

incels.is - the community dynamics of a fringe community

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Extended Abstract

The involuntary celibate (incel) sub-culture is an online community connected to various violent attacks, ranging from small to large scale cases of cyber-mobbing [1], as well as mass shootings taking place offline [2]. While the general worldview dominating the incel space has been exhaustively researched [3, 4], few attempts have been made to decipher the intra-group structure of the incel sub-culture. Research on incels provides implications of heterogeneity within the incel community regarding position on violence [5], use of language [6, 7] and, used platform [7, 8]. Riberio et al. (2021b) look at the user migration caused by the ban of the subreddit *r/incels* to the forum *incels.is* (formerly *incels.co*). They find decreased growth for the community overall, but the authors do not include the subreddit *r/braincels* in their analysis, which was similar to *incels.win* set up as an alternative to *incels.is*. The claim of reduced overall activity might be caused by most users moving to *r/braincels*. This study investigates the development of the community structure of *incels.is* since it went online (November 2017) until October 2022 to investigate the impact of other incel platforms being banned on the now largest incel platform (*incels.is*). The found structure is compared with regard to their use of language.

The data analyzed in this work is the fully scraped, publicly visible part of the online forum *incels.is* in November 2022. All posts later than the 31st of October 2022 are dropped to achieve the same endpoint for all users. After pre-processing, the final data set consists of 6,914,781 individual posts distributed over 338,328 single threads written by 11,796 unique users over the time from the 7th of November 2017 until the 31st of October 2022. For the graph representation of the forum, the quoting feature of the forum is used. The nodes are the users. The directed edges are generated based on who quoted whom. Posts without direct quotes are counted as quoting the original poster. The weight corresponds to the number of times user *u* quotes user *v*. Comparative studies conclude that the *Infomap* algorithm is suitable for directed & weighted large networks such as the present graph [9]. *Infomap* is based on a random walker the detected clusters reflect areas where information circulates [10]. The *Infomap* algorithm is applied to the static, weighted, and directed one-mode network representation of *incels.is*. Each user can be only part of one community. The use of language within the forum is investigated with two scores established in former incel research: Farrell et al.'s (2019) misogyny dictionary and the Google Perspective API used by Riberio et al. (2021, 2021b)

Infomap detects three major clusters (**C1**, **C2** & **C3**) that contain 97.62% of all users. The clusters show a clear behavior of succession (see Figures 1a & 1b). This observation could be attributed to the random walker-based algorithm - the graph contains latent temporal information: users that have been active at the same time are more likely to have quoted each other. The path from the first users to the latest new users is thereby expected to be longer since they had less or no chance for interaction. In that sense, a cohort-like behavior of the clusters found by *Infomap* based on the given graph is to be expected. The question is whether the transitions between two clusters actually represent a meaningful observation or are just arbitrary fragments

of the algorithm’s optimization. An investigation of the newly active users reveals that the clusters are meaningful (see Figures 1c & 1d). For the beginning of **C2** as well as **C3**, other incel platforms have been banned. Clear jumps, especially for the new users are visible for weekly posts as well as new users. The change is stronger for the ban of *r/braincels* compared to the other two platforms. This is to be expected since *r/braincels* was a much larger platform compared to *r/incelswithouthate* and *incels.win*. Besides: *incels.win* was founded as a replacement for *r/incelswithouthate*. The full impact of user migration from *r/incelswithouthate* to *incels.is* only converged after *incel.win* went offline too. The user base of each cohort is thereby clearly fueled by migrating users. A content analysis of the relevant threads during the observed transition times supports this claims. The use of language does not differ significantly between the communities (see Figure 2). The active user & post numbers stayed rather stable over more than four years, with an activity spike at the beginning of Covid-19. The median activity time of a user (first until last known post) is 25 days, implying high fluctuation among users.

This study finds a clear impact of the deplatforming of incels on Reddit on the *incels.is* forum. Unlike previous research, we also do not find the community to diminish.

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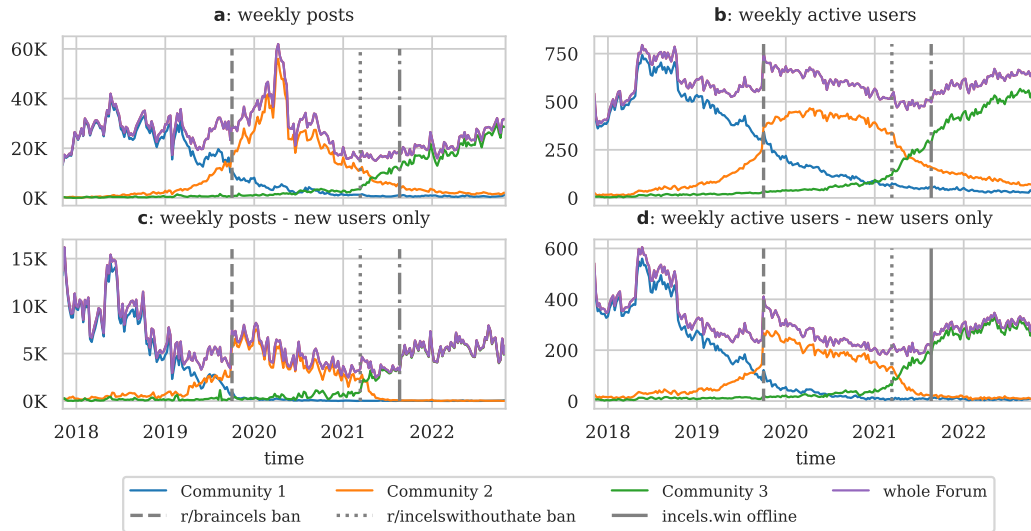


Figure 1: Weekly posts and active users (have posted) on incels.is: overall & per cohort

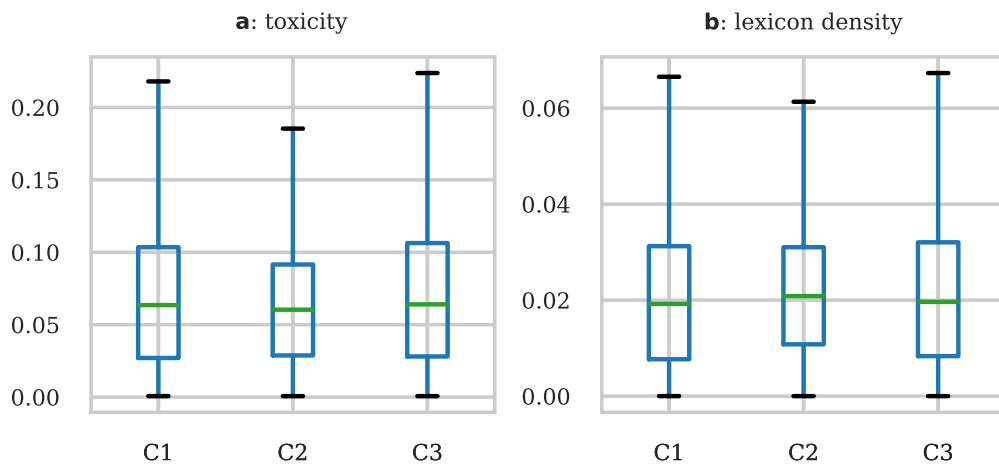


Figure 2: Distribution of toxicity and lexicon density (misogyny) per cohort.