



SHOUTING AT MPS:

SENTIMENT ANALYSIS OF TWEETS SENT AS @MESSAGES

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Background

- Concerns about
 - *hatred of MPs in wake of Jo Cox death*
 - *online abuse and intimidation related to Corbynistas/anti-Corbys*
 - *violent language towards public figures online*
- Obligation of MPs to maintain a social media profile
- Problems of professionalism/authority vs likeability

Methodology

- All tweets sent to 565 MPs accounts captured from December 22 and is ongoing (break after election)
 - *Pre-election, collected around 6 million tweets*
 - *1 million directed at only one account*
- Manually categorise as: hostile, disagree, neutral, positive & threat
 - *Five people[*] - around 10,000 tweets*
- Naive Bayes classifier trained on the manually classified tweets
- Rest of database then classified using Naive Bayes classifier
- Live feed using Tableau software and Naïve Bayes classifier

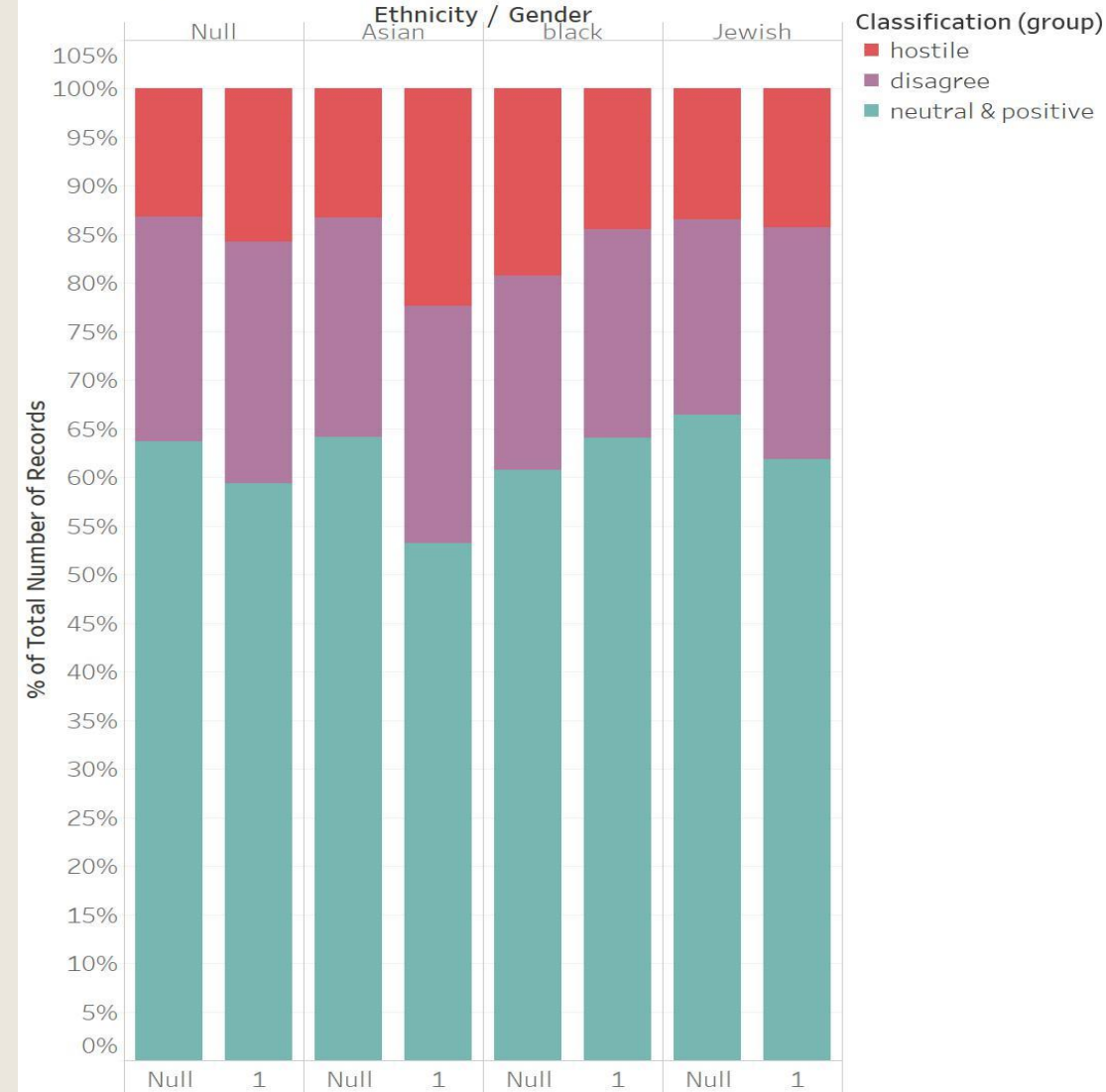
[*] With thanks to those five people, who read loads of boring tweets and some funny ones

Results:

Demographic comparisons

Categorised tweets by ethnicity and gender

By single @messages, May 18 to June 12, 2017

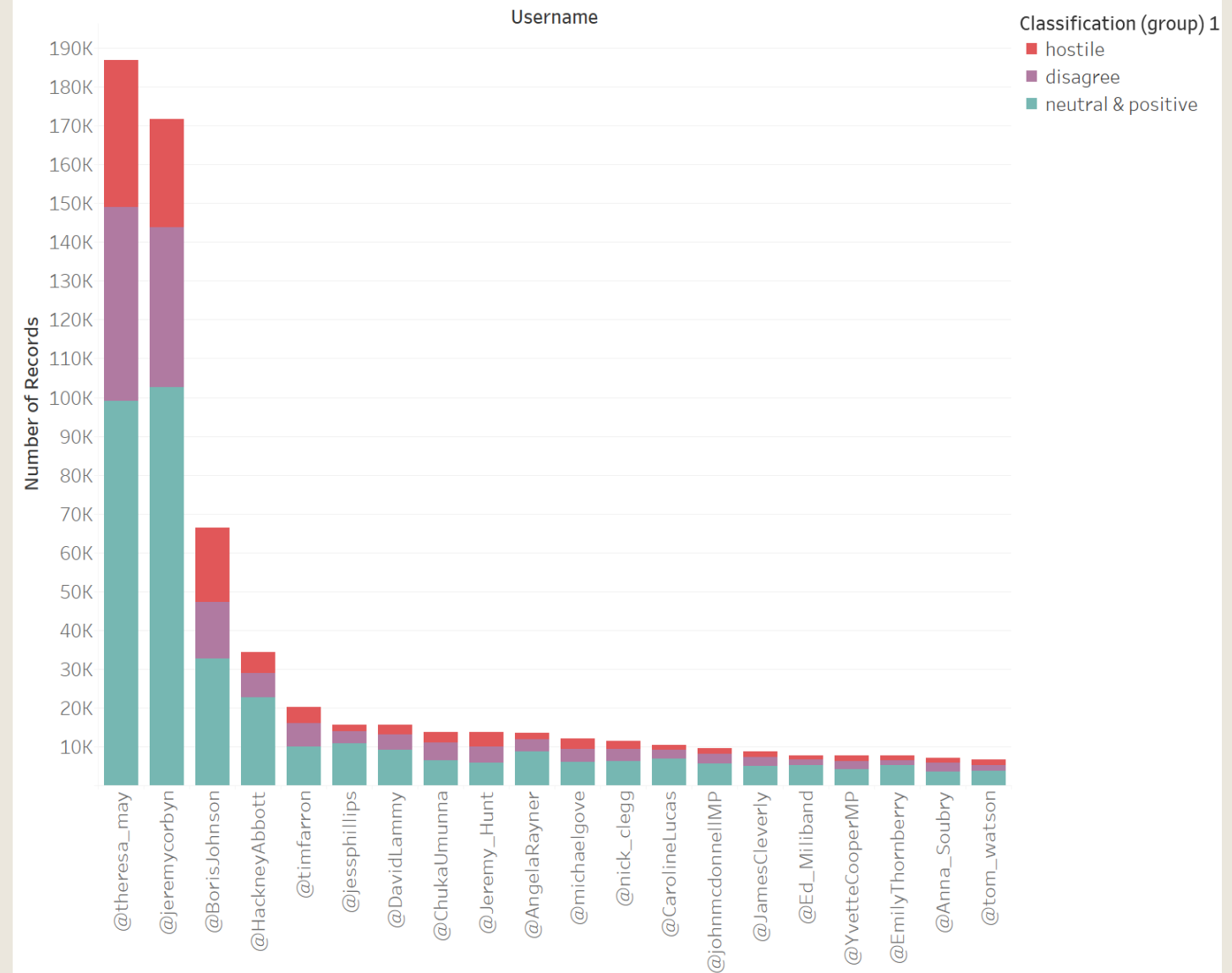


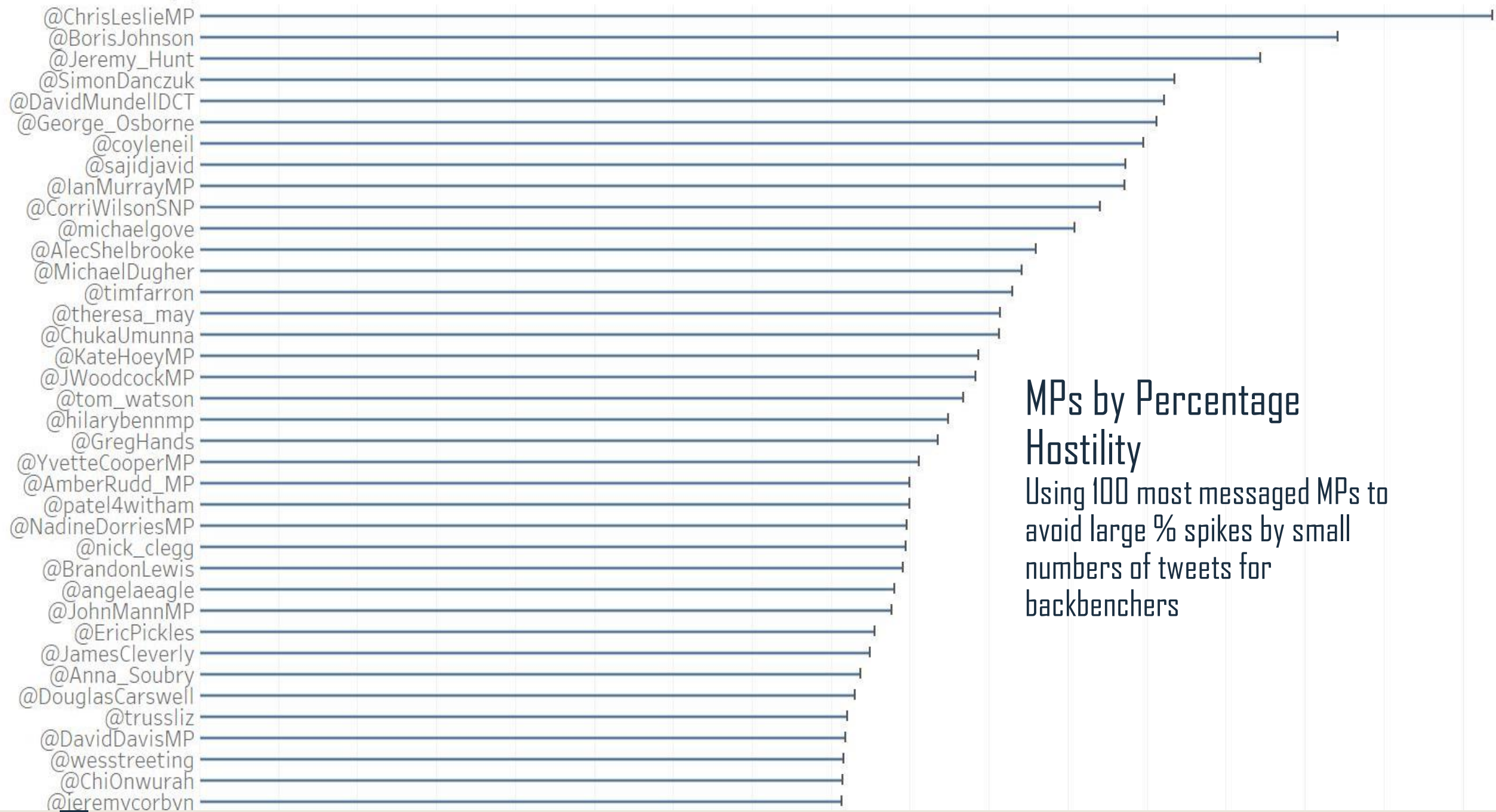
Busy Feeds

- High numbers of hostile tweets are linked to generally high level of activity

Top 20 most messaged MPs

By single @messages, March 18 to June 12, 2017





MPs by Percentage Hostility

Using 100 most messaged MPs to avoid large % spikes by small numbers of tweets for backbenchers

High general levels of hostility

- Busy feeds
- Scottish politics
- Corbyn critics
- High profile politicians

Spikes caused by

- Broadcast appearances (Question Time, Sunday morning shows)
- Embarrassing public appearances (shareable videos)
- Incautious tweets
- Speaking against Corbyn

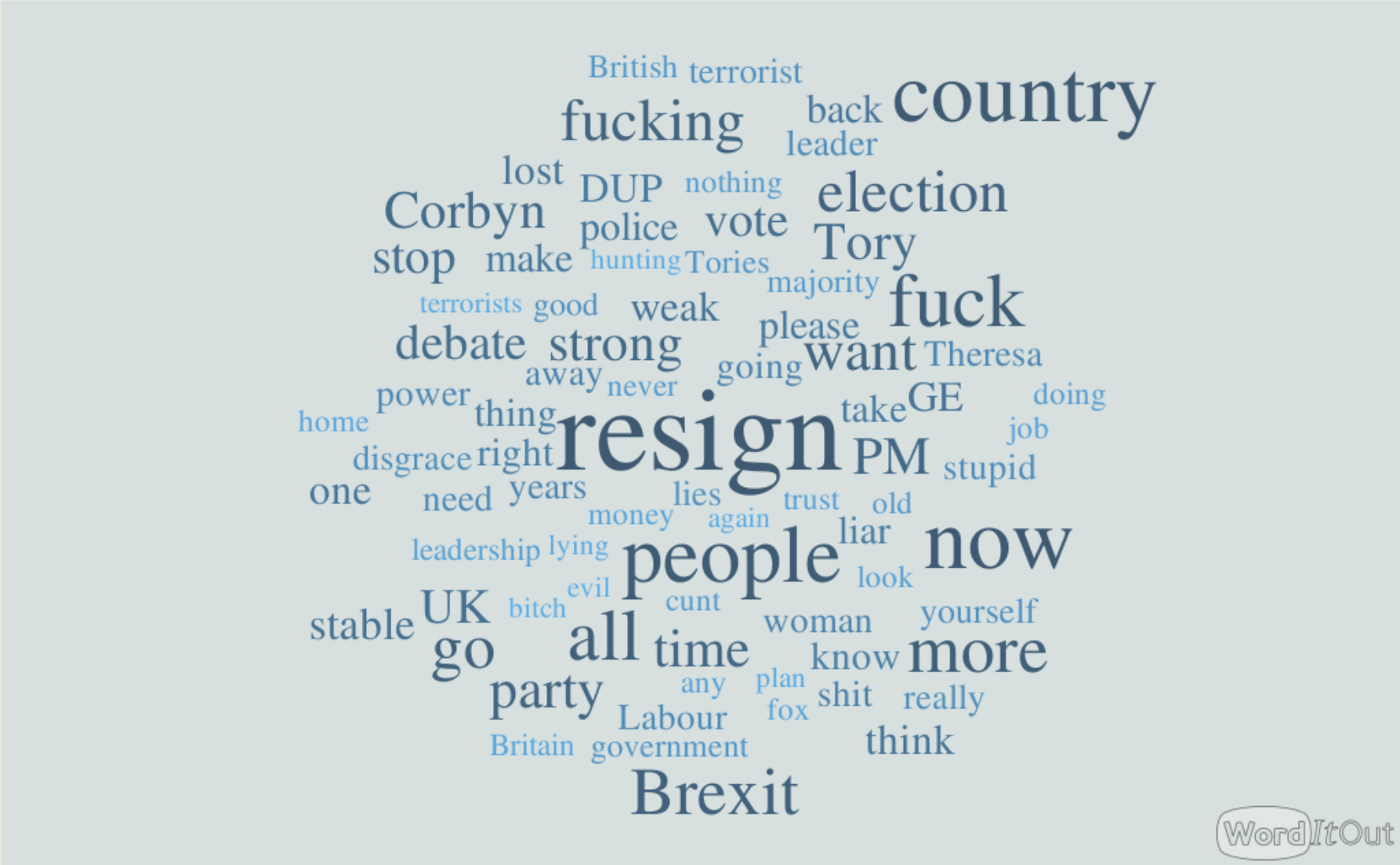
Analysis within individual accounts

- Network analysis of users messaging an individual
 - *Identification of key influencers*
 - *Requesting account deletion to disrupt networks of abusers*
- Frequency analysis of words:
 - *In all tweets of one account*
 - *In one category of one account*
 - *Over time to see how conversations are changing*

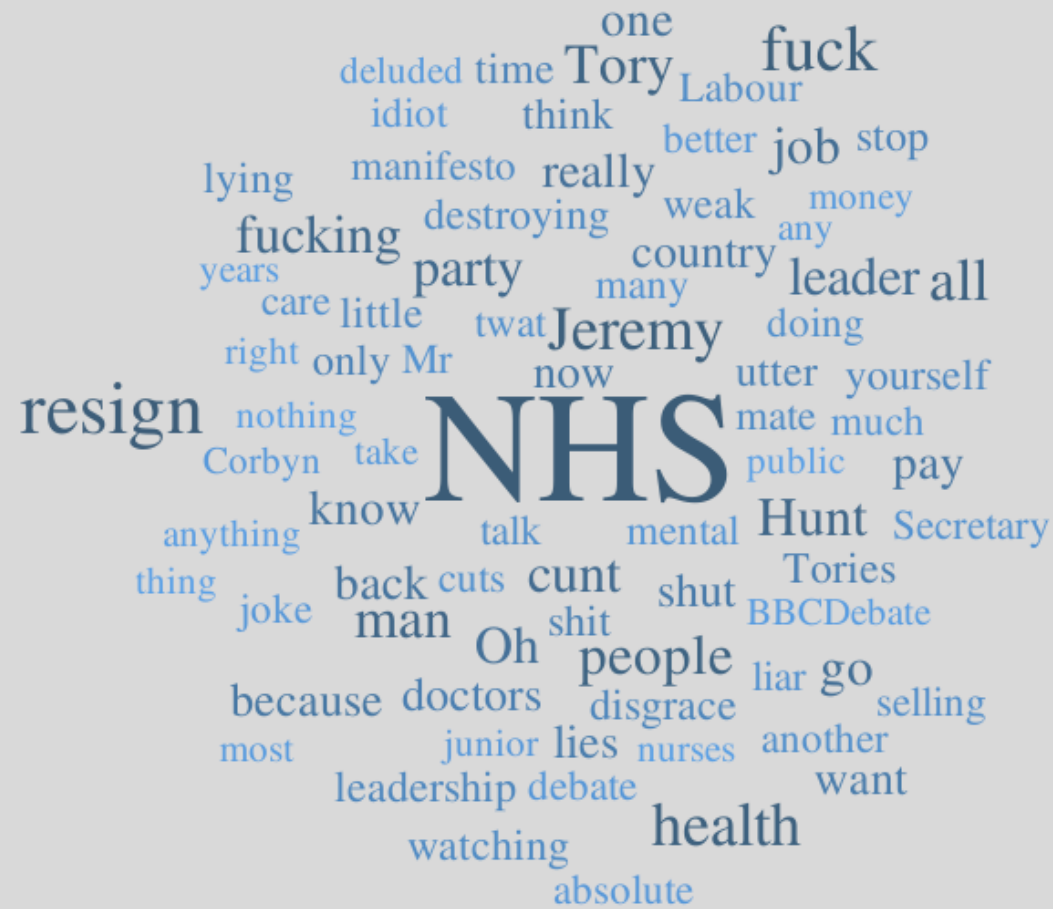
Chuka Umunna



Theresa May



Jeremy Hunt



Future directions

- Further research
 - *Additional classification algorithms*
 - *Analysis of geocoded tweets*
 - *Comparison with positive tweets*
- Tool for journalists/activists/academics/public
 - *Life feed using Tableau software*
- Long term storage/tracking of traffic including data about deleted tweets
- We are inviting research collaborators!