

Thesis notes

2nd March

A user-content graph on r/AskTrumpSupporters

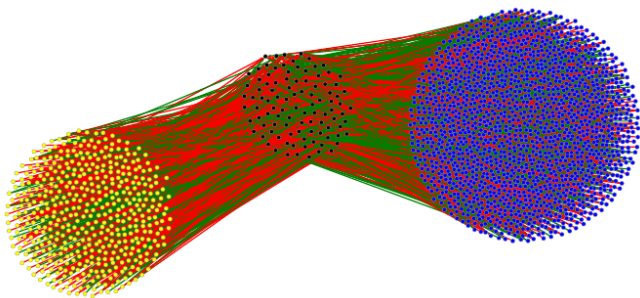


Figure: A graph built on 200 contents from r/AskTrumpSupporters, with Supporters, Non Supporters and Content nodes

Measuring content separation (1)

		User label	
		Supporter	Non Supporter
Stance	Positive	a	b
	Negative	c	d

If $a + d \gg c + b$ then the content is close to supporters.

If instead $c + b \gg a + d$ then the content is close to non supporters.

If $c + b \approx a + d$ then the content is neutral.

Measuring content separation (2)

A possible measure of content separation:

$$\alpha = \frac{a + d}{a + b + c + d} \quad (1)$$



Measuring content separation (3)

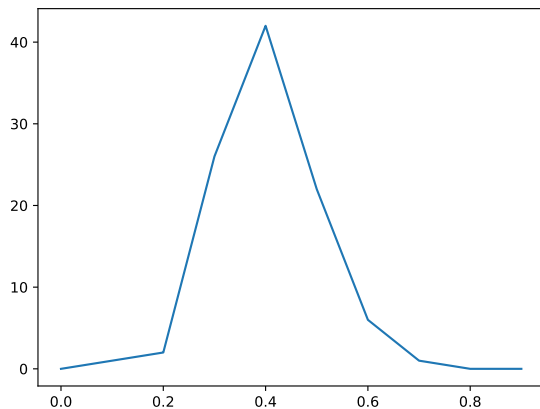


Figure: Histogram of content per α

A larger graph from @nytimes (1)

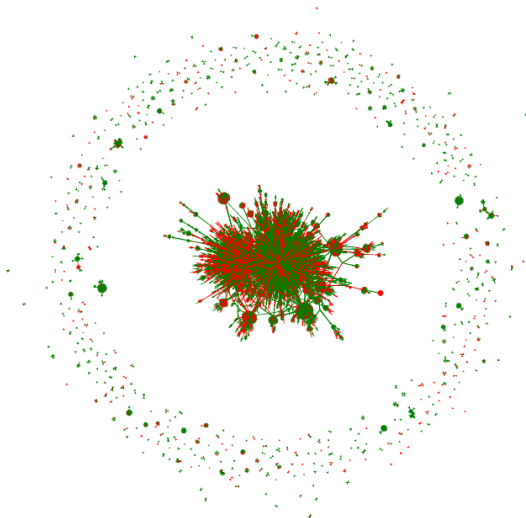


Figure: A graph built on 400 contents from @nytimes

A larger graph from @nytimes (2)

- ▶ The graph has 15914 vertices and 26439 edges
- ▶ Fraction of negative edges: 0.442 45
- ▶ Clustering coefficient: 0.000 67 with standard deviation 0.020 23
- ▶ Average shortest path length: 13.534 55
- ▶ Median shortest path length: 14.0
- ▶ Average degree: 3.322 73
- ▶ Unique average degree: 2.284 28

A larger graph from @nytimes (3)

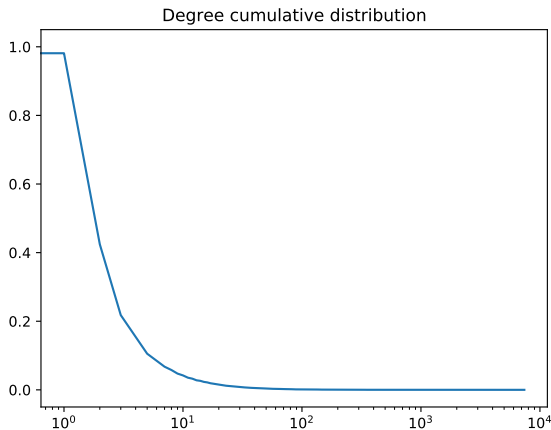


Figure: Cumulative degree distribution (log scale)

A larger graph from @nytimes (4)

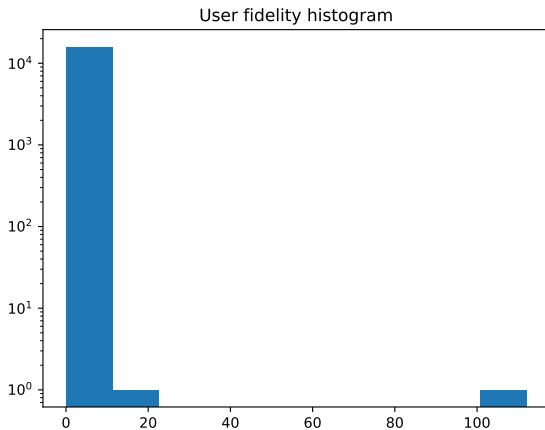


Figure: Histogram of users per number of contents they discussed

A larger graph from @nytimes (5)

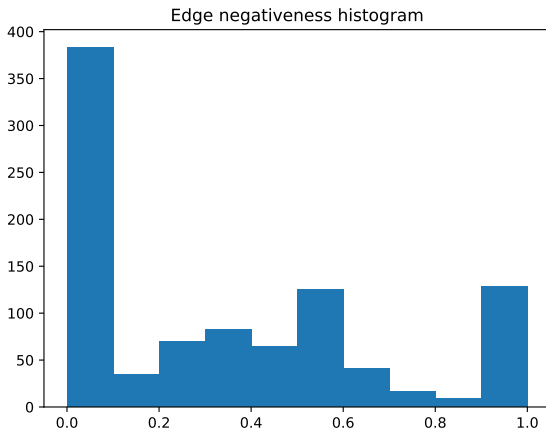


Figure: Histogram of contents per fraction of negative edges

A larger graph from @foxnews (1)

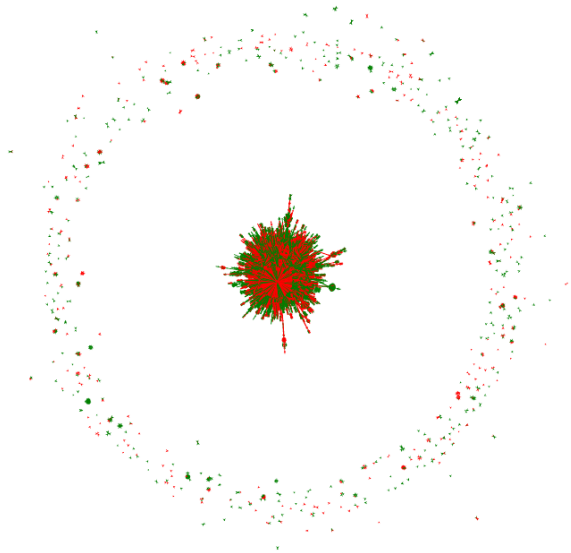


Figure: A graph built on 400 contents from @foxnews

A larger graph from @foxnews (2)

- ▶ The graph has 41188 vertices and 158540 edges
- ▶ Fraction of negative edges: 0.565 07
- ▶ Clustering coefficient: 0.000 80 with standard deviation 0.261 49
- ▶ Average shortest path length: 7.159 07
- ▶ Median shortest path length: 7.0
- ▶ Average degree: 7.698 36
- ▶ Unique average degree: 2.640 91

A larger graph from @foxnews (3)

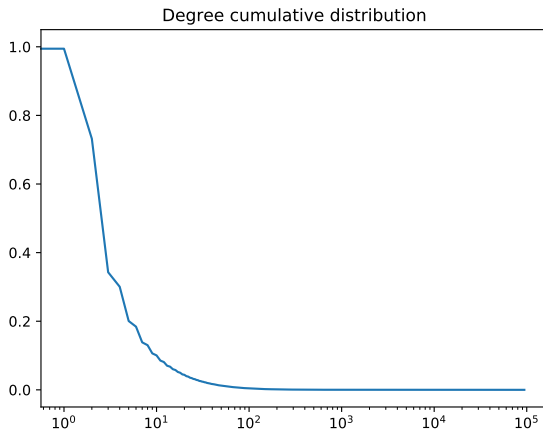


Figure: Cumulative degree distribution (log scale)

A larger graph from @foxnews (4)

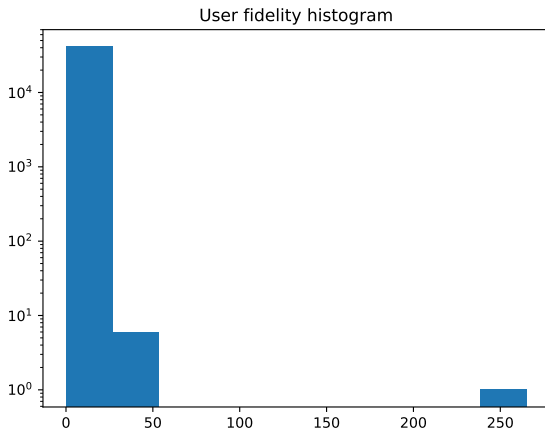


Figure: Histogram of users per number of contents they discussed

A larger graph from @foxnews (5)

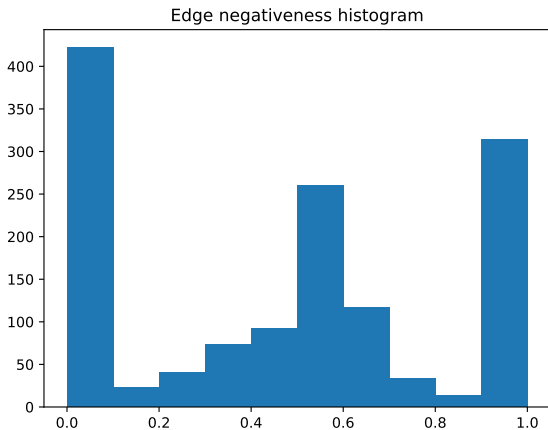


Figure: Histogram of contents per fraction of negative edges