Towards a Better Understanding of Toxicity in Competitive Multiplayer Games

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Abstract

Negativ social adfærd (toxic opførsel) i online spil har været et udbredt problem i mange år, som både industrien og forskere forgæves har forsøgt at løse. I dette studie søger jeg at skabe en bedre forståelse for fænomenet toxicity i online konkurrenceprægede team computerspil, ved at bevæge samtalen over på hvad det vil sige at være spiller, samt hvordan disse selv oplever problemet. I studiet foretager jeg en gennemgang af den akademiske litteratur samt nuværende industristandarder inden for emnet. Ud fra observerede problematikker fremsættes der fire forskningsspørgsmål, som studiet sætter ud for at besvare med det overordnede formål at komme nærmere en forklaring på, hvorfra toxicity opstår. Spørgsmålene, der bliver stillet i studiet, er følgende: 1) om handlinger i spillet ud over verbal kommunikation er vigtige for at forstå toxic opførsel?, 2) om der nødvendigvis er et link mellem toxic opførsel og en intention om at skade andre?, 3) om toxic opførsel i spil kan ligestilles/sammenlignes med cybermobning?, 4) om kvalitative tilgange til forskning kan være med til at give os en bedre forståelse for de underliggende dynamikker bag toxic opførsel, end hvad der ville være muligt med kvantitative tilgange? For at besvare disse spørgsmål udføres der et etnografisk studie af mine egne oplevelser med spillet Dota 2, samt en række interviews med andre spillere. Undersøgelserne foretaget i dette studie peger på de følgende svar; handlinger i spil er lige så vigtige at kigge på som kommunikationen mellem spillere, da den, på trods af ikke at være så hyppig som toxic kommunikation, ofte ses som mere ekstrem. Desuden ligger handlinger ofte til grund for efterfølgende toxic kommunikation. Der er ikke noget i undersøgelserne der peger på at toxic spillere indtræder i en spilsammenhæng med et overlagt ønske om at skade deres medspillere, i stedet ser det ud til at dette ønske opstår under spillet, altså i reaktion til spillet. Sammenhængen mellem intention og handling kan altså ikke frasiges, omend det virker til at der er en del misforståelse omkring intentionens bagvedliggende motivation. Sammenligningen mellem toxicity i spil og cybermobning eksemplificerer ligeledes en række fundamentale misforståelser omkring toxicity i spil. Først of fremmest lever toxicity ikke op til de definitioner for cybermobning der fremsættes i litteraturen. Desuden spiller denne opfattelse af toxicity ind i en misforståelse af den toxic spiller som værende en ondskabsfuld agent, der bevidst

søger at skade sine medspillere for egen vindings skyld. Min forskning peger derimod på den toxic spiller som værende en gennemsnitlig spiller der i frustration over sin situation og spillets konkurrencestruktur retter denne frustration mod sine holdkammerater. Den data og resulterende forståelse for nuancerne i problemstillingen der blev skabt gennem brugen af det autoetnografiske studie samt interviews ville ikke have været mulig gennem kvalitative undersøgelser, såsom spørgeskemaer eller big data, alene. Lignende tilgange vil derfor være uvurderlige for fremtidige studier inden for dette emne. Omend studiet ikke endeligt kan konkludere hvorfra toxicity opstår, peger resultaterne på dele af spildesignet, især omkring konkurrenceelementerne, som værende faktorer der fremmer den negative sociale opførsel. Desuden peger studiet på vigtigheden i at anerkende spillernes frustration, og ikke afskrive toxic spillere som ondskabsfulde agenter, da man dermed ikke skaber indblik i netop den brugeroplevelse der ligger til grund for problemet.

Intro

I love games and have done so ever since I was a child. As I grew older I began to get more into online gaming, which had seemed too intimidating to me when I was younger, but it was not until the release of League of Legends and Dota 2, in 2009 and 2011 respectively, that I started getting into competitive gaming. For the last 8 years of my life, competitive games have been a stable part of my game diet, with Dota 2's ranked mode becoming one of my favourite past time activities, so much so in fact, that I barely ever play any other of the games modes except when playing with friends. It is especially the solo ranked mode, were players sign up for the match alone and is placed on a team with four strangers to compete against another team of 5 strangers, that I enjoy. There is something wonderful about getting to test one's skill against other similarly skilled players, fighting to be the team that edge out ahead. However, for every amazing game, where a team of complete strangers from all around the world come together to achieve the amazingly complex task of playing a game of Dota, and even managing to do so well, while having fun, there are at least an equal amount of games that devolve into petty fights and ugly words yelled at teammates. The problem of negative social behaviour, or toxicity as it has been dubbed in the gaming community, is so widespread that it has become a fact of life for many gamers, while others decide to give up on specific games entirely as the negative behaviour becomes too disruptive to their enjoyment of the game (Shores et al., 2014). Every large game developer that deals in competitive multiplayer games have sought to implement some form of system to curb the negative behaviour, with Riot (the developers behind League of Legends or 'LoL' for short) going as far as to hire a team dedicated to conduct research on their players' behaviour (Maher, 2016). As I will demonstrate in the literature review, even in academia this issue has gotten a lot of attention, with many researchers looking to the data that is gathered through these massively popular games, for solutions to the problem. My dream is, for every game of Dota to be a similar experience to the best games I have. Dota is one of my favourite past time activities, and it can be one of the best games ever conceived, a sentiment that is only enforced by its presence as one of the most popular games in existence, more 10 years after its original inception as a user created game mode for Warcraft 3.

I began my work on this project, expecting to conduct a series of case studies, looking at a selection of game companies and their approaches to combating toxicity, as I assumed that by synthesizing elements from various approaches, some set of best practices could be arrived at. However, after examining the literature, and overcoming some of my own biases, I realized that, what is really needed, is for us to take a collective step back, and examine the dynamic of toxicity from the very ground up. With an academic background in design, and user experience, it dawned on me just how backwards both the industry's and academia's approach have been to this topic, with most solutions resembling playing whack-a-mole with the games' seemingly infinite supply of 'toxic players'. While every game company this side of the sun has implemented their own system for combating toxicity, competitive team games still feel as frustrating as ever. Rather than setting up an endless variety of systems to catch players who express negative attitudes, I believe that what is needed, if we are to develop novel and real solutions to these issues, is a better understanding of the compounding elements that make up toxicity. To combat these negative behaviours, we need to understand where it comes from. This study will seek to lay down the groundwork for doing just that, by moving the conversation to the core of what is means to experience these games as a player. Through an examination of the player experience of Dota 2, I will seek to supply a better understanding of what toxicity means to actual players and their perspective on dealing with it. I also intend for the study to serve as a model/example of an alternative way for researchers to approach the task of examining the issue in the future.

Reviewing the literature

To inform my problem formulation and subsequent research questions ahead of the data collection, I conducted a thorough literature review to establish a better understanding of the academic field surrounding the topic. The goal of this review was first and foremost to ensure that my problem formulation was not rendered redundant by past research, but also to find literature that could help inform my early inquiries and later analysis. In total, the point of this literature review was

to get a holistic overview of the academic consensus and identifying where/how my work would fit into the broader literary landscape.

My method for conducting the literature review, was as follows; first I performed a superficial search of the field, manly comprised of a series of google searches for academic literature on the topic. The texts found here, were used solely to ensure that the keywords used for the actual search were relevant, although multiple of the texts identified in this initial search also appeared in the later searches as peer reviewed articles. Once a set of keywords had been established, two further searches were conducted on AUB (https://www.aub.aau.dk/) and Google Scholar (https://scholar.google.dk/) respectively. Aside from texts that were not at all relevant to the question of toxicity in online gaming, I further sorted out anything that were strictly concerned with questions regarding gender and sexuality, for reasons that are discussed in study limitations. The search on AUB was further restricted to only contain peer reviewed texts, while the one on Google Scholar only contained texts that had been referenced in other works a minimum of 10 times. Below I will give a quick content overview of the examined literature.

Data collection

In regard to the methods of data collection seen in the literature, only three (Watson, 2015; Fox et al., 2018; Fahlström & Matson, 2014) made use of ethnographic approaches describing the actual experience of playing the games from the perspective of players. A large portion of the texts, (Kwak & Blackburn, 2014; Blackburn & Kwak, 2014; Mora-Cantallops & Sicilia,2018; Maher, 2016; Murnion et al., 2018; Mesquita Neto & Becker, 2018; Kwak et al., 2015; Märtens et al., 2015; Blackburn & Kwak, 2014; shores et al. 2014) made use of big data, most commonly acquired through Riot games API (https://developer.riotgames.com/) which provides researchers with access to large data sets from Riot's League of Legends. The remaining texts made use of various forms of data collection ranging from literature analysis to focus groups and surveys etc.

Topics

Almost all the texts were concerned in some way, with interactions between players and/or individual player's psyche as it relates to negative social player behaviour (toxicity). A majority of the texts examined this through the use of League of Legends as the subject of their research. This is presumably due the easy access to large data sets (see Riot games API mentioned above), as well as LoL's presence as (one of) the most popular multiplayer games in the world. Only (Fox et al., 2018; Murnion et al., 2018; Thompson et al., 2017; Mesquita Neto & Becker, 2018; Achterbosch et al., 2017; Tang & Fox, 2016; Märtens et al., 2015) covered other games, ranging from FPS[1] games and MMORPGs[2] to other MOBAs [3]and RTS[4] games. Of the texts covered here, only (Birk et al., 2015; Fragoso, 2015) did not examine multiplayer games, with Birk et al. examining the effect that players mental state has, going into a single player game, on their behaviour/performance in that game, and Fragoso examining online gamer culture more broadly both inside and outside of games.

Only a minority of the texts (Mesquita Neto, et al., 2018; Thompson et al., 2017; Murnion et al. 2018; Maher, 2016, p.3; Blackburn & Kwak, 2014; Mora-Cantallops & Sicilia, 2018b; Kwak et al., 2015) proposed some manner of potential solution to the problem of negative social behaviour in games, while a majority, (Kwak & Blackburn, 2014; Märtens et al., 2015; Fox et al., 2018; Fahlström & Matson, 2014; Meng et al., 2015; shores et al. 2014; Watson, 2015; Achterbosch et al., 2017; Hughes et al., 2017; Tang & Fox, 2016; Birk et al., 2015), conducted investigations into some of the underlying dynamics affecting the problem.

[1] FPS or First-Person Shooter refers to any game where the player character is controlled through a first-person perspective and where the gameplay revolves around shooting. Counter Strike, Call of Duty and Rainbow Six Siege are all examples of this genre.
[2] MMORPG or Massively Multiplayer Online Role-Playing Games are, as the name suggests, large multiplayer roleplaying games. The most famous example of the genre would be World of Warcraft.
[3] MOBA or Multiplayer Online Battle Arena is the genre that games like League of Legends and Dota 2 belong to. Common traits of the genre include controlling a single character that grows stronger over the course of a match and trying to destroy an enemy's base while keeping them from destroying yours.
[4] RTS or Real Time Strategy games are games where the player control multiple characters at the same time and may include mechanics like resource gathering and base building. Well known examples include StarCraft, Age of Empires and Warcraft.

Defining the problem

When it comes to defining the problem of negative player behaviour, a majority of texts used toxic behaviour and/or toxicity to describe it. Of these (Mesquita Neto & Becker, 2018; Thompson et al., 2017; Kwak & Blackburn, 2014; Märtens et al., 2015; Fahlström & Matson, 2014; Blackburn & Kwak, 2014; shores et al. 2014; Kwak, Blackburn & Hans, 2015) supplied some manner of definition as to what precisely this term refers to. (Fox et al., 2018; Murnion et al., 2018; Thompson et al., 2017; Tang & Fox, 2016; Kwak et al., 2015; Kwak & Blackburn, 2014; Blackburn & Kwak, 2014) used the term cyberbullying as well, when referring to negative player behaviour, either as an example of toxic behaviour, as an umbrella term for negative user behaviour directed at other players or as a completely separate phenomenon. Only (Achterbosch et al., 2017; Tang & Fox, 2016) used alternative terms, preferring griefing and antisocial behaviour respectively.

In the following section I will elaborate on the content of these texts, in an attempt to identify where consensus can be established and where the various findings diverge. The following analysis will ultimately form the basis for my investigation and from it I will establish my problem formulation.

Problem field

This section will give an overview of the studied field as understood through the literature presented in the previous section. I will cover topics discussed in the texts, ranging from the definitions for the various negative behaviour patterns present in online games to the text's methods of data collection. I will finish the section by giving voice to some of the contentions I have with the research conducted so far on the topic, which should further serve to frame my problem formulation.

Defining negative social behaviour

While almost all the texts covered relates to negative social behaviour in online games, there does not seem to be any clear consensus on what exactly constitutes such behaviour, with different researchers even using different terms to describe the various forms of negative social behaviour in

online games. As presented in the in previous section, most of the texts did refer to it as toxic behaviour or toxicity. Of these, eight texts supplied some manner of definition or examples of what could constitute toxic behaviour. Both Shores et al. and Kwak, Blackburn & Hans drew their definitions from League of Legends, with Shores et al. consulting a survey conducted with 138 players of LoL as to what they believed toxic behaviour to be. A majority stated that they would report players who engaged in actions such as "[...]verbal abuse (outside of socially acceptable cursing or yelling), refusing to continue to play a match and helping the enemy team win" (Shores et al., 2014, p.4), while a minority stated that they would likewise report players who they deemed to have underperformed in the given match. Kwak, Blackburn & Hans on the other hand drew their definition directly from the predefined categories used by players when reporting other players for bad behaviour. These categories are as follows: "Assisting enemy team, intentional feeding [suicide], offensive language, verbal abuse, negative attitude, inappropriate name, spamming, unskilled player, refusing to communicate with team, and leaving the game=AFK [away from keyboard]." (Kwak, Blackburn & Hans, 2015, p.2)

In other texts Kwak & Blackburn states that "Toxic behaviour in online games is a form of cyberbullying, defined as repetitive intentional behaviour to harm others through electronic channels" (Blackburn & Kwak, 2014, p.3), and later as "bad behaviour that violates social norms, inflicts misery, continues to cause harm after it occurs, and affects an entire community." (Kwak & Blackburn, 2014, p.1). In these definitions there is a clear emphasis on the intent of actions, and we begin to see the grounds for their equation between toxic behaviour and cyberbullying, which I will return to later. However, the latter definition also opens up for actions aside from verbal harassment, as long as these violates social norms. This mirrors the definition given by Mesquita Neto & Becker who states that "[i]nsults, taunts and blames are the most basic form of toxic behaviour,"(Mesquita Neto & Becker, 2018, p.10) but also extends the practice to actions that are deemed socially unacceptable by the players of a game, such as losing on purpose or leaving a match before it is concluded (Mesquita Neto & Becker, 2018).

On the contrary Fahlström & Matson state that “Toxic Behaviour tend to include behaviours like unjustified rage, threatening, racial and/or sexual insults and harassment directed towards both new and experienced players alike.“ (Fahlström & Matson, 2014, p.6), thereby not including in-game actions other than communication as a source of toxicity. Much like Fahlström & Matson, Märtens et al. “define toxicity as the use of profane language by one player to insult or humiliate a different player in his own team.” (Märtens et al. 2015, p.4), thereby also restricting toxicity to verbal (and textual) forms of harassment. Märtens et al. further excludes cross team harassment. They also stress that the profane language must be targeted to be considered toxic, excluding cursing that is not intended to insult anyone. Lastly Thompson et al. define toxicity, much like the latter two, as “[...] the intentional use of abusive, offensive language, often involving personal attacks” (Thompson et al., 2017, p.150), thereby also focusing entirely on the verbal aspect.

As was also described in the previous section several texts used either cyberbullying or some combination of cyberbullying and toxicity to describe the negative social behaviour. Murnion et al. uses cyberbullying as one of multiple forms of anti-social behaviours together with “griefing and chat spamming” (Murnion et al., 2018, p.3). They further acknowledge that these forms of behaviour are often described as “toxic” in the gaming community. They continue by stating that no single definition for cyberbullying exist, but that the one they ascribe to for the sake of that specific paper “[...] focuses simply on the behaviour e.g. being cruel to others by engaging in socially aggressive behaviour using the Internet or other digital technologies” (Murnion et al., 2018, p.3). Likewise Tang and Fox counts cyberbullying as one form of online harassment, placing it besides flaming and trolling. (Tang & Fox, 2016)

Blackburn & Kwak, on the other hand, saw toxic behaviour as a form of cyberbullying, reversing the relationship seen from Tang & Fox (Blackburn & Kwak, 2014). However, In Kwak et al.’s text from 2015, it is stated that “in online games” (Kwak et al., 2015, p.1) cyberbullying, together

with other similar phenomena, are contained within the umbrella term toxic behaviour, thereby agreeing with Murion et al. as well as Tang and Fox. In the same text they also equate verbal transgressions with cyberbullying. In a 2014 text by Kwak & Blackburn, cyberbullying is instead presented as a synonym for toxic behaviour, as well as griefing, and online disinhibition, and is defined, as seen in the section above, by “continuing to course harm after it occurs” (Kwak & Blackburn, 2014, p.1)

Thompson meanwhile is a bit more critical of the use of cyberbullying in relation to videogames, stating that the harassment seen in StarCraft 2 would not meet the requirements for cyberbullying, which he says, “requires repeated attempts to harm others” (Thompson et al., 2017, p.160). And as games of StarCraft 2 only last for a short amount of time, where after the players part ways and are likely to never interact again, Thompson is of the opinion that this cannot constitute cyberbullying (Thompson et al., 2017). Blackburn and Kwak does not seem to have the same reservations with categorizing harassment throughout a single game of LoL as ‘repetitive/repeated’ attempts, thereby making these actions fit the aforementioned criteria for cyberbullying.

Lastly, we have two types of texts that does not fall under any of the categories above. First of these are the texts that use some umbrella term to encompass a number of negative online behaviours, such as griefing, spamming, harassment and trolling. This includes Tang & Fox’s use of “antisocial behaviour” (Tang & Fox, 2016, p.514), and Hughe, Griffin & Worthington’s use of “destructive social behaviour” (Hughes et al., 2017, p.386). The nature of these terms, and how they are used means that they can be considered more or less synonymous with toxic behaviour, insofar as the encompassed elements are aligned. Secondly, we have texts that reference the specific acts that would otherwise have been encompassed by the above terms. This includes Fragoso’s use of griefing, spamming and trolling (Fragoso, 2015), as well as Achterbosch rundown of the various forms of griefing that exists in MMORPGs.

Solutions

While the definitions are not entirely clear, everyone agrees that the negative behaviour does pose a problem, if not directly for all players, then at least for new players and the companies behind the games. Not a single text found, disputed that this negative social behaviour is problematic, and likewise no one seemed to dispute that we should seek solutions to mitigate its negative effect on player experience. When it comes to solving the problem, the most popular approach seems to be going via the in-game chat. Mesquita Neto & Becker explore ways in which toxic chat detection can be used to punish offending players and reward positive players, as well as directing negative players towards less stressful game modes (Mesquita Neto & Becker, 2018). And while not providing a direct solution to toxicity itself, Thompson et al. likewise describe solutions for identifying toxic actors through sentiment analysis of chat messages in games (Thompson et al., 2017). In a similar vein Murnion et al. found that players in World of Tanks tended to exhibit the most toxicity following their in-game death, leading them to suggest that restricting players ability to communicate for a short while after dying could help to lower toxicity (Murnion et al. 2018).

Looking towards the industry for answers, Maher Details how a team of researchers at Riot Games made various attempts at lowering toxicity. One attempt involved priming, that is, using short messages/tips presented when entering a game, to change player behaviour. One of these messages, which involved warning players that harassing your teammates leads to worse performance, “reduced negative attitudes by 8.3%, verbal abuse by 6.2% and offensive language by 11% compared with controls.“ (Maher, 2016, p.3). The Tribunal system[5] was also presented in Maher’s text, and its positive effect on reform rate amongst offenders. “When [the players] were sent reform cards that included the judgements from the Tribunal and that detailed the chats and actions that had resulted in the ban, the reform rate went up [from 50%] to 70%.” (Maher, 2016, p.3)” Further

[5] The Tribunal system was a measure put in place Riot to combat toxicity. The system let the game’s community decide whether players under suspicion of ill conduct were to be punished or pardoned based off that player’s chat logs and game statistics. More on this system in the state-of-the-art section.

findings showed that supplying players with instant feedback following an offence, increased reform rate to a further 92% as well as lowering toxicity with 40% in LoL's most competitive game mode (Maher, 2016). Blackburn & Kwak also examined Riot Games' Tribunal system, in an attempt to create an automated solution with the ability to accurately predict the crowdsourced judgement that would otherwise drive the Tribunal, arguing that this could cut the costs otherwise associated with running the player driven Tribunal (Blackburn & Kwak, 2014). Acknowledging that most of the current solutions rely on players reporting bad behaviour, Kwak et al. found that participation in the reporting of toxic players could be increased by reminding players to report bad behaviour. The study also stated that the Tribunal system did, to some extent, correctly pardon innocent players that were wrongfully reported (Kwak et al., 2015).

Lastly Mora-Cantallops & Sicilia where the only ones to look at game design, as they explored different ways that games could be designed to better accommodate different types of players, distinguishing between solo players and team players, writing that, for example with solo players, there could be a greater emphasis on getting the players into the game quicker, while with team players, more time for preparing and more/better means of communication would instead be the focus (Mora-Cantallops & Sicilia, 2018b).

Examining the dynamics

As mentioned, most of the texts examine certain dynamics to arrive at a better understanding of the problem, rather than supply an actual solution. Of these a couple also looked at toxic chat. Kwak and Blackburn identifying differences in chat patterns between toxic players and typical players as well as "[...] a possible footprint of transitions from typical behaviour to toxic behaviour." (Kwak & Blackburn, 2014, p.9), while Märtens et al. worked with toxicity detection in warcraft 3's Dota. Märtens et al. found that players were more often toxic after they died in the game, mirroring the findings of Murnion et al., and that winning teams are a lot less toxic towards the end of the game

while the losing teams become more toxic, although they state that toxicity is only weakly tied to success. (Märtens et al., 2015)

Not looking at the content of the chat, but the means of communication themselves Meng et al. found that players employing an increased number of channels in their social relationships positively impacts both the bridging and bonding social capital. They further examined how a range of other variables affected bridging and bonding social capital (Meng et al., 2015).

Other researchers constructed better means for developers to identify different types of players. Achterbosch et al. proposes a taxonomy of griefer types as they exist in MMORPG's. A taxonomy focusing on *why* the different griefers grief (motivation) rather than how, thereby hoping to supply game designers/developers with tools to aid them in accommodating these types of players, without impeding on the enjoyment of others. Hughes et al. constructed a scale for measuring self-reported social behaviour, examining how different personality types relate to socially constructive and destructive behaviour, stating that this scale could potentially be used by the gaming industry to "[...] help identify players who might pose a threat to the social health of the gaming community." (Hughes et al., 2017, p.393).

Looking more at the social dynamics between players Watson used his experience from games of League of Legends to illustrate how different players bring different modes of playing into a game, and how this can, in some instances, lead to confrontation (Watson, 2015), while Fox et al. studied player diaries and from them identified a number of social phenomena present in team games, ranging from fair-weather friends, harassment based on skill, sexual harassment/toxic masculinity, and vicious cycles where targets of harassment engages in retaliative harassment thereby creating a feedback loop of harassment (Fox et al., 2018). Tang & Fox found through survey studies that negative social behaviour correlated with time invested in a game, with more experienced players being more toxic, suggesting that this type of behaviour is taught by the

community (Tang & Fox, 2016), with Birk et al. having similar results as they examined the effects that players mental state going into a game, has on their experience with said game, finding that higher self-esteem predicted positivity, invested effort and enjoyment, with lower self-esteem had the inverse effect (Birk et al., 2015).

Shores et al. looked at the consequences of toxicity, and found that it impacts player retention negatively, especially for newer players. They also Identified a link between increased toxicity and competitive game modes, and lastly that playing with friends was the highest predictor of player retention, leading them to recommend developers to employ referral programs which reward players for recruiting their friends to the game (shores et al. 2014), while Fahlström & Matson were the only ones to look directly at the parts of the game design that reinforced the negative behaviour, producing a series of what they dub ‘core aesthetics’ that lead to negative player behaviour; competitiveness, individualism and high stakes. They went on to discuss the exact game mechanics that support these aesthetics and the problematic ways in which these interact and, in some cases, are at odds with each other (Fahlström & Matson, 2014).

State-of-the-art

Moving on I will present examples of how the problem of toxicity is handled in the industry today. To this end I will examine a selection of the most popular competitive team games that exist on the market. Be aware that I have excluded any games of the wildly popular Battle Royale genre for reasons that will be discussed in the study limitations section. Maybe the most prevalent attempt in the industry to combat player toxicity is the report function, which allows players to report their teammates and/or enemies for bad behaviour during a game. This practice is so widespread that it is present in League of Legends (LoL), Defence of the Ancient 2 (Dota 2), Counter Strike: Global Offensive (CS: GO), Overwatch, and Rainbow six Siege, the five most popular online competitive team games of 2019 not counting Battle Royale games (based on the most popular games on twitch (https://www.twitch.tv/) as of March 2019). Even systems like the Tribunal of LoL or the Overwatch

system of CS: GO (discussed below) rely on reports to initially identify offending players, before the case can be reviewed. The following will give an overview of how these systems are handled in each of the five games, mentioned above, respectively.

Defence of the Ancient 2

In Defence of the Ancient 2, or Dota 2, reports can be given to players of either team after finishing a match. Reports are Divided into three categories:

"Communication Abuse - they were abusive over a communication channel (text or voice).

Intentional Ability Abuse - They intentionally used abilities to the detriment of their own team.

Intentional Feeding - they intentionally died repeatedly to hurt their own team." (Report, 2018), but a player can be reported for any combination of the three at the same time when a report is made. Each player only has three reports to give out each week but will be rewarded with an additional report each time one of their prior reports lead to punishment. Punishments in Dota come in two varieties, low priority, and bans. Players who are put in low priority will have to wait longer for matches and play their games with other low priority players. A set number of matches will have to be won before a player is returned to normal priority (Priority, 2018). Bans come either in the form of a communication ban or a matchmaking ban, restricting a player's ability to communicate or queue up for matches respectively. Bans come in a variety of durations ranging from 10 min to six months (Ban, 2018). The exact details surrounding what leads to punishment has not been shared by Valve (the developers of Dota 2). In the client (the program you enter to group up with friends, sign up for games and enter the game store) the player can access their "conduct summary" (see

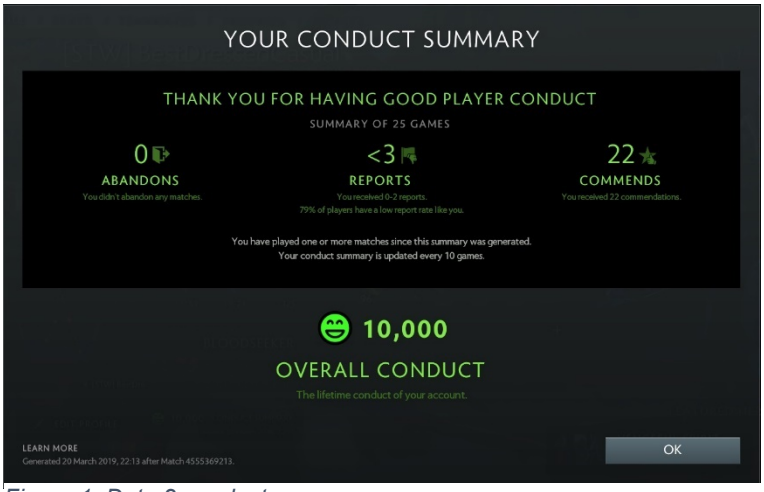

Figure 1: Dota 2 conduct summary.

fig.1), showing the number of times they were reported and commended[6] within the last 25 games as well as their behaviour score. The behaviour score describes the general behaviour of a given player. It starts at 10.000 and lowers each time the player is reported more than a set number of times (presumably 3 times, as this is when it registers on the conduct summary) within a span of 25 games. It raises again if you manage to go 25 games without exceeding the report limit. The conduct summary pops up in the players client after every 10 games but can also be accessed at will through their profile.

Counter Strike: Global Offensive

CS: GO has implemented a system, called Overwatch, very similar to the old Tribunal system from LoL, where reported players are brought before a jury of other players, who review the matches where reported actions took place. The main difference is that, to review cases in CS: GO, you have to be selected as an Investigator by the developers. Players are selected for the Investigator program based on their number of competitive wins, the age of their account, total hours played, the players skill group and a low report count. Once a player is selected to become an Investigator the accuracy of their judgements will be assessed continuously, meaning that Investigators who give inaccurate verdicts will be given fewer cases, and their rulings will count for less (Overwatch System, n.d.). I assume that the accuracy is measured against the rulings of the other Investigators, with the majority decision being deemed the most accurate one, although this is not stated in the FAQ. Punishments for players that are deemed guilty by the Investigators come in two forms:

> “Convicted by Overwatch - Minorly Disruptive: players receiving this message have been found guilty of in-game griefing and receive a ban of at least 30 days in CS: GO.”
>
> (Overwatch System, n.d.)
>
> And

[6] Commends (from commendation) can be given to other players that you play with, and function as a tool to show appreciation. As such, commends can be seen as the opposite of reports.

> “Convicted by Overwatch - Majorly Disruptive: players receiving this message have been found guilty of cheating and are permanently banned in CS: GO. These players will not be able to trade or use the market in CS: GO and must create a new account and re-purchase CS: GO if they wish to continue playing.”
>
> (Overwatch System, n.d.)

It is further stated that any repeat offenders that partake in griefing will be permanently banned regardless as well. Investigators receive rewards in the form of in-game experience for their account. Aside from the Overwatch system, CS: GO also has a handful of automated measures in their competitive modes. These trigger when a player has participated in any of the following actions:

- “Abusing the kick system; kicking too many players or being kicked from too many games will result in a competitive cooldown
- Abandoning games
- Attacking teammates / teamkilling
- AFKing or otherwise not participating in a game that you have joined”

  (Competitive Cooldowns and Bans, n.d.)

These actions can result in temporary bans ranging from 30 minutes to one week based on number of offences.

League of Legends

Riot Games’ Tribunal system has been a popular topic of research since its inception in 2011, at least if my literature review is any indication. However, the program, which sought to use crowdsourced decision making to evaluate cases of player toxicity, was disabled in 2014 (The Tribunal, n.d.). While the exact details of what has replaced the Tribunal are hard to come by, it seems to be largely built on a report system similar to the ones described above. On Riot Games

support website, they provide a list of behaviours that are considered unacceptable, and therefore may lead to their disciplinary system taking action against the offender.

- “Insulting, harassing, or offensive language directed at other players.
- Any kind of hate speech such as homophobia, sexism, racism, and ableism.
- Intentionally ruining the game for other players with in game actions such as griefing, feeding, or purposely playing in a way to make it harder for the rest of the team.
- Leaving or going AFK at any point during the match being played.
- Unnecessarily disruptive language or behaviour that derails the match for other players.
- Inappropriate Summoner Names.”

  (Picture of Horse, 2019)

It is further stated that no form of negative behaviour is acceptable, meaning that, even if someone else initiated the negative interaction, if you answer in kind, both are equally liable for punishment (Picture of Horse, 2019). Punishments administered in LoL generally follow a set escalation plan:

“First Offense: 10 Game Chat Restriction

Second Offense: 25 Game Chat Restriction

Third Offense: Two Week Suspension

Fourth Offense: Permanent Suspension” (Itsumo, 2019)

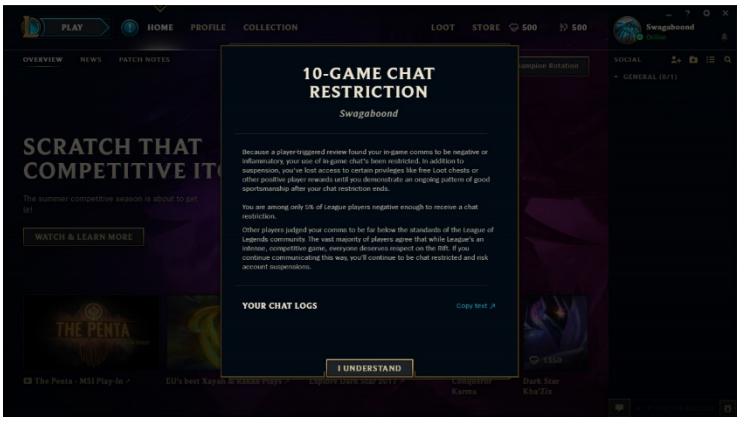

Figure 2: LoL reform card (Chiptek, 2019).

However, depending on the severity of the offence, multiple steps can be bypassed to give harsher punishments to first time offenders. Reform cards (see fig. 2) are supplied following any disciplinary actions, such as temporary bans or chat restrictions, explaining what behaviour led to the punishment (Chiptek, 2019). LoL also utilize player reports to identify offending players. As of March 2019, when reporting a player, you had the following categories to choose from: negative attitude, verbal abuse, leaving the game/afk, intentional feeding[7], hate speech, cheating and offensive or inappropriate name, combined with the option to give a more detailed account of what happened (see fig. 3).

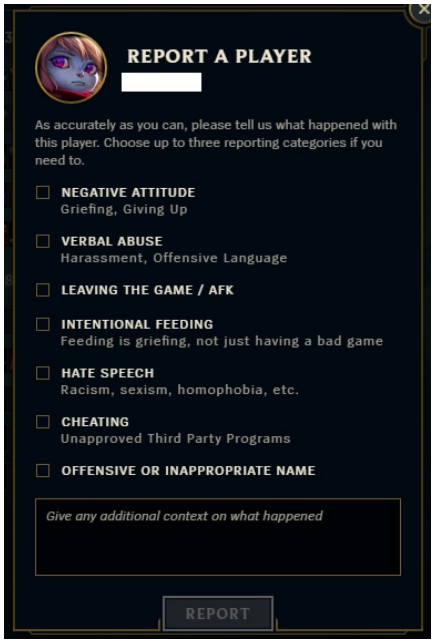

Figure 3: Player report page in LoL.

Rainbow Six: Siege

Players can be reported for cheating or bad behaviour, either during or immediately after a match or later by contacting Ubisoft customer support (Reporting a player in Rainbow Six: Siege, n.d.). In the game's code of conduct, the following is defined as forbidden conduct:

- "Harassing or bullying other players via verbal or written communications.
- Any language or content deemed illegal, dangerous, threatening, abusive, obscene, vulgar, defamatory, hateful, racist, sexist, ethically offensive or constituting harassment.
- Impersonation of any other player or Ubisoft employee.
- Any conduct which interrupts the general flow of Gameplay in the Game client, forum, or any other Ubisoft medium.
- Verbal or written abuse targeted toward a Ubisoft employee.

[7] The act of dying to the enemy on purpose, thereby 'feeding' them the gold and experience they get from killing you. Feeding is generally considered a form of griefing, that is, a way to intentionally lowering your team's chance of winning

- Use of macros.
- Any attempt to edit, corrupt or change Game or server code. Any such behavior will result in the immediate cancellation of the account, and may even give rise to personal liability and/or penal penalties.
- Use of third-party hacking, cheating or botting clients.
- The purchase of in Game benefits, including but not limited to “MMR boosting services” from unlicensed vendors, as well as the promotion of such services.”

  (Rainbow Six Siege Code of Conduct, n.d.)

Not adhering to these rules can result in punishment ranging from warnings to permanent bans, depending on the seriousness of the offence. Aside from relying on player reports, Ubisoft has launched an automated banning system, which bans players upon detecting the use of abusive words. The ban will begin with 30 minutes following the first offence, raising to two hours and finally leading to an investigation that may result in a permanent ban if the behaviour continues (Rainbow Six Siege Code of Conduct, n.d.).

Overwatch

Blizzard (the company behind Overwatch) have a combined code of conduct across all their games which seems to be enforced mainly through player reports. The code of conduct singles out misuse of communication such as hate speech, discriminatory language or obscene and disruptive language as punishable offences. It is further stated that names used in game (the names players use for their profiles/characters) are subject to the same rules. Behaviour such as griefing, losing games on purpose, dying on purpose to give

Figure 4: Player report page in Overwatch.

opponents an advantage or any other behaviour that intentionally ruins the experience of others are also presented as grounds for punishment. Lastly cheating is also stated as being unacceptable. Any of these offences may lead to account restrictions, and in case of more serious or continued offences, may lead to more severe restrictions (Blizzard's Code of Conduct, 2018). When reporting any of these behaviours, players can choose among the following categories: Abusive chat, Inactivity, Gameplay sabotage, Cheating, Spam and Bad battletag (player name) (see fig. 4). As an additional means to lower toxicity, the player also has the option to enable a profanity filter that presumably censors out any words in the chat deemed bad by the game.

My contentions

I will now cover some of the reservations I have regarding the sentiments exhibited in the literature. First of these is the use of cyberbullying.

Cyberbullying

First and foremost, using cyberbullying to describe toxic behaviour in games strikes me as misleading at the least, and intellectually dishonest at the worst. I very much side with Thompson et al. when they point out the issue of cyberbullying necessitating continued attempts to course harm coupled with the general length of a game being less than an hour. While you could technically argue that continuous attempts can be made in the course of an hour, and often is, I find it dishonest to attempt to equate the resulting harm caused by this, with that felt by students who are continuously harassed over the course of weeks, months or years over social media by their classmates, equations that researchers like Kwak et al., 2015 seemed content to make. While I do not contest harassment in games might have consequences that can extend into the real life of victims, I do not think we are doing anyone any favours by equating toxic behaviour in video games with extreme cases of online bullying. This not only keeps us from actually exploring the dynamics of what makes toxicity in video games bad, but also reinforces what I believe to be a wrongful framing, where toxicity

necessitates intent, that being, the intent of the perpetrator to course harm to the victim. More on this later.

To be clear, cyberbullying can of course take place in games, for example if a victim of bullying plays games with the classmates that bully him, the bullying that is already taking place on other platforms could easily extend into the game. Just as bullying within groups that frequently play together could possibly occur. That being said, playing with friends seems to be a great predictor of players not exhibiting toxic behaviour (shores et al. 2014) so it seems that this is at least not the most prominent source of toxic behaviour in games.

Data collection

It seems to me, that there is an over emphasis on quantitative data collection in the literature examined for this paper. With the vast datasets available from game developers like Riot Games, it seems that many researchers have made this the subject of their studies, which I believe in turn has led to an incomplete understanding of the field. This lack in understanding becomes painfully obvious, with the amount of the literature that limits toxic behaviour solely to communication, despite every single game developer including in-game actions as part of their report system. My guess would be that this oversight comes from the overreliance on big data, as toxic chat is far easier to detect and record than toxic actions. In fact, it seems that the industry itself has accepted the shortcomings of big data, relying instead on the human analysis of player reports, a topic that was also largely neglected in the literature, despite it being the single most prominent remedy implemented in the industry. Some researchers even sought to do away with the existing human analysis in favour of more big data solutions (Blackburn & Kwak, 2014). By exploring the social dynamics present in the phenomenon of toxicity in video games solely through the lense of what data can be recorded by the game system, I believe that we get a far too narrow understanding of what is actually going on between players, that leads to this kind of behaviour. To grasp the social interactions, and cultural norms surrounding a game from abstract data points gathered over millions

of games is simply untenable. One might be able to learn of the end results of toxicity but rooting out the course dictates a drastically different approach. So while I believe that the quantitative, big data approaches are great for creating a sense of the problem's scale, as well as supplying a surface level understanding of the dynamics at play, such as players being more toxic when they lose (Märtens et al., 2015; Mesquita Neto & Becker, 2018), more qualitative approaches, like the ethnographic study by Watson (Watson, 2015), is necessary if we are to foster a better understanding of the social dynamics at play in online toxicity. I believe that solutions like limiting players ability to chat at the moments where they feel the biggest need to express their frustration, is not only demining towards the player experience of the toxic player, it is also a case of treating the symptom rather than the course. Judging from the research done by Riot Games (Maher, 2016), it seems that the toxic players are not, in fact, an overly vocal minority, but rather normal players, who simply act out now and then. Are we okay with fostering an experience that leaves the average player wanting to scream slurs at each other? Rather than finding new ways of disabling players from expressing their frustration, would it not be more constructive to look at the elements that courses this frustration?

Reliance on chat

While this has already been touched upon in relation to data collection, I think the discussion merits its own section. A large problem in the literature is its emphasis on the spoken/written word over action, both in its definition, and its solutions. In my experience, toxic messages often times come in response to toxic actions. And while toxicity is problematic in any context, even when done as retaliation, you would completely miss the original perpetrator in these cases, if you only go by the chat record. Video games are not simply a chat room, or messaging app. Each player controls an avatar which serves as the extension of them inside the digitized physical realm of the game. As such it should be easy to imagine the presence of not just socially destructive actions but also socially negative body language inside the game (although in a far cruder/more limited form than what we

are used to from reality). These are also tools in the toxic players arsenal, and should, as such, be privy to the same attention afforded to their linguistic counterpart.

The issue of intent

Lastly, we must do away with the notion of intent. First of all, the intent of the offending players is often irrelevant. If my teammate is screaming at me, or purposely throwing the game, it matters little to me if he does so, specifically to harm my experience. Secondly, and more importantly, it limits the discussion by ridding it of all nuance. Rather than players, entering a game with the sole purpose of causing harm to their teammates for some malicious purpose, could it be that players who really want to win, become so frustrated with their situation, that their ability to be civil in their criticism of teammates breaks down? If we insist on treating offenders of toxic behaviour as some insidious force that we need to restrain/exclude, I think we run the very real risk of completely missing the actual root course of the negative sentiment.

Problem Formulation

As was stated in the introduction, my goal with this study is to lay down the groundwork for a better understanding of toxicities compounding elements, to understand how toxicity is experienced by the players and where it comes from. As such, my research questions will seek to do three things, firstly, to dispel some of the common misconceptions identified above, secondly, to approach a better understanding of the lived experience of the players, and thirdly, to examine alternative approaches to researching the topic. The four research questions are as follows:

- Are in-game actions as important as chat/speech when it comes to understanding toxic behaviour?
- Can qualitative approaches give us better insight into the underlying dynamics inherent to toxic behaviour, than what would be possible through quantitative approaches alone?
- Is the equation between Toxic behaviour and cyberbullying sound?
- Is there necessarily a link between toxic behaviour and the intend to cause harm?

Ultimately, I intent for the answering of these questions to place us closer to understanding where the toxicity comes from, or at least how we should go about examining it in the future.

To answer these questions, I will first perform an autoethnographic exploration of my own experience in the game, with the goal of conveying what playing the game means to me in a structured manner. My experience will serve as the basis for a series of interviews with other players, seeking to test how my experience relates to other players more broadly. The data gathered from these interviews will be used in conjunction with my own experience and relevant literature, to argue the assertions put forth above, thereby answering the research questions. Lastly, I will look at where these findings leave us in terms of finding better solutions for combating toxic behaviour, and where I believe future studies should go from here.

Study Limitations

Before moving on with the paper, I want to make it clear what this study does *not* set out to do. First of all, while gender disparity in regards to harassment in video games is a hot topic, both within academia (judging from the results I got during my initial search for literature), as well as in the gaming community, this is not a topic that I am going to cover. While some of the underlying dynamics might be connected, I believe that the gender disparity observed here is more connected to the broader pushback against women representation in traditionally male dominated media that is happening across a variety of different platforms, from films and comics to videogames. While this topic is worth investigating, and the women who suffer under this harassment deserve better, I believe that this type of harassment differ from what I seek to investigate. If not in form, then at least in origin/underlying motivation. In term of games, my study is limited to competitive online multiplayer team games, as these games, despite being of different genres, often are very similar in how they handle the team aspect of the game, as well as in what way toxic behaviour manifests. I do not claim that these kinds of games are the only ones to struggle with toxic behaviour, in fact I would guess

that every multiplayer game has its share of toxic players, it is, however, widely held in the gaming community that competitive team games like Dota 2, LoL and Rainbow Six Siege are where one is most likely to experience toxicity. While I will draw upon examples and findings from any game that falls under this umbrella, as has already been done in the previous section, my own research will be centred around Dota 2, as this is the game in which I have the most experience. One large and currently extremely popular genre that I leave out of my study is the Battle Royale genre. While these types of games are definitely competitive in nature, they are often played either solo, or in premade groups with friends that the player knows from outside of the game. These games are therefore not as prone to the type of toxicity that we see in the other games mentioned above. The explicit focus on competitive/ranked game modes stems from the tendency these modes have to increase toxicity, as described by Shores et al. (Shores et al., 2014). Regarding my terminology, I will, for the remainder of this paper, be using toxicity when referring to negative social behaviour, or otherwise unwanted player conduct, as this is, in my experience, generally how the term is used among players. In extension I will use griefing as one form of toxic behaviour, in which a player uses in-game mechanics to purposefully assist the opponent's team in winning, albeit the exact role of purpose/intend will be questioned later in this paper. This definition comes as the result of how the players interviewed for this study used the term, as well as how it, in my experience, is used within gaming.

Lastly, due to the topic and my aim of providing an accurate depiction of online competitive gaming, I will introduce terms throughout this paper that may be foreign to readers not familiar with online gaming as a whole, or the particular games specifically. To assist these readers, I will, as you have probably noticed by now, supply footnotes explaining the most foreign concepts that are not adequately described in the text itself.

Autoethnography, Presentation and approach

Looking for ways that could allow me to utilize my own experiences with the issue at hand, in an academically viable way, led me to autoethnography. Autoethnography focuses on the subjective retelling of the researcher's lived experience within a social context. By not simply acknowledging, but embracing the subjective nature of this approach, autoethnography engages with the first-person account in a way that would otherwise be untenable. It does so by placing explicit emphasis on the researcher's role and relation to the researched phenomenon, demanding that the researcher examines this relation critically (Hughes & Pennington, 2017). By making the researcher an explicit actor within the research, his perspective and potential biases are opened up for scrutiny much the same way as the methods or data collection would be in a conventional research paper. Jones et al. state that "[o]ne characteristic that binds all autoethnographies is the use of personal experience to examine and/or critique cultural experience." (Jones et al., 2016, p.22). They go on to outline four characteristics of autoethnography:

> "(1) purposefully commenting on/critiquing of culture and cultural practices, (2) making contributions to existing research, (3) embracing vulnerability with purpose, and (4) creating a reciprocal relationship with audiences in order to compel a response."
> (Jones et al., 2016, p.22)

This study, first and foremost, seeks to comment on the cultural practice of Toxicity, while critiquing the way that we understand it today, with the explicit purpose of garnering a better understanding of the nuances inherent to the issue. This involves critically analysing my own experiences as well as the nuances found within them. Part of critiquing the way that we understand the issue today, involves engaging with the academic literature and the research it presents, with the ultimate goal of adding my own findings to the academic discourse. The purpose of the literature review in the beginning of this study was, partly, to make explicit where and how my work is situated in the broader academic discussion on the topic. In regard to embracing vulnerability with purpose

my work collides with the reality that the subject matter is simply not as serious or personal as some of the works that dominate the field of autoethnography. While the topic of toxicity is something that has had, and continues to have, a large impact on my enjoyment of my favourite hobby, it would be crude to compare it to works the like of Carolyn Ellis' tale of dealing with a partner's terminal illness (Ellis, 1995), or Carol Rambo's story of her sexually abusive parents and her subsequent dealings with mental illness (Rambo, 2005). Nevertheless, part of my exploration involves engaging critically with my own actions and behaviour, with the purpose of better understanding what brings players to become toxic. So, while the vulnerability is nowhere near comparable to that presented in studies like those mentioned above, my research still involves sharing parts of my lived experience that would otherwise never be put up for exhibition. Regarding the last point of creating a reciprocal relationship with audiences, the lack of a truly narrative/aesthetic element to my research holds it back. I would hope that my research, or maybe more so the ideas presented within it, could become a topic of conversation in the community. I especially hope that my ideal of including first person accounts from the community becomes more of a standard, in favour of the big data driven research that seems to be the academic standard in the field today. However, I do not think that this study lends itself more so to public engagement than any other, except maybe by virtue of its topic.

In their book Hughes & Pennington mention five ideas that help to delineate autoethnography (Hughes & Pennington, 2017, p.22). These ideas are presented for autoethnography applied as critical social research, which is hardly the point of my study, however, they are relevant enough that they are worth discussing. First, we have the consideration of critical reflexivity, which covers the need for the researcher to critically assess their relation to/role in the studied phenomenon. This involves viewing oneself as, at least partly, complicit in the studied problem.

Secondly is the consideration of educative experience. This covers the need for the researcher to be aware of the educational backgrounds that forms their way of making sense of the world and understand the systems that they live within. Education here refers not only to schooling

and other social institutions that are part of the system in which one has been raised, but also (and maybe to a larger extend) social/cultural groups and other social dynamics such as race, class and gender.

Thirdly the researcher must consider their privilege - penalty experience, which simply refers to the interlocking systems of privilege and penalty that we all exist within.

Fourthly are considerations regarding relational ethics. Autoethnographers are placed in a peculiar position here, as they often study social contexts in which they have a dual existence: that of a researcher, and that of a member, and oftentimes their existence as a member will outlive that of the researcher. This means that certain considerations must be made as to not damage their continued ability to exist in the context as a member, once the research is concluded and potentially published. Hughes & Pennington presents three points that should be considered here:

1. Will it problematize your place in the social context if you share your findings with others? Which can be tied to the consideration; is it possible for other members to find themselves in your research?
2. The identity of others should be protected to ensure the privacy and safety of other members, for example through the alteration of identifying characteristics.
3. As autoethnography is often narrative works, it can be more important to worry about how a story is interpreted than to give a precise recounting of details.

Lastly is the consideration of supported salient narratives, which refer to the implementation of external sources and data that can support the views presented in a first-person account. By supplementing one’s work with, for example, other first-person accounts of the same subject, or peer reviewed literature on the topic, a first-person narrative can be rendered more believable to the reader, allowing them to worry more about potential inconsistencies between various viewpoints rather than the trustworthiness of the author.

Why autoethnography?

I have so far talked about some of the characteristics that make autoethnography, and how my study relates to them, but the question still remains of why autoethnography? Jones et al., also present five purposes that makes autoethnography “unique and compelling” (Jones et al., 2016, p.32). Of these, two are especially interesting to this study, namely: “(1) disrupting norms of research practice and representation; (2) working from insider knowledge” (Jones et al., 2016, p.32).

The first one has already been partially mentioned above, but this study is partly a critique of the quantitative and big data driven research that seems to dominate this field of research. By working qualitatively, I seek to draw attention to some of the social dynamics that exist between players. I believe that these dynamics may be a driving force in much of the toxicity that we see, and that they are ‘invincible’ to purely quantitative studies. As Jones et al. writes “[c]entering the work inside personal experience, autoethnographers not only have an investment in the experience they study but can also articulate aspects of cultural life traditional research methods leave out or could not access.” (Jones et al., 2016, p.34). I also want the players to be more active and visible agents in this type of research. This goes double for those who are deemed as being toxic, as this might be the way to understand where this behaviour comes from. In regard to working with insider knowledge, this mirrors the motivation presented in the beginning of this section, namely that I want a way to engage with my own experiences and knowledge on the topic in an academically viable way. It also ties into the point above, as “[w]orking from insider knowledge, autoethnographers use personal experience to create nuanced and detailed “thick descriptions” of cultural experience in order to facilitate understanding of those experiences” (Jones et al., 2016, p.33). It is exactly these thick descriptions that I believe are needed to convey a better understanding of the dynamics that leads to toxicity.

In the following I will cover my own background with competitive multiplayer games in general and with Dota 2 especially, and apply to it the consideration of critical reflexivity, educative experience and privilege-penalty experience while considerations of relational ethics and supported salient narratives will be presented in the context of the autoethnographic study itself. Before reading the following section, I would advise readers who are unfamiliar with the game Dota 2 to read the quick overview of the game, that I have supplied in the appendix (Appendix A).

My experience

Part of my motivation for looking into this topic in the first place was my experience and love for the genre of competitive team games. I have thousands of hours of playtime divided amongst LoL, Overwatch, Rainbow six Siege, and Dota 2, with Dota 2 being the most prominent with more than 4000 hours played since it entered open beta back in 2011. As such, the prominence of toxicity in these games have had, and continues to have, a very real impact on me.

In terms of competitiveness within the games internal ranking system, LoL, Overwatch and Dota 2 are the only ones where I have participated to a meaningful degree. For LoL my highest placement has been silver two, which placed me around the 50th percentile of players (Rank distribution, n.d.). For Overwatch my highest placement was low Platinum, also placing me around the 50th percentile (Milella, 2019), and lastly Dota 2 where my highest rank was Ancient two placing me around the 90th percentile (Rank distribution - season 3, 2019). As such I also have a solid foundation in the competitive aspect of the games. I would, however, never claim to have any level of professionally competitive experience, as I have never competed in tournaments, for money, or as part of a team. In other words, my engagement with these games is that of a competitive hobbyist.

Regarding behaviour, I have never received any punishments in any of these games, be it temporary bans or chat restrictions. In Dota 2, where they keep track of your behaviour score, I have been at the perfect score of 10.000 since the systems inception, aside from a couple of 10-game

periods where I was lowered slightly, presumably due to being reported by other players, although I cannot know for sure. It is worth mentioning here, that the behaviour score is based on a combination of reports, abandoned games and commends (commends, as mentioned earlier, are given by other players as a way to show appreciation) meaning that your score only falls when you have either abandoned a game, or behaved in a way so egregious that other players found it reportable. Furthermore, you will need to receive three or more reports over the course of 25 games for it to register. What this means is that, even with a perfect behaviour score, there is room for a fair bit of toxicity, and I do occasionally find myself making harsh remarks at teammates doing poorly. Especially players who refuse to heed the directions of the team, for example dying in places that they had been told would be dangerous to be in, or simply refusing to move together with the team, are things that can make me lose my temper. So, while I have not been punished, I cannot see myself entirely free of the impulses that leads to toxicity, and sometimes I do find myself vocalising my frustration at teammates in less than ideal ways.

There are several factors regarding my life that colour the way that I experience this issue. First of all, I have been raised in a system that favours group work, both in regard to the school system that I have spent most of my youth in, but also the society as a whole (Seeing as Denmark is a social democracy). This means that working as a team may come more naturally to me than it does for players with other nationalities/educational backgrounds and upbringing. This may also be why players generally seem to like playing with me (based on the number of commends I receive), and also why I take greater offence at players disowning the teamwork aspect of the game. Furthermore, I have never been a sore loser, which probably also helps me keep my cool, and ignore most of the negative impulses that more toxic players seem to be subject to.

My behaviour score itself also impacts my experience of Dota, as I am more likely to be grouped with other players with similar scores. As already discussed, in the state-of-the-art section, these systems are rarely made for transparency, and it is generally hard to acquire any information

about how they work precisely. But it is assumed by players that behaviour score in Dota 2 to some extend dictates who you play with, meaning that the higher your score, the less toxic your games will be (in theory). I also mainly play the support roles, which, in my experience, for the most part makes teammates more likely to think well of me as a player. Furthermore, support roles are generally less attractive than the other roles, meaning that figuring out who has to play it can often lead to conflict as early as the character selection phase, conflict that I almost entirely circumvent by always picking the role for myself (this was originally my main motivation for playing support).

Furthermore, I am a white straight male, born in a country that is borderline native English speaking (it is considered a second language rather than a foreign language), into a family of high socioeconomic status. While sexuality is hard for other players to ‘detect’ in a game and ethnicity is secondary to language, as how you speak is the only way for players to pick up on your origin, both make one more vulnerable to the racist and homophobic language that plague online gaming. In terms of gender, girls have a rough time in gaming, and simply using voice chat with a female sounding voice can cause you to become the target of harassment. Needless to say, my privilege in these regards also colour my experience with the game, and players with a different nationality, gender or sexuality may be privy to experiences that I am not, much like players with a lower behaviour score might be. There are almost certainly countless of other factors that colour my experience, that I am not cognizant of, but I have here done my best to be forthcoming with the biases inherent to my experience.

My approach

Now that we have covered what autoethnography is and the purpose with which it is implemented, as well as the nature and bias of my own experience background, we can move on to how autoethnography was utilized for this study. While “[c]entering the story of the self and focusing exclusively on narrations and descriptions of personal experience are the hallmark of autoethnographic studies,” (Hughes & Pennington, 2017, p.15) I have sought to combine my

experiences with the experience of other players through interviews. I have done so following what Leon Anderson describes as “Analytic Autoethnography” (Anderson, 2006). Anderson describes analytic autoethnography as a specialised subgenre of analytic ethnography, with the specific feature that the researcher is part of the studied social group, which is what introduces the ‘auto’. Analytic autoethnography seeks to include the consideration and addition of the personal perspective while still upholding the analytical standard and thereby generalizability of more conventional ethnographic approaches. Anderson points to five key features of analytic autoethnography that allows for this which I will cover in the following.

CMR (complete member researcher)

CMR as the name implies refers to the researcher’s role as a complete member of the group researched. This is at the core of analytic autoethnography and is what sets it apart from other forms of ethnography. In the following we will also see that much of Anderson's work on the subject revolves around how to include the researcher as a first-person account while still upholding the empirical rigor needed for broader generalizations. In regard to this study, my membership would be described as opportunistic, in that my “group membership precedes the decision to conduct research on the group” (Anderson, 2006, p.379). While being a complete member, brings the researcher the closest to the emotional world of the people/groups studied, it “does not imply a panoptical or nonproblematic positionality.” (Anderson, 2006, p.380). First of all, the researcher occupies a dual existence, as they are both member and researcher, which inevitably changes the form of their participation and experience, as they are not only there to participate, but also to observe (Anderson, 2006). Secondly, “significant variation may exist even among members in similar positions” (Anderson, 2006, 381), and most social settings involve members in more than just one position. To take my own example of Dota, my experience as a support player with a high behaviour rating, may differ from that of a carry, or a support player with a lower rating. Simply put, experiences can vary for a near infinite number of reasons, which is one reason why a single perspective can never give a full picture.

Analytic Reflexivity

Analytic reflexivity describes the awareness and considerations of one's effect, as an actor/researcher, on the researched phenomenon. As a first order actor in the setting, the researcher cannot get away with viewing themselves as a fly on the wall. "At a deeper level, reflexivity involves an awareness of reciprocal influence between ethnographers and their settings and informants." (Anderson, 2006, p. 382). This, to some extent, mirrors Hughes & Pennington's idea of critical reflexivity and the need for the researcher to critically reflect on their relation to the studied phenomenon. However, as Anderson states, "it is not enough for the researcher to engage in reflexive social analysis and self-analysis" (Anderson, 2006, p.383), they also need to be visible in the text.

Visible and active researcher in the text

The researcher needs to be highly visible, and their feelings and experiences are seen as vital data for the story and the phenomenon observed. The goal is to make the researcher/authors presence in the observed phenomenon transparent to "fully acknowledge an utilize subjective experience as an intrinsic part of research." (Anderson, 2006, p.385). As researchers should expect to be part of the phenomenon in ways where it not only acts on them, but they also act on it, "they must textually acknowledge and reflexively assess the ways in which their participation reproduces and/or transforms social understandings and relations." (Anderson, 2006, p.385) This is a balance act though, as too much inclusion of the author at the cost of the broader phenomenon can lead to "author saturated texts" (Anderson, 2006, p.385). At this point the research loses its "sociological promise" as there are no longer room for observations outside of the author's personal experience, which leads to the next feature.

Dialogue with informants beyond the self

This goes back to the significant variations in experiences between group members, as "[n]o ethnographic work—not even autoethnography—is a warrant to generalize from an "N of one."" (Anderson, 2006, p.386). We are only one part of the setting/phenomenon that we seek to understand, which must be recognized. "Unlike evocative autoethnography, which seeks narrative fidelity only to the researcher's subjective experience, analytic autoethnography is grounded in self-experience but reaches beyond it as well" (Anderson, 2006, p.386). In other words, in its ambition to uncover generalizable knowledge, analytical autoethnography necessitates a broader collection of data than simply the experience of the self, be it interviews, literature or other. This also ties back to the analytic reflexivity. By becoming aware of other's experiences in your absence, you can better understand how your presence affects the experienced phenomenon.

Commitment to an analytic agenda

The point of analytic autoethnography is not simply to give an insight into a personal experience, but to provide broader understanding of phenomena using empirical data. "Analytic ethnographers are not content with accomplishing the representational task of capturing "what is going on" in an individual life or social environment." (Anderson, 2006, p.387) Rather, analytic autoethnography seeks to generalize from the experience portrayed in the study through the use of additional complementing sources.

In the following section, I will cover my own autoethnographic inquiry, which explores and conveys my experience of toxicity in Dota 2. Following this section, I have documented my process of designing and conducting interviews with fellow Dota 2 players, followed by series of discussions where I seek to derive conclusions on the nature of toxicity in gaming based on my own experience, the academic literature, and the interviews, ultimately seeking to answer the opening questions put forth in the problem statement. Combined this process constitutes my analytic autoethnographic

study into the phenomenon of toxic behaviour in competitive online multiplayer games.

Analytic Autoethnographic study

My work on this study began with me contemplating my own experience with Dota 2. As described in the previous section I have played the game for more than 4000 hours since it entered open beta back in 2011 and as such intuitively felt that I had a good understanding of the phenomenon of toxicity. However, when I began reflecting on my time with the game, I realized that my feelings regarding this issue, might be at odds with what I had actually been experiencing.

When I decided to work with this topic it was because I felt that I often experienced toxic players in my games, and that my games would be greatly improved if only we could establish a sure-fire way of removing these types of players from the game. However, after reading that a Riot research team had found that only a very small minority of players were consistently toxic, and that most of the negative sentiments seemed to stem from average players (Maher, 2016), I was forced to revaluate my own experience. What I found was that I had a hard time remembering specific examples of games that had been ruined due to someone being toxic for the sake of ruining the game for the rest of us. What I remembered was simply the frustration that I often felt with the game, divorced from any specific context. As I continued to play the game while paying greater attention to my emotional experience, I eventually found that, to a much larger extended, what tended to frustrate me was players not participating in teamwork, not communicating, being non-responsive when their help was requested by the rest of the team and generally refusing to partake in the team aspect of the game. When I began looking for it, I also realized that often times the reason for other players' toxicity had to do with similar frustrations, namely teammates not playing the way those players thought the game ought to be played.

As I was faced with this discrepancy between my intuitive feelings on the subject and my actual lived experiences, I decided to conduct a more structured examination of my games, in an

effort to quantify my experiences. I hoped that a structured approach could help alleviate the problem of confirmation and negativity bias that my previous thoughts on the topic had been tainted by. Over the course of 54 games I recorded my experience of teammates behaviour using a combination of a scale system and notes. The scale was produced by me prior to the examination, and ranged from one to seven, one being the worst and seven the best leaving four as the neutral middle ground. Each step of the scale was associated with certain sets of behaviour that I deemed either virtues or detrimental in a teammate (see fig. 5). The scale was thereby not based on some broader ideal set by the Dota community, but simply meant to reflect how players corresponded with a set of behaviour that *I* enjoy in a teammate. My goal here was not to enable some broader generalization from these

1	Outright griefing - actively trying to throw the game/lose - this can be exemplified by feeding curriers, running down mid to suicide or misusing abilities on purpose to harm teammates.
2	Extreme verbal toxicity - the instigator of negative social interactions. May actively try to anger other players - is searching for a fight. Is very prone to blame team members the moment their game goes bad. Is quick to give up in the face of hardship. May partake in light forms of griefing if agitated enough (such as feeding curriers). Very prone to dragging negative experiences from past games into new games.
3	Unintentional negative social behavior - players being overly negative, most likely due to ingame hardship. This type of behavior could include: Telling teammates how to play in an unfriendly tone, complaining about team members' performance (without being outright hostile), giving unconstructive feedback (often worded in the form of a question i.e. "why were you in that position?) - basically any behavior that is not constructive but arises from a place of, if not wanting the team to succeed, then at least wanting the self to succeed.
4	The allowable buttomline for player behavior*: Acting neutral, may partake in very limited team communication, plays their own game to the best of their ability, but does not concern themselves overly with the wider team. Can be dragged into toxic interactions, but does not instigate them.
5	A good teamplayer, Follows the team, adheres to contemporary standards of play (i.e. does not play widely outside of the meta), can partake in limited negotiations regarding team decisions, but will otherwise simply adhere to the team consensus. Is willing to go on compromise for the greater good of the team (although they might not be happy about it). Partake in the necessary strategic communication.
6	Model teamplayer, tries to work together with the team to coordinate actions, tries their best to support other lanes, will attempt to defuse hostile interactions, is more likely to mute negative players than to engage in hostilities. May engage in informal team interactions (for example jokes and friendly smalltalk). Is likely to comment positively on teammates performing well. Can make constructive suggestions to teammates regarding what to do, often in relation to broader team strategy.
7	Extraordinarily good team player. Charismatic character who can unite the entire team around a common goal. May be funny and lighthearted. Compliment players for good plays. Can raise the behavior of the entire team through social interactions.

Figure 5: Behaviour scale.

findings, but rather to record and communicate my own experience in a structured way. The scale can also be found in the appendix (Appendix B). For each of the 54 games recorded, I noted the

date, the game duration, the characters used by each player on my team (this was mostly used to have some way of referencing the individual player in my notes seeing as I omitted usernames for privacy reasons), the game ID (in case it would be relevant to watch a replay or go over the stats later), and whether the game was a win or a loss. Each player was ascribed a rating that combined translated into an average rating for the specific game. A note was authored on the general nature of each game, and every player whose behaviour I deemed noteworthy (as a result of either especially good or especially poor behaviour) was given a personal note as well. An example of documentation from a single game can be seen in (see fig. 6). The behaviour of the enemy team

	Game 6 - 21/02	45:26:00	Loss	4.75		A nice game. everyone acted for the most part well, almost no coordinated teamwork occured, w
Player	Role	Behavior		Player notes		
alchemist	Mid	6				Tried to defuse tension, did his best to give advice without being derogatory, attempted to make
weaver	offlane	4				
Chaos knight	Carry	5				Got a bit heated at times, but at the same time he did try to actively coordinate with the team.
Ancient apparitio	5th	4				

Figure 6: Example of data from a single game.

was not examined for the simple reason that it was impractical, as I did not have access to their chat/voice communication nor was I able to see them for much of the game due to the 'fog of war'[8]. I further omitted my own behaviour as rating myself would most likely have been imprecise due to bias and ultimately irrelevant to what I was examining. The examination was conducted unbeknownst to my teammates, as it was important that they played like they normally would, without changing their behaviour due to observation. I have therefore also taken care to omit any personal information that could tie a player to any of the games. And while I recorded the game ID, this has also been omitted in both this text and the appendix. In total 216 individual players took part in this study excluding myself and the enemy team.

In this section I will go over some of the main findings from this examination. For the full data, see appendix (Appendix C). First of all, the rating of the 216 players that I played with were as follows:

Rating of 1	1

[8] A fog that obscures the parts of the map that the player's team does not have vision of.

Rating of 2	12
Rating of 3	33
Rating of 4	89
Rating of 5	61
Rating of 6	19
Rating of 7	1

As could maybe be expected the largest group of players were neutral. What came as a surprise to me however, was the large proportion of well-behaved players compared to those showing more negative sentiments. Even after having played the games, I would have guessed that it would be more evenly split, especially when taking into account that I lost far more games than I won. In fact, I lost 35 games with only 19 won, and if we look at the data it is clear that lost games were much more prone to involve negative behaviour, a dynamic that is also reflected in the literature (Märtens et al., 2015; Mesquita Neto & Becker, 2018). Out of the 35 lost games, only 6 were rated good whereas with the 19 wins 14 of them were rated as good. In total the game rating was as follows:

Rated as bad	6
Rated as neutral	28
Rated as good	20

The overall rating for a game was arrived at by taking the average of the players' behaviour. Seen in retrospect I am not convinced that this was a good system, as the dynamics of what makes for a good game experience is probably more complicated than the sum of the involved players'

behaviour. E.g. in some cases, having one toxic player and one nice player, might just equal out and make the game okay, while in other cases the toxic player might for some reason detract more from the experience than the nice player can add. In any case I think that toxic players, generally detract more form the perceived player experience than nice players add due to an inherent negativity bias. In general, humans seem to be more likely to remember bad experiences than good ones (Ito et al., 1998; Rozin et al., 2001; Vaish et al., 2008). There were only one case of players rating as 1 and as 7 respectively. This low occurrence allows me to go into more detail with these two examples, which is good as I think they show well the complexity of in game behaviour, and how it is not always so clear cut.

The rating of 1 was given to the player who made me the most frustrated/angry throughout the 54 games. The interesting thing here is that I do not know if the player did anything negative on purpose. When we were in the pregame phase where each team has time to pick their characters and go over some very simple strategy making, the player did not communicate, but signalled his intent to pick a character that was at odds with what every other player on the team had already picked. Realising that he did not respond to our hails, we quickly moved around some picks to try and accommodate his intended character. I myself was forced into a support role, as we assumed that he was going to play the character as a carry. I mostly play support anyways, so this was not a huge blow, and only problematic because the character that he picked was not the most conventional carry. However, when we entered the game, he did not play the carry role, but instead played the character (an assassin type character called Riki) as a roaming support, meaning that our team was left with no carry. This forced our offlaner to take the carry spot with a character ill-suited for the purpose, and our 4th position to play solo offlane. We quickly lost the game, and throughout it, the Riki did not communicate a single word to us. Now the Riki player lost us the game without a doubt. It is normally extremely frowned upon for players to not be flexible in the least when it comes to picking characters, but when the intended pick and position of someone is clearly communicated the rest of the team at least has the opportunity to accommodate it. In this case, the rest of our team did

not have a chance to make it work, because we were forced to guess the Riki player's intentions. This infraction was made even worse by the team's general willingness to accommodate the ill-behaved player (this is often a scenario that leads to teammates fighting before the game has even begun if, for example, one player signalled the intend to play a specific role, and then another player picks a character specifically for the same role, thereby effectively claiming it for themselves). The thing is, the player did not take part in negative communication, he did not grief or troll, he played the character and the role as it was supposed to be played. It is hard to make excuses for someone not communicating or reacting to the team trying to get in contact with him, especially at the rank that we were playing. But he might simply not have understood what we were writing (granted we had all signed up for the game as English speakers, so this also does not fully exonerate him). So, to sum up, the most frustrating player that I had the displeasure of playing with in 54 games, actually did not do anything toxic as such. He simply entered a multiplayer game and played it as a single player game. Regardless, everyone on the team saw his actions as inexcusable and unacceptable, and to my knowledge we all reported him.

For the player rated 7 the story is a lot shorter. I found this a hard rating to use, as it was a pretty soft line between 6 and 7. The high rating for this one particular player basically came from his ability to coordinate the team's effort, while at the same time remaining friendly and making the game fun to be a part of. When someone made the occasional miss play he was quick to crack a joke to lighten the mood. It can be hard for 5 strangers to come together and become a coordinated team over the course of a 45-minute game, so to have a player who can step up and be someone that the team can come together around is invaluable. The result of playing with a player like this is that everyone on the team is more likely to communicate themselves, which often results in fun games, and easy wins. To further exemplify the issue of negativity bias, I still remember the game with the player rated as 1 in painful detail, while I would have forgotten about the game with the player rated 7 had it not been for my notes. This is despite the game with the badly rated player technically being older, albeit only by three days.

If we look at some of the common features of players rated between 3 and 1 we see the negative behaviour that I experience the most and find the most frustrating. The most prominent here is blaming teammates for own misfortune, being quick to call out others mistakes and generally being unconstructive yet overzealous in one's criticism. This is probably the most common form of toxicity, and very damaging, as it often drags the targeted player into needless discussions, or may course a poorly performing player to play even worse. In some cases, it is hard to even point out who in fact is the victim as two players get upset with each other and spend the rest of the game at each other's throats. In all 54 games, I did not meet a single player who seemed to enter the game, intent on ruining the experience for their team. Rather there were a lot of players who to some extend diminished the experience for their team, as a result of getting upset with other players, either due to a perceived lack of skill, or over some disagreement. This could also explain why lost games tend to be more toxic, as most toxicity arises from players being upset with their teammate's performance. In a losing game there is probably a higher concentration of poor performance to be upset with. Alternatively, lost games could rate lower because toxic players are less likely to win than well behaved players. I believe that the truth is somewhere in the middle. You are more likely to lose a game, if you are being toxic towards your teammates, and more players tend to become toxic as a game is going poorly, thereby creating a feedback loop of toxicity and poor performance. In terms of player actions that I would deem toxic, these are divided into two groups, actions that take place in the pregame/character selection part, and those that take place within the game itself. In the pregame phase we have actions such as picking characters that did not fit the picks of the rest of the team, instantly picking a character for a position that another player had already marked or picking characters and position combinations that are widely outside of the meta.

One thing that is worth remembering here is that the recorded games were played in Dota's ranked mode, a mode that is purely played to win. So, while picking unorthodox characters/positions

can be fine in a casual game mode, it is generally frowned upon in ranked. The same goes for playing characters for the first time, without first practicing with them in one of the games casual modes.

For the players rated between 5 and 7 the biggest common denominator is communication. I suspect that this may be the most subjective part of this analysis, as I can imagine other players finding communicative players annoying and/or controlling. I, however, appreciate how beneficial it is to have players coordinate movement, and do not mind following orders if this improves my chances of winning. In my mind, a good player is one who embraces the team nature of these games by engaging in team coordination. What raises such a player from a rating of 5 to one of 6 or 7 is the added ability to create a friendly environment and make the game fun for the team. These games are the best, when a team of strangers can manage to come together around a common plan and have fun together while executing it. As an added benefit, these games tend to result in a win.

While it is clear from my notes, that communication plays a large role in players perceived behaviour, be it the positive, coordinating communication of a good player or the blaming, criticizing, and complaining comments of a negative player, I believe that part of the story is missing from this picture. As I mentioned, none, or very few, of the negative players entered the game with the intent of ruining anyone’s experience, yet something happened over the course of the game that triggered these negative responses. Some of the common complaints from upset players ranged from poor performance, bad character picks, to lack of situational awareness. It would be questionable to rate someone's behaviour poorly due to bad plays, but honestly this was also often what I found the most frustrating myself. Not bad plays as a result of lack of technical skills, but players not following the team, being in weird places instead of together with the team, dying to ganks[9] despite being told by the team that they should not be in a given position. A large portion of games are lost, not because

[9] A gank is a form of ambush, where multiple players of the same team move together in an attempt to catch an enemy player, that is out of position, off guard. It represents one of the most common ways of seeking to gain a momentary advantage in Dota 2.

your players are worse than the enemies', but because getting five strangers to move together and take objectives can feel like herding chickens. This is probably the single most frustrating experience, and the kind of experiences that can cause me to become toxic towards specific teammates. And as a player it is hard not to feel like this kind of toxicity is sometimes warranted. Based on My own experiences, it seems that these are the same emotions shared by many toxic players. A frustration with a team/teammate that does not play the game as you believe is most conducive for a victory.

Interviews

Following my initial literature review as well as the autoethnographic study conducted in the opening phase of my research, a series of interviews were conducted with the purpose of contextualizing the views represented in the literature as well as my own experience, with the experiences of other players. For the sake of structuring my efforts, I have made use of a framework presented by Kvale and Brinkmann, that divides the process of conducting interviews into seven steps: Theme, design, interview, transcription, analysis, verification, reporting (Kvale & Brinkmann, 2008). Aside from informing how I went about conducting the interviews, it also serves as a layout for this section. I will here note that verification does not have its own section, as the validity is a continual concern throughout every step of the process, rather than a separate step (Kvale & Brinkmann, 2008). As stated by Kvale & Brinkmann, one needs to understand the why and what of an inquiry (Theme) before beginning the descent into methodological concerns regarding how the collection of data should be conducted (design) (Kvale & Brinkmann, 2008).

Theme

The main point of this inquiry was to test whether or not my experiences corresponded with those of other players or if alternative experiences were more prevalent. This is increasingly relevant as my experiences were so at odds with the phenomenon as it was described in the literature. The goal of my inquiry was therefore to test specific hypotheses regarding the nature of negative social interactions between players as well as garnering a better overall understanding of how the issue

was experienced by players. My aim was to collect data on players' view on particular aspects of the phenomenon such as what forms of negative behaviour they experience, how they categorie it, to what extent they exhibit toxic behaviour themselves, and the underlying motivation for doing so. The main questions that I wanted answered was, firstly; what does players consider to be toxic behaviour. Secondly; which types of toxic behaviour are the most common, and thirdly; what are players' motivation for being toxic themselves. From both my own experience with the game previous to initiating this study, as detailed in the section 'Autoethnography, Presentation and approach', as well as the more structured autoethnographic exploration conducted for this study, described in the previous section, I entered this subject with a certain understanding of the dynamics, lingo, and cultural quirks that exist in the community. That being said, this understanding is near solely based on my own experience and is as such exceedingly subjective. So, while it enabled me to ask relevant and precise questions, and communicate with players, not as an outside spectator, but as a fellow player, it also exemplified the necessity of this inquiry, to bring me a better general understanding of the experience of other players to broaden the basis for my analysis.

Design

For the sake of getting an insight into the experience of other players, a series of interviews were conducted. Due to the mixed purpose of the inquiry the interviews were partly explorative, for the sake of establishing a better understanding of alternative experiences with the phenomenon of toxic behaviour (Kvale & Brinkmann, 2008) and partly structured for the sake of answering the specific questions posed above. This resulted in an interview structure where specific questions were asked for the purpose of getting conclusive answers while others had the purpose of opening up the conversation and letting the interviewee give a detailed account of their experience. The interviews were conducted using a combination of Discord (https://discordapp.com/) and Reddit (https://www.reddit.com/) as I hoped that the informal context would help make the interviewed players more comfortable, as well as making it clear that I exist as part of the community outside of my role as researcher, leading them to be franker, especially regarding their own toxic behaviour.

As Kvale & Brinkmann mentions, doing chat interviews comes with the bonus of not having to go through the time-consuming process of transcribing. The downside is, of course, that I am denied access to features of face to face conversation such as body language and tone of voice, that could otherwise be a rich resource of analysis in a conventional interview (Kvale & Brinkmann, 2008). However, for a less experienced interviewer such as myself, I would not feel confident enough to use this type of analysis to draw any conclusions regardless and is therefore content with eliminating it as a factor.

The interviews

In total 9 interviews were conducted over a four-week period. Most interviewees were recruited via the Dota 2 subreddit fan site (https://www.reddit.com/r/DotA2/), but one participant was found through a Discord community for Dota 2 players. Ages ranged from 17 - 32, and the participants were all male. In total 9 different nationalities were represented in the interviews; Pakistan, Latvia, Lithuania, Bulgaria, Canada, Malaysia, Germany, South Africa and Brazil. The interviews followed a loose script with the purpose of answering specific questions, such as how players define toxicity, what type of toxicity they find to be most prominent, if they themselves ever become toxic etc, while still leaving room for the conversation to wander based on interviewee responses. The questions used for the interviews can be found in the appendix (Appendix D). Following previous agreements with the interviewees, the transcriptions were cleaned of any identifiable information, such as username, age, and country of origin. This information (aside from username) was still recorded for the study, but was separated from the individual interviews to make identification based on the data impossible. Transcription of the interviews can be found in the appendix (Appendix E).

Transcription and Analysis

To ease the process of analysis, the interviews were colour coded based on topics. The following topic/colour combinations were used to code the transcripts:

Red	Definition of toxicity
Green	Favourite position
Cyan	Behaviour score
Purple	Level of experience
Blue	Their reporting behaviour
Yellow	State of the community
Gray	Effect of toxicity
Pink	Interviewees own toxicity

The colour coded interviews can be found in the appendix (Appendix F)

The colour coding was used to divide the answers into several themes, that were then compared across interviews. Effectively the interviews were broken into four themes: Defining toxicity, Participants' reporting behaviour, Effect of toxicity and Participants own toxicity. State of the community did not get its own discussion, as the interviews failed to produce enough information on the topic for it to be valid to talk about. Following the colour coding, answers were grouped based on similarities in an effort to assess to what extend players agreed on definitions and the experienced phenomenon. This process can be understood as a form of sentiment condensing (Kvale & Brinkmann, 2008) where answers were condensed as much as possible without losing meaning, for the sake of making it easier to compare answers. For example, if one player stated that they would sometimes yell at teammates who were performing poorly, while another player stated that he wrote slur words to teammates in chat, both of those answers would be condensed to the participants committing 'verbal abuse'. The same was done to a large extend with their definitions to toxicity,

where a number of different actions, that all presented ways in which players could purposely harm their own team's chances of winning, were condensed to the single term griefing.

Results

Every participant came from a different country. the majority of participants were over the age of 20 and under the age of 30, with three being 17 and one being 32 (see fig. 7).

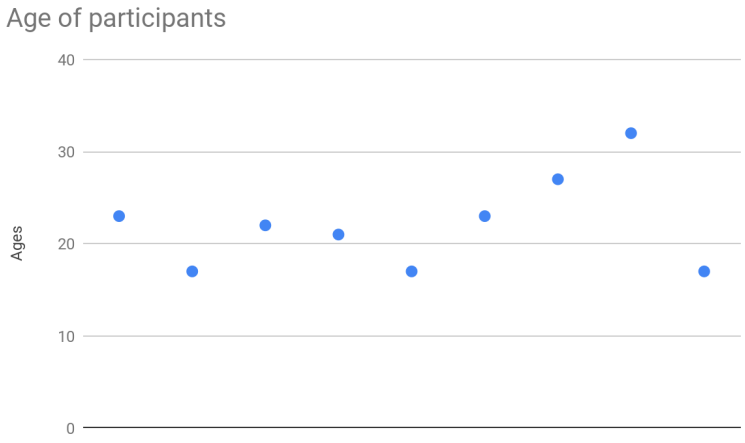

Figure 7: Graph showing ages of participants.

As shown in Figure 8, there seems to be no observable correlation between level of experience and behaviour score. Most participants had a behaviour score of over 9000, with two being above 8000 and one being significantly lower at 5000. Experience level was more evenly distributed, with players ranging from just around 1000 games played all the way to 10.000+ games.

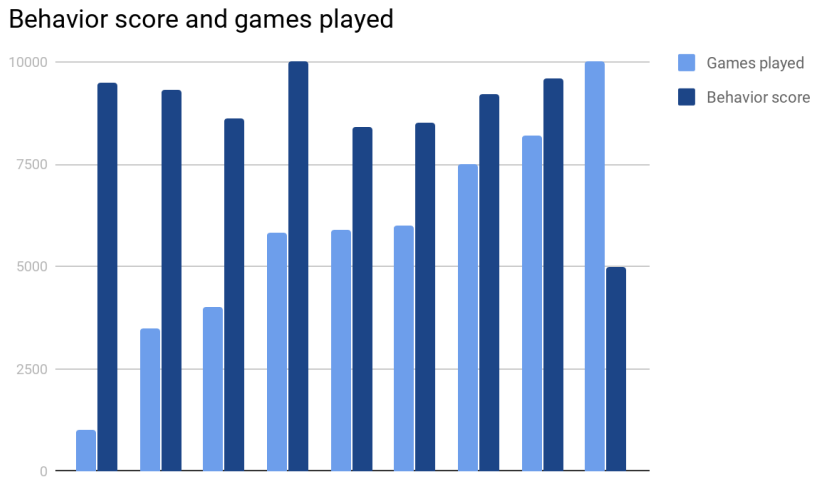

Figure 8: Graph showing behaviour score relative to experience.

Players were largely unable to pick one favourite position to play, but every position was near evenly represented amongst players, with position 1,2 and 4 being slightly more popular than 3 and 5. The differences however are not large enough for me to speculate on the reasons, although it seems to correspond with my general experience as well as the general assumption in the community, that position 5 (hard support) and 3 (offlane) tend to be the least favoured positions amongst players.

Defining toxicity

When asked to define toxicity participants were generally in agreement. Behaviour such as verbal abuse, pinning, and griefing were categorized as toxic by all but one player, who stated that only griefing was toxic, arguing that players either had a reason for being verbally abusive or, if not, were easy to mute. Another player, while stating that verbal abuse could be toxic, also stated that he found it to be okay for better players to harass players who were performing badly. Most players seemed to agree that verbal abuse, such as flaming or shifting blame, was the most common form of toxicity. Regarding different forms of griefing, players mentioned, feeding, killing own team's

currier[10], breaking items[11], buying wards[12] and placing them in one's own base, misusing abilities to help the enemy team, going afk, giving up and trying “fun” heroes[13] in ranked, with feeding being the most common. For verbal abuse blaming seems especially prominent, one player even stating that “you can see some players early in the game already setting the scapegoat since the start. Just in case something goes wrong” (Interview 08, Appendix E). Other forms include pointing out every mistake teammates make, aggressively sharing hindsight, racist and sexist remarks, and asking for others to report a specific player.

Participants’ reporting behaviour

Every participant used the report function, although what caused them to do so, and how often varied. Three participants reported to use it only in more severe cases, while four said to use it regularly enough to always use up their allotted reports. Of those that only used it in severe cases, one stated the scarcity of the allotted reports as the reason for their reluctance to report more often. Another stated that he only found severe negative behaviour toxic (such as intentional feeding and abandoning), and as such only reported this type of behaviour, which is rarer than for example verbal abuse. The third player pointed to his lack of trust in the report system as the reason for not using it more regularly. One player said to only use it sometimes, stating that he reported a player in one out of five games.

As to what caused players to report someone, of those who answered the question only one stated that they report players who perform badly. Two participants stated that they only report

[10] A unit used to transport items from the base to the players, that all players share control of. Killing the enemies’ currier will reward one’s team with gold and deny the enemy access to their currier for a time.
[11] Destroying one’s own items and thereby ruining one’s chance of further participating in the game, is used as an aggressive way of giving up. It is generally seen as an extreme form of griefing, as you irreversibly damage your team’s chances of winning.
[12] Wards are an item that can be placed on the map to give vision over an area for a duration. Wards are a limited resource to your team and wasting them can, as such, harm your team’s chances of winning.
[13] Picking fun characters refer to the action of picking the character that you would most like to play, regardless of how this character fits in the given match, an action that is extremely frowned upon in the games competitive modes where players play specifically to win.

players who grief and not those who are verbally abusive, while three participants also report players who are verbally abusive. One participant stated that he only reports players who really deserve it, but does not state what that entails, while another states that players need to be consistently toxic throughout a game for him to report them. Players also mention smurfing (the act of creating a new account to play against players of a lower skill level), account buying (opposite to smurfing this is done by players who want to play at a higher skill level), or trying out fun heroes in ranked, as reasons that can lead to reports.

Effect of toxicity

When asked how participants were affected by toxic players, everyone associated it with negative feelings such as anger, stress and frustration. Three players stated that it could cause them to become toxic themselves, one of them even stating that it could make him toxic in future games. Three players stated that they would sometimes have to take breaks or completely stop playing the game for a period of time to calm down after especially toxic matches. One player mentioned feeling ashamed after being called out in front of his team, also stating that it sometimes makes him want to quit the game entirely.

Participants own toxicity

Of the 9 participants interviewed, all but one described themselves as being toxic sometimes. Of those, five stated that it only happened sometimes or rarely, while it seemed more common for two of the other participants. The one participant who answered that they were never toxic, also stated that he “occasionally flame people if I think they are doing something that's absolutely stupid”(Interview 06, appendix E), but seeing as this player defined toxicity to not include verbal abuse when asked to define it, he also did not think that his behaviour should be seen as toxic. When asked what causes them to become toxic, three answered that other players´ toxicity was often what would cause it, while four pointed to teammates performance as the root causes. Two of the players also mentioned loading off anger, as a cause for becoming toxic, although it was not said where this

anger originated from, so it might well be one of the above as well. Lastly participants were asked in what ways they become toxic, to which all answered that they become verbally abusive.

Issues

While male players are the dominating demographic of Dota 2, it would have been preferable to have some insight into the female player base, but sadly, as I largely relied on players signing themselves on to be interviewed I had little control over the gender of the participants. Had it been a higher priority to get female interviewees I could of course have targeted those players more specifically. However, the goal of my approach to finding participants was to get a largely random set of participants, and actively seeking out a specific demographic would have undermined this.

Another point regarding the demographic of my participants has to do with the above-mentioned goal of finding a random set of participants. The truth is, of course, that nothing is truly random, and simply by using the fan reddit to recruit participants, I have already selected for a specific subset of Dota players, namely players who take the game seriously enough to peruse a fan site when they are not playing the game. This is also clearly reflected in the general level of experience of the players that participated, with the most ‘novice’ participant having played around 1000 games (which translates to something between 500-1000 hours played). Relying on players signing up themselves has probably also impacted what type of players I get. I would, for example, assume that the type of player who would find it interesting to participate in an interview regarding toxicity, is one that finds it to be a problem themselves. In truth, this assumption made me surprised to see that almost all participants admitted being toxic themselves, as I feared that the setup for the interview would automatically have selected for non-toxic players.

My sentiment condensing specifically relating to the term griefing is a bit problematic, as I cannot say for sure if all players would agree with my combining of the various phenomena into one term. For example, one player might find that dying on purpose to the enemy (feeding) can constitute

griefing, but that wasting wards is okay. Now, from my own experience with the game, and from the answers that were given by participants, I do not find it to be a serious stretch to assume that all players would be okay with the mentioned examples all being labelled griefing, but I cannot validate it using just the data from the interviews either. A survey to test what players believe constitutes griefing and verbal abuse would be an obvious next step for future research.

Lastly, it is important to note that all the answers I received from the interviews rest on self-reported accounts and the players' own memory of events. These players had not been asked to record their experience over a set number of games but was simply asked to remember their experience of the game. This means that their accounts are of course prone to the same mental biases that I ascribed to my own intuitive thoughts on the game in the previous section. Personally, I was more prone to remembering the bad experiences, thereby downplaying the good experiences I had, but it is impossible for me to say if or how these same biases affected the interviewed players. However, from a user experience point of view, I would argue that whether their perceived experiences adhere to reality of not, is of secondary importance, as it is their perceived experience that ultimately dictates their enjoyment of the game.

The nature of toxicity

In the beginning of this paper, four questions were put forth, two of which were: Actions are as important as chat/speech when it comes to understanding toxic behaviour, and there is not necessarily a link between toxic behaviour and the intent to cause harm. These assertions are what will be discussed in this section.

First of all, the existence of toxic actions (as opposed to speech or chat) seems like a common accepted fact everywhere but in the literature. As shown in the state-of-the-art section of the problem field, every single game company include various actions in their code of conduct, seemingly acknowledging that these types of actions pose issues for their players. Griefing in general and

especially intentional feeding is singled out in most games as actions that are punishable. If we look to the interviews, the answer is much the same. Although it would seem that griefing, in its various forms, is not as prominent as verbal abuse, it is seen as more extreme, and very much present in the game. Not a single player interviewed disagreed with it being seen as toxic. In other words, I believe it is safe to say, that toxicity in games cannot be examined through chat/speech alone, without losing out on an important aspect of its existence in these games. This is even more so the case when acknowledging that many of the interviewed players mentioned other players' toxicity as the cause of their own toxicity. From my own experience, nothing has made me more toxic, than when a teammate is griefing or in some other way seems disinterested in winning the game. This plays into a feeling of powerlessness that was also mentioned by some of the interviewees, where you feel unable to change the course of events. For example, if someone gets upset, and runs down the mid lane dying to the enemy team over and over again, there is very little that you, as a player or team, can do. That game is simply lost. If you study such a scenario only by examining the chat, you will get a very misleading picture of what is going on. And while I am not saying that the players verbally assaulting the griefer, is necessarily right in doing so, I would claim that their frustration is understandable. Furthermore, these players are not the cause of the problem, although they might very well be part of it. This dynamic gets even further complicated when we examine the motivation of the griefer. While I have no data from my interviews to go on, as none of the participants had ever griefed, I do not remember ever playing with someone who griefed seemingly out of nowhere. Rather, this behaviour has always erupted following some disagreement, be it players getting into a fight in the early stages of the game, or players disagreeing on picks/roles/lanes before the game even begins. In other scenarios we have players like the Riki that I singled out in my autoethnographic study, who may not himself ever have perceived his actions as griefing, and yet still ruined our team's chances of winning the game just as much as someone intentionally feeding. Dota 2 has a very complex meta game, and what constitutes griefing (or at least trigger players to become toxic) can often be as little as picking the wrong character for the wrong position, or a character that does not work well with the other characters the team has already picked. And the

truth of the matter is that many of these things, while not being recognised as toxic or done with the intent of hurting the team, can be as devastating to a team's chance of winning as someone outright griefing. For reference, in the pro scene, games are often said to have been won or lost already in the character selection phase, and the process of picking characters can be just as important as playing the actual game when it comes to ensuring victory. What I am trying to get at, is that verbal abuse, while never justified, rarely comes out of nowhere, and is likely to be a reaction to what happens in the game, be it toxic or otherwise. So, examining the phenomenon of toxicity only through the perspective of the chat is bound to result in a half-baked understanding of the phenomenon

This discussion leads me to the next point, namely the link between toxicity and the intent to cause harm. This one is more controversial, as many of the interviewed players, as well as the game companies focus on the role of intent. And to some extent intent is of course involved. It is not likely that every toxic player is being toxic on accident, or without knowing that their behaviour is toxic, although, as exemplified with the Riki player, it is definitely possible. What I would contest, though, is the idea that toxicity is an act of unmotivated/unprovoked malice. If there is one thing that I have found in my time with the game and in the interviews with players, it is that toxicity seems to be a reactionary behaviour. This is especially clear if we look at why the players that I interviewed became toxic themselves, this was always in reaction to other players performing badly or being toxic. Some of the interviewees even said that they actively tried not to be toxic, but still failed sometimes. So, in some cases it is not only not the intent to be toxic, the intent is specifically to not be toxic, and yet players still end up verbally abusing their teammates. Now, keep in mind that when I say that toxicity is a reaction, I do not mean to say that it is justified. What I am trying to illustrate is that, it seems, that much of the toxicity experienced by players, does not originate from someone entering a game with the goal/intent of causing harm to their team, but rather from the interactions between players. Even when players become toxic, it does not always seem to be with the purpose of hurting others, but rather a misguided attempt at correcting their playstyle, or self-preservation by removing blame from oneself. Most of the interviewed players mentioned these two, flaming/pointing to mistakes and

blame shifting as the most common forms of toxicity, while two players stated that they stopped being toxic after seeing that them yelling at their team to change did not result in any positive change, meaning that, at least to some extent, their prior toxicity was committed with the express intent of changing their team's playstyle. A last observation that I want to point out, is that not a single of the interviewed players expressed any joy associated with their own toxicity, some even being ashamed by it. In fact, arguably the most toxic player, judging from his behaviour score and the answers he gave, also seemed to be the most miserable player interviewed (Interview 04, Appendix E). He described how terribly other players' toxicity made him feel, and that he found no joy in the game, other than winning. He even went as far as to describe the game like a drug saying that he had tried quitting many times, but always came back. Based on behaviour score, this is the closest I have come to talking to a constantly toxic individual, and yet, he struck me as more of a victim than a perpetrator.

The use of cyberbullying in video game discourse

The third question that was presented in the problem statement, set out to critically examine the equation between toxicity in gaming and cyberbullying, which was made in some of the literature examined for this study. In the following I have examined the use of the term cyberbullying and its relation to toxicity in games, as it was argued in the literature presented in literature review. To determine the validity of the equation between toxic behaviour and cyberbullying, I have examined the cited literature from the associated texts.

Kwak & Blackburn equating toxic behaviour with cyberbullying

In the 2014 text titled *Linguistic Analysis of Toxic Behaviour in an Online Video Game* Kwak & Blackburn equates toxic behaviour with cyberbullying, citing a text by Barlinska et al. that gives the following definition to bullying:

> “[...] [b]ullying is defined as the intentional, negative actions of one or more pupils over an extended period, involving repeated, direct attacks on another student who, due to the perpetrator’s advantage (whether physical or psychological), is unable to defend himself or herself”
>
> (Barlinska et al., 2013, p.38)

Berlinska et al. further states that “cyberbullying should possess all those features” (Barlinska et al., 2013, p.38). The text does not mention games or toxic behaviour but talks specifically about cyberbullying amongst adolescent students. It is worth noting that the definition to bullying presented by Barlinska et al. stresses the importance of the intentionality of the negative behaviour as well as the need for it to occur repeatedly over an extended period (Barlinska et al., 2013). They do, however, add that when extended into the digital realm aspects like repeated attacks become increasingly ambiguous, although why is not entirely clear from the cited text. Presumably it has to do with conversations shared online being persistent in that everything is saved, making it hard to establish a definitive beginning and end point for harassment (Boyd, 2007). In a different text Kwak & Blackburn (Blackburn & Kwak, 2014) cites a similar definition by Smith et al.:

> [Cyberbullying is] an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself.”
>
> (Smith et al., 2008, p.376)

This definition again stresses the importance of bullying being an intentional act carried out repeatedly over time. In a third text using the same definition by Smith et al., Kwak et al. again equates toxic behaviour in video games with cyberbullying, citing an example of a girl committing suicide after being bullied over myspace to illustrate the danger of toxic behaviour in games (Kwak et al., 2015).

Murnion et al.

Murnion et al. writes about different definitions of cyberbullying, but ultimately ascribes to one provided by Hinduja & Patchin: “wilful and repeated harm inflicted through the medium of electronic text” (Hinduja & Patchin, 2008), largely mirroring the other definitions presented above. Hinduja & Patchin also does not tie this kind of phenomenon to video games, as the text is concerned with cyberbullying amongst adolescent students using social media. Murnion et al. also cites a study done by Ditch the Label in partnership with the online chat room Habbo Hotel, where 2500 players were surveyed on their experience with bullying in games. While the survey found that 57% of the players asked had been bullied in online games, they never clearly state what constitutes cyberbullying. From the user stories, and the other questions asked, it seems that being harassed, griefed/trolled or subjected to hate speech, constitutes cyberbullying in their definition (Ditch the Label, 2017). An issue with this study, is that no alternative to cyberbullying is posed by the researches, meaning that participants only have the term cyberbullying to fit their negative experiences onto. This in turn means that victims of singular instances of online harassment may have reported this as cyberbullying. While even singular instances of harassment present an uncomfortable experience for the victim, we must acknowledge the difference between this, and continued harassment in an environment that is hard to escape (such as a class or school). It could be argued that the experience of the player is paramount, and that, if a player feels continuously harassed this can constitute cyberbullying (at least in effect), even if the harassment is conducted over different games and by different parties each unaware of each other. In this case, it could be said that no single perpetrator bullied the victim, but that the combined harassment of multiple separate parties constituted an experience of being bullied for the victim. However, even this dynamic is at odds with other definitions to cyberbullying and all definitions of bullying cited by the texts examined here, which focus a lot on intent. While there may be intent behind the individual mean comments, this does not necessarily constitute the intent to outright bully someone. While this lack of intent might not be of significant consequence to the victim, it will most likely change the types

of solutions that will be needed to combat the behaviour as the underlying motivation may be very different.

When talking about the consequences of cyberbullying in games, Murnion et al. refers to (Yang, 2012) and (Fryling et al., 2015). Yang first of all talks specifically about adolescence, does not cite a source when first stating that online conflict leads to forms of harassment that are termed cyberbullying, but later provides a list of behaviour associated with bullying, which includes "(flaming, harassment, denigration, impersonation, outing, trickery, exclusion, and cyber stalking)" (Yang, 2012, p.5). This list is the closest thing we get to a definition of cyberbullying in the text, and, contrary to other definitions to bullying and cyberbullying examined here, it does not mention intent nor repetition as essential parts, meaning that someone calling you a bad name once in a video game, based on this scale, constitutes cyberbullying. Fryling et al. uses the consequences of cyberbullying on social media to frame the study and references Yang when connecting cyberbullying and videogames. The text documents a survey study done by Fryling et al. where participants were asked to answer a series of questions regarding the presence and effect of cyberbullying in video games (Fryling et al., 2015). The study was done using a similar approach to the Ditch the Label study, where it did not define cyberbullying, but rather asked the participants to supply their own definition. However, seemingly no alternative term for negative behaviour was given, meaning that you could either answer that you had experienced negative social behaviour in the form of cyberbullying, or that no negative behaviour had been experienced. In this way the study effectively presupposes the equivalency between negative social behaviour in games and cyberbullying.

Fox et al. cyberbullying in MMORPG's

Fox et al., 2018 does not give a definition for what they understand as cyberbullying, but cites (Ballard & Welch, 2017) to illustrate how widespread the problem of in game harassment is. Ballard & Welch's text is interesting, as it shows that there is some credence to the idea of cyberbullying in certain genres of games like MMORPGs. This seems very probable, as these games often

encourage players to form long lasting relations to one another. Players in these types of games often join up in ‘guilds’ (in game communities), that can last for years. Players can easily form very real social bonds within these communities, with many even falling in love with their fellow players (Chashaoballs, 2018). In this kind of environment, where a player has strong ties to a community, and where players sometimes stay in the same guild for years, it seems more probable that cyberbullying can exist in much the same form that it does in schools or workplaces. As opposed to the game genres discussed above, we here have an environment, where you are likely to meet the same people again and again, as the game takes place in a persistent world. You might also be part of a community (guild) that you do not want to leave, as this will mean giving up on social relations to other players. In this kind of environment someone could bully you for extended periods of time, and it would be hard for you to escape the bully, as this might result in the loss of friends and community. In other words, we here have a setup that is much more conducive to conventional bullying, but through digital means (cyberbullying).

Summation

Some inconsistencies present themselves when equating the definitions of cyberbullying seen above with the toxic behaviour taking place in a game like LoL or World of Tanks. First of all, a game of LoL lasts on average between 25 - 30 minutes, depending on rank and game mode (Game Durations, n.d.), the presence of repeated attacks over an extended period of time becomes hard to argue. This is even more so the case with World of Tanks where a game lasts, in my experience, between 5 - 15 minutes. Furthermore, unless you are being bullied by your friends from outside the game, there is little chance of ever meeting the perpetrators again after a match has been concluded. This remains the case even when taking into account the persistence of online messages mentioned by Barlinska et al., as the chat logs from these games are not easily accessible after the game’s conclusion, meaning that the victim would have to actively screenshot the messages during the game, to have a chance of ever seeing them again.

Another issue is that many of the texts cited for definitions to cyberbullying are examining the phenomenon in adolescent student environments specifically. This is both a different age group and context compared to that of the researches who examine the phenomenon in video games. Murnion et al. examined World of Tanks, and while exact numbers are hard to come by, the head of offline competitive gaming at Wargaming (the company behind World of Tanks), Alexey Kuznetsov “described a large portion of the game's demographic as within the 16-to-35 age bracket--with more players leaning towards an "older audience."” (Te, 2016) in an interview with Gamespot (https://www.gamespot.com/). For Kwak & Blackburn who are examining LoL the numbers are similar according to an official although dated infographic (Gallegos, 2012). In regard to context, it should be clear that the dynamics present in match based games like LoL and World of Tanks, where players group up specifically to play a single round of a game, are very different from the far more persistent worlds of social media. There is a temporal difference, as interactions in games tend to rely on the parties being temporally co-present (i.e. in the same match at the same time), whereas interactions on social media does not necessitate the victim or the offender being present at the same point in time. This further diminishes the ambiguity regarding repeated offences mentioned by Barlinska et al.

Maybe the most important point, is the problem of intent and motivation. I believe this to be the biggest misconception about toxic behaviour in online competitive video games, not just because it fails to identify the actual cause of the behaviour, but also because it will necessarily lead to suboptimal solutions. As discussed in the previous section both based on my experience and the conducted interviews, much of the toxicity comes as a reaction to the game and its players, more so than an explicit wish to course harm, and that, in fact, even toxic players seem to take no pleasure in the act. Rather, players seem to be too frustrated with the game and their teammates to communicate their critique in a constructive manner. To combat this kind of behaviour I believe that the first step should be to recognise the perpetrators as normal players, and not treat them as bullies,

or bad faith actors, but rather as players who are having a suboptimal player experience, and nowhere else to direct their frustration than towards their teammates.

To summarize, we have texts applying cyberbullying to instances that does not fit the definition that they themselves are citing. The cited definitions are developed for a separate context and for a different age group, yet none of the texts seem interested in demonstrating how these two phenomena are comparable. In fact, the texts seem to presuppose that the negative social interactions players have in games are the same as cyberbullying on no grounds. The arguments presented consist of citing texts talking about a separate phenomenon (cyberbullying) occurring between a different demographic (school children) in a different context (in schools/between students) motivated by a different goal (the intend to harm someone) as proof. It is also problematic that researchers do not seem to acknowledge the different dynamics of different game genres. Bullying might very well be possible in persistent world games like World of Warcraft or Minecraft for the reasons discussed above, but for all the same reasons that it is plausible in these games, it is nearly impossible to imagine in LoL, World of Tanks, or indeed Dota 2, where interactions rarely last longer than half an hour to an hour. It is therefore even more important that we have clear distinctions between toxicity and cyberbullying, when it comes to online gaming culture, as this will allow us to more accurately identify the actual problem. In the end, it is not my point to downplay the problem of toxic behaviour in online games. Cyberbullying is, however, associated with consequences such as depression, anxiety, low self-esteem and lowering of school satisfaction and achievement (Davison & Stein, 2014), so I believe we ought to make sure that the equation is warranted. While cyberbullying may be very plausible within certain contexts of online gaming, it is important that we distinguish between the phenomenon of toxic behaviour in games and cyberbullying. Firstly, because it has not been accurately demonstrated that the very serious consequences of cyberbullying are carried over to toxic behaviour in games such as LoL, World of Tanks, and Dota 2, and secondly, because the underlying dynamics, regardless of the experience of the victim, are very different, and as such the ways to combat them will most likely also have to be.

Where does the toxicity come from?

I have now argued for most of the contentions put forth in the problem field. I have argued for what toxicity is, what it is not, the dynamics surrounding its occurrence, and in the following section I will cover alternative ways for researchers to go about examining its existence. The questions that remain is then, where does toxicity come from, and how *do* we combat it? While giving a definitive answer to either of these two questions is far outside the scope of this single study, I will in this section venture some guesses as to the nature of toxicity's origin. As the data collected for this study does not prove sufficient to conclude where toxicity in competitive online multiplayer games stems from, the following should be seen simply as speculations based on the findings from this study and my own experience.

First, I will argue for the issue of implicit rules, and player conventions. In the description of the game Dota 2, that I have included in the appendix (Appendix A), I cover the various roles that players can take on in a game of Dota. One carry, one mid, one offlaner, and two supports. Yet, the existence of these roles is not enforced by the system, but rather by player convention. Ultimately, each player has no real power to limit the behaviour of their teammates, meaning that in the end, every player is free to do as they please within the rules of the system.

This idea of conventions also extend to what characters are picked for which position, with a specific pool of characters being broadly accepted as, for example, good characters for a carry player. Picking a good carry character for the support position thereby breaks with the conventions but is fully allowed by the game system. This problem extends further into the more complex aspects of the game. There are 117 characters in total to pick from in Dota 2, (as of May 2019) all of which are designed to inhabit certain roles, each with specific strengths and weaknesses. An important aspect of picking characters is making sure that the strengths of your team allows you to capitalize on the enemy's weaknesses. For example, a character like Skywrath Mage is capable of dealing

immense magical damage with powerful spells (see fig. 9), damage that can be completely negated by a character like Lifestealer with his ability to become magic immune for a duration (see fig. 10). In turn, Lifestealer's ability to turn magic immune can be circumvented by a character like Bane, whose ultimate ability allows him to pierce magic immunity (see fig. 11).

Figure 9: Skywrath mage dealing damage to Lifestealer with a powerful spell.

Figure 10: Lifestealer negating damage by using his ability to turn magic immune.

This means that picking the wrong character relative to the opponent's line-up, can erase your impact on the game. For example, picking Phantom Lancer (a hero that excel by creating large armies of copies of himself to fight by his side) into an enemy line-up consisting of Earth Shaker, Ember Spirit, Legion Commander, Axe, and Grimstroke (all of which have abilities that deal more damage the more targets they hit) can be as conducive to victory as playing football standing on

Figure 11: Bane disabling Lifestealer with a spell that pierces his magic immunity.

your hands. On top of this layer of characters' strengths and weaknesses comes a layer of team strength. Do you pick characters that are strong in the late game, or mid game? If you commit too hard to one of them, the enemy team might assemble a team that can punish it, but if you do not commit enough to one plan, you might end up with a mixed line-up that does not excel at any point in the game. In fact, an important aspect of Dota is timings: timings for when a specific character is the strongest, the timing for when a specific character is able to pick up an especially instrumental item, or the timing for when your enemy is the weakest. Missing these timings can easily mean losing the game.

The problem here is that even though all of these aspects are paramount to a player's/team's success in Dota, none of them are enforced by the system, but rather by player conventions. As a result, though player conventions exist outside of the rules of the system, some conventions still constitute the rules that make up what can be defined as the magic circle (Salen & Zimmerman, 2004), while other conventions are simply guidelines that can be broken under the right circumstances. The division between these can often be ambiguous. For example, that each of the three lanes has to be occupied at the beginning of the game, can be considered a rule, but which

type of character should be occupying what lane, can be slightly more fluid, although still subject to strong and rarely broken conventions, but at what point of the game a player should leave their lane to pursue joint team efforts, almost entirely depends on the given game. If we compare this to the distinction that Salen and Zimmerman make between operational rules (the written rules, how the game is played) and the implicit rules (the unwritten rules, etiquette and proper game behaviour) (Salen & Zimmerman, 2004), it seems to me that player conventions in Dota in many cases inhabit a grey area somewhere between the two where rules are not just convention, but also not quite operational. If we compare to the sport of handball, would you call it an operational rule that you have one goalkeeper and six players? In many cases it might as well be, yet sometimes the goalkeeper does follow the rest of his team in the attack, leaving the goal empty. Imagine, however, a game of handball where the goalkeeper consistently left the goal because he wanted to score points himself. In this scenario, the rest of the team would most likely feel like their goalkeeper was breaking the rules of the magic circle. When these implicit rules are broken in traditional sports, it occurs based on the dynamics found within the third and final stage of rule understanding, where one “[...] comes to realize that the rules of a game are dependent on a social contract and can be changed if all of the players agree to do so.” (Salen & Zimmerman, 2004, c.28 p.14). Basically, the goalkeeper can follow his team on the offensive, because the team agrees that this is a good strategy for that given moment, thereby circumventing conventions without breaking the rules of the game. The problem in a game with random players like an online match of Dota 2, is that it is hard for all players to agree on breaking convention, and players who break the conventions often either do not care for their teams’ consent, or do not realise or believe that their actions break conventions. Add to this the existence of conventions that are never broken yet are not part of the operational rules of the game. Going back to the example of handball, no matter what strategy a team utilizes, they will never not alternate between offence and defence. And when on defence, they will always seek to spread out over the goal area line to best cover from attacking players, yet these are not part of the operational rules of the game, but rather conventions of how the game is best played. There are no rules saying that one player cannot remain on the offensive, never returning to defend their own

goal, yet doing so would be considered an improper way to play. In Dota, similar examples of improper play would be playing carry heroes as support, not picking supports at all, or having two teammates fight for gold and experience in the same lane. Rather than being governed by the rules of the game, this type of behaviour is condemned based on what is deemed to be the best way of playing the game. What happens here is that:

> “[p]layers make a distinction between "ideal" and "real" rules. Ideal rules refer to the "official" regulations of a game. Real rules are the codes and conventions held by a community of players. Real rules reflect a consensus of how the game ought to be played.”
> (Salen & Zimmerman, 2004, c.28 p.29).

I believe that conflict over what constitutes the ‘real rules’ of Dota 2, can be found at the heart of many interactions that end in hostilities. As Johan Huizinga states “All play has its rules. They determine what "holds" in the temporary world circumscribed by play. The rules of a game are absolutely binding and allow no doubt” (Huizinga, 1950, p.11), later he continues to write “[...] as soon as the rules are transgressed the whole play-world collapses. The game is over.” (Huizinga, 1950, p.11). This sheds some light on the severity of the issue at hand. It is clear that Dota 2 has rules, also outside of those strictly enforced by the system. However, which of the many conventions surrounding competitive play of Dota are rules, and which are guidelines seems to be up for debate, which is problematic, for as Huizinga writes, rules allow no doubt. When playing a game of Dota, there are no room for us to disagree on the rules of the game, if a perceived transgression occurs, “the play-world collapses”, and “the game is over”.

This should not necessarily be seen as advocacy to change the implicit nature of the game. Ultimately this complexity is what has made Dota what it is, and putting the system in charge of upholding conventions, would limit the extent to which players can experiment and change these conventions over time. The result would be a far more stagnant game, for that which is convention

today, was highly unconventional a year ago, which is part of Dota's charm and why players can put a seemingly endless number of hours into it. The game is always changing. What I am trying to point out, is that these dynamics create an environment that makes it very hard and frustrating to be a player. If a teammate picks the wrong character, if your team is unwilling to mobilize at the right timings, or insists on mobilizing at the wrong timings, there is often nothing you can do as an individual player to turn the tide. And when you lose, how well you did as an individual will not matter, a loss is a loss. Which brings me to the next point, namely the MMR system.

The competitive, or ranked, game mode in Dota 2 revolves around the currency of matchmaking ranking, or MMR. Basically, how this system works is that, with every win a player gets a certain amount of MMR points, and whenever they lose they lose a similar amount. The specific amount won or lost corrects slightly to fit the balance of the game, meaning that if you lose to a team that is overall higher rank than you, you will lose fewer points and vice versa. Some time back the system was changed to a rank-based system similar to many other competitive games, where instead of MMR you have different degrees of a rank with each degree being associated with a specific medal (Matchmaking/Seasonal Rankings, 2019). Yet, you can still track your MMR, and the MMR system still functions as it used to. The MMR system is an example of what is called an Elo-rating system, a system that was originally designed to judge player skill in chess. The complexity of chess made it practically impossible to rate the quality of individual moves, so instead the Elo system rates players' skill purely based on wins and losses (Elo rating system, 2019). A group of game designers going by the name Extra Credits have made a video on the issues with the Elo system (Extra Credits, 2018). While I agree wholeheartedly with their analysis, I am less thrilled by their solution being the same system but with more positive feedback, but that is a discussion for another time. In short, while the Elo system solves the problem of judging player skill in an exceedingly complex environment, it was designed specifically to judge a two-player game in which winning or losing solely depends on your ability, as a player, to best your opponent. However, in a team game like Dota, all of a sudden it is not solely your ability that is being judged, but that of your team. And

due to how Dota functions as a game, it is not the ability of each of your team's individual players, but rather this team of strangers' ability to play well together, that is being judged. In effect, this means that you are not judged on your own ability, but rather the ability of five strangers to successfully play together. This, combined with all the factors of complexity covered above, means that winning or losing a game of Dota 2, often feels like a coin toss of which team picks the right characters and happens to be able to play well together. And while player agency of course plays into these aspects, your ability to affect the picks of your team or their willingness to cooperate is ultimately limited by their willingness to listen to your directions. As a result, Dota can become a meta game of managing players and herding your team in the same direction. A prominent figure in the Dota community made a video detailing how players, in light of this, could go about improving their chances of winning (Kenner, 2016). While being at least partly a work of comedy, it describes the potential absurdity of playing ranked Dota 2 quite accurately.

Another issue that is connected to the Elo system, is that the game teaches players to not care about the individual game of Dota, but rather care about gaining MMR. Salen and Zimmerman presents a model of metagaming that is divided into four categories, one of which is "what the player takes away *from* the game" (Salen & Zimmerman, 2004, c.28 p.23). Metagaming is described as the game around the game, or how the game relates to aspects outside of the game. The system of gaining MMR, can be seen as a metagame to Dota 2. Since how well I play does not directly affect my ranking, all I care about is winning. My score in the game, how I played, and even the players I play with are all temporary, and as such, secondary to winning. Of Course, playing well will improve your chances of winning, but since it so often feels like the games were a foregone conclusion that you had no impact on, for one of the many reasons discussed above, the game teaches you that what you do in the game only matters little. When this is how the game teaches you to understand the game; what happens in the game does not matter, all that matters is winning or losing. Any aspect of the game only becomes valuable insofar as it leads *you* to victory. Your performance only has value if it leads to you winning and your teammates only have value as long as they are

conducive to victory. In other words, players are taught to care, not about the game itself, but about the metagame of gaining MMR. What you have to show to other players are not the cool plays you made, or how well you played in a specific match, but rather how high you MMR is. Furthermore, the players on your team are random people that you have been put together with for this one match. And since there is little to no chance of meeting the same players again, there is no real reason to care about them past their effect on the game. This entire setup almost seems designed to dehumanise your teammates. There is nothing in the game to reinforce their importance to you, other than winning you the game, meaning that the moment a player proves detrimental to your chance of winning (or simply is perceived as such) that player has lost all value to you. In fact, since they do not just not improve your chances of winning, but most likely lower them depending on how badly they are doing, it is not just that you do not care about them, they are now the enemy. They become part of what stands between you and victory, just as much as the enemy players, and seeing as your relationship to these players does not matter in the slightest past this one game, you are given no motivation to care for them as anything other than a tool for winning. What you have effectively created, is a system where players are taught to have a dehumanizing utilitarian view of each other.

Lastly there is the factor of time investment. A game of Dota 2 takes on average between 25 and 45 minutes. Winning a game grants you around 25 MMR points and losing loses you a similar amount plus/minus a couple of points. But more importantly, losing a game wastes not just the 45 minutes that you spend playing the lost match, it also cancels out the 45 minutes of work it took to win those 25 points in the first place. To me, this is one of the most soul crushing aspects of Dota, that even when you are having a good day, and win 3 games in a row, this is all cancelled out if you return the next day and lose 3 games. During my autoethnographic study for this game, I hit a 10-game losing streak, and had I not been playing to gather data for this study, I would have quit the game and not come back for months. Knowing how many hours I put in to reaching the rank I had at the beginning of conducting this study still fills me with dread if I think about it for too long. In fact, my rank right now, is lower than when I began playing the game’s competitive mode years ago. It

took me 3 - 4 years to go from 3300 to 4000 MMR, but it took less than a month to fall down to 3100, and the idea of ever getting back to where I was seems nearly unfeasible. During that losing streak, I was the most toxic I have ever been in this game, because players stopped being teammates, and instead became the (perceived) reason I was losing my games. I believe this is at the core of what makes players toxic. This setup teaches players to think of each other as tools for winning the game, that individual performance does not matter if it does not win the game, and that teammates who play badly are directly coursing you, not only to not gain the MMR you are fighting for, but also losing those you won last game, effectively wasting hours of your life, and maybe more importantly, cheapening the good moments in the game. The amazing experience of winning a hard-fought game, between two equally matched teams that are both playing well together, can be completely erased by getting crushed in the following game because two teammates got into a fight over who should play mid. Tying it back to the complexities of Dota 2 discussed earlier, a teammate might have picked a hero that is terrible for the matchup, and significantly lowers your chance of winning the game. What does it matter that they were not aware that the pick was bad? It will still have lost you a couple of hours and 50 MMR, and this is from an action that was made before the game even began, yet there is nothing you can do to fix it other than do your best to win despite that pick. This antagonization of your teammates is even further reinforced since, by the nature of numbers, it is more likely that you are losing because a teammate is having an off day, than because you yourself are, simply because there are four of them and one of you. So even if all of you are playing poorly every fifth game, you will still be left with the feeling that your team is always letting you down.

I suspect that these are at least some of the dynamics that come together to create the frustration, that I believe toxic players are an expression of. Faced with such a hostile environment, where the individual player often times feel helpless to improve their own situation or affect any real change in a team’s behaviour or attitude, players find themselves with no other options than to express this frustration through the only channel they have, namely team coms/chat. There are few things in life that I enjoy more than playing a good game of Dota, with random strangers that for

some reason happens to play really well together, and even manage to crack jokes and have fun while doing so. Yet the slew of shitty games you have to go through to get these near utopian games can be soul crushing, and at times outright depressing, and for some players, it seems that the social pressure of the MMR metagame has erased any enjoyment that could be found in playing Dota, outside of winning.

Benefit of qualitative methods

With this paper, I have sought to illustrate the depth of understanding that I believe necessary for one to even begin grasping the complexity of the issue. While I will not enter into the broader debate regarding qualitative versus quantitative methods for data gathering, I will use the following section to point out how the findings presented in this paper would have been impossible to arrive at through quantitative means alone. Going back to my opening criticism of big data's prevalence in the academic discourse surrounding this issue, it would be inconceivable to capture the depth of complexity that is at the core of this issue, through analysing singular aspects, like chat, alone. If my findings have illustrated anything, it is that toxicity is a multifaceted problem, that arises, not simply from players seeking pleasure from hurting others, but rather as a result of a variety of factors, ranging from diverging beliefs in/understanding of player conventions, to suboptimal ranking systems. One of the big problems of relying on quantitative data when examining this issue, is that you are often limited to the type of data that the game company themselves are already tracking. One result of this, is that the academic discourse seems to have inherited the industry standard division between players and perpetrators, where toxic players are seen as individuals that need to be kept away from the 'pure' players, either by restricting their ability to communicate, or their ability to play the game entirely. What this perspective fails to ask is why the toxic players become toxic. It is simply not a consideration of the system. Nowhere in the game are a reported player asked to justify what triggered them in a particular game, and as a result, no data exist to explain the motivation of toxic players. Even my interviews, limited as they are in scope, unearthed a completely different story of the average player being toxic from time to time, often against their own will.

In other words, it is not simply the use of big data, but rather the reliance on curated big data, and this data alone, that I find problematic. Games are not chat rooms, and it is necessary to acknowledge how much interaction has occurred between players even before the first word is written or spoken. While verbal toxicity was pointed out as the most prominent form of toxicity by most players, it was rarely seen as the most frustrating or severe, and more importantly, was often motivated by things happening outside of the chat. Furthermore, there are undoubtedly many aspects of the game that the system does not record, and even though these become fewer and fewer, there is still a need for looking beyond datasets for the full story.

Quantitative methods definitely have their place in this discussion. The unprecedentedly enormous size of data that these games supply freely to researchers is an understandably attractive prospect, that does present an invaluable tool for understanding the broader nature of competitive online gaming. However, I believe that it should be used in conjunction with qualitative methods that can help explain the underlying, deeply social, dynamics related to what the data is showing. The alternative is the reported version of the issue we have now, where, that which is discussed is hard to recognise as a player. Such a setup is hardly conducive to an honest discussion of how we should seek to solve the problem.

Conclusion

In the beginning of this paper, I put forth a series of questions that I hypothesized could lead us to a better understanding of where toxicity in competitive team games stems from. First of these were the question regarding nonverbal forms of toxicity; are in-game actions as important as chat/speech when it comes to understanding toxic behaviour? In-game actions, while not presenting any of the most common forms of toxicity, seem to account for the most extreme forms, and are treated equally to other forms of toxicity in every report system found within games examined for this paper. I have furthermore argued the importance of accounting for in game actions, toxic or

otherwise, in the analysis of toxicity in all forms, as even verbal abuse seems to often be a reaction to in-game actions. As such I would argue that, while not being the most common form of toxicity, in game actions are equally important especially when it comes to understanding the motivation behind other acts of toxicity. Which brings me to the next question; Is there necessarily a link between toxic behaviour and the intent to cause harm? While toxicity cannot be fully divorced from the, at times, destructive intent to course grief for your teammates, there seems to be no reason to believe that such toxicity stems from unmotivated/unprovoked malice. In fact, judging from the interviews, it seems that players take no joy in being toxic, with some players expressing outright discontent with their own toxicity. However, despite their aversion to toxicity, every player interviewed performed toxic acts at times. It would therefore seem that, rather than from explicit intent to cause harm, toxicity arises as a knee jerk reaction to events within the specific game. Two motivating factors that were put forth by the interviewees were, firstly, other players' toxicity, and secondly, other players' performance. So, to sum up, yes, for a majority of cases some form of intent can be tied to toxic behaviour, but it seems, that some misconceptions regarding the motivation behind this intent is present in both academia and the industry. Similar misconceptions also present themselves in relation to the following question; is the equation between toxic behaviour and cyberbullying sound? While the short answer is no, the long answer is that no basis for such an equation was ever demonstrated in any of the literature, at least not for toxicity within competitive games the likes of LoL and Dota 2. First of all, the bully/victim narrative pays more credence to the idea of toxic players as malicious actors who are in the game with the explicit purpose of causing harm, which, for the reasons presented above, does not seem to be the case. Furthermore, in-game toxicity found in the type of games discussed here, fail to live up to the definitions to cyberbullying put forth in the literature on a number of factors, especially when it comes to cyberbullying having to be continuous and repeated over time. Lastly, we have the methodological question of; can qualitative approaches give us better insight into the underlying dynamics inherent to toxic behaviour, than what would be possible through quantitative approaches alone? Here the study documented in this paper speaks for itself. Whether the reader finds that the results presented within it in fact does bring us closer to

valid insight into the underlying dynamics of toxic behaviour, will be for them to judge. However, it is clear to me that similar findings would have been impossible to achieve through quantitative approaches alone. Especially the link between the complexities of Dota's metagame/conventions and player motivation is key to understanding the social conflicts that erupt amongst players. I fully believe that, to really get at the hearth of this issue, demands a deep understanding of the game, and a willingness to engage with the lived experiences of players.

So, has answering these questions brought us closer to understanding where toxicity comes from? At the very least, it has given us a direction. I argue that the discrepancy between what players perceive to be the "real" rules (Salen & Zimmerman, 2004 c.28 p.29) of the game, as well as being judged by the performance of strangers both are at the core of most conflicts that erupt between players. I believe that these conflicts are only fuelled by the dehumanizing effect that is created through the emphasis that the competitive modes place on raising one's MMR score. At the same time, the time cost associated with losing MMR points, helps to exacerbate the frustration that players carry with them between matches. To me, what we are left with are understandably frustrated players, many of whom lack the tools to take their frustration anywhere else but into their next game. Ultimately, treating these players as malicious actors, moves us further away from solving the actual underlying problem, namely the frustrating aspects of the competitive experience that turn average players toxic.

Where to go from here

All that is now left, is to ask, where do we go from here? As I see it, this study opens up various different avenues of research. First of all, a survey study to test the broader generalizability of the views expressed by the players interviewed for this study would be an obvious next step and could help to further solidify our understanding of the motivations of toxic players, and to what extend players agree on what can be categorized as toxic. It would also be interesting to find out if partaking in toxic behaviour is as widespread in the community as these interviews make it seem. Another

topic for future studies could be to specifically interview players who commit griefing, to see if their motivation matches those associated with less extreme infractions such as verbal abuse. Finding out if and how toxicity in ranked Dota is different from non-competitive modes, or if the toxicity in Dota differs greatly from that of other similar games all also represent valid goals for future research. Another avenue could be to work more specifically with tying the phenomenon of toxicity to specific game/gameplay features, in an attempt to alter player behaviour through game design. Especially alternative ways of structuring competitive modes, to alleviate some of the frustration tied to the Elo-system strikes me as a worthwhile pursuit for game developers seeking to improve the user experiences they offer. With the improvements being made to AI in Dota 2 (Statt, 2019), it is not inconceivable that it would be possible, in the near future, to create systems where AI observers rate players, not purely on wins or loses, but on what the individual players contributed towards their team's chance of winning. One major challenge, that such a system would have to overcome, is to account for unorthodox approaches to the game that often help evolve the metagame. An alternative approach could be to look at the community structure of games like World of Warcraft for inspiration, where players gather in guilds with hundreds of members. Here players often assemble in teams consisting of guild mates to complete the games content. This structure enables individual players to draft from a large group of people when assembling a team to play with, without relying on complete strangers. This could serve as a compromise between the risk of playing games entirely consisting of strangers, while still lowering the logistical issues associated with relying on a small group of friends to play with. As such It could be interesting to examine how playing with guild mates in World of Warcraft affects toxicity, and if it proves to have a positive effect, see if a similar structure could be introduced to games like Dota 2. Regardless of what avenue future research takes, I believe that there is an essential need for new ways of approaching the issue, that can lead to the conception of novel ideas that stray from the present conventions. Most importantly, future research needs to take the players and their frustration seriously and seek to implement solutions that respect the player experience of all players, even the toxic ones.

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Appendix

Appendix A - Description of Dota.

Appendix B - Behaviour scale.

Appendix C - Data from autoethnographic study.

Appendix D - Interview questions.

Appendix E - Transcribed interviews.

Appendix F - Color-coded transcriptions.

Appendix G – Dispensation for writing in English.