Slamming political rivals may be the most effective way to go viral—revealing social media's 'perverse incentives'

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Social media posts about the "political outgroup"—criticizing or mocking those on the opposing side of an ideological divide—receive twice as many shares as posts that champion people or organizations from one's own political tribe.

This is according to a study led by University of Cambridge psychologists, who analyzed over 2.7 million Tweets and Facebook posts published by either US media outlets or Members of Congress from across the political spectrum.

Researchers also found that each additional word referencing a rival politician or competing worldview (e.g. 'Biden' or 'Liberal' if coming from a Republican source) increased the odds of a social media post being shared by an average of 67% across the dataset.

These effects were found to be the same on both platforms, and regardless of political orientation.

The findings are published today in the journal *Proceedings of the National Academy of Sciences.*

Previous research investigating online "virality" found that using highly emotive language increases the likelihood of social media shares—particularly negative emotions such as anger, or when conveying a sense of moral indignation.

However, the latest study shows that using terms related to the "political outgroup" is almost five times more effective than negative emotional language, and almost seven times more effective than moral emotional language, at increasing the number of shares.

The scientists argue that their findings highlight the "perverse incentives" now driving discourse on major social media platforms, which in turn may fuel the political polarization threatening democratic processes in the US and elsewhere.

"Slamming the political opposition was the most powerful predictor of a post going viral out of all those we measured. This was the case for both Republican and Democrat-leaning media outlets and politicians on Facebook and Twitter," said Steve Rathje, a Gates Cambridge Scholar and first author of the study.

"Social media keeps us engaged as much as possible to sell advertising. This business model has ended up rewarding politicians and media companies for producing divisive content in which they dunk on perceived enemies."

"Our study suggests that out-party hate is much better at capturing our attention online than in-party love. This may be feeding a dangerous political climate," Rathje, a researcher in Cambridge University's Social Decision-Making Lab, said.
In fact, when looking at the use of reaction emojis on Facebook, the team found that—on average—posts about political opponents attracted over twice as many angry face emojis than posts about the "ingroup" gained in heart-related emojis.

This is symbolic of the problems with attempts to address pervasive political hostility, say researchers. Changing algorithms to value "deeper" engagement such as reactions and comments in the hope of bringing people together—as Facebook announced in 2018—may actually prioritize posts full of "outgroup animosity".

"We are told we need to escape our online echo chambers," said Prof Sander van der Linden, senior author of the study and Director of the Social Decision-Making Lab. "Yet if we do start to follow a diverse range of accounts we encounter waves of negativity about our own social group due to the viral nature of hostile posts."

He points to previous research showing exposure to diverse views on Twitter increases political polarization. "Echo chambers may be less important than the kind of content surfacing at the top of our feeds. Exposure to divisive in-party or out-party voices is unlikely to be beneficial in the long run," said Van der Linden.

The latest study is one of the first to use "big data" to explore the psychology of the "ingroup and outgroup"—the social categories we identify with and those we don't—in sparking viral content.

The scientists created a vast dataset of Facebook and Twitter posts including those from more liberal (e.g. New York Times, MSNBC) and more conservative (e.g. Fox News, Breitbart) media outlets, and well over a half a million tweets from Republican Congress Members and the same again from Democrats.

The team used lists of politicians and identity terms as well dictionaries of positive, negative and morally emotive language to count the references in each post and tally it with numbers of shares, retweets, comments and reactions.

Examples of viral posts featuring outgroup language include conservative media tweets such as "Every American needs to see Joe Biden's latest brain freeze" and Facebook posts from Democrat politicians saying "Donald Trump has lied more than 3,000 times since taking office but Republicans refuse to say Trump is a liar".

Across the entire dataset of politicians and media outlets on both Facebook and Twitter, each word with a negative sentiment was associated with a 14% increase in the odds of a post being shared, while each positive word was linked to a 5% drop in the chance of shares. "Moral-emotional language" related to a sharing boost of 10% per word.

Use of terms for the political ingroup had no significant effect on the chances of shares. However, each outgroup word used in a post increased the odds of it being shared by 67%.

Findings were starker when looking at social media of just the US Members of Congress. Negative language increased shares by up to 45% per word, while each positive word decreased sharing by 2-5%.

Ingroup terms did little to sharing chances. Yet each outgroup word used in a post—almost exclusively to attack or deride—was linked to between a 65-180% increase in sharing across both sites, regardless of whether it was a specific politician or general identity term.

"Viral content can help campaigns or social movements to succeed," said study co-author Prof Jay Van Bavel from New York University. "But when hostile and hyper-partisan language is most likely to go viral, generating superficial engagement may ultimately harm politics and society."

Van der Linden added: "Unless social media companies start penalizing polarizing content and rewarding more constructive posts, these platforms will continue to be swamped by political animosity that risks spilling into real-world turmoil. It may mean a radical rethink of their models for revenue generation."

Rathje, Van Bavel, and van der Linden have also recently launched a research project allowing
people to gauge the political slant of news shared by Twitter accounts—whether their own or other public feeds—as well as how reliable it is. The site includes "fake news scores" for all US Members of Congress.


Provided by University of Cambridge

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