It is both science and art." In qualitative research, contently analysis is a widely used research technique for interpreting meaning from data (Hsieh & Shannon, 2005). Krippendorff (2004, p. 18) described content analysis as a "research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use". He further elaborated content analysis as a scientific tool that provides researcher with new insights, increases researchers understanding on the studied phenomena or works as guiding light in practical actions. According to Elo and Kyngäs (2008), content analysis lacks simple guidelines for doing data analysis, and it is considered as a flexible but challenging method for a researcher to use.

The aim of content analysis is to gain compressed, yet still extensive representation of the studied phenomenon (Elo & Kyngäs, 2008). Content analysis is not restricted to written material, as it can also be used on for example art, images, maps, sounds or even numerical records (Krippendorff, 2004, p. 19). Outcome of content analysis is usually concepts or categories that describe the phenomenon, which then serve the purpose of forming a model, conceptual system, conceptual map or categories (Elo & Kyngäs, 2008). Content analysis is context sensitive, thus allowing a researcher to process data as text that are informative, meaningful and relevant to the users of the analyzed text or other material (Krippendorff, 2004, p. 41).

Purpose of the study determines if the researcher should use inductive or deductive way of conducting the content analysis. In inductive content analysis the categories are derived from the data itself. Inductive content analysis should be used when knowledge of the phenomenon is fragmented or previous studies are not found. (Elo & Kyngäs, 2008.) Advantage of the conventional approach (or inductive method) to content analysis is obtaining direct information from study participants without being forced by predetermined categories or theoretical perspectives (Hsieh & Shannon, 2005). According to Kyngäs and Vanhanen (as cited in Elo & Kyngäs, 2008) in deductive content analysis the structure of the analysis is defined and built based on previous knowledge. Elo and Kyngäs (2008) suggested using deductive approach if aim of the researcher is to test out existing theory is different situation, or when comparing categories at different time periods.

One specific approach to conducting content analysis is the conventional content analysis, which can be used when the study design aims to describe phenomenon. This kind of design is appropriate when research literature or existing theory on the phenomenon is in short supply or not found at all. In this approach the researchers let the categories and names for categories surface from the data. (Hsieh & Shannon, 2005.) This approach can also called inductive category development, shown in Figure 4 (Mayring, 2000). This initial approach to study design and analysis is shared by many qualitative methods (Hsieh & Shannon, 2005).

In conventional content analysis approach, if the researcher collects data primarily by conducting interviews, open-ended questions should be used with additional probes that make use of participants comments more than pre-existing theory. After collecting and transcribing the data, the data analysis starts with going over the gathered data several times in order to immerse the researcher in the data. Next, data are read word by word with purpose of deriving codes by underlining the words from the material that appears to represent key thoughts or concepts. (Hsieh & Shannon, 2005.) Coding can be defined as the analytic process where data are fragmented, conceptualized and then combined to form a theory (Corbin & Strauss, 2007, p. 3). Purposes of the coding procedures include aspects like providing the researcher with analytic tool for handling large amounts of raw data, helping analyst to remain both systematic and creative at the same time and helping to identify, develop and relate concepts that are the pieces for building theory (Corbin & Strauss, 2007, p. 12). Coding actions in conventional content analysis can be summarized to the points that codes and keywords are derived from collected data and defined during the data analysis (Hsieh & Shannon, 2005).

Continuing the conventional content analysis process, the researcher undertakes the material by making notes of first impressions, thoughts and initial analysis. As this activity goes on, titles that relate to more than single key thought for codes surface from the material and often form the initial coding scheme. Codes are then classified into categories based on how the individual codes are related or linked to each other. Further on, subcategories can be combined or reorganized into smaller number of categories if the relationships between them allow it. This is then followed by developing definitions for each category, subcategory and code. For reporting the findings, something serving as a typical example for each category and code are picked out from the data. (Hsieh & Shannon, 2005.)
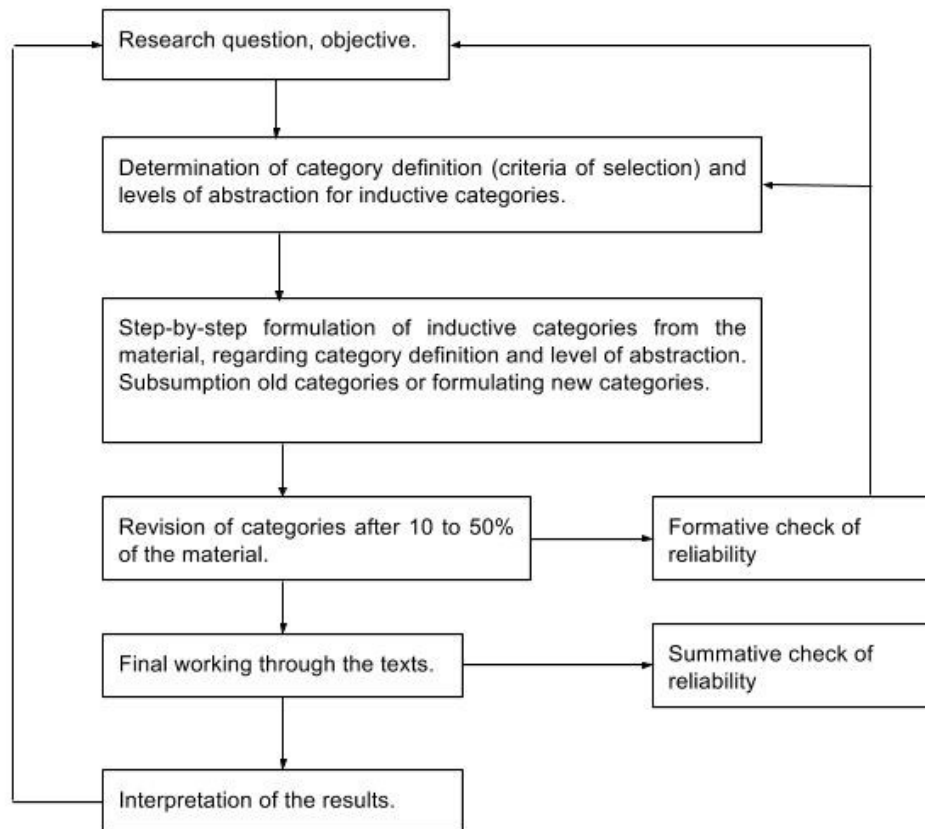
Figure 4. Inductive category development presented as step model (Mayring, 2000).

Mayring (2000) constructed a step model for illustrating how inductive category development takes place (Figure 4). Main idea of this plan of action is to prepare a criterion of definition that is obtained from theoretical background and research questions, which in turn controls what aspects of the material are taken into consideration. Following the criterion, material is worked over and preliminary categories are created and further deduced in step-by-step manner. Those categories are then revised further by the feedback loop, eventually developing into main categories, which are in turn checked for reliability. Eventually, researcher can proceed to analyze material while keeping the research question in mind. (Mayring, 2000.) Essentially, model by Mayring (2000) follows the same form as conventional content analysis by Hsieh and Shannon (2005).

From practical viewpoint, Elo and Kyngäs (2008) argued that the hardest part in conducting content analysis is often just getting started in the analysis process, as the amount of qualitative data can often seem very dismaying. Researcher will also often run into interesting points that are not relevant to current study, and the researcher is often in danger to be sidetracked by them. It is essential for researcher to keep the research questions in mind when doing content analysis in order to manage the work. Further challenges can also be in the phase of reporting the study and its results, as there are also several phases. (Elo & Kyngäs, 2008.) One challenge in conventional content analysis is developing complete understanding of the context and then identifying right key categories; if this fails, the result will be findings that do not correctly represent data. (Hsieh & Shannon, 2005.)

3.7 Summary

Qualitative research seeks to discover and generate new information and theories instead of testing what is already known (Flick, 2009, p. 15). Its aim is to explore and understand social or human problems and what they mean those involved (Creswell, 2013, p. 32). One research strategy for conducting a qualitative study is the case study, where the phenomenon is examined in the real-world context it occurs. Case study is not bound by used evidence or data gathering method and it can be used in many types of research. (Yin, 1981.) Steps in qualitative research process are developing questions and procedures, collecting the data, analysing the collected data and finally interpreting the meanings in the collected data (Creswell, 2013, p. 32). Data collection method depends on intent the research, for example open-ended questions allow the information to come directly from the participants of the project in the form of audio tapes and interview data (Creswell, 2013, p. 45).

Research interview is a common method of collecting qualitative data (Myers & Newman, 2007). Interview can be used to learn about the often hidden social world of the interviewee and a well-planned interview can yield in-depth information even if the researcher comes from different cultural settings (Qu & Dumay, 2011; Turner, 2010). Semi-structured interview is a flexible method, guided by pre-identified themes and prepared questions, that allows the researcher to adjust pace and style of the interview while moving the conversation toward topics of interest and probe the questions further for more detailed answers (Qu & Dumay, 2011). Important feature of semi-structured interview is that it allows the interviewees to speak freely by using their own terms, thus helping the researcher understand the social world under study (Krippendorff, 2004, p. 27; Qu & Dumay, 2011). One method of finding research subjects is the snowball sampling, where initial respondents are asked to refer other respondents to the researcher. Snowball sampling is often paired with qualitative research interviews. (Atkinson & Flint, 2001.)

Collected qualitative data can be analyzed by performing content analysis on it, with the aim of gaining compact yet ample description of studied phenomenon (Elo & Kyngäs, 2008). Content analysis is a commonly used method for interpreting meaning from data. In conventional content analysis (or inductive approach) the categories are inductively pulled directly from data gathered from study participants. (Hsieh & Shannon, 2005; Mayring, 2000.) In conventional content analysis the researcher digs deep into the gathered data and starts to derive codes from it to describe the central concepts and key thoughts, while refining the codes and categories as the process continues in loop-like fashion. Links between codes are sought and categories are further organized and combined until final categories are formed and the researcher moves to report findings. (Hsieh & Shannon, 2005.)

3.8 Practical implementation of the research methods

In this section the practical application of chosen methods is presented. The description starts from methodological considerations, next going over constructing the interview and piloting the study, from where it moves on to describing the research participants and how the participants were obtained. That is followed by description of conducting the interviews and finally how data was analyzed. Figure 5 shows the rough version of the actualization of the research process that took place in this study.
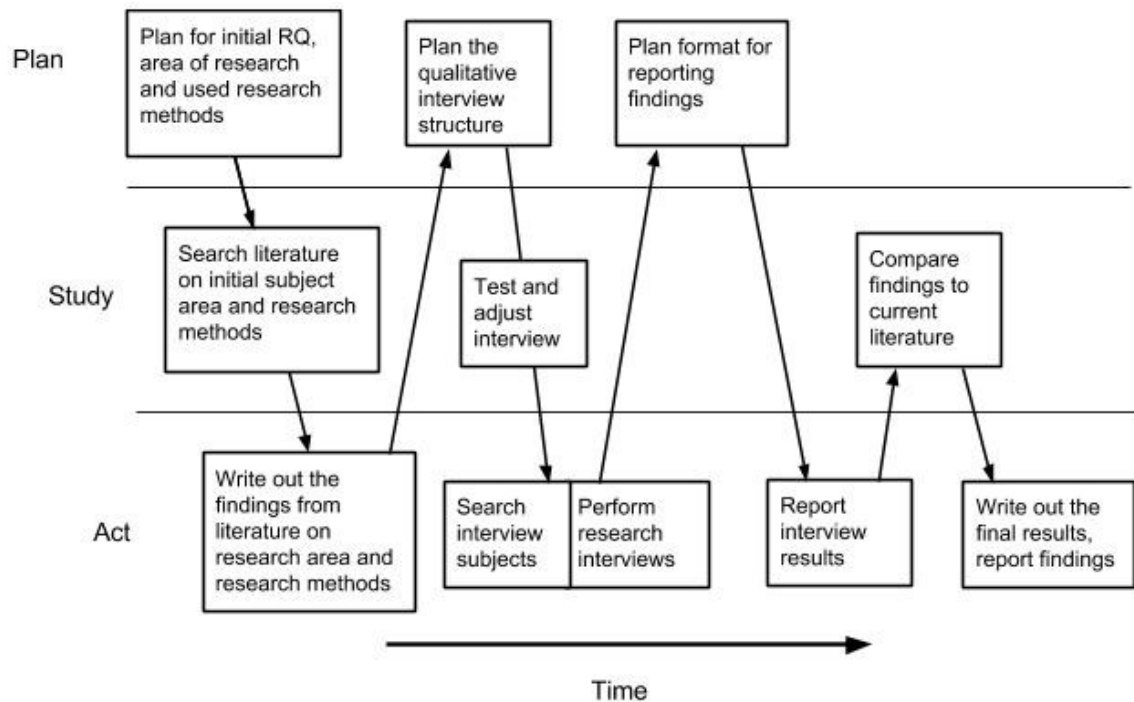
Figure 5. Actualization of the research process.

The actualization of the research progress is shown in Figure 5. The research process involved three main phases: Planning, studying and acting. In planning activities initial plans for working and performing activities were drafted, which were then studied further and refined in studying activity, and written out in final form in the acting phase.

3.8.1 Methodological considerations of the current study

Philosophic worldview of the study was constructivism, as the study sought to explore the player's perspective and personal experiences on how toxic behavior affects them in their everyday online gaming settings. Research strategy of the study was a case study, as the aim of the study was to get close to the phenomenon of toxic behavior in its real-life context of the modern online gaming, which was done by interviewing active online players who had encountered the phenomenon up close during their online gaming. Specific games Counter Strike: Global Offensive (CSGO), Dota 2 and World of Tanks (WOT) were chosen for the study due their match-based cooperative-competitive nature and having a large and active player base. The games are introduced in Chapter 4. The large player base of the chosen games helped to obtain interviewees within the limited time frame of the study. The chosen games represented different genres and monetization approaches, while also having a low bar of entry for anyone. Qualitative research approach was chosen since the aim of the study was not to test any existing theory, but to explore how toxic behavior affects the players involved and how they view the phenomenon either as an observer or when they are the ones it is targeted towards.

3.8.2 Constructing interview and piloting the study

The initial interview schema was drafted from the themes gathered from the literature review. Literature review was used to identify core themes that surround the online gaming activity,

in addition to toxic behavior, that was the starting point of the study. Recurring themes like sociality, competitiveness and flow were brought up for closer inspection. Literature was searched by using terms like online gaming, toxic behavior, toxic behavior in online gaming, cheating and games, griefing and games and so forth. Main databases for searching the initial literature were Google Scholar, EBSCOhost and Scopus. Further on, the literature was searched employing the snowball method where the references of a relevant work point the researcher further on towards other potentially relevant works. Table 2 summarizes some of the main works found in current literature.

Table 2. Summary of main themes and works for the current study.

Theme	Source in literature
Online gaming	Frostling-Henningsson, 2009; Rambusch et al., 2007; Sherry et al., 2006;
Social aspect of gaming	Kirman et al., 2012; Kou & Nardi, 2014; Weibel et al., 2008;
Toxic or deviant or antisocial behavior in games	Foo & Koivisto, 2004; Kwak et al., 2015; Yeung et al., 2006
Competitive aspect of gaming	Clarke & Duimering, 2006; Vorderer et al., 2003; Shores et al., 2014
Flow experience	Csikszentmihalyi, 1990; Hsu & Lu, 2004; Sweetser & Wyeth, 2005
Managerial aspect of gaming	Choi & Kim, 2004; Luo et al., 2006; Sheu et al., 2009

As seen in Table 2, the online gaming literature spanned over many years and brought up multiple themes to consider in the current study. Table 2 lists only some of the literature found, and many of the used sources remain unlisted.

After drafting the interview questions and building the interview form based on the literature review, the initial interview version was tested by employing the method of "investigating the investigator". A former Master's student was recruited to help with the process and assume the position of the interviewer, as the original researcher took the position of interviewee. This process was used in a loop-like fashion to remove overlapping questions, improve the flow of the interview and iron out any wordings that cause misinterpretation of any interview question. Additionally, the oral consent script (Appendix A) drafted by the researcher was reviewed by the recruited partner and a senior researcher in order to validate that it was clear and easy to understand. The first two research interviews further served as pilots. Based on the pilots the interview form was slightly cut down in order to shorten the interviewing time, further improve the flow of the interview and cut down some questions that seemed irrelevant regarding the current study. Result was the final interview guide (Appendix B) that was used in rest five of the interviews.

3.8.3 Obtaining the study participants

While the study participants were initially obtained from personal contacts of the researcher, the snowball sampling method was employed on the initial participants, which in turn resulted in more participants by referrals. Figure 6 depicts the chain of referral how the study participants were obtained.
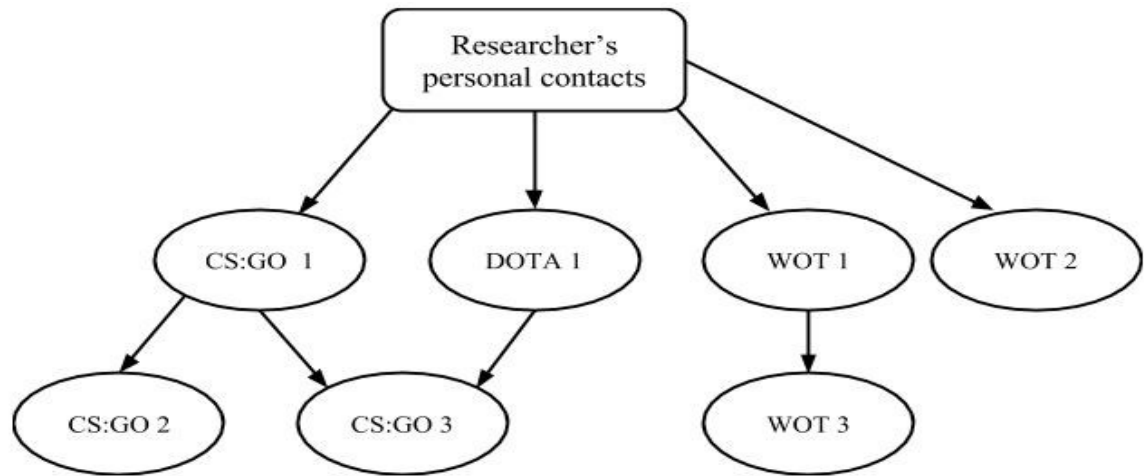
Figure 6. Obtaining of the study participants.

As seen in Figure 6, the research participants shared some social connections among themselves, and were able to refer the research onwards. While obtaining the study participants, there were only few restrictions in place. Firstly, the participant needed to have at least one year of experience playing one of the named games (CSGO, Dota 2 or WOT), thus ensuring that the player had got more than a short glimpse of the online playing environment. Secondly, participant was required to have the equipment to participate in an online interview: Internet, computer, microphone and some VoIP software. Table 3 shows summary of the interviewees who participated in the study.

Table 3. Participants of the study.

Interviewee, the game	Age	Online gaming experience	Weekly playtime	Duration of the interview	Time of the interview
Mike, CSGO	26	15 years	10 hours	1h 40min	13.11.2016, 15:30 - 17:25
Jake, CSGO	27	14 years	7 hours	1h 50min	16.11.2016, 11:15 - 14:05
Otto, CSGO	27	19 years	70 hours	1h 30min	12.12.2016, 02:30 - 04:10
Andy, DOTA2	28	14 years	20 - 70 hours	2h 5min	23.-24.11.2016, 23:20 - 01:30
Zach, WOT	28	12 years	21 - 35 hours	1h 35min	24.11.2016, 15:50 - 17:30
Nick, WOT	26	13 years	10 - 30 hours	1h 45min	29.-30.11.2016, 22:25 - 00:10
Peter, WOT	34	16 years	10 - 15 hours	1h 15min	03.12.2016, 20:25 - 21:55

As seen in Table 3, all of the interviewees were males, ages ranging from 26 years old to 34 years old, and each of them had more than 10 years of online gaming experience. Time spent playing games per week had large variations across the interviewees, as it ranged from 7 hours to 70 hours during an average week. The interviews lasted fairly long, but the length caused no apparent issues to either party of the interview. The interviews took place whenever it best fit the interviewee, thus resulting in a great variation to at what hour the interviews took place.

3.8.4 Conducting the research interviews

Data for the study was collected by conducting semi-structured interviews that were based on themes from the literature review that was conducted prior to the interviews. Before the starting on the actual interview questions, the interviewees were briefed about the nature of the study, how the gathered data would be used and what were their rights, like for example telling the interviewee that they could withdraw their consent at any time. The interview questions were arranged to separate sections around certain themes: Background questions, questions about toxic behavior on a general level, questions about flow and the effects of toxic behavior on flow, questions about purchase behavior and effects of toxic behavior on purchases made and the game-specific questions. The question form was not introduced to the interviewees at any point, thus allowing the researcher to stay flexible by adjusting the pacing and order of the questions where needed. See Appendix B for the interview guide used in the study.

The basic forms of toxic behavior in online games found in literature review were introduced by the researcher after asking the interviewees what they personally considered to be toxic behavior in online games. Additionally, the interviewees were given a definition of flow before the interview proceeded into the flow-related questions. Apart from these terms imposed on the interviewees, they were free to use their own terms during the interview and the researcher set no further boundaries on profanity or the used jargon. Some themes of the interview were handled in more delicate manner as they were considered to be more intimate, which affected how those questions were presented. For example, when doing inquiry about cyberbullying, the question was if the interviewee had witnessed any cyberbullying, and not if he had been a victim or participated in cyberbullying. Avoiding the direct form here was done so the interviewer would not appear as too intrusive, which could harm the trust between the two parties.

All the interviews were done in Finnish and conducted using the VoIP software TeamSpeak 3, while both parties took part in the interview from their personal computer. Interviews were recorded by the internal recording function of TeamSpeak 3, which was tested for suitability beforehand by the researcher. The online setting was chosen as it represents the natural environment for an online player, as the studied games are often played on the internet by using a computer and internet connection. Additionally, gaming situation often involves some VoIP software when the games are played together with friends. Participating in online setting from their personal computer also gave the participants much leeway to make time for the interview session. This is also visible in Table 3 as the inconsistent interview times, as the participants were allowed to point a suitable timeframes for themselves, while the researcher adapted to the schedules of the participants.

During the interview, notes were also taken to support the transcription process later, as the question form was not always followed in strict order. When the researcher sidestepped from following the interview form, it was usually done in order to maintain the flow of the interview, or to further probe some theme brought up by the interviewee.

3.8.5 Analysing the interview data and reporting results

After the interviews, the audio recordings were transcribed to text file for the analysis phase. Transcripts were not done in word-for-word style, but instead in edited format where the researcher captured and wrote down the main point of the interviewee's answer, while cutting down the fillers and editing some game-specific jargon into more general terms.

The answers were sorted into excel tables that were arranged in question-by-question style for each interviewee, therefore making comparing the answers easier. The excel tables were used as a tool to study the material and bring up repetitive or rare themes in the answers of the interviewees. By using the excel tables, themes that were considered relevant in regard of the studied subject area were picked up from the mass of answers and further listed into a separate excel table. These themes were then brought down to more general level from the specific format that interviewees had posed them, while keeping the cores of the answers intact, and then ultimately reported in the results chapter.

After a certain theme had qualified for the results chapter, a direct quote describing chosen theme was pulled from the audio file of the interview. The researcher chose a suitable direct quote that was conversing on the theme. The quote was translated from Finnish to English directly from the audio and written down to further illustrate the made point.

4.   Match-based team online games

In this chapter, the games that were used as inclusion criteria for the interviewees are presented in short fashion. General information of the game is presented along with the basic idea of the online game and how the game caters for both casual and competitive audiences. First comes Section 4.1 describing Counter Strike: Global Offensive (CSGO), followed Section 4.2 presenting Dota 2. Lastly, Section 4.3 describes World of Tanks (WOT).

4.1 Counter Strike Global Offensive

Counter Strike: Global Offensive is a multiplayer FPS game developed and published by Valve Corporation. The game was officially released worldwide in August 2012. CSGO currently has over 27 million total players, while daily players averages in over 500,000. (Steamspy, 2016a.)

In CSGO the player enters the game and plays as either Terrorists or Counter-Terrorists. Aim of the game is to complete objectives based on the chosen game mode and team. Objective can be for example to bomb a certain target as part of Terrorist team or rescue hostages as Counter-Terrorist team. While completing the objectives, players also attempt to eliminate the enemy team and avoid being eliminated themselves. Game includes wide variety of weapons, grenades and equipment that is obtained with money earned by completing objectives or killing enemies. Players can communicate by regular chat, voice chat or by using preset tactical commands that are visible to team only.

CSGO offers game modes for both casual play and competitive play. For casual play there are arms race, demolition, deathmatch and classic casual, classic casual being the most played game mode. In classic casual round is won either by completing the objective, like defusing the bomb or bombing the target or when the opposing team is eliminated. For competitive play there is classic competitive, which plays out in team matchup of 5 versus 5 players, in a best of 30 rounds matchup. Teams can be premade or consist of individuals who are put in a team based on their skill by automated matchmaking. For competitive play there are also professional or semi-professional tournaments organized by various third parties.

CSGO combines micro-transactions and traditional pay-to-play models: The game itself is obtained by purchasing it for 13.99€, granting access to core features of the game. Additionally, players can purchase "Operation Passes" that grant access to additional maps and virtual items. Other virtual items like weapons skins and stickers can be also obtained through online purchases with real money. Purchased items are purely cosmetics without impact on gameplay balance.

4.2 Dota 2

Dota 2 is a match-based team competition game and can be categorized as a MOBA genre game. Dota 2 is developed and published by Valve Corporation. Dota 2 was officially released worldwide in July 2013. Dota 2 has over 99 million total players, and it is played by over 750,000 players on daily basis. (Steamspy, 2016b.)

Dota 2 is played in five versus five matches and teams consist of either random players or pre-made teams. Team start from the opposite sides of the map, while both teams have a base protected by several defensive structures, and in the middle of that base is the "Ancient". Players control various hero-characters (113 available) with different abilities and playstyles, gather experience points and buy items with the ultimate goal of penetrating the defences of the opposite team. The game ends when either team destroys the "Ancient" of the opposite team. In Dota 2, the players are able communicate by chat, voice chat and by using preset tactical commands that are visible to friendly team only.

Casual play in Dota 2 involves many game modes with the same core idea of destroying the "Ancient" and players can join either solo or in parties of two, three or five players. Dota 2 offers ranked play mode for competitive playing where players join either as solo or as party of five players, while goal of the game still remains the same. Additionally, sponsored third party tournaments are held on various locations and times.

Dota 2 is free to play and it can be downloaded via Steam game platform. Players can purchase cosmetic items for the various heroes in the game, but the purchased items do not affect gameplay balance.

4.3 World of Tanks

World of Tanks is a team-based massive multiplayer online action game published by Wargaming. Wargaming officially launched Russian servers in August 2010 and China, Europe and North America servers in early 2011. (Wargaming.net, 2017.)

In WOT players enter combat with tanks of many nations like America, Germany, Soviet Union or China. Players can progress through technical tree to unlock new tanks, ultimately granting access to over 350 vehicles to play with. Focus of the game is in 7v7, 10v10 or 15v15 team battles where each player controls a single tank as part of a team. Aim is to destroy all enemy team tanks, capture the objective or defend the objective. Players can communicate with their team by chat or by using preset of context-sensitive commands.

World of Tanks caters for both casual play and competitive play. Main game mode for casual play called "random battle" where a player can quickly join to a team battle of up to 15 versus 15 players while the battle lasts for maximum of 15 minutes. For competitive play there are "strongholds" where players gather resources and fortify their stronghold by winning games, and "clan wars" where clans fight to capture territory on a global map to gain resources for the clan. Offering for both casual and competitive alternatives, there is "team battle" and "ranked team battle", where players can form teams with anyone and progress to play against other premade teams of their own skill level.

World of Tanks employs the free to play business model: Core features of the game are free, but player can purchase so called "premium account" which provides more in-game currency and experience per game. Players can also purchase "premium tanks" which are otherwise unavailable. Premium tanks provide players with more credits per game and train tank crews faster than regular tanks.

5.   Findings

In this chapter the findings are reported. The findings are reported based on the themes that emerged during the content analysis of the interview data.

The first section describes toxic behavior and its prevalence in online gaming on a general level. The second section goes over interviewees' experiences regarding their own toxic behavior, while the third section moves to report on effects of encountered toxic behavior. The fourth section describes findings regarding reactions on encountered toxic behavior and the fifth section is about toxic behavior and its effects on flow. The sixth section gathers findings regarding toxic behavior and the role of the game companies, and the seventh section describes toxic behavior in the specific environment of match-based online team games.

5.1 Toxic behavior and its prevalence in online gaming

The interviewees were allowed to air their own thoughts on what qualifies as toxic behavior in online games. One theme that came up often by the interviewees was intentionally ruining the game for other players:

> *Well, in short I think it (toxic behavior) means ruining the game for other players on purpose. How it manifests depends on the game I think, but for example it can be spamming communication channels, blocking the movement of other players, perhaps cheating too, and scamming.* -Jake

> *For example in Counter Strike there are players who ruin the game for other players, those guys emit toxic behavior. They do things like verbal flaming and also interfere with the playing of their co-players.* -Mike

> *First thing that comes to mind is sort of toxic harassment, like for example another player calling you a shit player if you fail at something or make a mistake in the game. Then there is using cheats of course… Another thing that comes to mind is sort of passive griefing, like for example when a player just stops contributing to team efforts completely and sits in the base, or intentionally plays bad to provide help to the opposing team.* -Andy

Another theme that was often brought up qualifying as toxic behavior was getting personal with someone:

> *Anything that doesn't belong into the game, like someone getting really personal or being "out of line" in a way that has nothing to do with the game anymore. Like for example, if you happen to play bad some players can start calling you names, which I find annoying.* -Nick

> *I think it qualifies as toxic behavior when someone disturbs or interferes with another player without any constructive approach, like calling him names, mocking his appearance or race, or anything like that.* -Peter

On a general level, toxic behaviors like cheating, griefing, flaming (harassment) and scamming were found to be very common in online games, sometimes even everyday

phenomenon. Flaming behavior was found especially common by the interviewees. All of the interviewees reported witnessing toxic behaviors while playing online games:

> *Flaming and griefing are something I witness almost every day, cheating maybe a little less. Sometimes I also get private messages promising free gold or something like that, which are obvious scamming attempts. -Zach*

One of the interviewees even considered toxic behavior to be a natural part of online gaming:

> *Yes I have witness it (toxic behavior). I suppose it is kind of natural part of online gaming since there are so many different kinds of people from different places and cultures, so it is bound to be there. Not all people behave the same. -Nick*

While toxic behaviors in general were found very common, they were also reported common in the close social circles of the interviewees, as all of the interviewees reported that they personally know a player who engages in some form of toxic behavior. Most common form of toxic behavior found near the interviewees was the flaming behavior, which was sometimes tolerated and but more often not:

> *One of the people I play with has a tendency of throwing around nasty comments if he notices someone in our group is making mistakes or playing bad, which often leads to loud argument. I guess it is sort of verbal harassment. […] I don't mind the occasional bad behavior, since I know he is very skilled player who just has problems keeping his opinions to himself from time to time. -Mike*

> *I don't enjoy playing with people who are toxic. For example, if I can choose between two players of which another is known for flaming but more skilled than the other, I always choose the guy who does not flame, even if he way less skilled. Playing with people who are not toxic is the number one thing for me, skills mean nothing compared to that; Even if I knew someone to be the best player in the world but very toxic, I still wouldn't play with him. I really don't like the idea of supporting that kind of bad behavior. -Andy*

However, the interviewees had very little to no tolerance when it came to cheating or griefing within their close social circle:

> *I'm not aware that anyone in my team would have cheated, ever. If someone cheated, I'd ask them to stop. If I knew someone to be cheating on regular basis, I simply wouldn't play with them. -Jake*

> *When we are playing with a stack of 5 players including myself, nobody really dares to start griefing or cheating. This is because everyone knows that they would be removed from the group immediately, and no one would play with them anymore, or at least no one from the current group. -Andy*

While toxic behavior was considered common phenomenon in everyday gaming, an exception was found in eSports level gaming. The interviewees had witnessed only very little or no toxic behavior while following the eSports-scene that represents the highest skill level of gaming. Cheating, griefing, scamming or cyberbullying were found absent, but minor harassment was sometimes seen:

In major tournaments there is no toxicity visible because the eSports has grown so large, so people don't dare to mess around. Sometimes when following some minor tournaments with smaller prize pools and more relaxed atmosphere I have seen players throw around taunts and minor insults in the chat, but that behavior would not be allowed in the major tournaments. -Andy

When the interviewees encountered harassment or flaming while playing online games, it was most commonly sparked by either the victim making a mistake and playing bad, or someone in the game playing too well:

Back in the days in Counter Strike, the most common situation was that someone made a mistake or someone was playing bad, and his teammates were frustrated by that and started insulting that guy in the chat or voice chat. -Andy

I have often received harassment, even when I have done nothing special provoke it. For example, I was playing calibration matches in CS:GO and I ended up in a game where I was facing much less skilled opponents, who were very upset because I outplayed them hard; They kept calling me cheater and flaming really hard, saying things like they hope I get cancer and so on. -Otto

When interviewees talked about the cheating they had encountered in online games, it was often described as a general phenomenon that ruins the game for everyone, not as a behavior specifically targeted towards the interviewee:

Some people just don't want to lose, so they cheat. It really ruins the game. For example, if someone in the game uses aimbot, it's game over. There is nothing you can do. -Jake

All of the interviewees had encountered griefing and it was often deemed as hard to avoid. Typically it was described as a one player targeting other players for some obscure personal reasons:

Sometimes there are situations where a player (griefer) enters the match and set their sights to destroy the match for someone right from the start: For example when they see someone playing a character class they dislike or they see a player who has better stats than they do, then hell is sure to follow. When there is someone griefing in your game it is bound to affect you because you can't really do anything about it. -Zach

All of the interviewees reported running into scams at some point during their online gaming career. The scams were generally considered to be very obvious and easy to avoid, and only two interviewees reported ever falling for a scam in an online game:

I got scammed in Ultima Online while doing a trade with another player, although in that situation the guy abused programming error to steal my items by overloading my character's carry capacity, causing my valuable items to drop on the ground. I have also seen plenty of poor scamming attempts in Diablo, Path of Exile and other RPG's, where people just try to abuse trust of others players by making false promises. -Andy

Cyberbullying was also witnessed by the interviewees, as five of the interviewees reported witnessing something that they personally would consider to be an act of cyberbullying, and

one of them also reported taking part in something he would now consider to be an act of cyberbullying. Four of the stories involved a player of lower skill getting targeted by other players. Similar story of people grouping up against a single person inside their guild or clan was shared by three of the interviewees:

> *I have witnessed cyberbullying while playing World of Warcraft in a big guild. In the guild there was this one player who was seen as less skilled player than many others, and people were often harassing or bullying him; People would comment everything he did in negative manner in Mumble or TeamSpeak. Every time he would say something aloud he was scrutinized by other players in the guild. It eventually ended up in him leaving the guild, an understandable choice. It did not take long for me to leave as well, the guild atmosphere was not right for me.* -Mike

One of the interviewees held a different viewpoint on what can be considered as cyberbullying:

> *Well, what comes to mind are times when someone gets really personal with someone. Something I see often is people start throwing comments that have nothing to do with the game being played, like insulting one's family or mother, this is something I see very often. Most common insults I've seen are calling one's mother a whore, calling someone a retard or making racist remarks.* -Nick

Table 4 shows a summary of toxic behaviors and which toxic behaviors the interviewees have encountered during the years they have spent playing online games.

Table 4. Toxic behavior encounters of the interviewees.

	Mike	**Jake**	**Otto**	**Andy**	**Zach**	**Nick**	**Peter**
Faced harassment or flaming	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Faced griefing	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Faced cheating	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Faced scamming attempt	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Witnessed cyberbullying	Yes	**No**	Yes	Yes	**No**	Yes	Yes

As seen in Table 4, toxic behavior in online games was found to be common phenomenon and it appears to be virtually unavoidable if one spends several years playing games online. The interviewees reported a wide variety of games they have played across the years, but despite that variety toxic behaviors such as cheating, griefing, harassment and scamming were all encountered by each of the interviewees. The only exception found was the cyberbullying, which was generally considered a powerful term by the interviewees, while the behavior itself remained unseen to two of the interviewees.

5.2 Player experiences on emitting toxic behavior

In addition to encountering various sorts of toxic behaviors, all of the interviewees also admitted emitting toxic behavior themselves from time to time. Most common behavior the interviewees identified with was the flaming behavior, but all of the toxic behaviors came up in the interviews. One of the interviewees recognized himself as prone to engage in flaming behavior, while others felt it happened only very rarely. When the interviewees described their own toxic behavior, five of them brought up the notion that they were immature and more toxic when they were younger:

> *Yep, I guess I have also been behaving toxic sometimes; some griefing, scamming and harassment too. But that was when I was younger and I feel those behaviors were fairly rare for me even then.* -Jake

> *I think I have done some flaming when I was a teenager, at least in Counter Strike. But I have never used cheats, ever. Even as a teenager I figured that I don't want my opponents to employ cheats, so I should not use them either, as cheats just ruin the whole gaming experience anyway. About griefing, well, sometimes I might have shot my teammates if they pissed me off, but nothing too drastic.* -Andy

While playing online games, the toxic behavior of other players was found to be a common trigger for toxic behavior among the interviewees. All of the interviewees reported answering toxic behavior with toxic behavior of their own in some form. Most common act was to respond to harassment or flaming in similar fashion, which was reportedly done by all the interviewees. Four of the interviewees had also answered griefing with griefing of their own:

> *Sometimes when a player started flaming me in chat, I might've started provoking him a bit and done some flaming myself, but it really never went further than that.* -Jake

> *When I grief, it is usually act of revenge. If someone does shit to me and I clearly see it was not an accident, I will surely retaliate.* -Otto

While not something done by the interviewee himself, a rarer occurrence was unearthed as one of the interviewee had witnessed his friend fighting a potential cheater by using cheats as well:

> *Not something I did personally, but I recall this one incident from my youth: I was playing with my friends, and we suspected someone in the opposing team was cheating. What happened next was that one of my friends went off, activated cheats, came back and started killing the guy we had suspected of cheating.* -Andy

Some of the interviewees reported feeling slightly embarrassed for their own actions after behaving in toxic manner like flaming their opponents, but most of the time feelings reported were simply neutral, even after taking revenge against someone they felt had wronged them:

> *For example, few times I have watched a recording of the match I played and reviewed the situation that made me flame my opponent, and I have then realized I was wrongly accusing him of being a cheater or such, and it made me feel little bad. Though I feel embarrassment is a little too strong word for the feeling. [...] Sometimes*

when playing World of Tanks I have taken revenge on someone who has initially done something to me, like block my movements or shoot me. Sometimes the revenge is very briefly satisfying, but most of the times I don't feel anything at all. -Nick

The act of mischief within the group of friends or inside the close social circles was also found common among interviewees, as six of them had done mischief. It was found acceptable as long as people did not overdo their mischief or target players they did not know:

Sure there is some mischief among us, it comes with the territory. For example in World of Tanks I might go push my friend around or do some banter in our voice communication software. It's important not to overdo it though! -Zach

Sometimes I might note a mistake my friend makes by making a snarky comment or by laughing at him, but that's not something I would do with people I don't know. -Andy

Each one of the interviewees had set themselves some form of guidelines or rules that they try to follow while online gaming. Following "common sense" and trying to behave in good manner in general were very common guidelines and found across all of the interviews:

I try to behave in good manner and follow the common sense. For example, I rarely do stuff online that I would not do in real life face-to-face situations. -Zach

[...] Act like you would want others to act around you, and don't cheat. -Andy

Most commonly found concrete rule among the interviewees was not to use cheats, which was mentioned by five of them. Cheating was often seen as negative because it nullifies any sense of achievement or personal progress:

I have never cheated, and I doubt I ever will. Cheating does not help me make progress or improve my skills in the game in any way. -Jake

5.3 Effects of encountered toxic behavior

Six of the interviewees felt that the toxic behavior of their gaming partners has a negative effect on their intention to play with that person, while one of the interviewees valued skill above other qualities. Degree of the negative effect varied, but those persons who were prone to harass or flame their teammates were usually avoided if possible:

Some of the people I have played with have had the tendency of flaming those in their own team, and those are the kind of people I try to avoid. I can't stand listening to that because it does not result to anything meaningful or improve the team's playing. -Nick

However, all the interviewees shared a view that if they had a personal history with the person who behaved in toxic manner, they were more forgiving towards that person. The interviewees often felt they can be more direct with people they know better, and correct or alleviate their toxic behavior to some degree:

I'd like to think I have more influence on actions of those people I know from a longer period of time. I feel like I can affect their behavior and turn it for the better at least on some level. Maybe not perfectly, but at least to some degree. -Zach

Harassment or flaming behavior coming from inside the team was always described to have some degree of negative effect on the mood and gameplay of the interviewees. One of the interviewees reported losing his temper due the flaming behavior of his friends in some extreme cases, resulting in himself starting to behave more aggressively. However, harassment or flaming inside the team most often directly resulted in general tension between the involved players and drop in morale or motivation of the interviewees:

When someone in my own team starts really heavy flaming, it's quite frustrating. My own interest and motivation towards the game might very well disappear. Even if the flaming is not targeted at me, the frustration builds up and it affects all my efforts negatively in that game. -Jake

Six of the interviewees often felt that harassment or flaming done by unknown or random player in the same match has very little effect or no on their mood, while only one felt that getting flamed or harassed by random players might kill his mood. Flaming done by opponent was often shrugged off as provocation or simply ignored:

It's quite common for the opponent team to start flaming me or my team, but in CSGO dealing with them is easy. I can just put them to ignore list which blocks their communications totally, so after that it does not affect my playing or mood at all. -Mike

Surprisingly, three interviewees reported sometimes receiving positive effects from getting flamed by their opponent:

I don't really care what some random person thinks of me. Sometimes I find it even funny that someone puts effort into it (flaming); When someone starts insulting me, it might even provide me with a bit of boost to my playing for a while. -Nick

All of the interviewees reported feeling varying degrees of irritation and frustration when encountering a cheater. A general feeling was that a cheater ruins the game, while all the cheaters were not always seen similar to each other:

At first, it's very annoying to meet a cheater, especially if the cheater know how to employ the cheats effectively. Sometimes I meet players who can't even use the cheats effectively, and they still suck even with them, those guys I don't even mind so much. But those guys who know how to take advantage of the cheats properly, those guys piss me off for a while. The feeling usually passes as you realize there is nothing you can do about it, so you just report him and move on. -Otto

Getting griefed usually had negative effects on the mood and gameplay of the interviewees, and only one of the interviewees reported that griefing affects him very little or not at all. Many of the interviewees paused to discuss and ponder on what constitutes as griefing. Getting griefed was often found very irritating at that moment and sometimes it even prompted retaliation:

Griefing can be very irritating. For example, when I'm are trying to aim at something and someone comes to push me around or shoot me, and ruins my aim; that's very annoying. If there are several incidents like that within a short time and I'm already irritated, I might snap and take revenge on that person by shooting him. -Nick

Running into a player emitting toxic behavior usually had only a short term effect on the interviewees, as five of the interviewees told that the negative feelings caused by encountering toxic behavior were gone either straight away when they quit the game, or disappeared very fast:

I might feel annoyed for a short while after the game, but it's not something you stop to think about really. The feeling goes away quite fast. -Mike

While toxic behavior was not always thought to be the cause for negative feelings after the game, it was still seen as something that would amplify the negative feelings that originated from somewhere else:

I might feel very negative after losing a game or playing bad, and it's not always necessarily because of encountering toxic behavior. But I think the toxicity probably boosts the negative feelings I have. For example, if you've just lost a game and someone harasses or provokes you, it will definitely boost your irritation. Another example would be running into a cheater few times in a row while playing competitive CSGO, which would cause me to quit playing and have a foul mood for awhile. -Andy

The interviewees felt some types of toxic behavior were easier to disregard without being greatly affected by them. Commonly easiest form of toxic behavior to disregard was flaming or harassment done by a random or unknown player. The main reason why the interviewees found it easy to deal with was found - or rather built - in the game itself, as it is usually possible to easily mute, block or blacklist the toxic person:

In any online game I find written harassment easiest to deal with, since I can simply turn the chat off. Usually I just don't pay any mind to players who flame or harass other players. -Nick

Hardest toxic behavior to disregard was found to be often either griefing or cheating due the tangible, direct impact on the gameplay and unavoidable nature of the offense:

I'd say I can most easily disregard harassment or flaming, but cheating is hardest to deal with because it's not something you can affect yourself. If the enemy players decides to cheat, it's out of your hands, and you just have to sort of "endure it". -Mike

I find griefing or cheating to be the most annoying behavior, but it depends a bit on the game I play. For example, in World of Tanks people pushing me around or otherwise griefing I find most annoying, but in Call of Duty it's the people who cheat. -Nick

However, some of the interviewees found coming to terms with cheaters easy because it was something they could not affect themselves:

If I meet someone who is sure to be cheater, like 100% that you can see the guy just flying through the game and shooting everyone in the head, I usually just think "this game is done for" and proceed to just wait until the game is finished. The chances to win matches like that is 0% and there is no point in putting effort into playing anymore. -Andy

Losing to a cheater is easier to get over than personally playing bad and losing. If someone cheats, the game sort loses its meaning at that point. Sure, the cheating itself is somewhat annoying, but the outcome of the game is completely meaningless at that point. -Peter

One of the interviewees found harassment happening within the team very hard to deal with, as the interviewee felt being trapped in the situation until the match is over:

I think the worst situation is when a teammate starts harassing people in the same team, because you still need to try to win and finish the game, all while trying to endure the ill-behaving person. I feel like I still need to give the game my all and try to win, even if there is some asshole in my team. -Andy

The interviewees gave various reasons that affect whether they would purchase certain online game or not. For example positive game reviews, suggestion from a friend, friends already involved in the game, interesting game content and price point were mentioned as reasons to purchase an online game. In most answers, witnessing or encountering toxic behavior was not found to have an effect on purchases made by the interviewees, but two of the interviewees reported situations where persistent toxic behavior had affected if they purchase a game or in-game items:

Cheaters were partially the reason I quit playing Call of Duty series. I mean I did not purchase the new Call of Duty because I know that there were -and always will be- cheaters using aimbots and wallhacks in the Call of Duty games. -Zach

5.4 Reactions on encountered toxic behavior

While all of the interviewees had tried to talk down a player they do not know who was emitting toxic behavior like flaming, only two of them felt that trying to reason with someone behaving in toxic manner works to calm the situation. On the contrary, five of the interviewees felt that reasoning with such player is meaningless, or it possibly makes the situation worse:

Toxic behavior in chat (flaming) is very hard to intervene. For example, if you try to write something to calm down the flaming person, it is often like pouring more gasoline into a fire. What works better is just staying quiet and minding your own business. -Nick

Stories of conflicts inside guilds or clans of the interviewees were not uncommon. These conflicts sometimes escalated into harassment, and three of the interviewees reported intervening as guild or clan officers when the conflicts turned into open harassment or flaming:

There were couple of players who had a clear disagreement how certain situation should have been played out. The argument started to get more intense, and eventually turned into full blown quarrel with both sides flaming hard. At that point I stepped in to stop it from going further. -Peter

The interviewees were active users of in-game tools that enable them to report encountered toxic behavior or toxic player. The interviewees most commonly used the reporting tools on a daily or weekly basis. Using cheats, griefing another player or being repeatedly toxic in some manner was a sure way to get reported by the interviewees. Only two of the interviewees were forgiving towards perceived griefing, if the behavior could have been an accident or the person griefing immediately apologized. However, those who engaged in flaming behavior or harassed fellow players were not always reported:

How I make use of the reporting tools varies a lot, usually I use them about once per week or less, but sometimes also more than that. For example if I see harassment that is very blatant, I will always report it, but some minor stuff I often let slip. I will also report all the cheaters I see, and most of the players who grief. If it's possible that the griefing was an accident, I usually don't do anything, but if it's repetitive behavior, I will proceed to report the player. -Jake

While the interviewees sometimes let flamers go without reporting them with in-game tools, one of the interviewees made a notion that adding insult to injury by harassing players who had already lost the match was a report-worthy offense:

Whether I report people who run their mouth often depends on the situation, and a lot depends on my own mood at the time. For example, if we have already practically won the game, I'm feeling good and the enemy starts yelling to me or my team, I very rarely make a report since I think they are just trolling. But if the situation is reversed, and it's me and my team who have practically lost the game, and THEN the enemy team starts yelling at us and taunting us, then I will probably report them. I don't see sense in taunting your opponent at a point where you have already won, so if my report in that situation results in a ban or something I'm glad, since other people don't need to endure their bad sportsmanship. -Andy

The interviewees were not keen on the idea of going "out of their way" to get a person emitting toxic behavior judged for their behavior by using methods that were not integrated into the game client, like contacting customer support or administrators outside the game. Only one of the interviewees had recently taken measures to report players for toxic behavior by using methods that were not integrated into the game client. Reason for going to such lengths was found from the stakes of the game, as the interviewee had participated in gameplay event that would yield tangible rewards for victorious players and clans. Contacting the customer support was seen as more reliable way of dealing with the matter than just doing an in-game report:

It takes a major infraction for me to take action like submitting a replay and making a ticket to customer service or technical support outside the game rather than using in-game tools. Those situations are very rare. When it happens, situations like those are often a result from my administrative position inside the clan I play in. For example, our team met a team that employed cheats in a clan match, and prize was

in-game currency for the winner. In this situation I had to use a replay from the game to make a ticket to customer support. -Peter

5.5 Toxic behavior effects on flow

All the interviewees were verbally given a description of flow as presented by Csikszentmihalyi (1990) and all of them recognized experiencing the state of flow while playing online games. However, one of the seven interviewees reported not experiencing flow while playing online team games due the use of voice communication: People constantly talking out loud and communicating during the game was a considered a factor preventing "a trance-like state". Further flow-questions were therefore skipped with this individual, resulting in six interviewees answering the flow-related questions.

Flow of the interviewees was found to be slightly affected by running into written or verbal harassment or flaming during their online gaming. Most of the interviewees felt that verbal flaming within the team had somewhat negative effect on flow, while any form of written flaming was simply ignored in most cases:

> *I feel that the effect of written or verbal flaming is more indirect to me, as I personally try to ignore flaming and focus on my own game while keeping myself in the flow. However, the existing team flow is usually broken if there is verbal flaming happening within the team, further causing the team play to deteriorate. If there is any flaming happening outside the team, I will just instantly block or mute their communication without bothering myself further by trying to talk to them.* -Mike

> *If an opponent starts flaming they can be simply muted or blacklisted, problem solved.* -Jake

One of the interviewees specified that encountering flaming behavior makes getting into flow harder, but any effect the flaming behavior has on existing flow of the player is minimal:

> *Any kind of flaming makes getting into flow harder, but once I get into the flow I stop paying attention to it (flaming), and all I can really hear are the game sounds. It is a kind of trance that I enter.* -Otto

All the answers regarding flaming behavior and flow were coded into simple adjective form and summarized form is shown in Table 5. Verbal (spoken) flaming and written flaming are looked into as separate issues.

Table 5. Verbal and written flaming effects on flow of the interviewees.

Interviewee	Verbal flaming effect on flow	Written flaming effect on flow
Mike	Slightly negative	None
Jake	Slightly negative	None
Otto	Moderately negative	Slightly negative
Zach	Moderately negative	Slightly negative
Nick	Moderately negative	None
Peter	None	None

Shown in Table 5, the interviewees answers were interpreted and turned into simple statements how a certain action affects the flow they experience. The scale is from no effect to major effect as follows: None, slightly negative, moderately negative, very negative and stops flow. Scale does not go to positive effects as none were reported. Only one of the interviewees felt that flaming behavior has no effect on flow experienced while playing, while other interviewees were affected by it to some degree.

Both cheating and griefing were reported having a negative effect on flow, with only 1 interviewee feeling immune to griefing while in a state of flow. Griefing was often reported as very negative due tangible form it took, like stopping one's character from moving or team-killing a friendly player. Running into a player employing cheats often resulted in totally losing motivation or interest, and thus losing the flow sensation as well:

> *Running into a cheater kills any flow pretty much immediately. There is no need to remain in flow when there is a cheater in game, personally I could just quit that game right then and there. All my motivation to play is gone when facing a cheater.* -Mike

> *Running into a cheater causes me to lose motivation and interest to the game, so naturally flow is then gone as well. When there is a cheater in the match, you have no reason to focus or put effort into playing anymore.* -Jake

Table 6 summarizes what happens to flow of the interviewees when they encounter a cheater or get griefed during their online gaming sessions.

Table 6. Cheating and griefing effects on flow of the interviewees.

Interviewee	Player cheating effect on flow	Player griefing effect on flow
Mike	Stops flow	Very negative
Jake	Stops flow	Very negative
Otto	Stops and prevents flow	Very negative
Zach	Stops flow	Moderately negative
Nick	Prevents flow	None
Pete	Prevents flow	Stops flow

In Table 6 the interviewees' answers were interpreted and turned into simple statements how a certain action affects the experienced flow. The scale is from no effect to major effect as follows: None, slightly negative, moderately negative, very negative and stops or prevents flow. Prevents flow was added as it was specifically mentioned by some of the interviewees. As a summary, the interviewees felt cheating having an especially negative on flow, as running into a cheater reportedly always either killed any existing flow or prevented getting into flow altogether.

Five out of the six interviewees identified a player cheating as having the biggest negative impact on their flow, while one of the interviewees felt that getting griefed in game had more negative impact on flow than a player cheating:

> *Griefing kills any existing flow. Cheating ruins that current match where it occurs for sure, but at that point I can personally label that match as meaningless and sort of disregard the whole match, and still get into the flow in the next match. But if I get griefed then getting back into the flow is much harder.* -Peter

5.6 Toxic behavior and the role of the game companies

Out of the seven interviewees, only two reported ever completely reading ROC, TOS or EULA document that comes with installing a game or creating an account for online game. One of the interviewees mentioned that reading smaller set of rules if such things were offered by game servers or communities, but not EULA or such that comes with installing the game. Overall, such documents were seen as hard to read or imposing a heavy workload on the reader. Reading rate of such document was found to be low, considering that it is a mandatory document that the game companies require one to read and accept in order to join:

> *Once, I have read such document only once in my life, not sure which game it was. I hope I'm not turned into HumancentiPad.* -Otto

> *Probably twice, they are usually so long that I can't be bothered to read them. The first time I read one was because a friend of mine suggested it; There were all kinds of funny details like "I agree to sell my soul to Satan" hidden in the document, I had*

a good laugh reading it. [...] I have never read the ones presented with the online games I play. -Peter

The interviewees held a variety of viewpoints on who is in charge of toxic behavior and dealing with toxic behavior in online games. However, a common viewpoint among the interviewees was that every person is responsible for their own actions and behavior:

In principle, the player is always responsible for his or her own actions inside the game. -Peter

If a player failed to moderate his or her own behavior or play according to rules, the interviewees often held either a game company or a third party community providing the platform for games responsible to intervene situation as a "last resort":

If the player is unable to take responsibility or does not want to take responsibility of his own actions, then the game company needs to take action. Of course the game company needs to draft clear rules and punishments for violating those rules to minimize the bad behavior. But still, if regardless of those rules the player still fails to take responsibility, the game company should be free to do what they wish with that player. -Otto

All of the interviewees drew a clear line where they feel the responsibility lies when it comes to scamming behavior. General consensus was that the gaming company is responsible for the technical systems of the game and making sure players cannot get scammed by exploiting bugs in the game:

How I see it is that game company is responsible for making sure their systems can't be used for scamming, and placing proper anti-scamming measures in their games. -Mike

In turn, the player was held responsible for his or her own actions, as no technical system can prevent one from acting stupid:

If someone gets scammed, usually the biggest factor in the act is the person who got scammed. -Jake

If someone is fool enough to give away his account credentials to stranger it's not something administrators can really help with. -Peter

Three of the interviewees had recently received suspicious contacts via in-game messages or mail, while one of them saw scams as more organized occurrences and further called for pre-emptive actions from the game company to keep players informed of ongoing scams:

Game companies should take more pre-emptive position in informing the players of possible scams. [...] For example, if there are scamming messages going around that imitate some bank, the real bank usually responds by sending e-mail to its customers or posting news where they warn you about the scamming attempts. Why shouldn't the game company do the same, I'm sure they are aware of ongoing scams. -Zach

If a scam had already happened, the role of the game company was often seen as a supporting actor, helping the scammed individual return things to normal:

> *The game administrator needs to offer some method for returning the ownership of your account if you get scammed. Role of the administrator is to help and support the victim of the scam or theft, so returning the stolen property is as safe and easy as possible.* -Peter

While generally viewed as negative behavior, some of the interviewees held more serious stance on scamming in online games, as far as to label them as crimes due the real life monetary value of virtual items:

> *The virtual item is often worth real money, or has value that can be measured in money, so the game company should take action when a scam happens. Scamming is stealing like any other stealing that happens in real life. [...] Game companies should work in cooperation with law enforcement in scamming cases, and the scamming in online games should be criminalized.* -Otto

Common perception of the interviewees was that the game companies have noticed the issue of toxic behavior and taken a better stance in combating it during the recent years. Practical examples named by the interviewees mentioned actions by gaming companies like updating and automating the self-moderation tools, regular ban waves of cheaters and promoting fair play:

> *Game companies take action on toxic behavior much more active nowadays. One thing I see done a lot now is that game companies actively encourage good behavior, which is something that was not common in the past. Back then administrators were only acting upon seeing clear violation of their rules. Fair play spirit is much more visible now.* -Peter

5.7 Toxic behavior in match-based online team games

When it came to online games, the interviewees were motivated by various things: Most commonly named motivation was competition, mentioned by five interviewees. Next up was the social interaction which was mentioned by three interviewees. Among other answers were cooperation, sense of success, concrete prizes involved and nostalgia.

All of the interviewees had encountered toxic behaviors in their designated online team games they had spent more than a year playing, which were CSGO, Dota 2 and WOT respectively (see Table 3 for details). All of the interviewees reported playing these games with friends or acquaintances most of the time, rather than alone with random players. One interviewee mentioned that playing with friends also works to ensure less toxic players in the same team as that interviewee.

Of the seven interviewees, five reported playing more on competitive game modes than casual game modes, while two spent more time on casual game modes. In competitive games most common toxic behaviors were found to be flaming and cheating, while in casual game modes most common behaviors were flaming and griefing.

All of the interviewees were unanimous that self-moderation tools (e.g. mute, blacklist, report a player) are a necessary part of all online games nowadays. Tools like "Overwatch" (in CSGO) and "Tribunal" (in League of Legends) that employ a player council to judge the toxic behavior of players were seen in positive light by the interviewees. Especially mute or blacklist function that blocks communications on demand was often found useful and necessary:

> *When you wish to simply disregard the people who flame and harass, I find the blacklist function very good for that and personally I use it quite a lot. I just checked, and it appears I have blacklisted 218 players in just World of Tanks alone.* -Zach

However, despite finding the self-moderation tools necessary, five of the interviewees brought up a notion that the tools provided in online team games are not sufficient to ensure they can enjoy the game to the fullest extent:

> *Even though CSGO has methods that attempt to counter toxic behavior, it's still not enough. Despite having multiple different methods that are all pretty good in their own way, they are still not effective enough to keep the community clean of the toxic players. The player base is so large, so you are kind of bound to meet them every now and then I suppose. I don't think a system exists that would maintain the standards of community well enough for me.* -Jake

Some of the interviewees felt that the methods were correct, but the tools provided inside the game were not working well enough, or the efforts by the game company administrating the game were not enough. Abusing the report tools was also mentioned as something that occurs from time to time:

> *I feel that the provided tools (in World of Tanks) do not work well enough. I think the means are correct, but the investment to them by the firm is not enough. In other words, the reports made by players need to be looked into more efficiently. Although I am aware that people make a lot of useless reports just out of frustration, something I've done myself as well. But still, I feel that the game company should put more effort into dealing with the player reports and making use of them. Reporting a player is not very useful if it leads to no actions from administrators.* -Zach

One issue that was repeatedly brought up by the interviewees was that they were personally unsure on how any of the in-game reporting tools functions in practice, which made placing trust in them harder:

> *I can't trust the anti-cheat and reporting tools in World of Tanks because I have no idea how they work.* -Peter

> *They updated the reporting tools in World of Tanks at some point, but I really have no idea if they work better now. I can't really actually see if there are concrete results.* -Zach

The trust interviewees placed into anti-cheat solutions provided by the game companies was also very low on general level. Many of the interviewees were unable to trust the anti-cheat solution because they were not sure if such system was even present, but the three

interviewees who were active playing CSGO competitively felt especially negative about effectiveness of the VAC anti-cheat:

> *I don't trust the automatic anti-cheat (VAC) jack shit. Give me one minute and I can google a working hack for CSGO. -Otto*

> *I have lost my trust in the effectiveness of the anti-cheat (VAC) over the years, it simply exists. From time to time there are ban waves (of cheating players), but new cheats are already available the next day, so it's not exactly convincing system. It's a constant fight between the developers of cheats and developers of anti-cheats, but I guess it's the best I can hope for. -Mike*

Many of the interviewees shared the viewpoint that game companies have limited resources they can spend on dealing with toxic behavior in their games, which in turn shifts part of the responsibility to participating players. The responsibility of the player was often considered to be using the reporting tools provided by the game, which then further enables the game company to act upon receiving reports from players:

> *In a perfect world the game companies would have infinite resources and they would `monitor all their games in real time and take action immediately when someone behaves badly. But of course that is not really possible, especially not in big and popular online games, so that leaves the players with responsibility of reporting the ill-behaving players. Reporting enables the information to go to the game company, which can then pass judgement where needed. -Andy*

Toxic behavior was often found to be evolving in various ways during a single match inside the online team games, as six of the interviewees had witnessed changes in toxic behavior during their matches. Table 7 summarizes the changes in toxicity witnessed by the interviewees.

Table 7. Witnessed changes in toxic behavior during a single online game match.

Interviewee	Witnessed change in toxic behavior
Mike	Cheater starts to harass or flame if spoken to
Jake	Any toxicity either stops fast or grows exponentially towards the end of the match
Otto	Harassment or flaming gets more intense as match progresses
Andy	No change, form of toxic behavior depends on the person
Zach	Harassment or flaming turns into griefing
Nick	Projected outcome of the match moderates the intensity of flaming: When flaming person is winning, intensity is lower and vice versa
Peter	Harassment or flaming turns into griefing

As seen in Table 7, the change in toxic behavior comes in many forms. The Table 7 contains condensed forms of what the interviewees reported witnessing during their online team

games. Common direction of change in toxic behavior appears to be towards more intense toxicity, as words turn into actions or a certain toxic behavior gets more intense.

Half of the interviewees felt that player skills and how they align has an effect on amount of toxic behavior happening during a match of online team game, while the other half saw toxicity of a player as a simple personal trait:

> *Yes, I feel that player skills play their part in the amount of toxic behavior. I have often witnessed a phenomenon where the more skilled team that is winning the game also adds insult to injury by abusing and taunting their opponents.* -Mike

> *I don't believe player skills have a lot to do with their toxicity, I think the behavior depends more on the IQ of the player. Player skills play a very minor role.* -Peter

Almost all of the interviewees reported that their gameplay has somehow changed since they have started playing the online team games. Five of the interviewees reported that their gaming has turned into more competitive or serious than in the past, while one felt it had not changed except the time spent on gaming is now less than before. However, unlike the others, one of the interviewees reported losing his drive for competitiveness:

> *I feel like I'm too old for playing CSGO nowadays. I feel like the game is aimed for younger audience, I can't keep up anymore. Sure, I still have great fun playing it (CSGO) sometimes, but I don't take it seriously anymore. I just don't feel like I care anymore, life is too short.* -Otto

6.   Discussion

In this chapter the findings are discussed in relation to current literature. The theoretical implications will be discussed first, followed by the practical implications. Last section will cover notes regarding the used research methods.

6.1 Theoretical implications

In this section, the theoretical implications of the current study will be discussed. First, general implications on online gaming will be discussed, followed by implications on the categorization of toxic behavior. The third section will go over implications on toxic behavior in detail, followed by the fourth section, implications on social aspect of online gaming. The fifth section will converse on implications on competitive aspect of gaming, followed by the sixth section about implications on flow experience and toxic behavior. The seventh section will conclude on implications on managing online games.

6.1.1 Online gaming

Studies have found many things that motivate online game players. Motivations mentioned in the current literature like competition (e.g. Frostling-Henningsson, 2009; Sherry et al., 2006; Hainey et al., 2011) and social interactions (e.g. Domahidi & Quandt, 2015; Yee, 2006) came up often in the current study as well. Sherry et al. (2006) suggested that especially young males are drawn to competition and challenge, but many participants of the current study, who are all males in age of 26 to 34, also reported competition as strong motivation to play online. However, some suggested motivations like escapism (Frostling-Henningsson, 2009) and fantasy (Sherry et al., 2006) were not found among the participants of the current study. Instead, motivations like tangible prizes and nostalgia were reported.

Kowert et al. (2014) found a positive link suggesting greater involvement in online gaming also increases problematic play qualities. The current study lacks mass for conclusive results, but a slight support can be given to the notion of Kowert et al. (2014), as the participant who reported the largest weekly playtime was the only one who admitted to engaging in unprovoked flaming behavior and periodically feeling aggressive while playing online games.

6.1.2 Categorization of toxic behavior

In their study, Foo and Koivisto (2004) named harassment, power imposition, scamming and greed play as categories of griefing behavior. While their categorization might be suitable for looking into griefing from scientific point of view, the categorization was deemed unsuitable for interviewing purposes involved in the current study. Instead of introducing the interviewees with griefing behavior sub-categories as they are presented in the literature, a different route was taken. The method used in the current study was an attempt to employ terms that are easier to understand from players' point of view. The researcher presented the interviewees with five different toxic behaviors in simple forms, which were then used during the interviews of the current study: Flaming (verbal and written harassment), cheating, griefing (interfering with gameplay), scamming and cyberbullying.

The current study found out that the term cheating (see Yeung et al., 2006) was universally well understood by the players and required no further discussion on the term during the interviews. Cyberbullying (see Smith et al., 2008) was found to be considered strong word by the participants of the current study, but all of the interviewees had some opinion on what they perceived cyberbullying. Overall, using these terms without adjustment while interviewing players of online games was found to be appropriate, as the terms were both well understood by the participants, suggesting that the terms are well established among the games and thus suitable for interviewing purposes as such.

Foo and Koivisto (2004) suggested treating harassment as category of griefing, but a different approach was taken in the current study. In the current study, harassment (see Foo & Koivisto, 2004; Kwak et al., 2015) and flaming behavior (see Lapidot-Lefler & Barak, 2012) were essentially treated as one behavior, as they both involve verbal or written hostile expressions, and they were separated from griefing behavior described by Foo and Koivisto (2004). Separating the harassment behavior from griefing was done in order to draw a clear line between intangible and tangible toxic behaviors for the purposes of this study. The approach was found to be appropriate, as the participants of the current study were able to discuss many different aspects of harassment and flaming in online games during the interviews without confusing that particular behavior with other behaviors. Overall, most of the participants of the current study were using the term flaming (see Dyer, et al., 1995) when describing different verbal and written harassment taking place during online games, suggesting that flaming is the appropriate term to use while interviewing online game players about verbal or written harassment.

While Foo and Koivisto (2004) gave griefing behavior various categories, the current study employed a different approach. In the current study term griefing was simplified and used to refer to tangible behavior where one player interferes with the gameplay of another player in unsavory manner. While griefing behavior contains many different variations in the literature (see Foo & Koivisto, 2004; Mulligan & Patrovsky, 2003), the current study suggests that using griefing as a simple definition for tangible interference of gameplay is suitable approach for interviewing purposes, as it brings the term close to how the player experiences it during the gameplay situation.

Scamming was also treated as a separate issue instead of it being sub-category of griefing behavior (see Foo & Koivisto, 2004). The current study made an assumption that scamming can be viewed as completely separate issue from griefing and tested this by stripping scamming from any references to griefing behavior. Results deemed the approach appropriate. According to the current study treating scamming as its own behavior is natural for the players and scamming is sometimes viewed as an act closer to crime (e.g. theft) than griefing behavior, suggesting that scamming behavior should be treated as a separate entity from griefing behavior.

6.1.3 Toxic behavior

In online gaming there are many negative behaviors present like harassment, griefing, cheating and cyberbullying, together also called toxic behavior (Kwak et al., 2015). The current study confirms the existence of such behaviors, as all of the types of toxic behaviors were experienced by the participants, in some cases even on a daily basis. The current study also supports Blackburn and Kwak's (2014) statement that toxic behavior often involves

numerous players, as the descriptions received about various toxic behaviors in the current study often involved group gaming situations where multiple players were involved. Further, the findings of the current study also strongly suggest that "bad-apple" phenomenon (see Felps et al., 2006) is also found in online gaming environment, as the study participants often reported situations where a single team member caused the teamwork (cooperation and coordination) to greatly suffer by acting in toxic manner inside the team. Overall, the results of the current study confirm the claim by Felps et al. (2006) that toxic behavior is not limited to one-on-one interaction, but instead affects a wider audience. Felps et al. (2006) described that group initially tries to alleviate the toxic behavior of its' member, but if this process fails, result can be rejecting that member. Occurrence of this phenomenon is also supported by the current study, as reports of situations progressing as Felps et al. (2006) suggested were present in multiple of the study interviews, as some people chose to avoid players who they knew to emit toxic behavior.

Yeung et al. (2006) argues that games cannot rely on administrators intervening to bad behavior, as such solution is not scalable to games that involve tens of thousands players. Findings of the current study are unable to provide information on scalability of the solutions in the studied online games, but the interviews revealed that many players are also sharing the same train of thought as Yeung et al. (2006), as the game company resources were often seen as a limiting factor in dealing with toxic behavior by the participants of the current study.

Shores et al. (2014) found no support for claim that players who have played for longer would emit more toxic behavior than newcomers, and the current study found no conclusive support for it either. All of the participants of the current study were gaming veterans with over 10 years of experience, yet none of them identified themselves as a particularly toxic player. For a player to be labeled as griefer who enjoys that playstyle for example, one must enjoy the act and act intentionally without provocation (Foo & Koivisto, 2004; Mulligan & Patrovsky, 2003), and the participants of the current study indicated no such features in their interviews, nor did any of them employ cheats actively according to the interviews. Exception to this was one of the participants who felt himself prone to flaming behavior, but even he did not regard himself as a toxic player. All in all, these findings suggest that players do not grow more toxic over the years of gaming.

All of the current study participants reported encountering toxic behavior often, but all of them still remained active online gamers, which would suggest that their tolerance to toxic behavior has grown to a fair amount. This finding supports the notion of "selection effect" where players must grow tolerance for toxic behavior or get driven off (see Shores et al., 2014). Additionally, the selection effect appears to have taken place with one participants of the study, as the person reported moving from one online game to another due excessive toxic behavior (cheating) present in the first game. All of the current study participants reported playing their designated online team games with friends most of the time, supporting the claim that playing with friends is strongly connected to if a player stays to play a certain game (Shores et al., 2014), and also supporting the claim that online gaming is very socially motivated activity (Weibel et al., 2008; Frostling-Henningsson, 2009; Guo et al., 2012; Domahidi & Quandt, 2015; Klimmt et al., 2009; Yee, 2006).

Foo and Koivisto (2004) stated that online games usually have rules that players are expected to follow. According to them, these rules can be found on three levels, as first rules are set by technical boundaries of the code, then rules specified in ROC or similar document, and

lastly there are implicit rules like fair play etiquette. The current study found no reason to contradict the categorization of Foo and Koivisto (2004), but an important finding was made in regards of the second set of rules, the mandatory document offered by the game (e.g. EULA, TOS or ROC): Results of the current study suggest that players hardly ever take a look into documents like TOS or ROC where game companies supposedly articulate the rules of their games, and those documents are often perceived as too cumbersome for one to read. This would suggest that rules articulated in ROS or ROC make very little difference from player's perspective, or affect the behavior of the players very little.

Kou and Nardi (2014) claimed that players often refer to their own understanding of the community norms to judge certain behaviors. Current study strongly supports this view: The findings of the current study indicate that players rarely study the rules of games, like the ROC document, but still actively report players with in-game tools for what they perceive to be deviant or toxic behavior, suggesting that norm-based judgement is often taking place.

Lin and Sun (2011) suggested that online gamers perceive free-to-play games in negative light due them attracting more toxic players than their pay-to-play rivals. The current study found no evidence to support this claim. Toxic behavior in online games was viewed as a common phenomenon in all online games, and the current study found no supporting evidence on free-to-play games involving more toxic behaviors than pay-to-play games, or evidence of players viewing them as more toxic environments.

Implications on harassment and flaming in online games

The online disinhibition effect described by Suler (2004) is a phenomenon where people say and do things online that they would not do in face-to-face settings, in both good and bad: In benign disinhibition someone might go out of their way to help a stranger, and in toxic disinhibition someone might exhibit rude language, hatred, anger and spew threats to damage other users. Suler (2004) stated reasons for such behavior can stem for example from anonymity provided by internet, physical invisibility in cyberspace and treating cyberspace as a game where normal rules do not apply. Lapidot-Lefler and Barak (2012) pointed out flaming is one form of toxic online disinhibition. The current study confirms that the toxic disinhibition effect and flaming are strongly present in online gaming settings regardless of the game type, and the current study suggests that flaming behavior is the most common toxic behavior found in online games in general. In the current study reason for flaming behavior was often linked to young age, as many interviewees felt they been immature and engaged in flaming behavior in the past:

> *Yep, I guess I have also been behaving toxic [...] But that was when I was younger [...]* -Jake

Additionally, the results of the current study suggest another common reason for flaming behavior in online games is reacting to flaming of another player. As it stands, the current study is unable to warrant further support towards the causes for toxic inhibition or flaming behavior suggested by Suler (2004).

Clarke and Duimering (2006) found that players behaving in anti-social manner like bullying fellow players or verbally abusing players was often cause for negative experiences in multiplayer settings. Current study works to confirm this finding, as both written and verbal flaming were found to have negative effects on the participants of the current study. In the

current study, the flaming behavior was found to have the mildest overall effects on the gaming experience, but the behavior itself was deemed a very common occurrence. A find that is opposite to what Clarke and Duimering (2006) stated was also made, as some of the participants of the current study reported occasionally receiving positive effects when they got flamed by their opponent during a game. This would suggest that negative feedback from one's opponent can transform into positive feedback for a player, as they then know that their actions have "hit the nerve".

Implications on griefing in online games

Paul et al. (2015) claimed that griefing behavior is often held in disdain, and the current study supports that view. In the current study, griefing was never seen as acceptable behavior inside or outside the participant's gaming groups. The current study warrants some support for Paul et al. (2015) claims that griefing is a common playstyle for players: None of the participants in the current study reported themselves as griefers, but the griefing behavior was still deemed as something that the participants encountered often during their online gaming. The current study also supports the statement that people perceive different things qualifying as griefing behavior (see Blackburn & Kwak, 2014), as the participants of the current study rarely had the same definition of griefing. Instead many of the participants needed to "think aloud" on what kinds of actions can be considered griefing. This also supports the claim that in some cases griefing can also be ambiguous (see Foo & Koivisto, 2004; Lin & Sun, 2007).

According to Ross and Weaver (2012) victims of griefing are more likely to engage in griefing than those who were not griefed. Paul et al. (2015) also suggested that players often engage in griefing behavior to retaliate after getting griefed, to fight fire with fire, in order to stop misbehavior of the other player. This fight fire with fire effect was found to be common trigger for griefing in the current study, as all of the participants reported engaging in such behavior at some point during their online gaming career. However, stopping the misbehavior of the other player (see Paul et al., 2015) was not reported as a motive for fight fire with fire actions by the participants of the current study, which partially contradicts what Paul et al. (2015) claimed. Additionally, the current study suggests that the fight fire with fire is not limited to griefing behavior, but also more commonly found in flaming or harassment behavior, usually employing the simple motive of revenge or getting back at someone. Even act of fighting cheating with cheating was found feasible by the current study. However, the current study found no support for the claim that griefing in retaliation would bring social elements (see Paul et al., 2015) to griefing behavior. Instead, the motivation commonly found in the current study was a simple revenge.

The current study found some of the same effects from victims of griefing as Ross and Weaver (2012), including decreased enjoyment and increased frustration. No positive outcome from encountering a griefer was ever reported by the participants of the current study, nor found in the current literature, suggesting that griefing does not foster positive outcomes for those who fall victims of it.

Implications on cheating in online games

Having anti-cheat software in place is highly recommended by literature (e.g. Lu & Wang, 2008; Blackburn et al., 2012; Clarke & Duimering, 2006). One example of such systems currently in place is VAC (Blackburn et al. 2012). According to results of current study,

players do not view anti-cheat systems in the studied games effective. Especially VAC was seen as a system that lags behind, thus unable to effectively prevent players from cheating. These findings supports statement by Yeung et al. (2006) that new version of cheat is often soon available after previous version gets detected. In some cases the interviewees of the current study were not sure if an anti-cheat system existed at all in the game they play, suggesting that a more visible stance should be taken by the game companies.

According to Yeung et al. (2006) those who do not cheat have almost no chance to beat a player who cheats, while Clarke and Duimering (2006) stated that cheating ruins the balance of challenge in the game. Results of the current study support both of these views: When encountering a cheater, the interviewees often felt that there was nothing they could do against such player, and reportedly lost their motivation to put effort into the match while the cheater was present. Overall general consensus of the current study participants was that cheating ruins the game for everyone involved, thus supporting the view of Clarke and Duimering (2006).

Yeung et al. (2006) closed on a note that unchecked cheating ruins the entertainment value of the game, causing players to eventually abandon the game. There was some support found to this, as one of the participants of current study reported gradually moving away from a game franchise that was riddled with cheaters, moving on to another online game where cheaters were not seen as an issue. Overall, findings of this study suggest that tackling down cheating behavior is important for the game company in order to ensure players can enjoy their online gaming.

Implications on scamming in online games

Foo and Koivisto (2004) describe scamming has fraudulent behavior while trading goods or deceiving another player by posing as someone else in order to gain benefits from that player. The current study found the description to be accurate, but in need of expanding, as scamming appeared to take place in other places than just trades between players. According to some of the participants of the current study scamming had taken more organized forms than only player to player interaction, as they reported running into suspicious contacts that appeared to be scams involving no trading between players. The current study also supports Lu and Wang's (2008) claim that game company needs to provide fraud prevention in their games, as scamming behavior has taken more organized forms according to one of participant of the current study. The current study also found out that players perceive the gaming company responsible for making sure the technical systems of the game or platform cannot be used for performing scams, which also supports the statement made by Lu and Wang (2008) on need of fraud prevention. The current study also suggests that players have grown to spot scamming attempts and that the players are generally well aware on how the scamming takes place, as majority of them considered scamming to be obvious and easy to avoid. However, one possibility is that this could simply be the results of their long gaming career, as each of the study participants had over 10 years of online gaming behind them.

Implications on cyberbullying in online games

Four of the five cyberbullying incidents that were discovered in the current study closely resembled the South Korean "wang-tta", where lower skilled player gets targeted and harassed by other players of their community (see Chee, 2006). This would suggest that the

wang-tta phenomenon is not bound to only South Korean gamers, but takes place in the western online gaming as well. Most of the cyberbullying incidents witnessed by the participants of the current study fit the description of malicious behavior that is carried out by group or individual repeatedly (see Smith et al., 2008) with intent of harming the target (see Paul et al., 2015), deeming the descriptions accurate. Four of the five cyberbullying incident descriptions mentioned that the bullied person was perceived as a lower skilled player, suggesting that the perceived player skills play a major role in cyberbullying, just like suggested in study of Chee (2006).

6.1.4 Social aspect of gaming

Lu and Wang (2008) argued that online game players get more pleasure from playing when their friends also participate. The findings of the current study suggest that there is another hidden factor inside this statement when it comes to online team games: Online team games can only involve a set amount of players, so a friend occupying one player slot means one less slot for potentially toxic unknown player in the match, thus potentially increasing overall enjoyment received from the playing.

Person who participates in a social space online agrees to unspoken social contract that outlines the behavior inside that context (Boucher & Kelly, 2003). These unspoken contracts were also found present in the online gaming environments of those who participated in the current study, as some them regarded toxic behaviors like cheating or griefing inside their gaming group forbidden on simple unspoken *everyone knowns* basis:

> *When we are playing [...] nobody really dares to start griefing or cheating. This is because everyone knows that they would be removed from the group immediately [...]*
> -Andy

Underlying mechanics of social systems are important tools for forming social contracts and enabling communication, for example in online games communicate by fighting together and forming communities (Kirman et al. 2012). The current study found signs of forming social contracts by playing games, as the participants played these games not only with people they knew, but also with people they were less acquainted with. There were also signs of social norms evolving and getting re-negotiated (see Kirman et al. 2012) among the participants of the current study, as the participants reported behaving in different manner and having different tolerance for toxic behavior depending on how well they knew the person they were playing with. Sometimes toxic behavior of co-player led to diffusion of social contract between the interviewee and the co-player, as the participant of the current study indicated he no longer plays with certain people who he perceives toxic. Additionally, one of the participants in the current study shared the view of Kirman et al. (2012) that it is natural that some people break the implicit social norms, as he considered toxic behavior to be expected in online games nowadays. Overall, the findings of the current study suggest that toxic behavior is a factor in forming and de-forming of social contracts while playing.

Current study supports the view by Blackburn et al. (2012) that online game players and communities dislike those who break the rules of the game. Participants of the current study reported very little tolerance to behaviors like cheating and griefing that often break the rules of the game, in both implicit sense (see Boucher & Kelly, 2003) and explicit sense (see Blackburn et al., 2012: Yeung et al., 2006). The participants of the current study reported

experiencing only negative effects to their gameplay when running into a cheater or griefer. Additionally, results of the current study would suggest that players who break the implicit rules of the social group (by for example flaming their teammates) are often also disliked and avoided.

Act of mischief that takes place between socially acceptable behavior and anti-social behavior (see Kirman et al., 2012) was found to be common behavior among the interviewees of the current study. Findings of the current study supports the claim that mischief is often present in tight-knit social communities (Kirman et al., 2012), as most of the study participants were involved in such actions with their own social group while playing online. Attitude of playfulness and lack of harmful intent (Kirman et al., 2012; Foo & Koivisto, 2004) were also found to be core values of mischief in the current study. In the current study the participants appeared to know the boundaries of their mischief well, which would implicate that they were already past part of testing the boundaries of acceptability mentioned by Kirman et al. (2012), further suggesting that mischief serves social purposes beyond exploring the boundaries of what is socially acceptable mentioned by Kirman et al. (2012).

6.1.5 Competitive aspect of gaming

Rambusch et al. (2007) suggested that gameplay changes over time for some players, especially evolving from leisure and fun to more competitive direction. Findings of the current study suggest the same, as five of the seven participants had progressed towards more competitive gaming in the same fashion. There was also one outlier, as one of the participants had gone the opposite direction, away from competitive towards more leisure gaming, suggesting that online game players follow their personal preferences when changing their style of play.

Clarke and Duimering (2006) made several observations in their study: According to them negative experiences in multiplayer settings were commonly caused by players cheating or behaving in anti-social manner like bullying, griefing or verbally abusing other players. Additionally, they claimed that cheating in multiplayers destroys the balance of challenge and ruins the competition factor for those who participate. The results of the current study strongly supports these claims. Toxic behavior like cheating or griefing was felt as having negative effect on online gaming experience across all of the interviews, and those who played competitively often reported cheating to ruin the game, and competition alongside with it:

> *Some people just don't want to lose, so they cheat. It really ruins the game. [...] it's game over. There is nothing you can do.* -Jake

Guo et al. (2012) argued that major gap in skill between the players of online game match can lead to demoralizing experience and those of lesser skill might give up. The results of the current study work to suggest that encountering a cheater works in the same way: The participants of the current study often reported just giving up when encountering a cheater, as they perceived having no chance of beating a cheater when playing fair, just as Yeung et al. (2006) mentioned in their study. According to the current study, when a cheater is present, the competitive aspect of the game or match is perceived gone, verifying the claim by Clarke and Duimering (2006) that cheating ruins the challenge and competition aspects.

The current study could not provide any conclusive results regarding the claim by Adachi and Willoughby (2011) that competitiveness in video games would produce higher level of aggressive behavior than violent content in games. Only one of the interviewees reported feeling aggressive from time to time, but his personal play style was casual and the aggression was reportedly caused by flaming behavior of a teammate, not the game or its contents. Instead, the current study warrants some support to idea that encountered toxic behavior can possibly act as a catalyst for bad mood (including aggression) for a player who is already stressed by something else.

6.1.6 Toxic behavior and flow in online gaming

Csikszentmihalyi (1990, p. 71) described flow as mental state involving characteristics like intense involvement, concentrating and focusing, clarity of goals, distorted sense of time and lack of self-consciousness. Current study supports the accuracy of the description, as all of the interviewees quickly recognized the experience as something they have felt during their online gameplay, which also supports the view that flow is found in online activities like gaming (see Hsu & Lu, 2004; Sherry, 2004). Current study also supports the suggestion by Sweetser and Wyeth (2005) to add social interaction as part of the flow experience in games, as flow sensation was found to be disturbed by negative social interactions like flaming happening within the gaming groups of the study participants, thus making it relevant factor in flow.

Hsu and Lu (2004) suggested that if a user of online game is met with difficulty that one cannot overcome, flow and usefulness of the game will not be perceived. Results of the current study suggest that cheating fits this description and works as described by Hsu and Lu (2004), as all of the participants reported complete stop or prevention of flow, and sense of incapability towards playing the game when they encountered a player employing cheats. In essence, encountering a cheater led to nullification of flow and sense of apathy (see Figure 2) for the participants of the current study.

In the current study, encountering griefing behavior was found to very negatively affect the flow sensation. The effect of griefing on the felt flow was not as extreme as the effect of cheating, but it was still reported as highly detrimental in regard of felt flow, often so due the tangible nature of the griefing act. Results of the current study would therefore suggest that griefing negatively affects flow of the victim because it disturbs the enjoyment, control and concentration (see Koufaris, 2002; Hsu & Lu, 2004) that are all central components in the flow experience.

Current study suggests that harassment or flaming coming from inside the gaming group is also detrimental to flow experience. In the current study, flaming behavior was not found to affect the participant's balance of challenge and skill described by Csikszentmihalyi (1990), but instead it was reported to bother the participants of the study by disturbing elements of flow like concentration and enjoyment (see Hsu & Lu, 2004).

The findings of the current study warrants minor support to Hsu and Lu's (2004) claim that lack of flow can lead to user abandoning the game: One of the participants reported moving away from a game franchise due excessive presence of cheaters, and the overall findings of the current study suggest that cheating is highly detrimental to flow sensation.

6.1.7 Management of online games

Online game communities should be maintained by vendors in order to ensure players are able to enjoy social interaction while playing (Lu & Wang, 2008). The results of the current study support this claim, as online gaming was found to be socially motivated, while flaming behavior that disturbs social interaction was deemed very common. The findings of the current study suggests that one effective and highly suggestible form of maintaining the community is to provide the participants with self-moderation tools, such as blacklist and mute that can be used to prevent unwanted communication. Yeung et al. (2006) claimed that such reporting-systems are already in place in several online games, and the results of the current study work to confirm that. When it came to dealing with encountered toxic behavior, the participants of the current study were found to be active using the reporting-tools provided in the games they play (confirming their existence), and less active on taking roundabout methods like contacting customer support. The existence of such reporting tools was seen as positive thing, but the vague black-box nature of the tools was sometimes considered problematic by the participants of the current study, just as mentioned by Kou and Nardi (2014).

Governing online game communities is beneficial for both players and game companies (Kou & Nardi, 2014). Developers should be actively encouraging positive community norms (Shores et al., 2014). Both of these claims invoke the idea that a gaming company should be a public figure in dealing with toxic behavior that takes place in their online games. Findings of the current study support that idea, as some participants of the current study made positive remarks about gaming company taking a visible stance in reacting to toxic behavior in form of announcing bans, warning players on scams or promoting fair play. In the current study gaming company was often seen as a figure with the final authority to deal with situations where players failed to moderate their actions, suggesting that players have an expectation of presence for the gaming companies. Overall, company taking any action or stance on toxic behavior was viewed as a positive thing by the participants of the current study. While governing online game communities was seen as positive thing, there were also hints of problems visible (as suggested by Kou & Nardi, 2014) in the current study: The participants of the current study often remarked the black-box nature of the automatic reporting tools and one-sided disciplinary actions as factors that lower the trustworthiness of those governing actions, suggesting that game companies should work to improve their transparency when dealing with toxic behavior.

Luo et al. (2006) and Aleem et al. (2016) both made a claim that online game experience benefits greatly when the game is accompanied by high-quality customer service. Findings in the current study warrant support this view as well, as results of the interviews brought up a notion that game company was expected to provide personal service to player, especially in a situation where a scam had taken place. While current study found that players are not likely to contact customer support when met with toxic behavior like flaming or griefing, the customer support was still viewed as a reliable way to deal with toxic behavior when the situation called for greater actions than simply using available in-game reporting tools and hoping for results. This would suggest that players still expect customer service to be more reliable than automatic reporting tools when dealing with toxic behavior. Results of the current study are slightly contradictory with view of Luo et al. (2006) claiming that online game players often seek instant in-game support when contacting customer support. In the current study players did not seek instant in-game support when contacting customer support,

but instead they expected that contacting customer support would reliably provide a concrete solution to their problem, even if the solution would be provided later.

6.2 Practical implications for online game developers

The current study looked into toxic behavior in online games from a view that is close to the player viewpoint. The interviews were structured towards finding out how the player sees, feels and deals with toxic behavior he or she encounters while playing online games. The interviews yielded many practical implications on how players handle or try to handle the toxic behavior they encounter. In many cases, methods or tools that participants used to deal with toxic behavior were found directly from the game client, just as suggested by Yeung et al. (2006) and Shores et al. (2014).

The current study indicates that online game players hold a fairly positive view on the efforts that gaming companies and developers take to combat toxic behavior. This would implicate that online gaming companies are well aware that toxic behavior can be a threat to user retention (see Shores et al., 2014), as actions to counter such behavior are being taken by the companies. Players of these games also appear to be well aware of the magnitude of the task, as many of the current study participants acknowledged the limited resources gaming companies can spend on fighting toxic behavior.

Here some suggestions will be made considering the practical side of managing an online game. Suggestions posted here are based on the current study and the conducted research interviews. Additionally, some sources from current literature that support to the claims made based on the current study will be listed after the suggestion. The practical implications from this study come in three different levels and they include several different methods of fighting toxic behavior:

Tier 1 - Pre-emptive:
- Skill-based matchmaking
- Anti-cheat software
- Well-defined and compact rules

Tier 2 - Reactive:
- Player tools: Mute or blacklist
- Player tools: Report offenders
- Visible stance on toxic behavior from gaming company

Tier 3 - Personal service:
- Personal customer support

The three tiers will be discussed in detail in the following three sections. First will come the pre-emptive actions, followed by reactive actions and finally, the personal service actions.

6.2.1 Tier 1 - Pre-emptive

Results of the study suggest that people enjoy playing and put good effort towards playing when the skill levels of players involved match each other, especially when the games are played with high intensity. When the players are putting their effort into playing the game, that effort is not put into unsavory activities like flaming, thus improving the general

atmosphere of playing. A quote to summarize the previous statement from one participant of the current study:

> *When the players are skilled and play the game with high intensity, they don't have time to flame or do stupid stuff - All their focus is in the game itself, nothing else.* -Peter

Therefore, a suggestion of employing skill-based matchmaking in order to reduce overall toxic behavior involved in the game is made.

The current study found out that cheating is perceived as a very negative behavior in online games. In addition, cheating is often perceived to ruin the gaming experience for all the players involved in the same match. In extreme case unchecked cheating had even driven a player away from whole game franchise, thus costing the game company a customer. Current study also showed that having an anti-cheat software in place works as a positive signal that game company is taking note of the issue of cheaters, even when the anti-cheat software is all but effective.

Therefore, a suggestion of employing anti-cheat software in order to reduce cheating and improve gaming experience is made.

Results of the current study suggest that players largely rely on their personal understanding of the norms to judge behaviors and report toxic behavior. In addition, the current study found out that the mandatory ROC or EULA documents are almost useless for the purpose articulating rules to players, as the players very rarely actually read them. The participants of the current study were not against reading rules, but documents like ROC or EULA were perceived too cumbersome. According to current study, even if a player would not read ROC, he would gladly read a more compact set of rules.

Therefore, a suggestion of having a well-defined and compact set of rules visible for players is made, with aim to uniform the rules for players and reduce the need for personal norm-based interpretation.

The current literature offers some support for these suggestions, see for example: Clarke and Duimering (2006), Guo et al. (2012), Kou and Nardi (2014), Liu et al. (2013), Yeung et al. (2006).

6.2.2 Tier 2 - Reactive

The current study found written and verbal flaming to be the most common form of toxic behavior that players encounter. Results of the current study suggest that the most common and method of dealing with encountered flaming is to blacklist or mute the misbehaving player, by using the tools provided by the game itself.

Therefore, a suggestion of having an on-demand tool for muting another player is made, with aim to give players means to protect themselves from flaming.

According to the results of the current study, players are aware that amount of toxic behavior is widespread issue and that companies are not able to deal with everything related to it directly. The participants of the current study preferred methods of reporting toxic behavior

that are integrated into the game client, versus methods that involved making contact with game company outside the game. Additionally, while all of the participants of the current study agreed that self-moderation tools are necessary part of games these days, a more feedback from using them was hoped.

Therefore, a suggestion of having in-game tools to report players who are behaving in toxic manner is made, with aim to give players chance to improve their gaming experience and also to lessen the load of the game company.

Company taking a visible action on toxic behavior was seen as a positive thing by the participants of the current study. That action might have been something like issuing a warning about ongoing scams or banning a wave of cheaters, but regardless of the form it took, it gave the players a signal that the gaming company was taking a stance on toxic behavior. In fact, actions like these were sometimes wished for by the participants of the current study.

Therefore, a suggestion is made for company to take visible stance on toxic behavior and how they deal with it, with aim to signal players that issue of toxic behavior is not being overlooked.

Support from current literature to back up suggestions made here can be found from following sources: Blackburn and Kwak (2014), Yeung et al. (2006), Shores et al. (2014), Hsu and Lu (2004).

6.2.3 Tier 3 - Personal service

According to the current study, game company is often expected to provide help to the player when all other methods have failed to do so. Results of the current study also suggest that customer service is viewed as more reliable way of dealing with issues than the automatic reporting tools provided by the games. Personal customer service was seen as important actor that could return things to normal especially in a situation where scamming had taken place.

Therefore, a suggestion of providing players with personal customer service on-demand is made, with aim to resolve issues that cannot be handled by automatic means.

Support for the benefits of having customer service can be found from current literature: Choi and Kim (2004), Lu and Wang (2008), Luo et al. (2006).

One additional method of fighting toxic behavior that was not listed here, but mentioned by the participants of this study was the player councils. Player councils are currently employed by CSGO (Overwatch) and were formerly employed in League of Legends (Tribunal, see Blackburn & Kwak, 2014). Such systems were always mentioned in positive light by the participants of the current study, but would warrant a close look in order to receive a recommendation.

Overall, these three tiers of measures are something that every company should take into consideration when administering their online game and the community surrounding it. On a positive note, according to the literature (e.g. Yeung et al., 2006; Blackburn et al., 2012; Blackburn & Kwak, 2014) and the interviews of the current study, many of these listed methods of fighting toxic behaviors are already largely present in the current online games

and many of the gaming companies are actively keeping an eye on the situation regarding toxic behavior.

6.3 Notes regarding involved research methods

All of the interviews in the current study were conducted with VoIP software and the interviewees took part with their own computer from the comfort of their home. As all of the interviews were completed in full form without major problems, they can be considered to be successful for the purposes of this study. Thus, the current study supports the notion made by Turner (2010) that the interviews should be conducted in an environment that is pleasant and safe for the participants where they do not feel uncomfortable to share information. As online games are mostly played over the internet and on the home computer (see Weibel et al., 2008), the settings of the current study were as close to safe environment as possible for the interviewees who are online gamers. Disclosure of confidentiality was reviewed by additional researchers as suggested by Chenail (2009) and used as one method of building trust between the interviewer and interviewee (Myers & Newman, 2007). As the interviews were all completed in full format, the current study supports the benefits of having oral disclosure of confidentiality as part of the interview done over the internet.

While data from pilot studies is usually not included in the final study (Chenail, 2009), in the current study the data was included. Including the data was seen as appropriate, as the first two interviews that served as pilots were completed in full form without any major issues and the data gained from them was appropriate regarding the current study. Reason for updating the interview structure after pilots was mostly due the length, as pilot interviews took almost two hours to finish. Other problems found in the pilots were minor problems in staying flexible as mentioned by Myers and Newman (2007), which was not seen as a basis for abandoning data gathered in pilots either.

The current study employed a lesser known method called "interviewing the investigator" by Chenail (2009) as the first step in piloting the interviews. Chenail (2009) suggested that the method can be employed solo, where the researcher plays both roles of interviewer and interviewee and goes over the interview, but this was not found feasible in the current study. The situation of interviewing oneself proved too awkward and artificial in the current study, and those are mentioned as difficulties in any interview by Myers and Newman (2007). The researcher got constantly sidetracked by his own thoughts and notices made about the makeshift interview situation, thus the situation proved impossible to complete. However, when another researcher took over the part of interviewer, the process could be successfully completed in manner described by Chenail (2009). Additional note was also made during the process: The assisting researcher involved should also have expertise in the area surrounding the study (as suggested by Flick, 2009, p. 54; Qu & Dumay, 2011) to foster the flexibility of the interview (Myers & Newman, 2007) during the process.

After taking in another researcher to do the interviewing, the interview the investigator method worked well in areas like assessing time spent (Chenail, 2009), adjusting the questions (Chenail, 2009; Turner, 2010) and improving the flow of the interview (Qu & Dumay, 2011). The current study suggests that a separate pilot interview should be conducted after finishing the interview the investigator process. The pilot interviews conducted in the current study helped to improve the research questions further a great deal, as suggested by Turner (2010), even after the interview the investigator process was already completed.

7.   Conclusion

In this chapter, the research question will be answered in compact form. Answering the research question will be followed by the limitations of the current study. Lastly, some suggestions for further studies will be given.

7.1 Answering the research questions

The goal of the current study was to understand how the toxic behaviors affect online gaming by conducting qualitative interviews on players of online games. The current study aimed to answer the following research question:

- *How does toxic behavior affect online gaming?*

Overall, based on the results of this study, toxic behavior appears to negatively affect online gaming. Different types of toxic behavior like flaming, griefing and cheating had different kinds of negative effects on various aspects (e.g. social aspect and competitive aspect) of online gaming. Flaming that happened inside the social circle of the player had negative impact on sociality, competition and cooperation of the group, while flaming coming from outside the social group was simply blocked and thus had very little effect. Sometimes flaming done by the opponent even produced positive effects for those who were getting flamed. Griefing behavior appeared to have very negative effect on overall gaming experience, no matter the direction it came from, ultimately resulting in decreased enjoyment and increased frustration for the victims. Cheating was never seen as an accepted behavior either, and it had especially destructive effect on competitive aspect of gaming. In the extreme case, the presence of continuous cheating behavior had even made a player quit the game for good. The effect of these various toxic behaviors was generally only short lasting, and something that subsided when the game ended.

Scamming was deemed a negative behavior, but it was often considered to be easy to avoid with common sense. While the biggest factor in scamming was perceived to be the victim, the gaming company was still expected to return things to normal if a scam had taken place. Sometimes scamming was even viewed as a crime due the monetary value of the items involved. Moving on, none of the participants of the current study reported to be victims of cyberbullying, thus the effects of cyberbullying remained hidden. However, the behavior itself was witnessed by the participants, and generally found to be something targeted towards players of lower skill.

The main research question of the study was supported by two assisting questions. The first assisting question was aimed to research the link between flow and toxic behavior, and the second assisting question was aimed to see if toxic behavior affects how players make purchases in online games:

- *Does the toxic behavior affect the flow experience in online games?*

The current study found out that encountering toxic behaviors like flaming, griefing and cheating has a negative effect on the flow experience of the players. Written flaming had no effect or very little negative effect on flow, while verbal flaming usually had little or

moderate negative effect on flow of the victim. Griefing was found to have very negative effect on flow of the victim due its tangible nature. Encountering a cheating was found to have the biggest negative effect on flow of those involved in the game, as it essentially always either completely stopped the flow of the player, or prevented the player from entering state of flow at all.

- *Does the toxic behavior affect purchases made by online game players?*

In most cases (five out of seven), toxic behavior was found not to affect purchases made by the players, but there were some exceptions. Two of the seven interviewees reported to have stopped spending money on a certain game due some form of toxic behavior being persistent in that game. One of these two had quit the whole game franchise due the persistent cheating behavior present in that game. So in summary, toxic behavior can negatively affect the purchases made by the players.

7.2 Limitations of the study

The current study has some limitations in place that should be taken into consideration when it comes to the results of the study. One limitation comes from the fact that the study was essentially carried out by a single researcher, all the way from literature review to interviews and content analysis. Credibility of the results and interpretations could have be improved by involving another researcher while conducting the analysis from interview transcripts.

Another limitation stems from the fact that all of the interviewees can be viewed as experienced gamers or seasoned online gaming veterans, who have been playing games online for a big part of their life. In that sense, the study lacks viewpoint from less experienced gamers, who could possibly hold another viewpoint on impacts of toxic behavior in online games. The demography of the interviewees is very similar overall, as they were all Finnish adult males, which works to reduce the generalization potential of the results. Additionally, the use of snowball sampling produced a sample that partially shares the same social connections and consists of socially active online game players while leaving out those who play online games mainly by themselves, potentially generating a bias in the study sample (Atkinson & Flint, 2001; Biernacki & Waldorf, 1981).

7.3 Future research

The current study suggests that the categorization of different kinds of negative or toxic behaviors in online games is needed. There are studies that tackle different kinds of deviant, anti-social or toxic behaviors on online games from various viewpoints (e.g. Foo & Koivisto, 2004; Kwak et al., 2015; Yeung et al., 2006), but a research is needed to bring forward more uniform categorization for the different negative behaviors present in current era online games. The task is not easy, as online games come in many forms ranging from leisure Facebook clickers to hardcore competitive strategy games that require years of practice to master. Adding to the challenge, the online gaming environment is in constant state of development, as new technologies and games make their way on to the market.

Among other things, the current study supports the notion by Paul et al. (2015) that cyberbullying requires more studying in the gaming environment. The cyberbullying incidents unearthed in this study were found to resemble the South Korean wang-tta (see

Chee, 2006), which would suggest that the phenomenon is not limited to only South Korea. Overall, the nature of cyberbullying in online games is due for further research on how it manifests in the online gaming environment and how the cyberbullying affects those who fall victims of it.

While the current study did some work to unearth the connection between flow and toxic behavior in online games, a more comprehensive study on that particular subject is needed. Currently, additional studies that look into effects that toxic behavior has on flow in online gaming environment are missing. The current study only scratched the surface of the phenomena and gave some general implications on the subject, therefore a suggestion to study this area further is made.

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Appendix A. Oral consent script in Finnish

Olen Teemu Saarinen ja opiskelen Oulun yliopistossa. Kirjoitan gradua, eli teen tutkimusta nettipelaamisesta ja häiriökäyttäytymisestä nettipeleissä.

Haluaisin haastatella sinua tähän tutkimukseen ja nauhoittaa kyseisen haastattelun. Myöhemmin nauhoitus litteroidaan, eli kirjoitetaan nauhalta koneelle. Syntyneitä nauhoja ja litteroita ei laiteta yleiseen jakoon, vaan niitä käytetään ainoastaan tämän tutkimuksen ja mahdollisten jälkitöiden yhteydessä. Tutkielmassani saatetaan käyttää lyhyitä sitaatteja tästä haastattelusta. Sitaatteja ei yksilöidä muuten kuin arvotulla nimimerkillä, johon on liitetty ikä. Sinä olisit esimerkiksi "Seppo (tai Minna), 12v".

Voit koska tahansa kieltäytyä vastaamasta kysymykseen, lopettaa haastattelun tai kieltää vastauksiesi käytön tutkimuksessa jälkikäteen ottamalla minuun yhteyttä esimerkiksi sähköpostilla.

Otatko osaa tutkimukseen ja saanko nauhoittaa haastattelun tutkimuskäyttöön?

Appendix B. The interview guide

The semi-structured interview here is the final version that was refined after two of the first interviews and used on five of the seven interviews. In addition to question visible here, additional probing question were often asked. The questions are translated from Finnish to English here, and they were originally asked in Finnish.

Demography
1. How old are you?
2. How long have you been playing games online?
3. Would you describe your online gaming history briefly, for example where it began and what games were special for you in the past?
4. What platforms do you use for online gaming nowadays?
5. Which online game has occupied you the most during the past year or so?
6. On estimate, how long do you spend online gaming per week currently?
7. What motivates you in online games?
8. Are there times when you play online games but do not really enjoy playing at that time?

General questions on toxic behavior
9. What do you personally consider as toxic behavior in online games?

Here briefly describe the different toxic behaviors that the interview will converse:
•   Griefing
•   Cheating
•   Harassment, flaming
•   Scamming
•   Cyberbullying

10. Have you ever witnessed toxic behavior in online games?
11. Have you ever intervened or tried to intervene toxic behavior in online games?
12. Have you noticed if other players intervene toxic behavior when such behavior occurs?
13. Have you been in a situation where a friend or game companion of yours has started to behave in inappropriate manner while you have played together?
14. Do you personally know players who are prone to toxic behavior while gaming?
15. Have you ever personally behaved in toxic manner when playing online games?
16. Have you ever responded to toxic behavior with toxic behavior of your own while playing online games?
17. Have you ever been a target of verbal or written harassment or flaming while playing online?
18. Have you ever been a target of griefing behavior while playing online?
19. Have you ever been a target of cheating player while playing online?
20. Which one of the aforementioned toxic behaviors *(flaming / griefing / cheating)* do you find easiest to disregard, and which do you find the most disturbing while playing online?

21. Have you ever been in a situation where a toxic player would have changed their behavior or visibly regretted their actions?

22. How often do you report ill-behaving players with the reporting tools provided in online games?

23. How often do you report ill-behaving players to administrators using methods that are not integrated into the online game? *(For example, making a ticket to customer service)*

24. What kind of punishment do you see fit for different toxic behavior? *(Go over different kinds of toxic behaviors one by one)*

25. Do you ever engage in playful mischief with your friends or game companions?

26. Have you ever witnessed cyberbullying in online games?

Flow and toxic behavior

(Provide interviewee with short description of flow): Flow-experience in games means a situation where the player is completely absorbed in what he is doing and receives great enjoyment from playing. In flow-state the player is completely focused on the game and feels like he has total control over his actions. Flow also often involves distorted sense of time.

27. When playing online games, do you ever enter the state of flow? *(If unable to get into flow, skip to 34.)*

28. Do you feel something makes it easier for you to get into the state of flow?

29. Do you feel something makes it harder for you to get into the state of flow?

30. What breaks your flow, or where does your flow end?

31. How does the written or verbal harassment affect your flow?

32. How does encountered griefing or cheating affect your flow?

33. Does some type of toxic behavior affect your flow more than other types of toxic behavior?

34. Have you ever felt that toxic behavior or the feeling caused by it would stay with you or follow you to outside the gaming situation where it occurred?

Money and toxic behavior

35. Have you ever read "Rules of Conduct" or "Terms of Service" document offered along with an online game?

36. Have you ever spent money on online games?

37. After you have spent money on a certain online game, has there ever been a sensation of not getting your money's worth?

38. What affects your decision to purchase pay-to-play online game?

39. What affects your decision to test free-to-play online game?

40. Has toxic behavior, or amount of encountered toxic behavior ever affected your purchases regarding online game in any way?

41. Have you ever passed on purchasing online game after hearing or reading negative comments on the toxic behavior present in game?

42. Who or what do you hold responsible for intervening toxic behavior in online games?

43. Have you witnessed any change in the attitude of gaming companies regard toxic behavior in their games?

44. Do you think game companies should intervene scamming happening in their games, or do you think players are responsible for their own actions?

Gaming related questions (CSGO / DOTA2 / WOT)

45. Do you usually play the <game> with friends or solo?

46. Has playing the <game> changed for you somehow during the time you spent playing?

47. What ways does the <game> offer you for dealing with toxic behavior or avoiding it?

48. Do you trust the anti-cheat and automatic reporting tools to work appropriately in the <game>?

49. On a scale from 4 to 10, how would you grade the <game company> on dealing with the toxic behaviors in their <game>?

Casual and competive playing and toxic behavior

50. Do you play the <game> more often in the casual or competitive game modes?

51A. Is any certain type of toxic behavior common in the casual game modes of the <game>?

51B. Is any certain type of toxic behavior common in the competitive game modes of the <game>?

52. Has the toxic behavior you have encountered during a single match in <game> ever changed shape somehow as the match progresses?

53. Regardless of the game mode, do you feel that the <game> has more or less toxic behavior depending on how the skills levels of the players match during the game?

54. Do you follow eSports of the <game>?

55. Have you ever witnessed toxic behavior in the eSports level of online gaming?

56. Is there something else you would like converse on, or make additional comments regarding the toxic behavior you have encountered during your online gaming?