

The structure and influence of discussions of bTB and BVD on Twitter

factual vs. rhetorical

Aim

To analyse the discourse, on Twitter, relating to disease control

Hypothesis

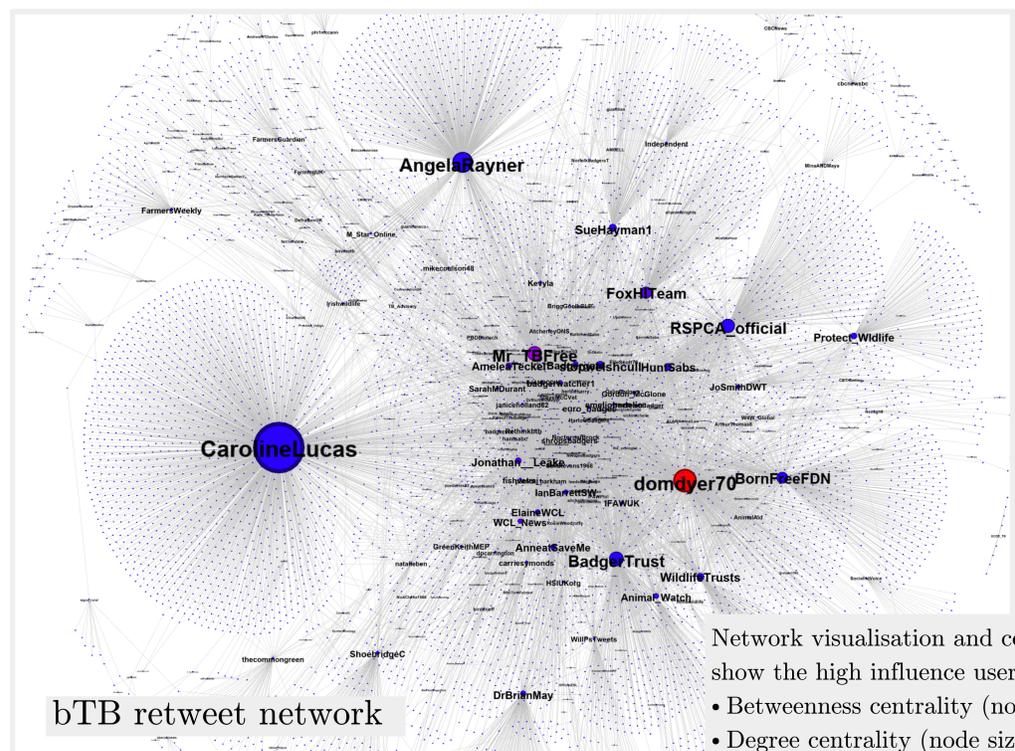
Discourse is polarised by “factual”, disease-related discussion and “rhetorical” or controversial discussion

Study

- Identify various interaction networks in the data, relating to the various modes of discourse on Twitter
- Identify who the “influencers” are
- Find measures which identify if a discussion is “factual” or “rhetorical”

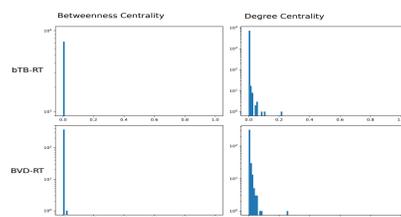
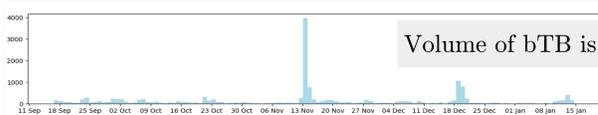
Data

- 120 days worth of Tweets on Bovine Tuberculosis (bTB) and Bovine Viral Diarrhoea (BVD)
- bTB discourse includes a number of areas of contention and controversy, e.g. around badger culling.
- BVD discourse tends to be centred around disease control, with very little controversy

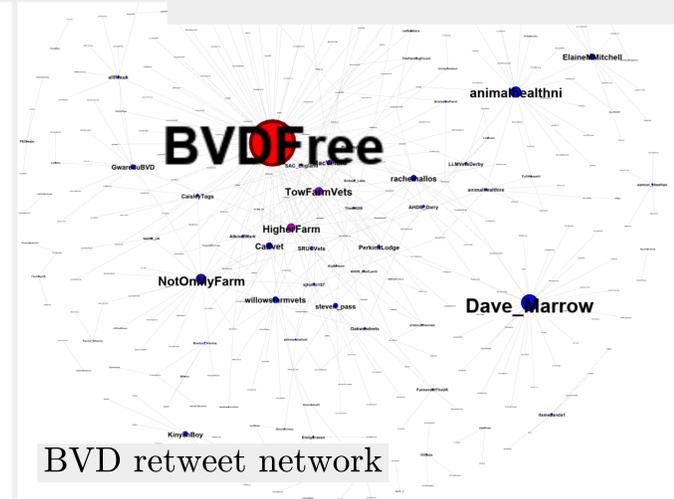


Network visualisation and centrality measures show the high influence users by:

- Betweenness centrality (node colour)
- Degree centrality (node size)



Centrality distributions show little difference between the networks.



Networks:	Retweet	Reply	Follow
bTB	bTB-RT	bTB-Re	bTB-FI
BVD	BVD-RT	BVD-Re	BDV-FI

Community detection

Using the basic Girvan-Newman community detection algorithm we see that the networks cluster into communities around the high-influence users.

Further study

- So far we have shed little light on the distinction between “factual” and “rhetorical”.
- The next step is to use a more focused community detection algorithm, with prior information on which high-influence users fall into which camp.
- We plan to gather another data set for comparison (e.g. avian flu?)
- What are the roles of high-influence users? Are they focused on a topic? Do they act as conciliators?
- How do the networks change when an event occurs? (e.g. bTB Godfray report, which is in our data set)

