

Moral Emotions Drive Spread of Political Content on Social Media

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How do ideas travel social media?



Figure 1. Trump tweeting about Jan 6th, 2021.



Figure 2. The Jan 6th Insurrection [5].

We replicate and extend Brady’s et al. analysis to get a better understanding of how ideas spread on social media [1][2].

Moral emotions – emotions connected with evaluations of social norms and brought about by interests potentially different from one’s own [3].

Negative Binomial regression on retweets

- We tested our hypotheses on 300K tweets about **gun control** [2][4].
- **Moral emotional word dictionary** to count the number of moral emotional, positive and negative words per tweet [2].
- **Gunning Fog Index** to quantify complexity of tweets.
- **Negative Binomial regression** fit on the data to test the hypotheses.

$$\text{Gunning Fog Index} = 0.4 \left[\left(\frac{\text{words}}{\text{sentences}} \right) + 100 \left(\frac{\text{complex words}}{\text{words}} \right) \right]$$

	twid	rtwid	username	text
1	6616645633776288	NaN	ROCKWITHBECK	BOYCOTT NOV 4 @ABC @CMAwards > THREAT TO AL...
2	661664567940874240	6.616639e+17	BUSHADEMOCRAT	RT @AddInfoOrg: 'Responsible Gun Owner' Gives ...

Figure 3. Example tweet and retweet items.

Each moral emotional word adds 33% retweets

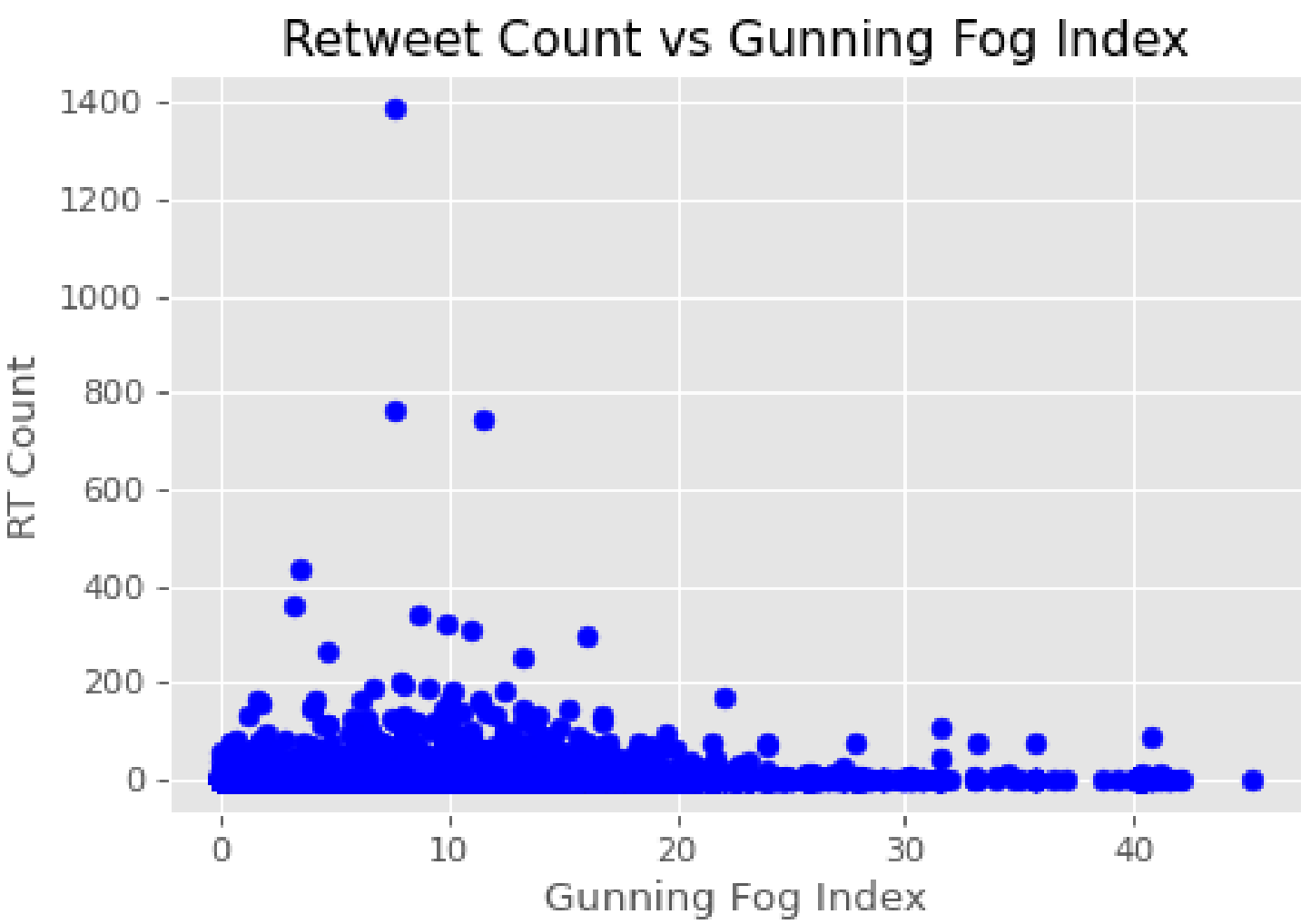


Figure 4. An average tweet has about one and a half retweets and is easy to read for a high school junior.

1. For each moral emotional word, a tweet gets 33% more retweets.
2. For each positive moral emotional word, a tweet gets 4% fewer retweets. However, for each negative word, a tweet gets 55% more retweets. So make sure to include negative emotional words in your tweets as often as possible!
3. For a unit increase in complexity, a tweet gets 1% fewer retweets. So don’t go too complex but otherwise you’re probably fine!

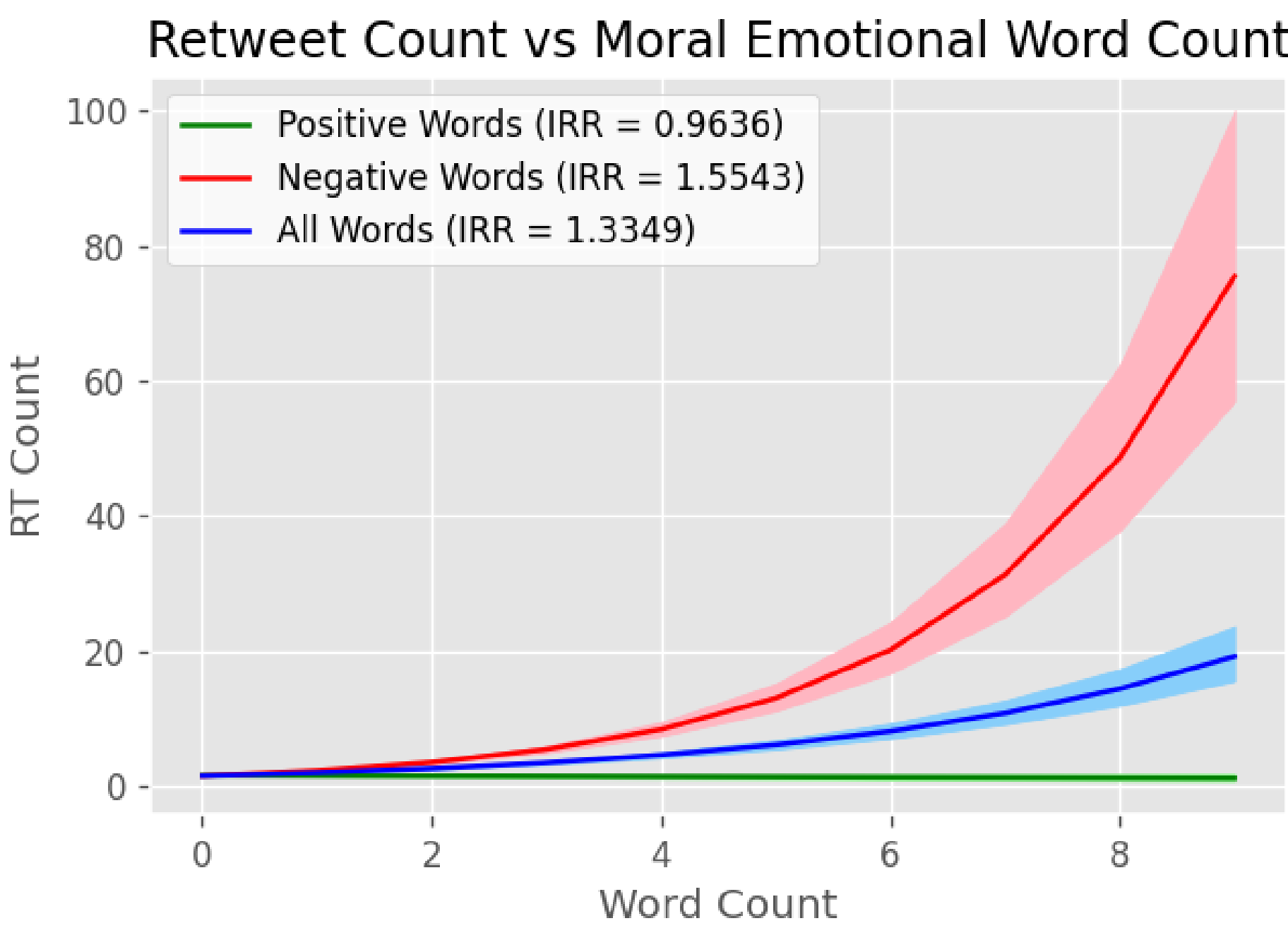


Figure 5. The predicted retweet count as a function of moral-emotional, positive and negative words.

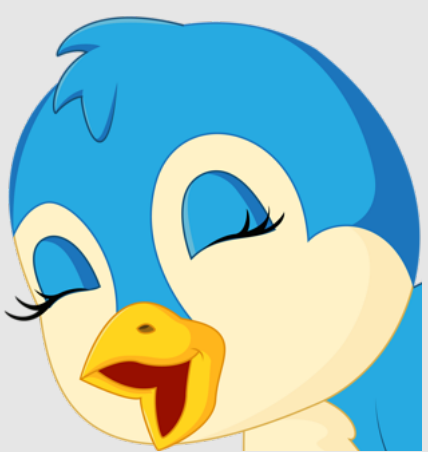
Moral emotions rule social media

1. Moral-emotional words may **increase** the diffusion of tweets.
2. Negative moral-emotional words may **increase** the spread of tweets, while positive moral-emotional words may **decrease** it, though at a lower rate.
3. Increase in tweet complexity may **decrease** the spread of tweets.

How do I get more retweets?

Moral Emotions

guilt, joy, cruel
hope, shame, safe, value
violence, kill



Complexity

Many years later, as he faced the firing squad,
Colonel Aurelian Buendia was to remember
that distant afternoon when his father took
him to discover ice.



Thanks

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References

[1] Brady, W. J., Gantman, A. P., & Van Bavel, J. J. (2020). *Attentional capture helps explain why moral and emotional content go viral*. Journal of Experimental Psychology: General, 149(4), 746.

[2] Brady, W. J., Wills, J. A., Jost, J. T., Tucker, J. A., & Van Bavel, J. J. (2017). *Emotion shapes the diffusion of moralized content in social networks*. Proceedings of the National Academy of Sciences - PNAS, 114(28), 7313-7318.

[3] Ellsworth P., Scherer, K. (2003). *Appraisal processes in emotion*. Handbook of Affective Sciences, Oxford Univ Press, New York, pp 572-595.

[4] Full raw data and dictionaries can be accessed at <https://osf.io/59uuz>

[5] Image credit: Alex Edelman/AFP via Getty Images