Online Hatred of Women in the Incels.me Forum: Linguistic Analysis and Automatic Detection

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Abstract
This paper presents a study of the online discussion forum Incels.me and its users, involuntary celibates or incels, a virtual community of isolated men without a sexual life, who see women as the cause of their problems and often use the forum for misogynistic hate speech and other forms of incitement. Involuntary celibates have recently attracted media attention and concern, after a killing spree in April 2018 in Toronto, Canada. The aim of this study is to shed light on the incel community, by applying a combination of quantitative and qualitative approaches to analyze the communication between the users of the forum. We investigate the vernacular used by incels, apply automatic profiling techniques to determine who they are, discuss the hate speech posted in the forum, and propose a Deep Learning system that is able to automatically detect instances of misogyny, homophobia, and racism, with approximately 95% accuracy.

Keywords: misogyny, hate speech, social media, forensic linguistics, text analytics, text profiling

1 Introduction

On April 23, 2018, 25-year old Alek Minassian killed 10 and injured 16 in Toronto, Canada, by driving a rented van into pedestrians “like he was playing a video game” (The Telegraph, 2018). This incident has become known as the Toronto van attack. Shortly before the attack, he posted a cryptic message on Facebook stating: “The Incel Rebellion has begun!” (Reuters, 2018). The term is shorthand for involuntary celibates and refers to an online community of men that blame women for their celibacy (Ging, 2017). Evidence shows that Minassian was inspired by the 2014 Isla Vista killings, where 22-year old Elliot Rodger stabbed and shot 6 people to death near the UCLA campus, after posting a video on YouTube in which he complained about being rejected by women, while envying sexually active men (Blommaert, 2017; Larkin, 2018).
Several studies suggest that “echo chambers”, online forums where like-minded people share disparaging views, may be a catalyst for radicalization (e.g., Colleoni et al., 2014). To illustrate this, on November 7, 2017, the r/Incels community was banned from Reddit for spreading misogyny.\(^1\) However, a new incel forum, Incels.me, appeared online shortly after.

In this paper, we analyze the discourse in the new forum to shed more light on the nature of the incel movement. In section 2, we outline the dataset collected for quantitative analysis and the sample that we used for qualitative analysis. Section 3 examines the language used in the forum discussion threads, and section 4 discusses the forum’s users. Section 5 analyzes the disparaging nature of (most of) the content (misogyny, homophobia, racism), the user’s motives for posting it, and techniques for automatic detection. Section 6 discusses the group dynamics in the forum. In section 7, we formulate our conclusions of the case study.

2 Methods & Materials

We have combined quantitative techniques from Natural Language Processing (NLP) with an in-depth qualitative analysis, which allows for a systematic description of the data and the development of an automatic detection system using Machine Learning (ML) techniques. This kind of technology can be useful for the monitoring or prevention of online misogyny.

**QUANTITATIVE ANALYSIS**

We used the Pattern toolkit for the Python programming language (De Smedt & Daelemans, 2012) to crawl and collect approximately 65,000 messages (about 1.5M words) from Incels.me. The resulting dataset covers 3,500 threads (i.e., discussion topics) with messages by 1,250 users, posted in the 6-month period between November 2017 and May 2018. Approximately, each thread contains about 20 messages, by 10 users. Each user posted about 50 messages on average. About 350 new messages were posted each day. The number of posts increases significantly in April, after the news of the Toronto van attack, as shown in Figure 1 below.

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\(^1\) As of July 2018, r/braincels was still active on Reddit, featuring a mix of less inflammatory incel rhetoric and role-playing.
QUALITATIVE ANALYSIS

We manually reviewed a subset of a 100 threads (~3%) selected to reflect the variety of topics discussed in the forum, including definitions of *inceldom*, the prospect of being an incel, feminism, female promiscuity, male attractiveness, ethnicity, suicide and violence as coping mechanisms, and so on. Providing insight into the debate in the forum does not go without showing concrete examples, hence the reproduction of discriminatory or offensive language is unavoidable (see Marx, 2018: 1 for a similar observation). All of the examples are indicated as published, i.e., without changing spelling or grammar mistakes.

*Figure 1.* Timeline of messages posted on Incels.me (November 2017 – April 2018).

*Figure 2.* References to violence on Incels.me (November 2017 – April 2018).
AIM OF THE STUDY

The aim of this study is to assess whether or not the Incels.me forum fosters radicalization. In general, the earliest reference to an Incel Rebellion is only made on April 24, the day after the Toronto van attack, in a thread titled “Well I’ll be damned”. However, references to a Beta Uprising, which is the term that the forum’s users seem to prefer, occur as early as February, in a number of threads where some users attempt to incite others to commit acts of violence, such as: “Even if it’s shooting up a school, don’t sit back and do nothing”. This is illegal according to the International Covenant on Civil and Political Rights, but most likely protected by the First Amendment of the United States Constitution and Brandenburg v. Ohio, 395 U.S. 444 (1969).

As a first tentative cue, Figure 2 shows the relative frequency of messages that contain common references to violence (~2%), i.e., the words kill, rape and/or shoot. Notably, these references tone down around Christmas, but the frequency of messages that contain kill then increases in the weeks before the attack. In particular, violence against women is often judged as acceptable or even desirable, which is a cause for concern. Thus, it is important to discuss how likely it is that the users would resort to actual violence, for example under peer pressure.

3 Text Analysis

Text Analysis refers to the study of words and combinations of words that constitute the rhetoric. Quantitative approaches from NLP include analysis of word frequency, word combinations, word context, and dictionary tagging (e.g., identifying aggressive verbs or negative adjectives).

3.1 Quantitative Analysis

We compared 50,000 Incels.me messages to 50,000 “neutral” texts, composed of 40,000 paragraphs from random English Wikipedia articles (which are moderated for neutrality) and 10,000 random English tweets (to account for internet slang). In theory, all words should be evenly distributed between both sets. For example, most sentences require function words such as a and the to be comprehensible. However, there are also content words that occur more

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2 [https://www.ohchr.org/EN/ProfessionalInterest/Pages/CCPR.aspx](https://www.ohchr.org/EN/ProfessionalInterest/Pages/CCPR.aspx)
frequently in a specific context, e.g., sports tweets will often mention winner while messages on Incels.me may often mention loser.\(^3\) Below is an overview of words that 9 out of 10 times occur in incel messages, and which are statistically significantly biased (chi-square \(p\)-value < 0.05).

**TOP 10 KEYWORDS**

The top 10 of most frequent significantly biased keywords consists of \(I\) (30,000x), \(you\) (20,000x), \(n’\) (10,000x), \(do\) (7,500x), \(if\) (6,500x), \(just\) (6,000x), \(like\) (6,000x), \(me\) (6,000x), \(get\) (4,500x), \(even\) (4,000x). The occurrence of personal pronouns (I, me, you) is explained by the difference in genre: Wikipedia articles tend to represent facts while Incels.me posts reflect personal opinions. Wikipedia articles also avoid informal contractions, using do not instead of don’t. The presence of adverbs such as just and even indicates expressions of uncertainty (i.e., hedge cues; Farkas et al., 2010). Conjunctions such as if are generally used to introduce unlikely events.

**TOP 100 KEYWORDS**

The top 100 of biased keywords has references to gender (female / male, girl / guy, woman / man), physical traits (attractive, fat, pretty, ugly, white), and sex. Swear words (fuck, fucking, shit) and internet slang (kek, lmao, lol) occur frequently, indicating adolescent age (Barbieri, 2008). Also common are more negations (nothing, never), negative adjectives (bad, hard), modal adverbs of uncertainty (maybe, probably, why), and emotion verbs (hate, hope, want, wish). Some words constitute coded language. For example, Chad or Tyrone are derogatory denominations for an attractive and successful young man (cf., alpha male, bad boy, bro, jock) while Stacy denotes an attractive roastie, a promiscuous young woman. A central metaphor in the incel jargon refers to The Matrix, a popular science fiction film in which the protagonist is offered either a red pill (knowledge and misery) or a blue pill (ignorance and bliss). In the online men’s rights community (i.e., the Manosphere),\(^4\) the red pill refers to the belief that men are oppressed. Particularly in incel subculture, this means that a minority of attractive men have access to the majority of all women, while the other men are left to compete over a minority of women. The black pill (Figure 3, rank 89) then is the nihilistic belief that unattractive men will never “score”.

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\(^3\) [Link to spreadsheet](https://docs.google.com/spreadsheets/d/1j6Gns075hQjF-D3GWBsBk3QEAgi1ms-AfY0O8kGPvQ)

\(^4\) [Link to Manosphere glossary](https://rationalwiki.org/wiki/Manosphere_glossary)
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Figure 3. Top 100 keywords.

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</tr>
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<td>2547</td>
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</tr>
<tr>
<td>want</td>
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<td>19</td>
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<tr>
<td>shit</td>
<td>2258</td>
<td>20</td>
</tr>
<tr>
<td>why</td>
<td>2165</td>
<td>22</td>
</tr>
<tr>
<td>Chad</td>
<td>2098</td>
<td>24</td>
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<td>ugly</td>
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<td>bad</td>
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<td>80</td>
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Figure 4. Top 1,000 keywords.

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</tr>
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<td>510</td>
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<td>215</td>
</tr>
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<td>499</td>
</tr>
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<td>527</td>
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<td>617</td>
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<tr>
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<td>48</td>
<td>690</td>
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<td>pillow</td>
<td>38</td>
<td>799</td>
</tr>
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</table>
Figure 5. Top 2,000 keywords.

TOP 1,000 KEYWORDS

The top 1,000 of biased keywords (Figure 4) has references to romance (girlfriend / boyfriend, date), sexuality (horny, masturbating, virgin), and pornography (ass, cum, cunt, dick). Misogyny (bitch, slut, whore) and other hate speech (faggot, nigger, retard) start to surface. There are many more negative adjectives (e.g., brutal, disgusting, dumb, lazy, insane, lonely, pathetic, stupid, terrible, useless) and verbs expressing aggression (crush, die, hate, kill, rape, shoot, slay).

TOP 2,000 KEYWORDS

Beyond the top 1,000 biased keywords (Figure 5), we find more (and more specific) references to male sexuality (boner, micropenis, urges), more negative adjectives (infuriating, submissive), and more aggressive verbs (beat, stalk, torture). There are noticeably many more compounds of a disparaging nature (e.g., noodlewhore, soyboy, wageslave).

<table>
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<td>micropenis</td>
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<td>1399</td>
</tr>
<tr>
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<td>1436</td>
</tr>
<tr>
<td>sexbot</td>
<td>14</td>
<td>1443</td>
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<tr>
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<td>13</td>
<td>1555</td>
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<td>12</td>
<td>1622</td>
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<td>weeman</td>
<td>11</td>
<td>1797</td>
</tr>
<tr>
<td>tampon</td>
<td>10</td>
<td>1899</td>
</tr>
</tbody>
</table>
WORD COMBINATIONS

Commonly co-occurring adjective-noun pairs are high school (~200x), white man (200x), black woman (80x), good looking (125x), ugly man (125x), ugly woman (30x), social anxiety (30x), social skills (65x), low IQ (50x), big dick (40x), big deal (30x), little bitch (15x), and little girl (15x). There are many more, usually referring to physical attributes and the size of body parts. Figure 6 shows the context of the word women in the dataset, with size representing frequency.

WORD EMBEDDINGS

We can use the co-occurrence counts of words to discover prevalent topics in the data. This is often done using topic modeling techniques such as Latent Dirichlet Allocation (Blei et al., 2003), but these require vast amounts of data. Therefore, we opted to use word embeddings, an NLP technique that represents words as vectors of real numbers, derived from co-occurrence statistics. Word embeddings encode semantic as well as syntactic information, and have been shown to work well with limited data. We used Gensim (Rehurek & Sojka, 2010) to refit the standard word2vec word embeddings (Mikolov et al., 2013) onto the Incels.me data, and t-SNE (Maaten & Hinton, 2008) for dimensionality reduction, to map the vector space to a 2-D visual representation where semantically related words are projected in close proximity to one another.

Figure 6. Words preceding or succeeding the word women.
Figure 7 shows an example t-SNE visualization of words that occur more than 400 times in the Incels.me dataset. Notably, topical clusters emerge with swear words (7.1) in the center, words that represent physical traits (7.2), and words referring to gender (7.3) – although in general the rhetoric appears to be highly heterogeneous.

We also experimented with non-negative matrix factorization (Xu et al., 2003) to compute topic clusters. In this case, some of the most distinct topics are formed by verbs that express thinking processes (know, think, want), verbs that express sensory perception (feel, like, look), and swear words (fuck, fucking, shit, …).
3.2 Qualitative Analysis

We can identify three broad trends in the messages that users post and the language that they use: 1) negative discourse that pertains to being a incel, 2) offensive discourse that targets (attractive) women (and men), and 3) infighting and bullying while competing for in-group status, discussed in section 4 (profiling), section 5 (hate speech) and section 6 (group dynamics) respectively.

SEXUALITY

The most prominent topics in all discussions are sexuality (from physical, psychological as well as sociocultural perspectives), sexual selection, and sex (from a pornographic perspective). In particular, incels are concerned with what constitutes attractiveness (“just a bit of muscle is best for general-purpose attractiveness”), how to approach women (“I don’t approach women, ever”), and how and why they are unsuccessful in this regard (“Attempts: 3”). The forum’s users reflect on the physical aspects of sexuality and invent ranking systems (e.g., by chin size or penis size), discuss detrimental psychological aspects (e.g., anxiety, anger, loneliness), and construct unusual theories about the sociocultural aspects of sexual relationships (“Throughout history women frequently killed their own offspring to sleep with the conquerors”).

SEX & PORNOGRAPHY

It is likely that online pornography distorts the incel’s perception of women’s sexual preferences. As a test, we searched the dataset for porn and manually reviewed 250 matching messages. The prevalent pattern in this sample is that users either praise mainstream heterosexual pornography, or otherwise blame the pornography industry for their low self-esteem (most notably, insecurity about penis size). Some messages (~15%) include hyperlinks to freely available pornographic content (e.g., pornhub.com), which offers a cue to the misogynistic nature of the forum, i.e., what kind of pornography users prefer to watch and how they advertise it on the forum: “convincing rape porn”, “best uncensored rape porn”, “humiliation”, etc.

Research on pornography consumption and sexual aggression is too broad to include here (for an overview, see Pollard, 1995) but we can highlight two studies that relate to the unusual views on sexuality in incel subculture. Firstly, it has been shown that antisocial individuals may be drawn
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to pornography due to its impersonal opportunity to exert control over a member of the opposite sex (Vega & Malmuth, 2007: 106). However, Malamuth & Ceniti (1986) report that exposure to (violent) pornographic material does not raise the level of aggression towards women, and does not turn consumers into rapists, except when individuals already exhibit personality traits linked to aggression. Dominance-centered views on sex are common in the dataset. The overwhelming majority of users also openly despise LGBT+ practices. One user states: “Nothing hardens your heart and strengthens your resolve like hatred, sexualized hatred is what I prescribe for looming thoughts of faggotry”. Other users also claim that forced female-on-male oral sex is not arousing since it resembles male homosexual practices. A small amount of messages are more moderate and view pornography as stress-relief to the incel predicament.

4 Text Profiling

Text Profiling pertains to gaining insight into the demographic and psychosocial aspects of the (anonymous) author of a text, based on the words that they use, the topics that they discuss, their personal writing style, and metadata such as what usernames they choose. Relevant techniques from NLP include sentiment analysis, and age, gender and personality prediction (Argamon et al., 2009), which have for example been used to identify school shooters (Neuman et al., 2015) or jihadists on social media (De Smedt et al., 2018).

Incels.me discussion threads related to the Toronto attack show that incels feel misrepresented in the media, being framed as white conservatives: “I’m sick of these Ameritards trying to label us all as white and right wingers. They don’t want to learn about inceldom all they want to do is push their narrative and political agenda”. According to another user, the forum is a “community made up of disparate groups ranging from edgy shitposting teens to Salafi Jihadist apologists and Christian Identity white supremacists”. We will attempt to shed further light on who the incels are, in terms of age, gender, ethnicity, and state-of-mind, using a combination of quantitative and qualitative analysis to reveal a negative mindset of mostly male adolescents who suffer from anger issues, uncertainty, and social inhibition.
4.1 Quantitative Analysis

**SENTIMENT ANALYSIS**

Sentiment Analysis is the NLP task of automatically predicting whether a text is positive, negative or neutral (Liu, 2012). Using the Pattern toolkit (75% accuracy), we find that over 60% of Incel messages are **negative**. By comparison, less than 5% of articles on Wikipedia are negative.

**DEMOGRAPHIC PROFILING**

We used the Textgain API\(^5\) to detect age, gender, education level and personality of the forum’s users (~80% accuracy). Most of them are flagged as **adolescent, male,** and slightly less educated (Figure 8).

In prior work, Pennebaker (2011) demonstrated how personal writing style contains subtle cues for age, gender, state-of-mind, and personality. For example, statistically, women tend to use more pronouns (*I, my, we*) to talk about relationships, while men tend to use more determiners and quantifiers to talk about objects and concepts (*the, one, more, …*). Adolescents use more informal language and profanity, while introverted persons tend to use more negative adjectives.

Such findings support the results of the Textgain API. For example, the results indicate that 35% of the users might be women, even though we know with certainty that all of them are men. But then most of the discourse is about interpersonal relationships and physical functions, topics that are statistically more prevalent with women (Newman et al., 2008: 219). Likewise, younger age correlates with lower education, suggesting that the users are not necessarily less educated than other people, although there are multiple references to low IQ (~50x), which may indicate low

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\(^5\) [https://www.textgain.com](https://www.textgain.com)
self-esteem (or contempt). Finally, in popular belief, about one third of the world’s population is introverted, which would mean that relatively more Incels.me users are introverted (which corroborates the prevalence of negative adjectives), but there is little evidence to support this.

PSYCHOLOGICAL PROFILING
The Linguistic Inquiry and Word Count analysis (LIWC; Pennebaker et al., 2001) automatically identifies psychological categories for common words, e.g., cried = Affective, Negative, Past, Sadness, Verb. In general, the results support our earlier observations that the forum users tend to use more swear words, more personal pronouns, more modal adverbs, more negative adjectives, and fewer positive adjectives. They tend to express more negative emotions like anger and uncertainty, and display social inhibition (i.e., avoidance, anxiety). They talk less about their family, work, hobbies, goals, beliefs, and more about relationships and sexuality.

4.2 Qualitative Analysis
Due to the heterogeneity of the community, as well as the subjective nature of attractiveness, there is no standard in-group definition of inceldom, i.e., being an incel. The question of who can be considered to be an incel repeatedly comes up in the forum, mainly because not all users of the forum are welcome, especially normies or volcels (voluntary celibates). All sorts of threads contain discussions about who is a real incel (truecel), i.e., a legitimate and particularly a badly-off user, which is important since it often entails receiving emotional support.

DEMOGRAPHIC PROFILING
Gender. The forum contains a short section with terminology, rules, and FAQs. It defines an incel as a “[p]erson who is not in a relationship nor has had sex in a significant amount of time, despite numerous attempts”. A person here has to be understood as a man, since women are considered not to have problems finding sexual partners, which is noted both in the rules section and in the threads. The minimal criteria of inceldom are: being male, and not having had a sexual partner for a long time. The majority of users understand that this entails being a virgin, without any hope of changing status (“I’m going to be a kissless virgin for life, its truly over”).

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Age. The age of the average user is harder to determine, since most users do not make explicit references to their age, nor their place of residence. However, many of the users appear to be adolescent men. This is implied by references to school (*my school, my college*), parents (*my mom, my dad*), and video games that are popular with teens (*League of Legends, World of Warcraft*). But other users seem to be considerably older. The age that they self-report in our 100 sample threads varies between 21 and 33. That a non-negligible part of the forum consists of older members can also be inferred from indirect references to age (“Most of us take fewer risks because our rejections are in the 30s and higher”), from references to a former university, and by talking about school in the past tense (“things were different when I was in high school”).

Race. There is no definite evidence that Incels.me users are predominantly white, contrary to what is often reported about incels. We will discuss race and ethnicity in section 5.

PHYSICAL PROFILING

The users generally attribute their lack of sexual experience and social contacts to *ugliness*. Many of them refer to the absence of physical attraction by their username, such as *Hunchback, MicroDong, YunGandUgly, Uglyinkel, blackletcel, Asianmanletcel, patheticmanletcel* (where -let refers to a shorter height). Some users describe their physical shortcomings openly (“manlet stature with abnormally long arms and a huge skull”), in part because this attracts attention, pity, and confirmation of their perceived hopeless predicament. The incels’ views on beauty are quite elaborate: They discuss it in a detailed and controversial way, using coded designations such as *lookism* or *LMS*, which involves a categorization system based on specific facial features such as a broad chin or a normal nose, build, height, personality, and/or normally-sized genitals. Such aspects are discussed in minute detail in threads titled “Being a self aware ugly male is pure torture”, “Are we incels because”, or “Are you fucked if your cock is sub 5?”.

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7 See DiMauro (2008) and Donnelly et al. (2001: 165) on the connection between self-image and an involuntary lack of sexual experience.

8 In general, usernames can be divided into three groups: 1) names based on *incel or -cel* (e.g., *theonlytruecel, Poverty Cel, Weiraclel, Suicel*), or 2) names referring to the mental disposition of the user (*fakmylyf, lonelyistheworld, Subhuman Trash, itsOVER*), or 3) names based on incel terminology (*Blackpill101, ropenotcope, Heightframeface, Cuck*). These categories are not mutually exclusive.
PSYCHOLOGICAL PROFILING

**Isolation.** There is another defining criterion with general consent: being alone. Some incels have never had a date (see also Donnelly et al., 2001: 163) or any contact with women (“I’ve never touched a non-related female even for a handshake or something”; “I wish I could be friend zoned but girls are to repulsed by me to even consider me a friend”). Even establishing any social contact whatsoever seems to be difficult for some incels (“no one ask me to hang out in my entire 22 years of existence. Not even men or my neighbors”).

**Inhibition.** Some users argue that mental disorders like autism can also render a person an incel. This opinion is in line with the forum’s rules section, where *mentalcels* are implicitly included as a “[t]ype of incel whose reason for failure in relationships/sex is related to mental illness or major insecurities”. Some users report taking psychotropic drugs and having been diagnosed with schizophrenia, autism, and/or personality disorders, as in “I’m diagnosed autistic aspergers, social anxiety and anti social personality disorder aka sociopath” or “diagnosed aspiecel and borderlinecel here but i LITERALLY fit the description of EVERY SINGLE Personality disorder except antisocial personality disorder and narcissistic personality disorder”. These members have usernames such as *Schizoidcel, Psychocel*, or *HopelessMentalcel*. Anxiety and depression are common as well, but these afflictions are believed to be a consequence of the lack of physical attractiveness, since “those are just usual symptoms of being a subhuman outcast”. Some users feel left out because of their low IQ, which is discussed as an inherent feature of inceldom in one thread: “We are not only uglier than beautiful people but also dumber on average”. Examples of usernames that hint at a low IQ and/or depression are *retarded_dumbshit, lowIQretard, Sadness, Eternaldarkness*, and *Melancholy_Worm*.

**Negativity.** The comments by the users show that incels suffer because of their condition (e.g., feeling lonely, deprived of sexual contacts, stared at in public, lacking a career). There is a large number of discussion threads (~25%) containing “it’s over”, which stands for the lack of hope to escape their situation. There are a few positive users in the forum who address their situation, for example by going to the gym (*gymcel*), but this is often experienced as a strain because of the

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9 [https://www.huffingtonpost.ca/2018/06/05/incel_a_23451320](https://www.huffingtonpost.ca/2018/06/05/incel_a_23451320)
high number of *Chads* in the gym (“gymcelling is literally torture”). When discussing what to do on a free night, self-reported activities point to an isolated life, with solitary exercising, drinking, playing video games, cleaning, masturbating, or doing nothing at all as the most common answers. Cautiously positive messages like “I’m probably coping but maybe there is a glimmer of hope” are rare. This prevalence of negativity is substantiated by our sentiment analysis.

**Neglect.** Self-pity and hopelessness drive part of the users to neglect their daily grooming, as in: “I haven’t brushed my teeth in over six months. I did shower yesterday, but it was for the first time in like 2 to 3 weeks”, or “I dress like a bum, have unkempt hair, ripped shoes”. This might contribute to a vicious circle of depression. Once their impression of hopelessness is reinforced by other users, they call it *suicidefuel* (in contrast to *lifefuel*). Direct messages expressing the desire for suicide are quite common: “This is so fucking brutal and I also want to end it as soon as possible. I don’t even get emotional when thinking about suicide anymore. I’m just waiting for the right time”. Several users claim a right to euthanasia (“Painless suicide pills should be freely distributed to people like us”). Another effect of feeling let down is the development of hatred towards society, especially towards women and attractive men (see section 5).

![Figure 9. Summary of core and peripheral aspects of inceldom.](image)
SUMMARY
Within the community, there is considerable disagreement on which defining factors are the most prevalent, and also on the relation between ethnicity and attractiveness. Other potential criteria are a lack of stable personality (as a long-term result of physical and mental flaws) and success in one’s professional life (many incels seem to be unemployed). Figure 9 sums up the factors that are often discussed in the forum as defining inceldom. While some factors are apparently more defining than others, a prototypical incel would be somebody like: “22 yr old kissless, dateless, virgin. Chubby cheeks, crooked nose, 5”10, balding at age 22, weak frame, and awkward voice. Shitty career prospects. Mild autism and social anxiety. My life is fucking fucked […]”.

5 Hate Speech

Hate speech is defined in the Encyclopedia of the American Constitution as “any communication that disparages a person or a group on the basis of some characteristic such as race, color, ethnicity, gender, sexual orientation, nationality, religion, or other characteristic” (Nockleby, 2000). However, in the US, freedom of speech is protected by the First Amendment and there is no exception that prohibits hate speech, unless it constitutes incitement to imminent crime. The EU’s Code of Conduct on countering illegal hate speech online defines hate speech as “the public incitement to violence or hatred directed to groups or individuals on the basis of certain characteristics, including race, colour, religion, descent and national or ethnic origin”.

In this section, we examine to what extent incel vernacular constitutes hate speech, to understand how disparaging and/or offensive the incel discourse is, in particular towards women. Together with the explicit references to violence, this may serve as an indicator of how dangerous the community is, with respect to potential future attacks. Finally, a growing number of attempts have been made to automatically detect hate speech (for an overview, see Schmidt & Wiegand, 2017). This section also discusses our attempt to automatically detect misogynistic vernacular.

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10 Incels partly assess their attractiveness by penis size, which is a common focus in a penis-centered view of sex (Plummer 2005: 179).
5.1 Quantitative Analysis

To get a first impression, we looked for the occurrence of 10 offensive words in each discussion thread, in particular words that constitute misogyny (*bitch, landwhale, roastie, slut, whore*), homophobia (*fag, faggot, soyboy*), and racism (*coon, nigger*). Using this approach, about 30% of the threads are misogynistic. About 15% are homophobic, and 3% are racist. For example, three of the most hateful discussion threads are titled “Caught this fat bitch swiping left on Tinder”, “Faggots are just as bad as women!”, and “Black man chases femoid through streets”.

About 5% of all messages in our dataset contain one or more of these 10 offensive words. By comparison, the likelihood that a random Twitter message contains one of these words is 0.4% (about 40 out of 10,000 tweets), or over 10x less than incel messages.

About half of the users in our dataset posted hateful messages at one time or another. Nearly 500 use misogynistic slurs, 250 (also) use homophobic slurs, and 75 (also) use racial slurs. But most users post no more than two or three hateful messages. About 10% of the users are responsible for the majority of the hate speech. The most aggressive user posted nearly 500 hateful messages in as many threads in a 6-month period.

The reported numbers are an approximation based on a small selection of 10 offensive words, while hate speech is a heterogeneous phenomenon that does not even necessarily always involve attitudes of hatred (Brown, 2017: 432). Most likely, our estimates err on the conservative side.

If we do a search for 50 offensive words, word combinations (*dumb girl, fat chick*), and verb constructions (*beat / teach her*), the percentage of misogynistic discussion threads steadily rises over 50%, most of it again posted by 10% of the users. Figure 10 presents an overview.
5.2 Qualitative Analysis

HOMOPHOBIA

Wikipedia states that incels are mostly heterosexual and white.\(^{13}\) The former is true for the users of the Incels.me forum (the latter is not).\(^{14}\) For example, one user states: “gays cant be incel theyre too busy having sex and shopping at bed bath and beyond”. Homosexuals are often despised and called *faggots* (“being a faggot is a mental disorder same with being trans”), and only once in the subsample of a 100 threads does a user refer to himself as homosexual. The pervasiveness of heterosexuality can be attributed to 1) the fact that homosexuals are not wanted in the forum, and 2) that the world views (particularly misogyny) of heterosexual incels may not be something that homosexuals can relate to.

RACISM

It has been shown that the anti-feminist movement is connected to white supremacism and to antisemitism (Kämper, 2011), and the same has been suggested for the incel community in various news media.\(^{15}\) It is impossible to say whether the majority of Incels.me users are white men, but our data implies that this may be less true than expected. There are some mentions of Hitler or gas chambers and some anti-semitic remarks (“The damage that Jews have done to our species is almost unfathomable. Fucking kikes”). There are some racist comments in general, targeted either at other users (“go back to freaking syria, find some camel or goat and fuck”) or at a group as a whole (“Muslims need to be exterminated”). But in the 100 threads we analyzed such cases are sporadic rather than systematic.

However, race is an extensively treated topic in the forum, but primarily in relation to which race has more incels and which race has more (dis)loyal women. There is a general consent that unattractive non-white men have a harder time than unattractive white men (“Ethnic subhumans like me […] are either instantly rejected or friendzoned”), which is referred to as the “just be white theory”. There is also consent that “[r]ace is a big part of looks” and that Indian incels

\(^{13}\) [https://en.wikipedia.org/wiki/Incel](https://en.wikipedia.org/wiki/Incel)

\(^{14}\) We also found sporadic evidence of sexual deviation, including pedophilia (“A lot of pedos in this community actually”), necrophilia (“No pics of its dead body Disappointed tbh”), and zoophilia (“I have sex with willing mares in heat”).

(currycels) are most badly off. Other ethnic groups mentioned in this context are Asians, and less often African Americans and Arabs. This may reflect, to some extent, the **ethnic variety** of the forum. One user believes that only half of the people on Incels.me are white. Other users claim that most incels are not white, and one user substantiates this by referring to a poll in the forum.

**MISOGyny**

Misogyny can be defined as “an unreasonable fear or hatred of women that takes on some palpable form in any given society” and “sexual prejudice that is symbolically exchanged (shared) among men” (Gilmore, 2001: 9). Misogyny is one of the most pervasive features of the Incels.me forum. One user says: “I think acceptance of ‘misogyny’ and disregard for outsiders is what separates us from other communities”. Hating women is seen as an inherent characteristic of incels (“hating women is a requirement”), who attribute their situation to undesirable female behavior. Indian and Asian women are hated the most (“Ethnik Indian and noodlewhores are the worse of the worst”) because they are said to prefer only white men, while at the same time Asian women are recommended as prostitutes. Unsurprisingly, the forum is thus replete with derogatory designations for women (*cum dumpster, cum rag, it, roastie, slut, whore*, etc.).

Nevertheless, not all users hate all women. A discussion thread designed as a poll asks whether the forum users hate all women and shows that opinions are mixed: about 55% (33x) answer positively, while about 45% (28x) answer negatively (“No, I like my mom and grandma”). One user states the following: “I don’t hate all woman. And I believe that most brothers here in the Forum also don’t hate them. We hate the situation we are in”.

**Dehumanization.** Many users criticize feminism, which is seen as a threat to masculinity, or as brainwashing (Ging, 2017: 3), or the reason for “loneliness and suicides”, “the decay of society”, “terror”, and so on. Multiple messages call for the abolishment of women’s rights, to the extent that women should not be allowed to vote and should be regarded as the property of their husbands: “Female HAVE TO become property again. They should not have the right to even SPEAK without male permission”. Concrete advice includes treating women like wild animals (“You have to get used to seeing them as animals”) and keeping them on a leash and caging them.

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16 As self-reported comments in the poll suggest, 45% hate only *some* women, or no women at all.
when their owner leaves the house. In turn, men should have a legal claim on virgin brides, and
the government should mediate their desire for sexual contact by “redistribut[ing] pussy”, i.e.,
legalizing and subsidizing prostitution. This extreme dehumanization of women\textsuperscript{17} entails several
other more or less systematic opinions about women’s rights, such as capital punishment (e.g.,
stoning, acid throwing) of adultery or wearing “revealing clothing”.

**Incitement.** As these opinions already suggest, the attitude towards violence against women is
often favorable (“Disobedient wives should be beaten”). One particular topic that comes up
frequently is rape, which is encouraged, with the main concern that women falsely accuse men of
rape. Some users believe that women enjoy being raped, and that it should be legally impossible
to accuse men of rape. Some users would like to see all women dead (“I want them all to die”),
writing minutely detailed instructions of how they should be raped or killed. Other users praise
reports on rape (“Roastie slut got what she deserved”) and attacks on women (“Better a few dead
than all of them living their carefree lives. Enjoy the little things\textsuperscript{\textquotedbl}”).

The reason why incels have such a negative attitude towards women is the perceived female
“degeneracy”, i.e., an exclusive interest in (sex with) attractive men, who are also a target of
incel hatred. Women are portrayed as being shallow, immoral, promiscuous, and responsible for
the incels’ isolation. Users post pictures of women taken from the news and social media, upon
which the women’s physical traits are derided, especially obesity (“I loathe fat women. Bunch of
useless fucking hogs”). The users believe that men generally “date down”, while women are not
willing to do so (“They think that they deserve only rich handsome princes and muscular greek
gods with perfect bodies”). However, it is important to emphasize that a lot of features of incel
misogyny extends to online misogyny in general, such as detailed depictions of sexual violence,
 extreme insults, or the shaming of women for bodily flaws (Jane, 2014).

\textsuperscript{17} Dehumanization in discriminatory talk has often been subject to Critical Discourse Analysis (Musolff, 2012).
5.3 Threat Assessment

The discussion threads show considerable glorification of incel-related crime: “Alek Minassian. Spread that name, speak of his sacrifice for our cause, worship him for he gave his life for our future”. Several users have Rodger’s or Minassian’s face as their profile picture. Some want to exact revenge on society (“I’m driven by hate, any action that can lead to the slightest bit of revenge upon society is worth the effort”) and choose usernames that refer to hate, rage, rape, murder, and so on. Some user profiles contain explicit depictions of violence, for example GIFs (animated images) that show women being hit in the face, shot in the head, or stabbed with a knife. Users do not necessarily agree on what revenge should be like. While some would derive satisfaction from systematically blackpilling the world, i.e., spreading their negative world view (“I want people to feel a sort of visceral dread that has then questioning the very value of existance”), others actively incite violence towards women, or even call for human extinction in general. One user states: “They don’t give a shit about us. Nobody does. That’s why I have no problem if any of us starts killing as many people as possible. The more young women, Chads, Chadlites, normies, cucks, and Boomers who get slaughtered, the better”.

We identified three general verbal acts in this regard:

Incitement including appeals to kill people in the course of the Beta Uprising using lengthy descriptions, for example titled “How a crazy school shooter is made, and how women play a part in this whole”, that explain how the perceived discrimination and injustice that incels experience leads to becoming a mass shooter.

Fantasizing about how people could be injured or killed, for example by beheading, poisoning, stabbing, “spray[ing] that class with bullets”, renting a van to run over people, or driving a fire truck into the Coachella music and arts festival.

Threatening, in varying stages of concreteness, with users considering to follow in the footsteps of previous attackers such as Elliot Rodger and Alex Minassian. More precisely, we found five such messages (~0.25%) in the subsample of a 100 discussion threads. By extrapolation, this means that there might be a 150+ more in our entire dataset that should be examined.
To offer three examples:

- “I hope one day I get the confidence or the opportunity to seriously injure a chad at my HS”
- “Can’t wait until the next physical blackpill movement. I will join in”
- “I’m not even exaggerating, I’m probably gonna snap one day”

MEDIA RESPONSIBILITY

The forum’s users generally agree that incel attacks will become more common in the future. However, we must add that there is also a clearly visible faction among the users that objects to violence and in particular mass killings (“I don’t condone violence. Especially mindless violence against innocent people”). They see a dangerous trend in the incel movement: “The spreading of the blackpill would no doubt increase shooting (and suicides) because some young men lose control”. The media response to the Toronto attack also raises concerns, firstly, how the “media makes these killers into overnight celebrities” could increase the motivation for such killings, and secondly, how incels will be perceived in the future (“this event has been a disaster for this forum”, “Now we are gonna be thought of as psychos even more cause of this crazy asshole”). Given that news reports on the incel community in the wake of the Toronto attack indeed seem to portray the members as a homogeneous rather than a heterogeneous group, such worries may be legitimate. However, the pro-violence incels seem to outnumber the anti-violence faction, which might be in part explicable by the group dynamics of the forum (see section 6).

5.4 Automatic Detection

One way to mitigate the surge of online hate speech is to deploy systems that assist with the early identification of worrisome content. Machine Learning (ML) is a field of AI that uses statistical techniques to train systems that “learn by example” to make automatic predictions. For example, given a 1,000 junk emails and a 1,000 real emails, a machine learning algorithm will infer that words such as viagra and lottery occur more often in junk emails. Such cues can then be used to classify unknown emails as junk or real. We used state-of-the-art Deep Learning techniques to train a Multichannel Convolutional Neural Network (CNN; Kim, 2014) in Keras (Chollet, 2015) with 50,000 Incels.me messages and 50,000 neutral texts composed of 40,000 paragraphs from
random English Wikipedia articles and 10,000 random English tweets. The statistical accuracy of the model is 95.1%, which makes applications for detecting online hatred of women viable.

We also experimented with the Perceptron algorithm (see Collins, 2002), which does not require expensive GPU hardware during the training sequence. We used character unigrams (u, g, l, y), bigrams (ug, gl, ly), trigrams (ugl, gly), and word unigrams (ugly) and bigrams (ugly guy) to encode both lexical (e.g., word endings) and contextual features (e.g., word combinations). Using 10-fold cross-validation (i.e., 10 tests on 10 different samples), the statistical accuracy (F1-score) is 92.5%, which is a competitive tradeoff between cost and effectiveness.

6 Discussion

PERSPECTIVES ON GROUP DYNAMICS

Donnelly et al. (2001: 167) have shown in their study on involuntary celibacy that test persons “appeared to be using the Internet more to find moral support than for sexual stimulation. For most, the Internet was used to create a sense of community and to fill emotional needs”. This is what Dholakia & Bagozzi (2004: 258) refer to as the “companionship motive” for participating in virtual communities. This motive is also true for Incels.me, where users turn to because they feel isolated. One user remarks: “if it wasn’t for incel forums id have 0 social interaction whatsoever”. The users feel part of an in-group, which creates a sense of community between like-minded people. To illustrate this, there is even merchandise such as T-shirts that can be purchased on the website.18 The downside of this sense of community is that it also creates a toxic platform for anti-feminist radicalization (Ging, 2017). For example, Blommaert (2017: 20) highlights the importance of the online communities themselves in the radicalization of Elliot Rodger, which has resulted in the incel expression to go ER (to commit a mass killing spree):

Rodger derived from his engagement in those communities an absolute certainty about his identity as a victim of a world that conspired to steal away his (sexually focused) happiness, and enough of a commitment to take this logic of action to its very end, where the victim becomes the perpetrator.

18 https://teespring.com/stores/fast-banana
The internet enables small hate groups to reach a large number of people, whereas in pre-internet times extremists had to work in more isolation (Douglas, 2009: 155). The gratification that users derive from a forum like Incels.me is approval, as they spread ideas or initiate threads that are considered as “high IQ”. Such ideas often involve complex (but also absurd) reasoning, leading to “the emerging of individual and collective identity categories (‘victims’, ‘beta males’) and commonly ratified (‘normal’) lines of action” according to Blommaert (2017: 16). Messages that proliferate misogyny or incite crime help a user to cement his reputation as an alpha user.

As as result, the Incels.me forum brims with subcultural language, partly composed of in-group terminology for much-discussed agents, and partly composed of youth language in general. The terms most often recurred to can broadly be grouped in 1) designations for themselves (see above for different word formations including the creatively coined morpheme -cel), 2) their targets, i.e., women (Staceys, roasties, femoids) and attractive men (Chads, Tyrones), and 3) the incel ideology (e.g., blue pill, red pill, blackpill, lookism, go ER). This aspect is particularly important, since online communities emerge through language, and the use of a group-specific language determines the boundaries of the community (cf. Haythornthwaite, 2009: 123f).

PERSPECTIVES ON ECHO CHAMBER EFFECTS

These identity-forming mechanisms have the downside that discussions motivate users to post messages with content that attracts attention, i.e., producing comments that are more extreme than previous comments in a thread. For example, one thread on how to rape a woman shows that users will try to come up with more “creative” methods of accomplishing this. It is unclear whether such extreme views about killing women are fantasies or an early warning sign. In non-anonymous face-to-face interactions, users might speak less drastically than in these echo chambers (Colleoni et al., 2014). It can be argued that the image of an aggressive group does not correspond to reality, but rather that the existence of the forum in general contributes to cementing a negative worldview. As Waltman & Haas (2011: 63) state, “[t]he Internet has become the lifeblood of the organized hate movement”. One user answers the question if he hates all women with: “[b]efore incels.me: no. After incels.me: YES YES YES”.

19 See Haines et al. (2014) on the connection between anonymity in computer-mediated communication and the expression of unethical opinions.
Figure 10. Incels.me screenshot of an example discussion thread.

One reason why people are able to engage in this toxic communication is that there is little or no content moderation. There are some rules restricting what can be said and how, and infringement is penalized by users being banned. These rules include: 1) no persecution or bullying of other users, 2) no race-baiting, 3) no stories of sexual experiences, 4) no discussion of illegal activities, and 5) violent content and pornography need a spoiler tag. The rules also state that positivity is appreciated “as long it is not bluepill ideology or white-knighting”. But these rules are enforced only half-heartedly, and banned users can ask the moderator to lift their ban again. Hence, the forum is rife with hate speech, filled with discussions about illegal hate crimes, and extremely offensive infighting. It is not uncommon for users to react to comments with insults such as “Just kill yourself and do us all a favour” or “you little worthless sub-human scum”. Although positivity is officially appreciated, it is often those users who bring optimism into the forum that are viciously attacked by their peers. It is not surprising that some users recognize the dangers of the forum: “This site isn’t good for anyone’s mental health, let’s be real”.

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20 https://incels.me/forums/ban-appeals.18
Is the Incels.me forum part of a growing number of online hate communities? Our analysis has shown that it may be so, in part because its users share in-group mechanisms such as subcultural language, extremist beliefs, and a tendency for radicalization. They also engage in intergroup rudeness (Kleinke & Bös, 2015: 50) such as the construction of a majority outgroup outside the forum (normies vs incels) and persecuted outgroups within the ingroup (i.e., users who are not truecels). However, there is one major and important difference to other hate communities: the community is more heterogeneous than other hate communities, because users are not united by a common goal, but by a feature that its individuals share, i.e., not being able to engage in social and/or sexual contacts. Due to the resulting negative self-image, incels do not, in contrast to other hate communities, create in-group identity through self-portrayal in positive terms, but only create out-group identity by depicting normies as flawed and deplorable, which is again a feature that it shares with other ideological groupings (Waltman & Haas, 2011: 34).

7 Conclusion

In this paper we have demonstrated how the key to identifying features of an online subculture is examining their language use, both quantitatively and qualitatively. Using various methods, we have outlined an alliance of necessity of isolated young men with a highly negative mindset and a pronounced inclination towards misogynistic spite. Our findings correspond in part to how incels have been depicted by the media, but the analysis also reveals that the group is more heterogeneous than assumed. Our dataset displays a mixed picture of how dangerous or violent the members of the community may be, which is important to assess in regard to potential future attacks like the one committed by Alek Minassian. On the one hand, the forum is replete with incitement and explicitly violent fantasies. On the other hand, part of these may be no more than verbal tactics of self-enhancement in an online echo chamber. How to deal with a community such as Incels.me? The prior removal from Reddit has demonstrated that a community does not simply disappear, but finds new ways to spread and share hatred. Close monitoring of platforms such as Incels.me in terms of radicalization should be considered, with the possibility to act upon explicit threats. Automatic techniques to detect hateful speech can facilitate this process, in our
case with up to 95% accuracy. We encourage the use of such tools to assist, but not to replace, a continued monitoring of the activities and development of online hate communities.

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