

COVID-19, MISINFORMATION, FAKE NEWS, CONSPIRACY THEORIES AND ISLAMOPHOBIA ON TWITTER

SENTIMENT ANALYSIS

Using Sentiment Analysis it is possible to assign a numeric value to each tweet, across a range of different emotional dimensions. It is then possible to compare the different range and strength of emotions being expressed by different groups. This allows for a more nuanced investigation of the Tweet content, looking beyond what has been said and instead considering how it was said and what it conveys emotionally.

METHOD

100
TWITTER
USERS



100,545
TWEETS

For the Twitter data the comments were assigned to categories of being either pro-social in content or anti-social in content. If they could not be assigned or were unclear they were not included resulting in a reduced overall sample size of 40,340. SÉANCE 1.2 (Crossley, Kyle & McNamara, 2017) was used to determine the emotional content/valence of each Tweet. This was done using the EmoLex (Mohammad & Turney, 2013). This is an emotional lexicon that scores a comment on a decimal scale from 0 to 1, with higher scores indicating a stronger association to a particular emotional state. It focuses on eight emotion categories: anger, anticipation, disgust, fear, joy, sadness, surprise, trust.

RESULTS

	Condition	N	Mean	Std. Deviation
Anger	Prosocial	18495	.026	.043
	Antisocial	21845	.019	.043
Anticipation	Prosocial	18495	.023	.042
	Antisocial	21845	.025	.055
Disgust	Prosocial	18495	.015	.035
	Antisocial	21845	.014	.039
Fear	Prosocial	18495	.032	.049
	Antisocial	21845	.024	.048
Joy	Prosocial	18495	.016	.039
	Antisocial	21845	.020	.053
Sadness	Prosocial	18495	.022	.038
	Antisocial	21845	.019	.044
Surprise	Prosocial	18495	.011	.031
	Antisocial	21845	.014	.041
Trust	Prosocial	18495	.044	.066
	Antisocial	21845	.041	.069

TABLE 1: MEAN AND SD EMOLEX SCORES FOR PROSOCIAL AND ANTISOCIAL TWEETS

As can be seen in table 16X there appear to be only marginal differences in the mean scores for each EmoLex category between Prosocial and Antisocial Tweets. Some larger differences can be seen in some areas with higher mean Anger, Sadness and Fear for Prosocial compared to Anti. With notably higher mean Joy for the Antisocial.

SUMMARY

Initially these results seem counterintuitive as the supposedly positively framed prosocial tweets, tweets around combating misinformation and Islamophobia, score highly for very negative emotional states. However this appears to reflect the emotional response that prosocial tweeters are having to the negative content they encounter – that of the antisocial tweeters, spreaders of misinformation, and Islamophobes. They are directing in their comments anger towards these individuals, disgust at their behaviour and statements, fear of the impact it may have on their safety and that of others.

Contrastingly the significant inclusion of Joy in the Tweets of those considered to be antisocial potentially reflects the satisfaction taken in being contrary, either through the process of trolling or potential enjoyment in the impact their statements have. It has been noted that high scores on the Dark Triad/Tetrad (with sadism being one of the scored traits) can be associated with antisocial online behaviour. If this applies in this context also it would explain the Joy and Anticipation present.