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English Vulgarisms in Internet Communication

Anglické vulgarismy v internetové komunikaci

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Poděkování

Rád bych touto formou poděkoval Mgr, Jaroslavu Emmerovi za odborné vedení mé práce a jeho cenné rady, bez nichž by tato práce nemohla vzniknout.

ANOTACE

Tato bakalářská práce se zabývá užitím vulgarismů v komunikaci anglicky mluvícího internetu. Internet je specifický svým velmi dynamickým prostředím, a tudíž i mnoha způsoby komunikace. Teoretická část se zabývá vymezením pojmu „taboo language“ a jeho typologií. V rámci této části je bližší pozornost věnována vulgarismům. Závěr teoretické části se zabývá přiblížením specifik internetové komunikace. Praktická část obsahuje popis zkoumaných stránek a následně obsahuje samotný výzkum a rozbor internetového jazyka na vybraných internetových stránkách. Sesbíraná data jsou podrobena analýze pomocí korpusového softwaru #LancsBox. Data jsou poté vložena do přehledných tabulek a grafů, které znázorňují nejčastěji používané výrazy a jejich počty. Analyzované stránky jsou na závěr porovnány co se týče frekvence užívání vulgárních výrazů. Práce zkoumá, kdy se vulgární výrazy na internetu používají, a zda-li se používají více než v mimo něj.

Klíčová slova: internet, vulgarismy, Reddit, Twitch, on-line forum, live-streaming

ABSTRACT

This Bachelor's thesis deals with the usage of vulgarisms in the communication of the English-speaking internet. The internet is well known for its very dynamic environment, as well as its many forms of communication. The theoretical part of the thesis deals with specifying the term “taboo language“ and its typology. This part also provides a closer look at vulgarisms specifically. The ending of the theoretical part concentrates on introducing the specifics of internet communication. The practical part of the thesis contains a brief overview of the examined websites, and furthermore, it contains the analysis of the internet language of the chosen websites. The collected data are analyzed with the help of a corpus toolbox software #LancsBox. The data is afterwards put into tables and graphs, that show which vulgarisms are used and in what quantities. At the end of this thesis, the analyzed websites are compared in terms of the frequency of using vulgarisms. The thesis analyses when are vulgar expressions used on the internet, and whether they are used more often than in everyday communication.

Keywords: internet, vulgarisms, Reddit, Twitch, on-line forum, live-streaming

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1 INTRODUCTION

Although the terms “taboo language” and “vulgarisms” are not too often spoken about, they are a natural part of any spoken language. Emotionally demanding situations require expressions suited for such occasions, which might often be the exact time, at which people reach for a vulgar expression that would suit the situation.

The internet is a fast-growing medium that seeks to outperform any other form of media that humankind has ever known. It is used in many ways, but one of the most important uses of the internet is communication. Extraordinary amounts of data are uploaded onto the internet every day, and they do not seek to stop in any foreseeable future.

Another use of the internet is entertainment. Masses of people browse the internet every day to entertain themselves in any way they see fit, whether it is watching videos, sharing pictures, finding out new information, and so on.

Two popular sites used mainly for entertainment are Twitch.tv and Reddit.com. Many people visit both sites daily to reach the entertainment of their choice, whether it is watching a live stream on Twitch.tv and communicating with other viewers via the live chat room that accompanies every stream, or browsing their favorite subreddit to reach one of the many forms of entertainment that Reddit.com provides.

Both of the mentioned sites provide a form of communication to their users. And where there is language, there are vulgarisms. Researchers in the 2000s found out, that taboo words make up approximately 0,5% to 0,7% percent of spoken language (Jay, 2009). This thesis aims to find out, whether the veil of at least partial internet anonymity makes people on the internet use vulgar expressions more frequently than they would in spoken language.

2 THEORETICAL PART

2.1 WHAT IS TABOO?

According to the Cambridge Dictionary (Cambridge Dictionary, 2020a), *taboo* is defined as a subject, word, or action that is avoided for religious or social reasons. According to the Oxford Learner’s Dictionaries (Oxford Learner’s Dictionaries, 2020),

it is defined as a cultural or religious custom that does not allow people to do, use, or talk about a particular matter, as people find it offensive or embarrassing, or as a general agreement not to do or talk about something. The word itself originates from Polynesian, but the use of the term is now widespread (Online Etymology Dictionary, 2020).

Taking this into consideration, it can be said that taboo is something that should be avoided. The problem with this might arise when we consider that what is taboo and what is not is very often based on culture, or religion, which may differ significantly in different parts of the world (White, 2014). Examples of taboos that are present in most parts of the world are murder, racism, incest, pedophilia, etc. These taboos are commonplace and are best to be avoided anywhere in the world. Body function taboos such as belching, spitting, or defecation, when performed in front of other people, are also very often present.

Taboos that are not commonplace usually relate to culture and religion. As an example of a religious taboo, the Islam religion strictly forbids the consumption of alcohol and pork in any form. Similarly, it is forbidden to consume beef in Hinduism (Sociology Group, 2018). Premarital sex is also considered taboo in many religions.

Cultural taboos on the other hand relate to the specific country or region. To give an example, in Japan it is considered taboo to wear shoes indoors and considered rude to point at someone with your chopsticks (Sociology Group, 2018).

Taboo is a broad topic, and it can be based on a great variety of factors. Ranging from where are you from, what you believe in, to what your moral standards and beliefs are, taboo can manifest itself in many ways. This might be one of the reasons why taboo has been studied from many perspectives and by many fields, including philosophy, sociology, psychology, and linguistics.

2.2 TABOO LANGUAGE

Taboo language, also called linguistic taboo or taboo words, are words, that are to be avoided entirely, or at least in “polite company” (Akmajian, 2010). Alternatively, the term “taboo words” can be used to “describe the lexicon of offensive emotional language” (Jay, 2009).

Same as behavioral taboo, what is or is not considered taboo language is defined by culture, and not by anything inherent in the language itself. The sound of the

expressions in question is not the reason that they are not to be used in polite company, the reason is simply that in the process of learning the language, its users were taught that these are “swear words” (Akmajian, 2010).

In today's society, people know very well when it is, and when it is not appropriate to use taboo language. Throughout the process of people being brought up, they are taught by their elders that taboo language is not to be used at all (Jay, 2009). The principle of being punished for uttering the wrong word at the wrong time is solidly embedded into peoples' minds. This is something that everybody is taught from an early age.

But what if that is not the case? What happens when we are not physically present with the people that we use taboo language with? When using the internet, people are very often covered by at least partial anonymity. How do people behave in this environment and what instances of taboo language do they use? When the threat of immediate punishment is no longer present, the way people express themselves could significantly change.

2.2.1 TYPES OF TABOO LANGUAGE

Taboo language is quite a wide concept and different authors may categorize it in different ways. According to Edwin Battistella, there are four categories of taboo language. Namely, these categories are epithets, profanity, vulgarity, and obscenity (Battistella, 2007).

In the context of taboo language, an epithet can be defined as “a disparaging word or phrase” (Merriam-Webster Dictionary, 2020a), or as “a word, phrase or expression used invectively as a term of abuse or contempt, to express hostility, etc. (Dictionary.com, 2020a). Epithets are various types of slurs. These slurs usually refer to race, ethnicity gender, sexuality, appearance, disability, or other characteristics. Examples of epithets would be words like *bitch*, *fag*, *midget*, *retard* (Battistella, 2007).

Profanity in its core is a term related to religion. To be profane is to show no respect to god or religion, specifically through language (Cambridge Dictionary, 2020b). On a wider scale, the term “profanity” can nowadays be considered synonymous with cussing, cursing, or swearing (Merriam-Webster Dictionary, 2020b). Going back to the original meaning, profanity is considered to be religious cursing,

coarsely using what is taken to be sacred. The range of profanity can be from mild *hell* or *damn* to emphatic *goddamn* (Battistella, 2007).

Both terms, vulgarity, and obscenity, refer to words or expressions which characterize sex-differentiating anatomy or sexual and excretory functions in a crude way, with the primary differentiator between the two terms being their degree of prurience (Battistella, 2007). Something obscene can be defined as something that goes strongly against the moral code. It can also refer to the use of taboo language in polite speech (Merriam-Webster Dictionary, 2020c). Vulgar is not far from this definition, since it refers to something lacking taste, something being morally crude or undeveloped, or it simply describes a term that is offensive in the context of language (Merriam-Webster Dictionary, 2020d). Some terms used in these categories are *fuck* or *shit* (Battistella, 2007).

It is important to realize that the categories mentioned above are not exclusive, and certain expressions may belong to more than one of the categories. An example of this fact is the exclamation *God fucking dammit* (Battistella, 2007).

2.2.2 VULGARISM

Although the prior part of this work provides some definitions, there is one definition of vulgarism that has been left out on purpose. This particular definition says that vulgarism is a word or an expression that has originated from or is mainly used by an illiterate person (Merriam-Webster Dictionary, 2020e). Another definition is quite similar, although it mentions vulgarisms mainly being used in coarse colloquial speech (Dictionary.com, 2020b). Below the first of these two definitions, the online dictionary provides synonymous words to the term, which contain words such as curse, cuss, dirty word, obscenity, profanity, or swearword.

Considering this definition, a working definition of the term that is worked with within this thesis can be formed. The term “vulgarism” throughout this thesis refers to any use of coarse language or inappropriate usage of language on the examined sites. The original Latin term *vulgus* means “common people” (Online Latin Dictionary, 2020), thus the language that is to be examined will be as such. Name-calling, obscenity, profanity, cursing, etc. are all considered vulgarisms for the sake of this thesis. This helps achieve a greater sample size and overall improve the quality of the gathered data.

2.2.3 WHY IS TABOO LANGUAGE USED?

Quoting Jay (2009,155): “Swearing is like using the horn on your car, which can be used to signify a number of emotions (e.g., anger, frustration, joy, surprise)”. Taboo words can be used to achieve multiple outcomes from multiple people. The outcome of their use can be positive, negative, or even ultimately inconsequential when it comes to the impact on others (Jay, 2009).

Jay continues by stating that we primarily use swearing for emotional connotation. This occurs in the form of epithets or insults directed towards others. (ibid.) Another reason for using taboo words would be to achieve a specific reaction from others. It injects a direct emotional component into the discussion that helps to express the feeling of anger, frustration, or surprise. Insulting forms of taboo words include name-calling, cursing, or wishing harm to someone. Taboo words are one of the defining features of discrimination, hate speech, sexual harassment, verbal abuse, etc. These uses of taboo words usually lead to negative outcomes (ibid.).

Not all uses of taboo words are negative, however, Jay continues to point out that taboo words have positive uses in some of their forms. These forms include humor and jokes, social commentary, sex talk, self-deprecation, storytelling, or ironic sarcasm. He also notes that a positive outcome can be achieved when physical violence is replaced by speech (ibid.).

When it comes to inconsequential uses of taboo words, Jay mentions that many uses of these words are mere casual conversation habits. These uses lack a clear social motive other than fitting in with others’ informal use of taboo words. This kind of use, which may not be intended to be inherently offensive, can still be regarded as impolite or rude by the speakers who are not directly involved in the conversation (ibid.). The uses of taboo words are multiple. They can be used in a cathartic way, the way of emotional release that helps us handle an unpleasant situation better or even to help us endure pain more effectively (Stephens, 2009). They can be used to insult or exclude someone. But they can also be used in your friend group as terms of endearment (Jordan, 2018). As Jay states in his article, the lexicon of taboo words can somewhat be compared to a toolbox. It can be used for a wide range of emotional expressions and one can achieve a great number of social and personal goals by using them (Jay, 2009). According to him, swearing is a unique human behavior that has developed for a

purpose. Taboo words have the ability to convey emotions through communication that non-taboo words simply do not have (ibid.).

2.3 SPECIFICS OF INTERNET COMMUNICATION

Throughout its existence, people have been using the internet in a myriad of ways. One of the most important of its uses nowadays is clear and almost instantaneous communication. Some of the ways the internet can be used for communication are instant messaging, email, VoIP (aka. Voice over Internet Protocol), Videoconferencing, or Internet Relay Chat. (CallHippo, 2020).

The internet fundamentally provides two types of communication, asynchronous communication, and synchronous communication (Nebojteseinternetu, 2020).

Asynchronous communication does not require the immediate reaction of the addressee. This means that once the message is sent, it takes from minutes up to days until the recipient replies. Examples of asynchronous communication are e-mails or online forums (Holloway, 2020).

Synchronous communication on the other happens when messages can only be exchanged in real time. It is used when we require the immediate reaction of the addressee. It requires direct interaction of its members (Nebojteseinternetu, 2020). Examples of synchronous communication are chatting programs such as WhatsApp or Messenger, or programs that allow their users to talk directly, such as Skype or Discord.

As the internet evolved, so did the language that its users employ. This gave birth to “internet slang”. Internet slang has many forms, which were created for various reasons. Some of them were simply created to save keystrokes and make on-line communication devices such as chatting faster. These include letter homophones (typing “CU” instead of typing out the entire phrase *see you*) and acronyms made out of initial letters of words (“LOL” meaning *laughing out loud*) (Wikipedia, 2021).

A particularly interesting type of internet slang is “flaming”. Flaming is the act of posting or sending offensive messages over the internet (Techterms, 2021). Originally meaning the act of sending an angry or insulting e-mail (Cambridge Dictionary, 2021), flaming is currently common throughout the internet. Currently, flaming does not only on e-mail, but can occur on practically any platform that allows its users to communicate. Discussion forums, live chats, e-mail, video or audio call, all of these means or internet communication are where flaming can occur.

3 PRACTICAL PART

3.1 TWITCH.TV

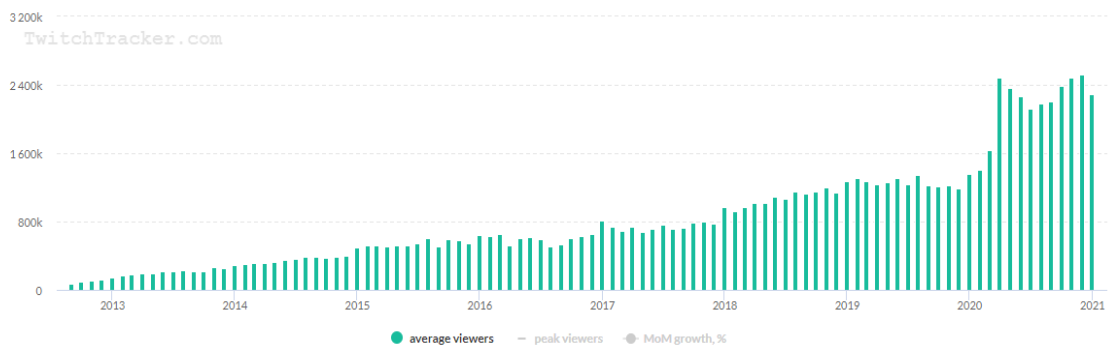


(source: <https://www.pcmag.com/reviews/twitch>)

Twitch.tv is a video streaming platform launched in 2011, that is operated by Twitch Interactive and owned by Amazon. The website mainly focuses on video game live streaming. These broadcasts include major esports events and competitions, music broadcasts, creative content (painting, 3D modeling, drawing, etc.) or the most recent addition to the roster, the “IRL” (aka. “In Real Life”) or otherwise known as the “Just Chatting” section, in which the broadcaster simply does whatever they want (as long as the Terms of Service allow so) and interacts with the chat while doing so (Wikipedia, 2020). The broadcasts are most often run by individuals called “streamers”, that have chosen broadcasting on Twitch as their hobby, and many of them even as their main source of income. The content on the website is available in two forms: watching the broadcast live or watching a recording of the broadcast, which the site saves automatically. These recordings are called “Video on Demand” or “VOD” for short.

Over the 9 years of its existence, the site has achieved widespread popularity. Over this time, the site has built a massive, loyal audience. The increase in viewership was so significant that it led the American giant Amazon to buy Twitch in August of 2014 for almost \$1 billion (VideoGamesStats, 2020).

The site TwitchTracker.com provides insight into how exactly the site grew in terms of viewership, as well as the number of broadcasters that have picked Twitch as their streaming platform of choice. The graph below shows the statistics:



(Source: <https://twitchtracker.com/statistics>, screenshot taken on January 2nd 2021)

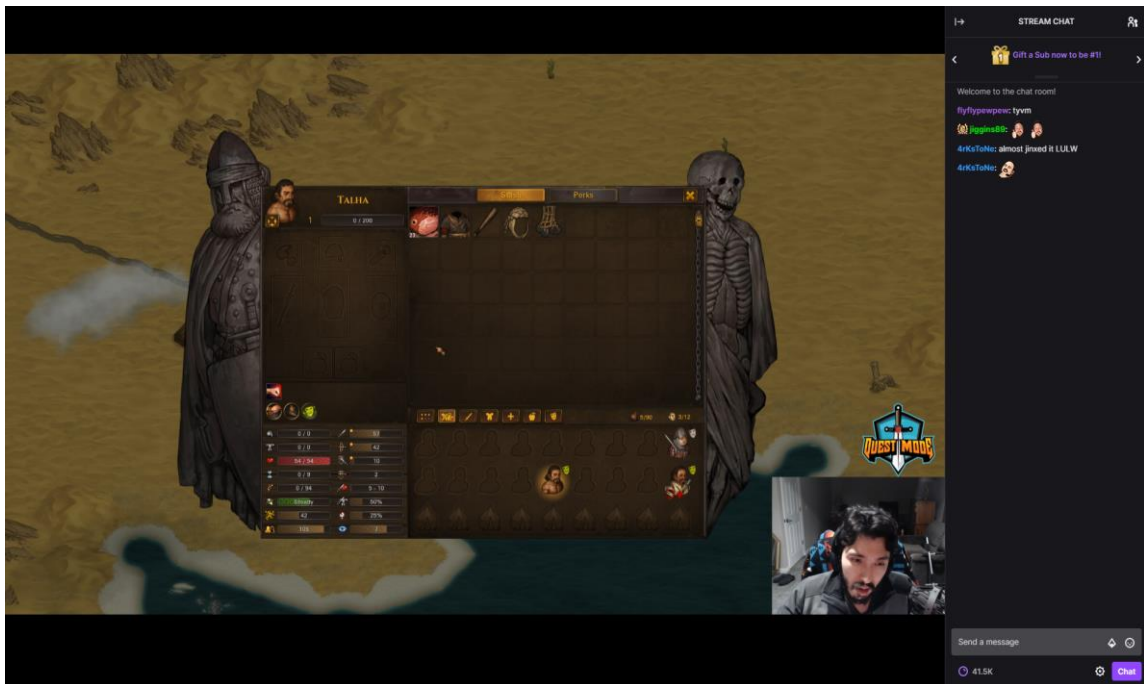
The popularity of the site might also be attributed to the fact that when it comes to video game live streaming, there is little competition, as Twitch decisively dominates the scene (Mallick, 2020). Most prominent streamers, user-friendly interface, and the fact that Twitch can be enjoyed absolutely free are just some of the pros that solidify Twitch as the go-to platform for a great number of viewers as well as broadcasters. Other websites such as YouTube or now non-existent Mixer have tried to compete with Twitch in terms of video game live streaming, but their attempts have thus far proven unsuccessful. Furthermore, Twitch as of late has been attracting other content creators apart from video game broadcasters, as the Music, Art, and “Just Chatting” sections seem to be steadily growing by the day.

All the above-mentioned facts led to choosing Twitch.tv as one of the primary sources of data for this work. The live stream is always accompanied by live chat, where people post their messages and talk about topics ranging from commenting on what is happening on the stream and communicating with the streamer to simply chatting with other users. Some streams can have up to tens of thousands of viewers at a time, plus the fact that the environment of the stream may vary significantly from streamer to streamer are just some of the factors that make Twitch.tv a suitable source of material for this work.

3.1.1 METHOD OF RESEARCH

Twitch is a live-streaming platform. A streamer broadcasts the content of their choice to the people who choose to join the stream. The people who do so may or may

not choose to also engage in chat. The following displays how a typical Twitch stream might look like:



(source: <https://www.twitch.tv/arvius>)

On the left, there is the window of the stream itself. Whatever the streamer decides to broadcast shows there. And on the right is the chat window. The chat is how the viewers communicate with the streamer and vice versa.

In this study, each stream was studied in two ways. Firstly, the main focus was on the chat. The data were recorded throughout one entire broadcast and put into a text file. This was done via software called Chatty, which automatically saves the chat log from the entire broadcast. The text file was then imported into a software called #LancsBox. #LancsBox is a corpus analysis tool that helps analyze the text in great detail.

Once the full chat log is imported into #LancsBox, the text is analyzed by using the “KWIC” function. This function allows the user to search for specific words and/or word groups. Using an integrated function of the software, typing “SWEARWORDS” into the search bar highlights certain swearwords that are present in the text. This is a useful tool, but it does not highlight all the sought-after expressions, thus a manual search for certain expressions needed to be made using the “KWIC” function.

Afterward, the “Word” function of #LancsBox was used, which allows the user to search for alternative variants of or a word, to find variations of the sought-after expressions.

List of swearwords integrated into #LancsBox: *arse, arsehole, bastard, bellend, bint, bitch, bloodclaat, bloody, bollocks, bugger, bullshit, clunge, cock, crap, cunt, damn, dick, dickhead, fanny, feck, fuck, gash, git, god, goddam, Jesus, minge, minger, motherfucker, munter, piss, prick, punani, pussy, shit, sod, tit, twat*. Variations of these expressions are included.

List of manually searched expressions: *ass, cum, slut, whore*. Abbreviated forms of searched expressions: *BS* (stands for *bullshit*), *FFS* (stands for *for fuck’s sake*), *LMAO* (stands for *laughing my ass off*), *LMFAO* (stands for *laughing my fucking ass off*), *WTF* (stands for *what the fuck*). Variants of these expressions are included.

After analyzing the text data, the sought-after expressions were put into tables and graphs to further show how often they are used. The text was then revised in detail using the “Text” option of #LancsBox, which allows the user to go through the entire text one instance of an expression at a time. This was done to filter out the possible spam that might have altered the data. This means that a message being spammed and repeated multiple times that contains a vulgar expression was only counted as one instance of a vulgarism being used.

Secondly, the focus of the analysis is on the streamers themselves. It is not unusual to see that the language of the streamer often reflects on the chat. This means that at least a part of the sample size might be chat users simply mimicking something that the streamer said, and thus the samples of the language might differ in a noticeable way from channel to channel.

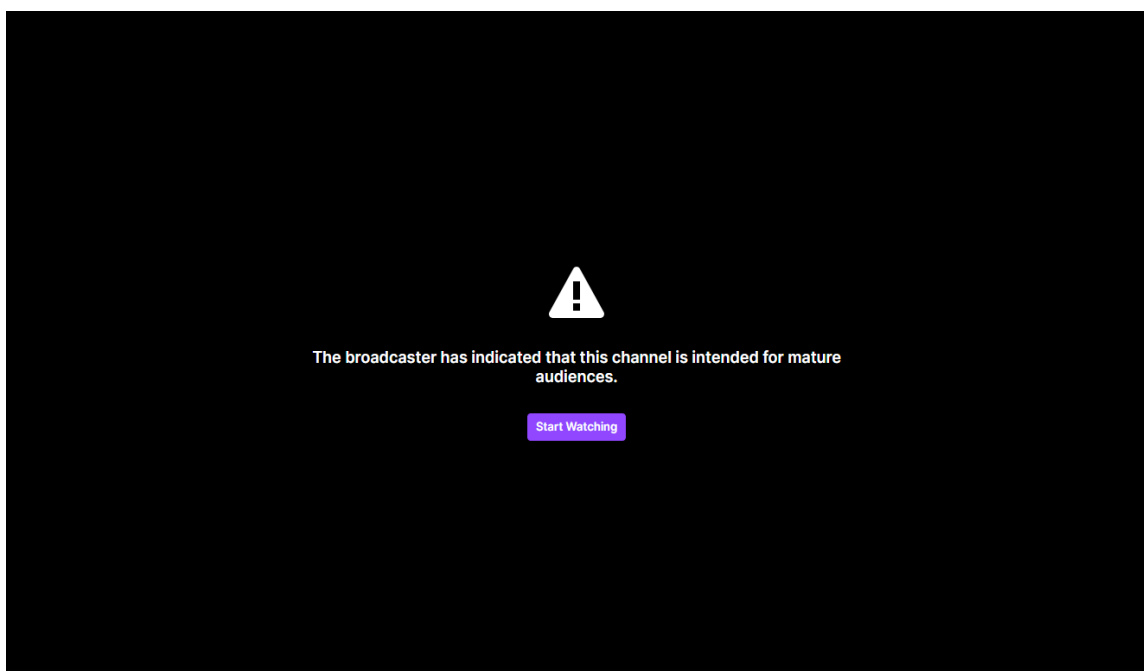
3.1.2 INDIVIDUAL SPECIFICS OF TWITCH.TV

There are many things to be considered with each individual channel. Each of them is unique in one way or another and no two Twitch channels are identical. The aspects to consider include the game that is being broadcasted, the broadcasters themselves, the target audience of the stream, the nationalities of the audience, the time at which the broadcast takes place, the number of viewers the broadcast has, etc. All of these are to be considered to properly identify why the streamer and the users in the chat behave the way they do in terms of using vulgarisms.

There are multiple types of twitch viewers. Some of them watch certain channels for the streamer and their personality, while others are watching solely for the content that is being broadcasted. This means that some of the users might frequent only one category of content on Twitch, while others only watch specific broadcasters regardless of what content they decide to broadcast.

Every Twitch streamer is unique. The personality of the streamer is a factor that has an undeniable impact on the stream. It is up to the streamers to decide what game they broadcast, how they behave towards the game, the chat of their stream or their possible teammates/enemies and how they choose to express their emotions. This nature of the broadcaster tends to be very clearly reflected by the users in chat. A long-time viewer of a certain streamer tends to pick up their speech habits, often used words or expressions that they might have not used otherwise.

In certain ways, the streamer can directly choose the target audience of their stream. One of these ways is setting the minimum age of the viewers that can join the stream. According to the Twitch Terms of Service, all Twitch users are required to be at least 13 years of age to use the website. Some streams are fit for all 13+ viewers, but some are not. If the streamers themselves choose to target a mature audience with their broadcast, they can do so by switching on a setting, that displays this message when entering the stream:



(source: <https://www.twitch.tv/forsen>)

This way, the viewer is required to confirm that they are mature before entering the stream. By using this feature, the streamer can filter the viewers that join their stream. When the streamers know that the audience of their stream is mature, the streamers may be more prone to using mature language.

The nationalities of the viewers and the nationalities of the streamers are fairly closely linked to the time at which the broadcasts take place. When the streamer is from the USA for example, the viewers they attract are most likely to be from the same or a similar time zone. This is due to the fact the streaming time of the streamer can be in the middle of the night for the European viewer. The principle works the other way around. This way, American English-speaking streamers are more likely to attract other American English-speaking viewers, while European streamers often attract English-speaking viewers of European origin, whose first language may not be English. This can affect the streamers as well as viewers in multiple ways. Being a native English-speaking viewer may prompt them to be more cautious when using vulgarisms or making them more vulgar by simply knowing the language better and thus knowing more vulgar expressions. While not being native English-speaker might cause them to be extremely cautious while using vulgarisms, or it might prompt them to use them more as filler words.

Lastly, the size of the audience might greatly influence the use of vulgarisms in the chat. Simply put, the more viewers there are in the stream, the more possible it is that at least some of them will use this type of language. This means that a streamer with 10 viewers could be the most vulgar on the platform without a single vulgar message in his stream chat, while a streamer with 10,000 viewers can utter a single vulgarism and hundreds of viewers might respond in kind.

Taking all of these factors into consideration, analyzing only one streamer would not provide a proper overview of the usage of vulgarisms on Twitch.tv. This is why it is necessary to analyze multiple streamers, with which these factors vary.

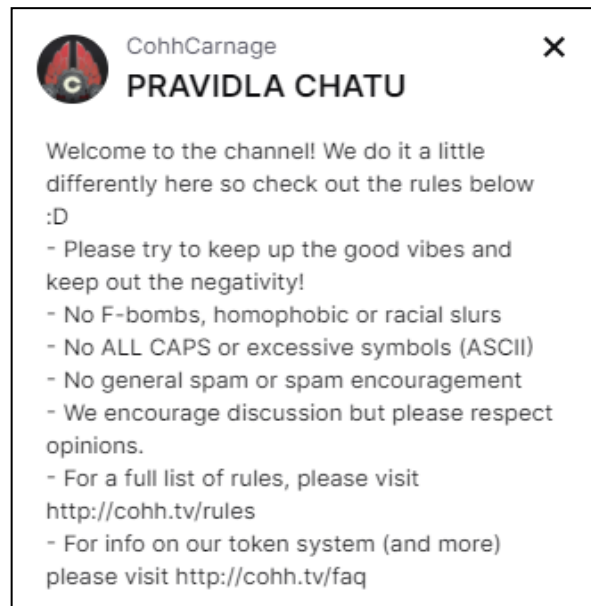
3.1.3 OVERALL SPECIFICS OF TWITCH.TV

Although every channel on Twitch is unique, some rules apply to all of the channels on the platform. These rules are referred to as the Twitch Terms of Service (TOS for short). Specifically, the part of the Twitch TOS that this work is concerned

most about is the “Hateful Conduct and Harassment” part of the “Community Guidelines” tab.

In this tab, Twitch specifies how they handle preventing and protecting the users of their site from hateful behavior and harassment. Hateful conduct is considered to be any content or activity that promotes, encourages, or facilitates discrimination, denigration, objectification, harassment, or violence based on the following characteristics: race, ethnicity, national origin, religion, sex, gender, gender identity, sexual orientation, age, disability or serious medical condition (Twitch.tv, 2020). Harassment is any content that attempts to intimidate, bully, abuse, degrade, or create a hostile environment for others. This includes repeated name-calling, stalking, telling someone to hurt themselves, etc.¹

These rules apply to every channel on Twitch with no exceptions. Both individual and overall specifics of Twitch push streamers towards enforcing the rules that the site itself requires and that the streamers themselves prefer. That is why streamers can set up a popup message, that warns the users before typing anything in the chat so that they do not accidentally break any rules. The popups look something like this:



(source: <https://www.twitch.tv/gmhikaru>) (source: <https://www.twitch.tv/cohhcarnage>)

¹ The policies mentioned in the “OVERALL SPECIFICS OF TWITCH” are only in effect until 22nd of January 2021. From this date on, a new policy will be enforced on the site.

Whenever any rules are in place, there is a risk of the rules being broken. This is why a vast majority of streamers on the platform opt to have users that watch over the chat for them. These people are called Chat moderators and they watch out for any forbidden behavior and punish it according to the channel rules. These punishments range from a few seconds long timeouts to permanent bans from typing any messages in the chat. Twitch chat moderators are present since it would be extremely difficult for the streamer to create content and watch over and punish any inappropriate chat behavior at the same time. A great amount of streamers also chooses to use chatbots in their stream chat. These bots automatically punish users for using certain expressions (such as racial slurs). The reason for using these bots is the simple fact that as the viewership of the channel grows, it becomes increasingly difficult for human moderators to watch over the chat by themselves. A couple of human individuals moderating a chat of more than 10 000 viewers could prove to be very difficult.

3.1.4 STREAMERS

In this part, the chosen streamers are systematically analyzed one by one. The order in which they are analyzed goes from the one with the least average viewers to the one with the most.

3.1.4.1 WOLFSGORAWR

<https://www.twitch.tv/wolfsgorawr>

Twitch username WolfsGoRawr belongs to a male streamer from The Netherlands named Ace. Ace streams daily and is a variety streamer, meaning he does not stream one video game in particular, but many of them, although it could be said that he usually focuses on video games that contain some sort of turn-based element. His stream usually starts around 1 PM CET (GMT+1) and goes on for around 5 hours.

3.1.4.1.1 ENVIRONMENT

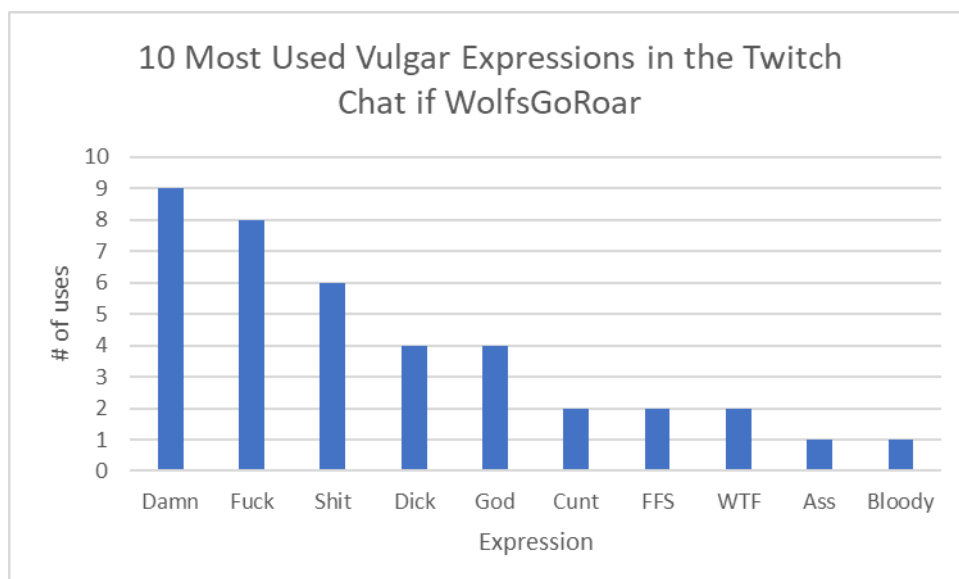
Ace labels himself a sarcastic person and his on-stream behavior confirms this label. Ace is no stranger to using sarcasm, irony, and tends to joke often. His stream is aimed at a mature audience and his speech matches this aim. Ace's viewer average as of

December 2020 is 51 average viewers, which makes his stream the smallest out of all the examined streams. With his small but dedicated audience, Ace has been a full-time streamer for years.

3.1.4.1.2 ANALYSIS

The analyzed stream took place on the 27th of December 2020. Ace was streaming a game called Darkest Dungeon. Throughout the stream, his viewer average was 125, which is more than twice December's average. The chat log of this stream contains slightly more than 1200 messages and almost 8200 word tokens.

Expression	# of uses
Ass	1
Bloody	1
Crap	1
Cunt	2
Damn	9
Dick	4
FFS	2
Fuck	8
God	4
Jesus	1
Shit	6
WTF	2
Total	41



Although Ace himself is not at all opposed to using strong language and uses it quite frequently, the chat of his stream does not share this sentiment as much. Out of the 8200 words used in the chat throughout the stream, only 41 of them contained vulgar expressions. This is the equivalent of 0,5% of the chat being made out of strong language. This might be attributed simply to the fact that the viewers of the stream are not so numerous, and thus their messages stand out more. Even though strong language is not at all forbidden in Ace's stream chat, users might still choose not to use these expressions, since other users are more likely to read their message and point it out.

In the case of this particular stream, even though the streamer is not against using strong language, chat seems to not mimic his behavior much. A vast majority of vulgarisms being said by the streamer resulted in no vulgar reaction by the chat whatsoever. This, among other things, might be due to Ace not communicating with his viewers directly and simply commentating on the events that are taking place in the game he is playing. This way, the viewers may not feel as involved and might not feel the urge to respond in kind. Taking this into consideration, a lot of messages involving strong language in the chat were, for example, used to express the irritation of the viewers over the game that was played, and simply mentioning their frustrating experiences with it.

3.1.4.2 FROSTPRIME

https://www.twitch.tv/frostprime_

The second analyzed streamer is Frost Prime. Frost is an American streamer, currently residing with his girlfriend in Richmond, Virginia. Frost streams daily, starting at either 4 PM CET (GMT+1) or 7 PM CET (GMT+1) and streaming for around 6 or 7 hours. Forst's content revolves around a set of few things. Firstly, Streaming video games such as League of Legends, Slay the Spire, and an occasional variety of other games. Secondly, On a regular basis, usually once a week, Frost also streams in the "Just Chatting" section, at which point his content mainly focuses on directly communicating with his chat.

3.1.4.2.1 ENVIRONMENT

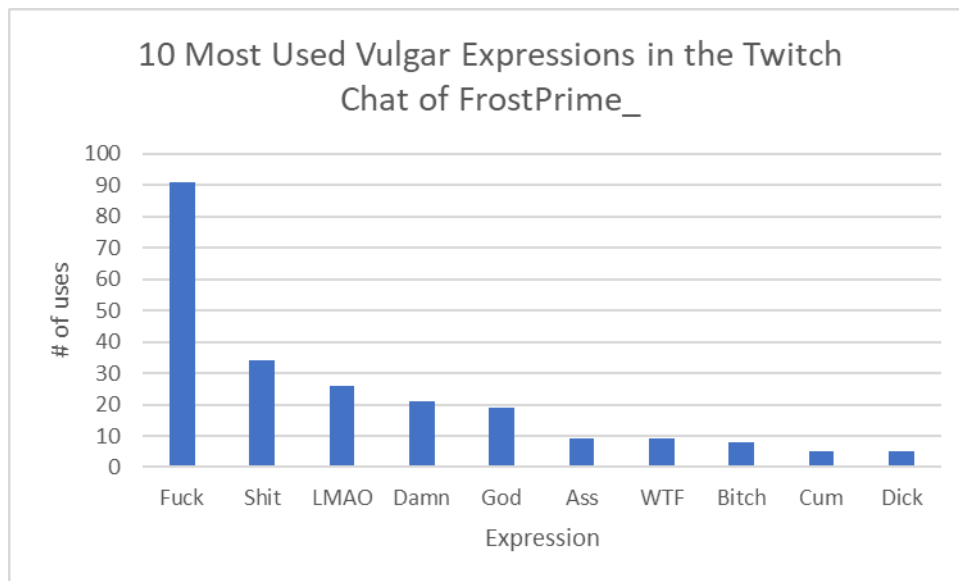
Frost Prime has a cheery and easy-going personality. Frost started as a content creator on YouTube but later shifted his primary focus to creating stream content on Twitch. His natural charm and the joy he takes from streaming make his streams an exceptional source of entertainment. As of December 2020, Frost's viewer average was 310 viewers. His outgoing nature helped him build a big and supportive fanbase, which allowed him to start streaming full time. Frost enjoys communicating with his chat throughout his streams and does so very often. Frequently throughout his broadcasts, Frost asks his viewers questions, responds to their messages, or sometimes even lets the viewers decide on what he should do next or what decision he should make in the game he is currently playing.

3.1.4.2.1 ANALYSIS

The analyzed stream took place on the 29th of December of 2020. The stream started with a roughly 30-minute long intro where Frost was talking to his audience and waiting for them to join the stream, followed by 6 hours of a game called Slay the Spire. Throughout the stream, Frost's viewer average was 429 viewers, which is more than a hundred above his average viewer count for the month. The higher involvement of the chat in this stream shows in the collected data since the chat log of this stream contained more than 6500 messages and more than 34000 word tokens.

Expression	# of uses
Ass	9
Bitch	8
Bullshit	1
Cock	1
Crap	2
Cum	5
Damn	21
Dick	5
FFS	1
Fuck	91
God	19
Jesus	5

LMAO	26
Motherfucker	1
Pussy	3
Shit	34
Tit	4
WTF	9
Total	245



Compared to WolfsGoRawr, there is a clear increase in the number of vulgar expressions used. Out of the 34000 word tokens, 245 were uses of strong language, which is the equivalent of roughly 0,71% of all the words in the chat being vulgar.

Frost has an open personality and so he often uses swearwords to express his emotions when he is, for example, not doing well in the game. The environment he creates makes it so that the viewers feel the same way, and do not mind typing out a vulgar expression to show their opinion about the particular matter.

Frost often does not hesitate to describe things he is excited about in a vulgar way. For example, he might ask his viewers: “*How fucking great is this chat?*” which makes the viewers not fear any repercussions and respond in kind with the same vulgar expression. Knowing this, his long-term viewers know how to behave in his chat and which expressions to use and which to stay away from.

3.1.4.3 TOBIAS FATE

<https://www.twitch.tv/tobiasfate>

The third analyzed streamer is called Tobias Fate, alternatively Tobito, or simply Tobias. Tobias is a Canadian streamer, currently residing in Toronto. Tobito's streaming schedule is entirely sporadic and not at all. Tobias can be seen streaming at random hours on random days, sometimes not streaming for days and other times streaming for multiple days in a row, sometimes even multiple streams per day. The length of the streams is also completely random, as Tobias sometimes can stream for more than 8 hours without stopping, and on different occasions "rage quits" the stream after 2 hours of streaming. His content is mainly focused on streaming a video game called League of Legends, and that is where most of his community comes from. He is known for his particular skill in the game and exceptional mastery of certain characters in it.

3.1.4.3.1 ENVIRONMENT

Tobias Fate has a unique streaming style. During his streams, Tobias tends to shift between actively commentating the game that he is playing at the moment, while sometimes he entirely mutes his microphone and plays music, so he can focus on winning the match. Tobias mixes his in-game skill with entertaining commentary and if he is not commentating, with fast music to match his energetic playstyle. As of December 2020, Tobito's viewer average was 1202 viewers. In the past years, Tobias used to have many more viewers watching his stream, but the drop in viewership has not changed his streaming style in the slightest. His love for pirates, power metal, and his straightforward personality are what make his viewers come back to watch his stream.

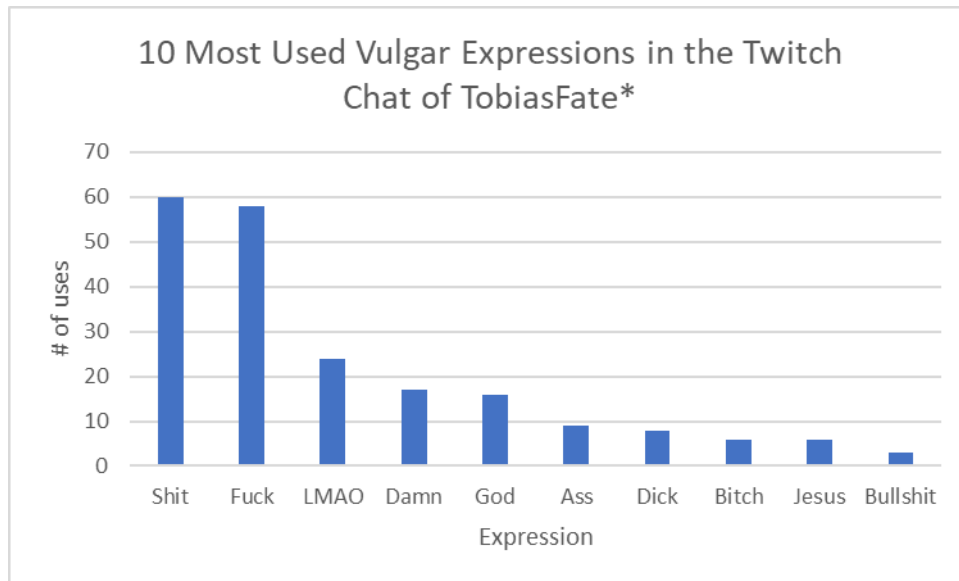
3.1.4.3.2 ANALYSIS

The analyzed stream took place on the 28th of December 2020. The stream started at around 1 AM CET (GMT+1) and ended at around 10 AM CET (GMT+1). Tobias played League of Legends for the entire duration of the stream, and would

regularly switch between commented and muted segments. His viewer average was 1215, which perfectly in line with December's average. The chat log of this stream consists of more than 8400 messages and over 62000 word tokens. Comparing the data to the previous log of FrostPrime shows one thing. While the number of messages is not necessarily too different, the number of word tokens is almost doubled. This goes in line with the fact that from watching the channel, it can easily be said that Tobito's chat is very spammy. Long messages with repeated text and numerous emoticons, paired with even the chatbots being programmed to spam along with the viewers inflates the word token count by a considerable amount.

Expression	# of uses*
Ass	9
Bastard	1
Bitch	6
BS	1
Bullshit	3
Crap	2
Cum	3
Damn	17
Dick	8
FFS	1
Fuck	58
God	16
Jesus	6
LMAO	24
LMFAO	3
Motherfucker	1
Piss	1
Shit	60 (47)
Twat	1
Total	221(208)

*The numbers WITHOUT brackets are the absolute values, the numbers WITH brackets are the values with spam filtered out.



*Graph made using absolute values.

Looking over the graph and the table and comparing them to the word token count of this stream confirms what was stated in the previous paragraph. The spammy nature of this particular chat results in only roughly 0,35% of the chat being vulgarisms if spam is counted, and only 0,33% if it is not. Although Tobias himself is not at all tame when it comes to his language. This also points towards the fact that although users in the chat spam, the spam is not vulgar. A lot of League of Legends streamers share one particular characteristic, which is being very harsh to other players, be it teammates or enemies. Tobias is no exception to this, although his vocabulary is very particular. He can very often be heard calling other players *retarded*, *disgusting*, *slimy*, *filthy*, *creeps*, *sick fucks*, *creatures*, etc. The viewers in his chat however rarely engage in such behavior and rather just laugh at the way Tobias interacts with other League of Legends players. Tobias seems to have almost no filter and seems to always speak his mind, which he does not care to mask with softer words. Overall, Tobias is even more vulgar than his chat. He is not shy to call out a bad play of his teammate or his enemy and add a swearword to emphasize his statement.

3.1.4.4 FOLLOWGRUBBY

<https://www.twitch.tv/followgrubby>

Manuel Schenkhuizen is the full name of the owner of this Twitch channel. He resides in The Netherlands and is often nicknamed “Grubby”. Grubby, who is nowadays

a Twitch streamer is also a great personality in the e-sports scene. Since 2003, when Grubby entered the professional scene, he has won multiple international e-sports tournaments in the video game Warcraft 3, which he now streams. Besides being a streamer, and an ex-professional gamer, Grubby is also a YouTuber. Grubby has 6 days a week streaming schedule. Usually starting at around 8 PM CET (GMT+1), Grubby usually streams until around 2:30 AM CET (GMT+1). Grubby's content revolves around streaming Warcraft 3 on an almost professional level. His skill in the game is very well known and greatly respected even among contemporary Warcraft 3 professionals.

3.1.4.4.2 ENVIRONMENT

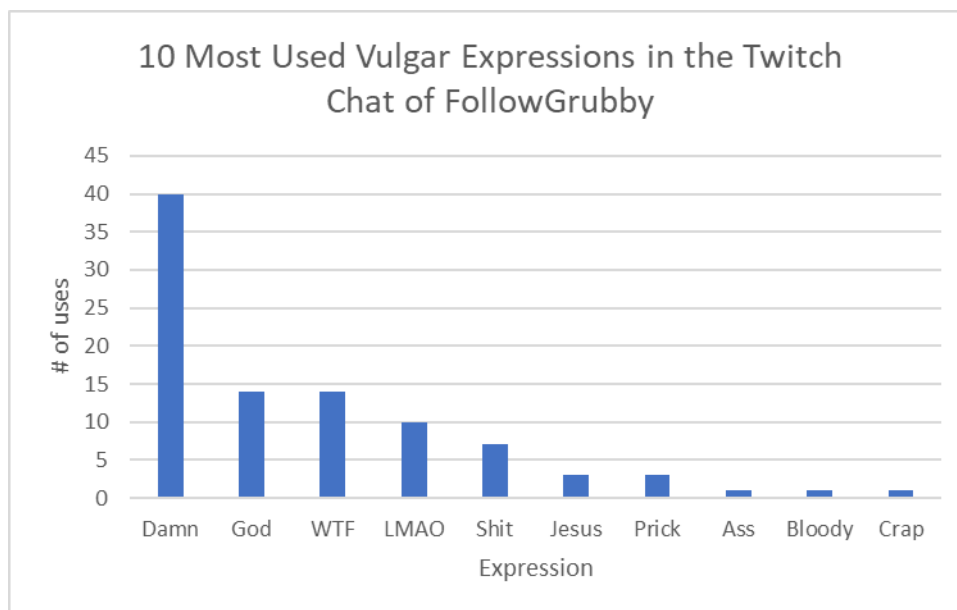
Grubby likes to run his stream in a very clean manner. His content is aimed at viewers of all ages and it can be deduced by simply watching his stream. Grubby's viewer average as of December 2020 is 2404 viewers. Grubby is extremely good at what he does and he often shares his knowledge with his community. Although during the matches themselves Grubby only rarely communicates with his viewers, in between the matches he is always ready to answer any questions about the game that his viewers might have. Grubby is very encouraging when it comes to his viewers wanting to improve in the game and does not mind going in-depth and over-explain any issues that want to discuss.

3.1.4.4.1 ANALYSIS

The analyzed stream took place from around 8:30 PM CET (GMT+1) on the 26th of December 2020 to around 4 AM CET (GMT+1) on the following day. Grubby was playing Warcraft 3 for the entirety of the stream. Alternatively, Grubby was watching replays of professional Warcraft 3 players to analyze them. The viewer average of this stream was 2939 viewers, which is more than 500 above December's average. The chat log of this particular stream consists of more than 6300 messages and 41000 word tokens. Comparing this to TobiasFate's channel, the amount of both messages and word tokens is lower. Considering the environment of Grubby's channel this is not a surprise. Grubby's stream chat is usually slow. Since Grubby does not interact with his audience much while in the middle of a match, the window open for interaction is considerably

small. Grubby's chat also contains no spam and is kept under strict rules to match Grubby's preferences.

Expression	# of uses
Ass	1
Bloody	1
Crap	1
Damn	40
God	14
Jesus	3
LMAO	10
LMFAO	1
Prick	3
Shit	7
WTF	14
Total	95



When considering the characteristic of Grubby's stream, the results of the analysis are not surprising. Ranging from the low total number of instances of strong language uses, to the words used, it shows a lot about how the channel is run. Only roughly 0,23% of Grubby's chat were vulgarisms. Expressions that stand out on graphs and tables of other stream chats are in this case very low in numbers, or even completely absent. What dominates the table, in this case, is the fairly mild expression

damn. Although abbreviations containing vulgar expressions are present, they have become so standard on the site that only very few users consider them vulgar anymore. Nevertheless, in the attempt to keep his stream as non-vulgar as possible, Grubby often tends to use euphemisms, such as “*geez*” instead of “*Jesus*”, “*shoot*” instead of “*shit*”, and “*darn*” instead of “*damn*”.

3.1.4.5 ELAJJAZ

<https://www.twitch.tv/elajjaz>

Elias Lönn is the full name of a Twitch streamer called Elajjaz. Elajjaz is a European streamer from Sweden, who lives in a Swedish city called Gävle. Elajjaz streams 6 days a week, usually starting at 4 PM CET (GMT+1) and streaming for at least 8 hours, usually ending his stream shortly after midnight. Elajjaz is a variety streamer who often tends to stream particular games for longer periods of time. Elajjaz is what is known as a “speed-runner“. What that means is that Elajjaz often chooses a game and plays it over and over again, competing with other speed-runners for the shortest time, in which they can finish it. This means that he often switches from playing a new game every few days to grinding the best completion time in a single game for months without switching.

3.1.4.5.1 ENVIRONMENT

Elajjaz is an open-minded person who prefers to run his stream in a free manner. He is determined and knows his community very thoroughly. His long-time viewers tune in daily to enjoy his cheery personality and entertaining content. As of December 2020, his viewer average was 5861 viewers. Being a speed-runner has its benefits since Elajjaz was able to develop good muscle memory, allowing him to interact with his chat at almost all times. Elajjaz likes to keep his chat involved, often even displaying it as a part of his stream. His streams often involve segments, in which he talks to the chat to interact with his community more. Elajjaz often calls his viewers by their Twitch usernames and can keep a steady conversation with his chat even in the middle of playing a game.

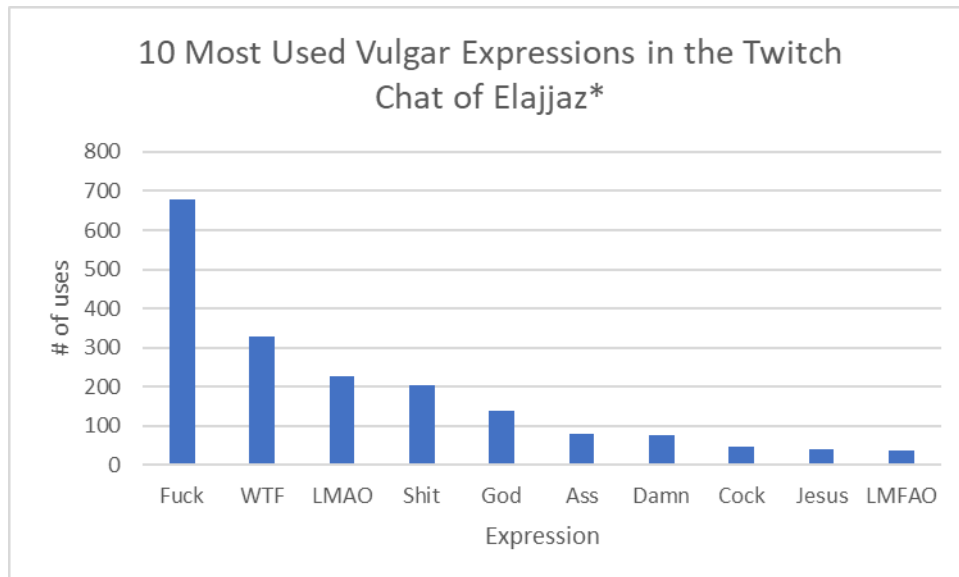
3.1.4.5.2 ANALYSIS

The analyzed stream took place from 4 PM CET (GMT+1) on the 22nd of December 2020 to 12:30 AM CET (GMT+1) on the following day. Elajjaz started with the stream with a roughly 30-minute long intro and proceeded to play Hitman 2 for the remainder of the stream. The viewer average of this stream was 6912 viewers which is more than a thousand above his average for the month. This increase is not surprising since many viewers that watch variety streamers tend to come and go depending on the game the streamer decides to play. Comparing the viewer to the previous streamer shows more than twice the viewership, but the main difference can be seen when it comes to the chat. There were more than 58000 messages in the chat throughout the stream which contained more than 232000 word tokens.

Expression	# of uses*
Arse	1
Ass	80 (72)
Bitch	34
Bloody	3
BS	5
Bullshit	13
Cock	48 (41)
Crap	1
Cum	20 (15)
Cunt	2
Damn	78
Dick	13
FFS	13
Fuck	678 (430)
God	140 (82)
Jesus	41
LMAO	227
LMFAO	36
Motherfucker	4
Piss	3
Pussy	7
Shit	205 (186)
Tit	3
Twat	1

WTF	329 (306)
Total	1985 (1617)

*The numbers WITHOUT brackets are the absolute values, the numbers WITH brackets are the values with spam filtered out.



*Graph made using absolute values.

Out of the 232000 word tokens used, 1985 of them were vulgar. This means that more than roughly 0,85% of the chat were vulgarisms. Elajjaz is a streamer that is not afraid to show his emotions. To add to the impact of his speech, Elajjaz often uses vulgarisms to emphasize his feelings, whether positive or negative. Whether something goes his way or absolutely does not, Elajjaz lets his viewers know. *“That’s fucking amazing!”* or *“Get fucking destroyed!”* are just some examples of the utterances he uses. His viewers, who enjoy Elajjaz’s straightforward personality often join in and use the same expressions that he does, sometimes in a spammy manner.

3.1.4.6 LOLTYLER1

<https://www.twitch.tv/loityler1>

Tyler Steinkamp is the civil name that is connected to the online alias Tyler1, often simply called Tyler or T1. Proclaiming himself “the most toxic streamer”, Tyler1 is not far to uphold his statement. Historically streaming mainly League of Legends,

Tyler got a total of 22 of his League of Legends accounts banned for excessive toxicity. Tyler's offensive behavior, however, is not something that is only kept to the in-game chat but something that can be very often seen live during his Twitch stream. Being an American streamer, his streams usually start around 10 PM CET (GMT+1) and usually go into the morning hours, often ending his stream between 7 AM CET (GMT+1) and 9 AM CET (GMT+1), usually depending on his mood. Tyler1 streams Monday through Friday, taking the weekends off.

3.1.4.6.1 ENVIRONMENT

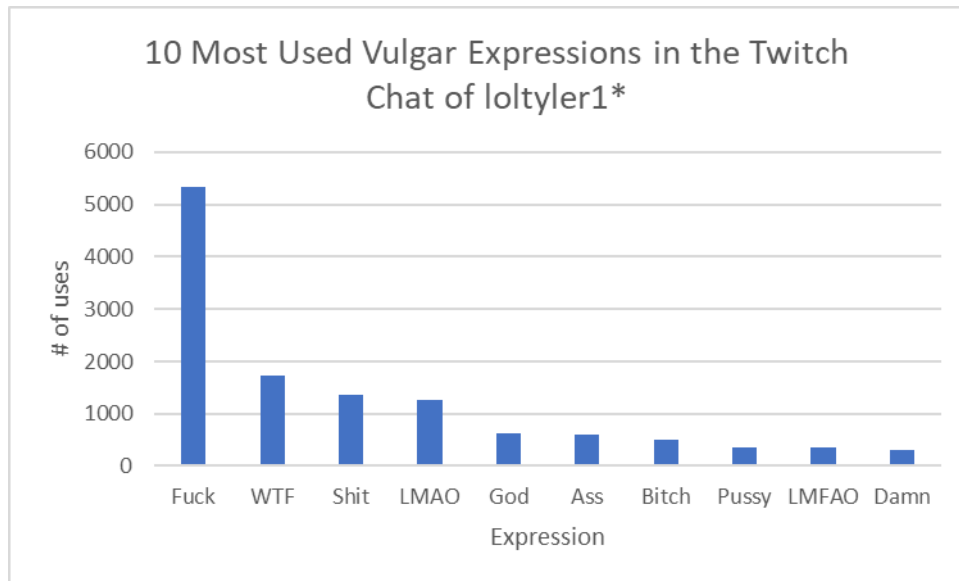
Tyler1 has a very clear and well-known image. His enjoyment in fitness and body-building, paired with his aggressive mindset and will to achieve the best results make up for a very noticeable personality. Building his trademark on being "alpha", Tyler1 quickly rose to fame in 2016, when he started garnering his still-growing audience. As of December 2020, Tyler's viewer average was 24588 viewers. Being loud, aggressive, rude, but also very skilled in video games are just some of his most known characteristics. Tyler's personality, mixed with the fact that he streams League of Legends, makes his stream a unique experience. Tyler1's fame is considerable, and there are only very few Twitch users who do not know who Tyler1 is.

3.1.4.6.2 ANALYSIS

The analyzed stream took place from around 10:30 PM CET (GMT+1) on the 22nd of December 2020 and ended at around 10:15 AM CET (GMT+1) on the following day, which makes the stream almost 12 hours long. Throughout the entire stream, Tyler played League of Legends, only taking 5-minute breaks on a few occasions. The viewer average of this stream was 25578, which is intact with December's average. Tyler1 is a notorious persona in the League of Legends community and thus this amount of viewers is normal for his streams. Tyler commentates on almost everything that is happening in-game, while actively reading and communicating with his stream chat. Taking into consideration Tyler1's active interaction with his stream chat, his high viewer count, and the length of this particular stream, all of these factors result in a total of over 209000 messages being posted in chat, which contained over 946000 word tokens in total.

Expression	# of uses*
Arse	6 (1)
Ass	611 (459)
Bastard	29
Bitch	500 (353)
Bloody	2
BS	34
Bullshit	82 (68)
Cock	271 (210)
Crap	11
Cum	55
Cunt	3
Damn	315 (299)
Dick	160 (93)
FFS	66 (49)
Fuck	5323 (4134)
God	616 (521)
Jesus	94 (73)
Jizz	3
LMAO	1260 (1085)
LMFAO	346 (294)
Motherfucker	34
Piss	154 (93)
Prick	6
Pussy	365 (285)
Shit	1373 (1154)
Tit	17
Twat	1
WTF	1735 (1560)
Total	13472 (10926)

*The numbers WITHOUT brackets are the absolute values, the numbers WITH brackets are the values with spam filtered out.



*Graph made using absolute values.

As expected judging from the number of messages and word tokens, the number of vulgarisms drastically rose. Out of the 946000 word tokens, 13472 were vulgarisms. This is the equivalent of roughly 1,42% of all the chat being strong language, which is an extremely high percentage compared to the rest of the streamers. This is no doubt due to Tyler's behavior on stream. Tyler does not stray away from using vulgar expressions, aiming them towards his teammates, enemies, developers of the game, and even his stream audience. When Tyler behaves in such way towards his viewers, the viewers usually respond in kind, often spamming their messages, since Tyler's chat moves very quickly, and they want the streamer to notice their message.

3.1.5 OVERALL RESULTS FOR TWITCH.TV

Twitch.tv is a live-streaming platform, and as such, it captures its users' immediate reactions to whatever happens. The reaction of the streamer can be observed on the stream, while the reaction of the viewers is capture by the chat of the stream. The analyses were made throughout one entire broadcast of each of the chosen Twitch channels.

Stream chats of six Twitch channels were analyzed. The names of these channels are WolfGoRawr, Frostprime_, TobiasFate, FollowGrubby, Elajjaz, and loltyler1.

Starting with the first channel, the stream chat of WolfsGoRawr contained 8200 word tokens, out of which 41 were vulgar, which equates to 0,5% of the stream chat being vulgar expressions.

The second channel, FrostPrime_, had a total of 34000 word tokens posted in his stream chat throughout the stream, out of which 245 were vulgarisms. This equates to 0,71% of the stream chat being made out of vulgarisms.

The third channel, TobiasFate, had a total of 62000 word tokens posted into the stream chat over the streaming runtime. Out of this total, 221 words were vulgar, out of which 13 were spammed. This equates to 0,35% of the chat being vulgarisms if the spam is counted, and only 0,33% of the chat being made out of vulgar expressions if spam is left out.

The fourth channel, FollowGruby, had 41000 word tokens posted in the chat during the stream, out of which 95 were vulgar. This equates to only 0,23% of the chat being made out of vulgarisms, which makes the chat of FollowGrubby's channel the least vulgar out of the analyzed channels.

The fifth of the six channels, Elajjaz, had a total of 232000 word tokens posted into the stream chat during the broadcast. Out of this total, 1985 words were vulgarisms when spam is not omitted, and 1617 vulgarisms when it is. This equates to 0,85% of the stream chat being vulgarisms if spam is counted, and only 0,7% if it is not.

Lastly, the biggest of the six channels, loltyler1, had a total of 946000 word tokens posted into the chat of the channel during the stream. Out of this total, 13472 words were vulgarisms when spam is counted, and 10926 vulgar expressions when spam is not counted. This equates to 1,42% of the chat consisting of vulgar expressions when spam is involved, and 1,15% of the chat being vulgarisms when it is not. This makes the chat of this channel the most vulgar out of the analyzed channel by a considerable margin.

Putting all the results together, the average chat of an analyzed Twitch channel consists roughly 0,68% purely out of vulgarisms if spam is counted, and roughly 0,6% purely out of vulgarism if spam is omitted.

3.2 REDDIT.COM



(Source: <https://www.slashgear.com/reddit-is-experiencing-another-outage-heres-what-we-know-18592169/>)

Boasting the title “front page of the internet”, the popularity of Reddit is considerable (Reddit, 2020a). With over 430 million average active users per month, the title is not far from reality. At the time of writing, Reddit is the seventh most popular site in the US, (Alexa, 2020a) and as high as the eighteenth most popular site in the world. (Alexa, 2020b)

In simple terms, Reddit is a massive forum made up of smaller forums (Boyd, 2018). Put in a more complex way, Reddit is a community-determined aggregator of content. It is a site that allows registered members to submit, rate, and discuss the content of their choosing. Reddit is made out of many smaller communities, that are also known as “subreddits”. Each of these communities has its own page, subject matter, users, and moderators (Reddithelp, 2020a). The users of these communities can post anything, ranging from stories to links and media. After that, it is up to other users to vote and comment on these posts. Through voting, the users determine which posts make it to the top of their individual community pages, or even the front page of the entire website. This way the site is in constant motion and is always full of new content for its users to discover. This constant motion also prompts users to come back on a regular basis, to check out what is new and trending. For some people, going to Reddit is the equivalent of reading a daily newspaper (CGP Grey, 2013).

As mentioned before, Reddit is a large community made out of many smaller communities. These sub-communities are known as subreddits. Each of these subreddits is dedicated to a different topic and is all moderated by Reddit users (also known as

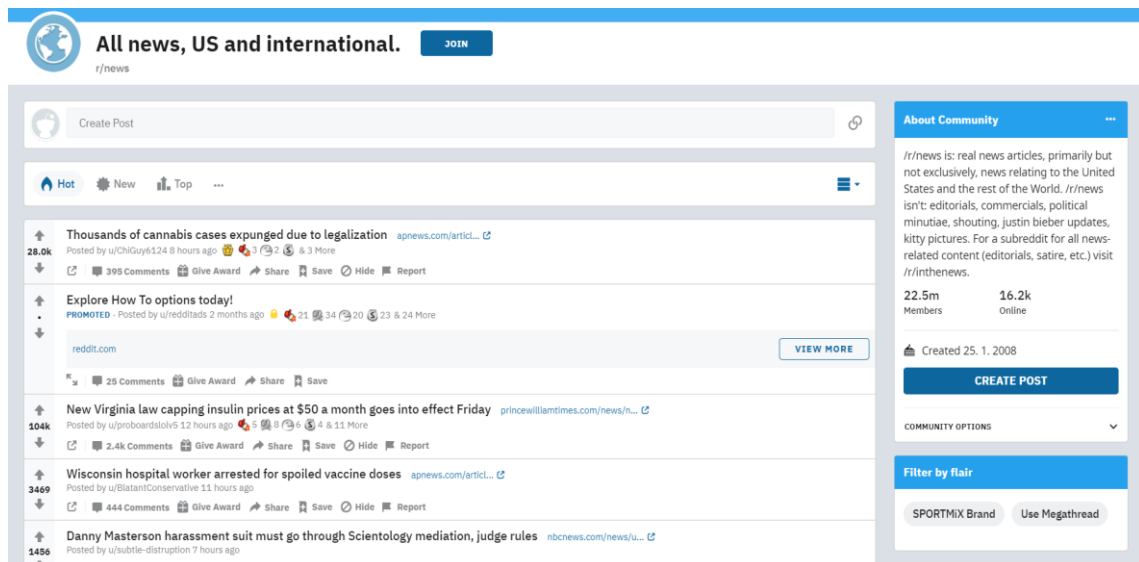
“Redditors”). Every subreddit has its own topic. (Reddithelp, 2020b) The site is so vast and popular that there is a subreddit for almost everything. These range from general news, to hobbies, legal advice, science, video games, music, literature, and many more (Reddit, 2020b). At the time of writing, there are over 2.5 million subreddits, with about 1500 to 2000 new subreddits being created every single day (FrontPageMetrics, 2020).

Redditors can interact with content on the site in several ways. All the content on Reddit is posted by its users. Once a user makes a post, other users have several ways to interact with it. Users can comment on their own, or other users’ posts to continue the conversation about the topic or add their opinion or something new to it. Another key feature of Reddit is that users can cast positive or negative votes (called “upvotes” and “downvotes”), for each post and comment on the site (Widman, 2020). The more the post is upvoted, the more visible it becomes on the site, and thus more people are likely to interact with the post in some way. By creating an exceptional post or by being a good part of the community, the users earn what is called “karma”, which reflects their status within the community and their contributions to Reddit (Widman, 2020). This way, the users are encouraged to contribute to their communities in the best way possible, to post good content, and provide relevant feedback to the content of other users. (Anderson, 2015)

The sheer popularity and amount of people that visit Reddit on the daily basis, makes the site a suitable choice for this work. New users come to Reddit every day and are eager to interact with other like-minded users. Each community deals with its users differently and the boundaries are set differently by the moderators on every subreddit. The language used and how it is dealt with can differ significantly from one subreddit to another and thus the site will certainly provide an immense amount of data for analysis.

3.2.1 METHOD OF RESEARCH

Reddit and Twitch are very different websites, and thus the method of research cannot stay the same for both of them. Reddit is a forum, which means there is no such thing as live chat. It is divided into numerous subreddits, where people post content depending on the topic of the subreddit. The front page of a subreddit looks something like this:



(source: <https://www.reddit.com/r/news/>)

At the top left, there is the name of the subreddit, and beneath it the posts that the users of this subreddit have posted. On the right, there is a summarized “About” section, that also contains the information about the total amount of members of the subreddit, and the number of them that are currently online.

Focusing on the list of posts in the middle of the picture, that is where the data for this study is collected from. Users create posts, and other users come in to discuss them. Depending on the size and popularity of the subreddit, some posts can have up to hundreds or even thousands of comments. Popular posts on several different subreddits underwent the analysis. Three posts per subreddit have been analyzed.

To get the best picture of the current language situation on the chosen subreddits, “Popular” posts have undergone the analysis. “Popular” posts are the posts, that are displayed when the front page of a subreddit is sorted by the “TOP” option and that fall under the “Today” category. To get the most recent data, the analyzed posts had to be from 12 hours to 24 hours old at the time of data collection.

The data was collected by manually copying the post with all of its comments into a text file. The text file was afterward imported into the corpus analysis software #LancsBox, in which it was analyzed.

Once the entire post with all its comments is imported into #LancsBox, the text is analyzed by using the “KWIC” function. This function allows the user to search for specific words and/or word groups. Using an integrated function of the software, typing “SWEARWORDS” into the search bar highlights certain swearwords that were used in the text. This is a useful tool, but it does not highlight all the words that we are looking

for, thus a manual search for certain expressions needed to be made using the “KWIC” function.

From this point onward, the method of research followed the same pattern used for Twitch.tv, which can be found in chapter 3.1.1.

3.2.2 SPECIFICS OF REDDIT.COM

Even though Reddit is a community-driven website, the users of the website have to follow a set of rules. Rules that apply for every subreddit are Reddit’s Content Policy rules. These rules apply everywhere within the boundaries of Reddit without any exceptions. Included in the Content Policy is the prohibition of harassment, bullying, or threatening violence against other users. Content of any form, be it usernames, posts, comments, or even private messages that are harassing or abusive in any way are not allowed and may result in a ban (Reddit, 2020c).

Furthermore, people or communities that incite violence or promote hate based on vulnerability or identity are strictly forbidden. This means that any attacks aimed at race, color, religion, national origin, ethnicity, gender, gender identity, sexual orientation, disability, or ethnicity are not allowed. Examples of these hateful activities would be subreddit communities dedicated to mocking people with disabilities, a derogatory post aimed at a racial minority, or a comment justifying rape (Reddithelp, 2020c). These are the most relevant platform-wide rules for this work. Furthermore, all users of Reddit must be 13 years of age or older (Reddit, 2020d). If a subreddit features content that is targeted at a strictly adult audience, you must first confirm your age before gaining access to the subreddit.

Additionally, each subreddit has its own set of rules, that the users are to abide by. These usually include prohibiting Redditors from posting content that does not belong on the subreddit, stealing content, spamming, using deceptive titles on posts, self-promoting, reposting, etc. All subreddits also include rules that directly prohibit Redditors from posting any content that would contain racism, sexism, homophobia, or any other forms of toxic content. If any of these rules were to be broken, the moderator team of the subreddit takes care of the problem. Depending on the severity, the moderators might decide to simply delete the content off of the subreddit, or even ban the user from ever accessing the subreddit again.

Comparing Reddit to Twitch reveals some similarities, as well as some major differences. The major similarity of the two sites lies in the set of overarching rules of the site, as well as the specific set of rules for each subsection. The major differences lay in the exclusivity of the content, and its form.

Reddit is made for long-term discussion, structured thoughts, and comments. Insight and helpfulness are some of the qualities that Reddit values the most. Redditors choose to enter discussions on the posts that they choose mainly because they are interested in the topic, want to share their knowledge of the subject with others, or simply because they find the posts entertaining and want to share the entertainment with other Redditors.

The number of comments and the size of the discussion is directly linked to the number of members that each subreddit has. The more members there are on the subreddit, the more members are likely to notice the post and interact with it. Once a post gets enough traction, it might even appear on the front page of the entire Reddit, which usually brings in even more user interaction.

Content on Reddit is not time-exclusive. Once a post is made, as long as it does not violate any rules, it can stay posted on the site forever. What is exclusive, however, is the traction that the post gets. The discussion in the comment section below the post is usually most active once it reaches peak traction, and falls off in time once it is no longer relevant. The comment section of the post is archived, however, the users participating in the discussion might not be present anymore.

3.2.3 SUBREDDITS

The following section contains the analyses of the chosen subreddits. Three popular posts from each subreddit were analyzed and put into joint tables and graphs to better show the overall usage of vulgarisms on individual subreddits. All of the data was collected throughout the 1st of January 2021.

3.2.3.1 R/GAMING

<https://www.reddit.com/r/gaming>

R/gaming is a subreddit that is dedicated to discussing everything related to games, be it video games, card games, or board games, with the exclusion of sports.

Redditors visit the subreddit daily to learn about gaming news, new releases, discuss their experiences with certain games, show off their achievements, etc. Discussions about game flaws, rating games, and much more are daily occurrences. With its 29 million members, r/gaming experiences no small amount of daily traffic.

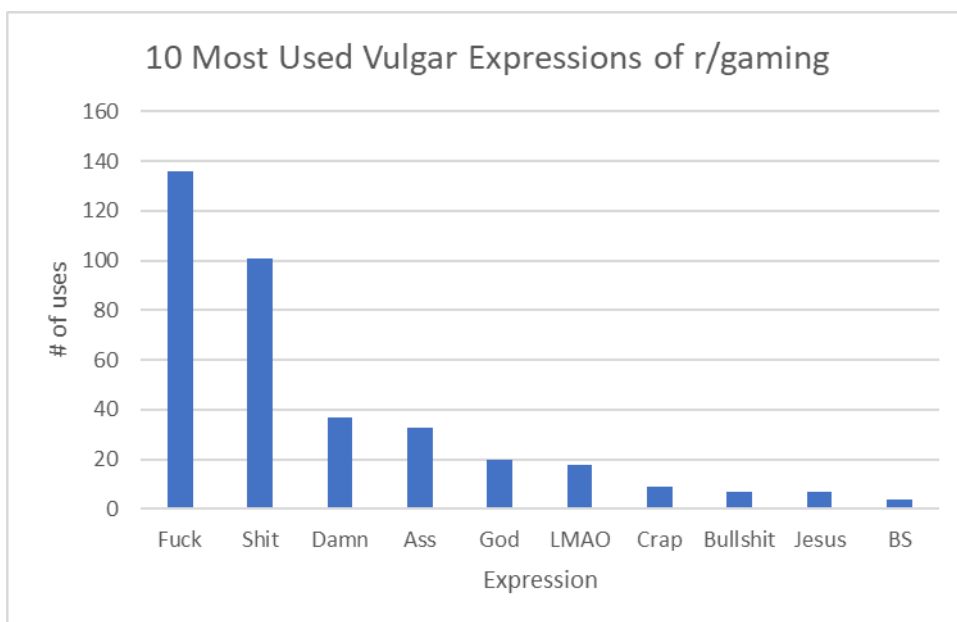
Discussing something that a Redditor is invested in can often lead to an emotional reaction. Debating over a game that you have played, sharing your experiences with other players of the same game, and engaging in discourse with them over something you disagree on might escalate the conversation exceptionally quickly. R/gaming has no extra rules regarding profanity and vulgarisms besides the general Content Policy, and thus vulgarisms on the subreddit are present.

3.2.3.1.1 ANALYSIS

All three of the analyzed posts were posted on the subreddit for more than 20 hours and amassed a total of 3136 comments. The first post was discussing a home-made arcade machine that one of the Redditors made. At the time of the analysis, it has been posted for 21 hours and amassed 880 comments which contained over 20000 word tokens. The second post was a „nostalgia thread“, discussing two old gaming consoles, PlayStation 1 and PlayStation 2. At the time of the analysis, it has been posted for 22 hours and had 1151 comments in the comment section which contained over 29000 word tokens, making this post the largest out of the analyzed tree. Lastly, the third post was discussing a newly released game called Cyberpunk 2077, which came out on the 10th of December 2020. At the time of analysis, the post has been posted for 20 hours and amassed 1105 comments which contained almost 25000 word tokens.

Expression	# of uses
Arse	1
Ass	33
Bastard	2
Bitch	2
BS	4
Bullshit	7
Cock	2
Crap	9
Damn	37
Dick	4

Fuck	136
God	20
Jesus	7
LMAO	18
LMFAO	1
Motherfucker	1
Piss	3
Shit	101
WTF	4
Total	392



The total number of word tokens taken from r/gaming was more than 74000, and out of the mentioned number 392 were vulgar. This means that roughly 0,53% of all words used were vulgarisms. The post that included the least amount of vulgarisms was the first post, and most of these were used positively, in phrases such as *This is fucking amazing!* The most vulgar post was the last post, in which Redditors were expressing their negative emotions towards the game and its creators. Some of the comments also praising the game, but these were not nearly as numerous.

3.2.3.2 R/NEWS

<https://www.reddit.com/r/news>

R/news is a subreddit dedicated to real news articles. These primarily include news relating to the United States and the rest of the world. News usually sparks discussion, primarily with the Redditors, that this news affects. Taking into consideration the fact that r/news has over 22,5 million members, the number of comments on big news articles tends to grow into considerable amounts.

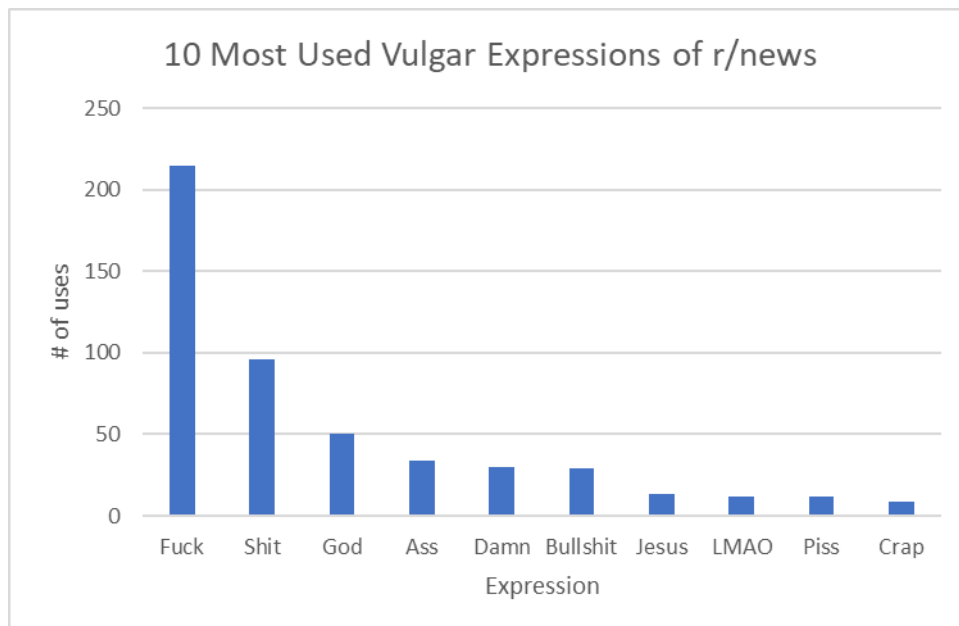
Due to the size and focus of the subreddit, r/news implements some extra rules directed towards strong language. In addition to the Community Policy of Reddit, the moderators or r/news warn other Redditors about posting overly crude comments that add nothing to the conversation, as well as posting comments that are unnecessarily rude or purposefully provocative. Comments that include such content are subject to removal. Even with these rules in place, strong language is not forbidden on the subreddit, and it can be seen throughout it.

3.2.3.2.1 ANALYSIS

All three of the analyzed posts contained news regarding the US and amassed a total of 3845 comments. The first post was by far the largest in terms of the number of comments, as there was a total of 2493 comments at the time of the analysis, and it has been posted for 19 hours. The post in question contained a news article about a new law in Virginia, which is capping insulin prices at \$50 per month. The second post was a news article about thousands of cannabis cases being expunged due to legalization in Illinois. At the time of the analysis, the post has been posted 16 hours ago and generated 772 comments. The third post was a news article concerning a Wisconsin hospital worker being arrested for spoiled vaccine doses. At the time of the analysis, the post has been posted for 19 hours and garnered a total of 580 comments

Expression	# of uses
Ass	34
Bastard	1
Bitch	6
Bloody	2
BS	8

Bullshit	29
Crap	9
Cunt	5
Damn	30
Dick	4
FFS	1
Fuck	215
God	50
Jesus	13
LMAO	12
LMFAO	1
Motherfucker	2
Piss	12
Prick	2
Pussy	1
Shit	96
Whore	1
WTF	8
Total	542



In total, the three posts contained over 131000 word tokens, and 542 of the word tokens were instances of vulgar language. This means that only roughly 0,41% of the words used in these posts were vulgarisms. Due to the sheer size of the first post, it comes as no surprise that more than half of all the cases were present in that post alone. Redditors not only from the US but from all over the world joined the conversation and

discussed the prices of insulin at the place of their residence, and discussed the steep price of health care in the US.

3.2.3.3 R/MEMES

<https://www.reddit.com/r/memes>

R/memes is a subreddit dedicated to sharing memes. “Memes“ in this case refer to images, that are meant to be for the sole purpose of entertainment and may or may provide a piece of social commentary within them. If they do, Redditors in the comment section often start a conversation about the piece of social commentary that the meme features. With 14,3 million members, r/memes is visited by many Redditors every day, who primarily seek entertainment.

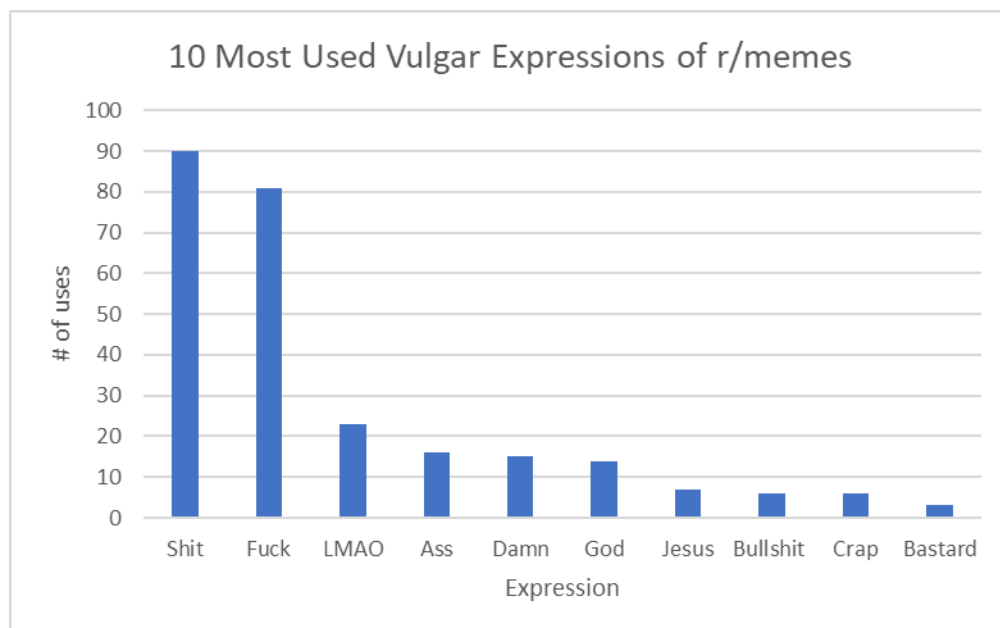
Apart from the Community Policy, r/memes asks its users not to “troll“ other users within the subreddit, prompts its users to keep the comment sections civil and respectful to other Redditors. The rules of the subreddit also forbid Redditors from posting memes about death, mass shootings, tragedies, rape, war, etc. Overall all of the rules mentioned in the Community Policy also extend to the memes that are allowed to be posted on the subreddit. Apart from the mentioned rules, no rule forbids the users of r/memes from using vulgar language.

3.2.3.3.1 ANALYSIS

The three posts chosen from r/memes contained 2031 comments in total. The first one was made purely for entertainment, as it poked fun at Europe officially entering the year 2021 before the US. At the time of the analysis, it has been posted for 20 hours and contained 434 comments. The second post has garnered the most attention out of the analyzed three, as it was making fun of certain jobs and how much money people earn doing these jobs. At the time of analysis, the post has been posted for 13 hours and Redditors posted 1102 comments to it. The third post was pointing out that the year 2020 has been very difficult for a lot of people, and felt considerably longer than 366 days. At the time of the analysis, the post has been posted for 20 hours and contained 495 comments.

Expression	# of uses
------------	-----------

Ass	16
Bastard	3
Bitch	1
BS	1
Bullshit	6
Cock	2
Crap	6
Damn	15
Dick	2
Fuck	81
God	14
Jesus	7
Jizz	1
LMAO	23
LMFAO	2
Piss	1
Shit	90
Whore	1
WTF	3
Total	275



The three analyzed posts contained over 50000 word tokens in total, out of which 275 were vulgarisms. This means that 0,55% of all the words were vulgar expressions. Considering the size of the posts, it is not surprising that most of the vulgarisms were part of the second post. The second post contained the biggest amount of social commentary and sparked a massive discussion about jobs. It evoked a way

more emotional response in Redditors, and thus the Redditors were more prone to use strong language.

3.2.3.4 R/TODAYILEARNED

<https://www.reddit.com/r/todayilearned>

R/todayilearned or r/TIL is an informational subreddit. The subreddit is dedicated to sharing small pieces of specific information that other users of the subreddit may find interesting. With 24,5 million members, r/TIL gets a considerable amount of daily traffic. Finding out new information often leads to Redditors sharing their thoughts in the comment sections of the post in which they found it.

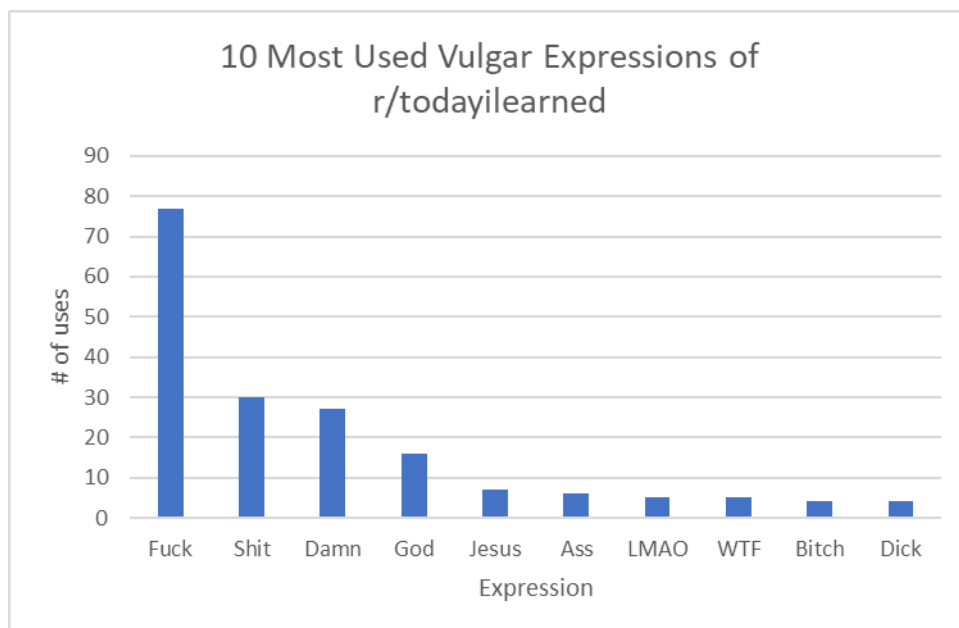
The Community Policy of Reddit rules is the only set of rules that is dedicated to restricting Redditors from using vulgar language on this subreddit.

3.2.3.4.1 ANALYSIS

Each of the three analyzed posts contained information from different fields, and they amassed 1474 comments in total. The first post was about Stephen Hawking, and it mentioned the fact that due to this condition, he should have passed away in the early in the middle 1960s. At the time of the analysis, the post has been posted for 17 hours and contained 733 comments. The second post featured a giant tortoise species that was believed to be extinct, only for it to be discovered again. At the time of the analysis, the post has been posted for 17 hours and 349 comments. The third post was discussing the rap artist called MF Doom, who has been confirmed dead on December 31st, 2020. At the time of the analysis, the post has been posted for 20 hours and the comment section contained 392 comments.

Expression	# of uses
Arse	1
Ass	6
Bitch	4
Bloody	1

BS	1
Bullshit	1
Cunt	1
Damn	27
Dick	4
FFS	1
Fuck	77
God	16
Jesus	7
LMAO	5
LMFAO	1
Motherfucker	1
Piss	1
Pussy	1
Shit	30
Whore	4
WTF	5
Total	195



The three analyzed posts combined contained over 37000 word tokens. Out of this total, 195 word tokens count as vulgar. This means that roughly 0,52% of all the words are strong language. The second post contained the least amount of vulgarisms by a considerable amount, while the first and the third posts had almost the same number of vulgarisms, even though the first post had almost twice as many comments.

This might be because the death of MF Doom is a recent event, and thus the emotional reaction to it might be way stronger, than to Stephen Hawking. Secondly, MF Doom's music contained vulgar lyrics, so the Redditors discussing him might be more used to using the same type of language, and might not see a problem with other users doing the same.

3.2.3.5 R/FUNNY

<https://www.reddit.com/r/funny>

R/funny is a subreddit purely made for entertainment. Redditors can post videos, pictures, gifs, or any type of media, as long as they make an attempt at humor. With its 34.9 million members, r/funny is the second biggest subreddit of the entire website. This means that the traffic that the subreddit has is large, although many of the users do not interact with the content in any other way than simply viewing it.

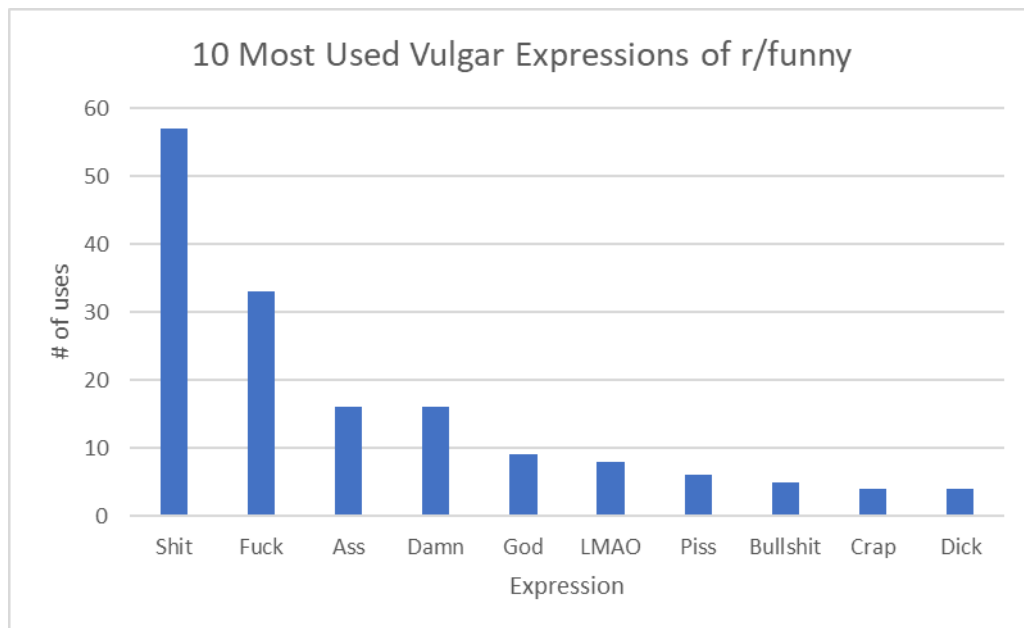
Even though r/funny has a long list of rules regarding what can or cannot be posted on the subreddit, no rule enhances the Community Policing of Reddit when it comes to using vulgar language within the subreddit.

3.2.3.5.1 ANALYSIS

All three of the analyzed posts were commenting on the ending of the year 2020. In total, the three analyzed posts accumulated 2234 comments. The first of the three posts shared the poster's last major experience of 2020, which was falling through the ceiling of their own house. At the time of the analysis, the post has been posted for 19 hours and contained 771 comments. The second post was the biggest of the three. In this post, the Redditor claims, that Google Maps on their phone automatically shows where they traveled during the year, at the end of each year. The poster follows the claim with a picture, which shows that they have only been in their apartment throughout the year 2020, due to the global pandemic. At the time of the analysis, the post has been posted for 20 hours and amassed 953 comments. The third post contains an image of a map. In this post, the Redditor shared their friend's last ride of 2020 on a map software. The map software captured the track of the ride and the final picture that the track made seemed like the track is "flipping the middle finger" directed towards the entire year of 2020. At

the time of the analysis, the post has been posted for 16 hours and garnered 510 comments.

Expression	# of uses
Ass	16
Bastard	2
Bitch	1
Bloody	1
BS	2
Bullshit	5
Crap	4
Cunt	2
Damn	16
Dick	4
Fuck	33
God	9
Jesus	3
LMAO	8
LMFAO	1
Motherfucker	1
Piss	6
Prick	1
Pussy	1
Shit	57
WTF	2
Total	175



All three posts combined contained almost 47000 word tokens, out of which 175 were instances of vulgarisms. This means that only roughly 0,37% of all the word tokens were vulgarisms. This statistic is quite surprising, especially because there are almost no restrictive rules regarded towards vulgarisms on r/funny, and also considering the aim of the posts. The first two posts contained almost the same amount of vulgarisms, while the last one contained the least. Judging by the fact that all of the posts revolved around one general topic, the differences between them are dictated solely by the number of comments.

3.2.4 OVERALL RESULTS FOR REDDIT.COM

Reddit.com is a massive forum, made out of smaller forums, called subreddits. Rather than capturing the immediate reactions of its users, Reddit captures calm and structured posts and comments. The analyses were conducted on three popular posts from each of the five subreddit, in an attempt to capture a sample of the current language trends.

Posts of five subreddits in total were analyzed. These subreddits were r/gaming, r/news, r/memes, r/todayilearned, and r/funny.

Starting with r/gaming, the analyzed posts of this subreddit contained a total of 74000 word tokens, out of which 392 were instances of vulgarisms. This equates to roughly 0,53% of all the word tokens in the post and its comments being vulgarisms.

The second subreddit, r/ news has the biggest word token sample size which is 131000 word tokens. Out of these word tokens, 542 were instances of vulgar expressions. This equates to roughly 0,42% of all the word tokens being vulgarisms.

The third subreddit of the five, r/memes holds a 50000 word token sample size, out of which 275 word tokens were vulgar. This means that roughly 0,55% of the word token sample size from r/memes are vulgarisms.

The fourth subreddit, r/todayilearned had the smallest word token sample size of the five, 37000 word tokens. Out of this total, 195 were vulgar expressions. This means that roughly 0,52% of all the word tokens that were taken from this subreddit were vulgarisms.

Lastly, r/funny had a sample size of 47000 word tokens, 175 of which were vulgarisms. This equates to only roughly 0,37% of all the word tokens being vulgar, which makes the last of the five subreddits the least vulgar.

Taking all of the above-mentioned percentages and making an average for the entire website results in a value of roughly 0,48%. This means that roughly 0,48% of all word tokens taken from Reddit.com were vulgarisms

3.3 COMPARISON OF TWITCH.TV AND REDDIT.COM

	Word Tokens	Vulgarisms*
WolfsGoRawr	8191	41
FrostPrime_	34388	245
TobiasFate	62254	221
FollowGrubby	41061	95
Elajjaz	232277	1985 (1617)
loltyler1	946606	13472 (10915)
r/gaming	74005	392
r/news	131567	542
r/memes	50226	275
r/TIL	37456	195
r/funny	46935	175
Total	1664966	17638 (14713)

*The numbers WITHOUT brackets are the absolute values, the numbers WITH brackets are the values with spam filtered out.

Chanel/Subreddit	% of Vulgarisms
WolfsGoRawr	0,5
FrostPrime_	0,71
TobiasFate	0,33
FollowGrubby	0,23
Elajjaz	0,7
loltyler1	1,15
r/gaming	0,53
r/news	0,42
r/memes	0,55
r/TIL	0,52
r/funny	0,37
Rough average	0,54

In total, 1323200 word tokens were taken from the stream chats of Twitch.tv, and 339000 word tokens were taken from posts and comments of Reddit.com. A total of 16059 vulgarisms were uttered in twitch chat when spam is counted, and 13132 if it is not. Considering that there was no spam present on Reddit.com, there is only one number for the instances of all vulgarisms, which is 1579 of total vulgar expressions.

The total values differ significantly, which is why the total numbers are converted into percentages, which are easier to compare. The most vulgar stream chat on Twitch.tv belonged to a channel named loltyler1. The percentage of vulgarisms in this stream chat was 1,15%, while to most vulgar subreddit was r/memes with a value of 0,55% of all word tokens being vulgarisms. The least vulgar stream chat of a Twitch.tv stream belongs to the channel FollowGrubby, which only had 0,23% of all word tokens being vulgarisms, while the least vulgar part of Reddit.com was a subreddit called r/funny, which only contained 0,37% of all word tokens in the form of vulgarisms.

When spam is not considered, the overall percentage of word tokens taken from Twitch.tv contained 0,6% of vulgarisms, while using the same equation for Reddit.com results in a value of 0,48%.

Taking the final data, it can be compared to the research made by Jay (Jay, 2009), which mentions that spoken language contains from 0,5% to 0,7% of taboo words. The value for both of the websites shows that on average 0,54% of the word tokens from each corpus are vulgarisms.

4. CONCLUSION

The internet is a massive medium, that is used by countless amounts of people. The behavior of people on the internet may differ significantly from their behavior outside of it. The differences in behavior might also include their use of specific language expressions, due to the anonymity that the internet often provides.

The main aim of this thesis was to discover, whether vulgar language is used more on the internet, than in everyday life. No two sites are the same and subsections of these sites can differ from one another considerably. That is the reason for two sites were chosen to be covered in this thesis, and why multiple subsections of the two sites were analyzed.

Although the aim of the sites and the content that they provide are significantly different, the main differences between the sites were not too significant considering the entire sites, but rather in their subsections. The results from each of the subsections came out different, especially in the case of the first website. Considering the overall comparison, however, showed the frequency of using vulgarisms on both of the sites was not significantly different.

The results of the research were quite surprising. Even though there might be less of a repercussion while using vulgarisms on the internet, the results show that people on the internet use vulgarisms just as often as they would use them normally in spoken language, with one of the websites using them slightly more often than the other.

Since the internet is vast, it is hard to form a complete picture of the entire medium, even more so since it is ever-changing and fast expanding. Analyzing the behavior of people on the internet is no easy task, especially since the collected data may become outdated considerably fast. Even though the research might prove to be difficult, knowing how people behave and speak on the internet might prove to be very valuable information.

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