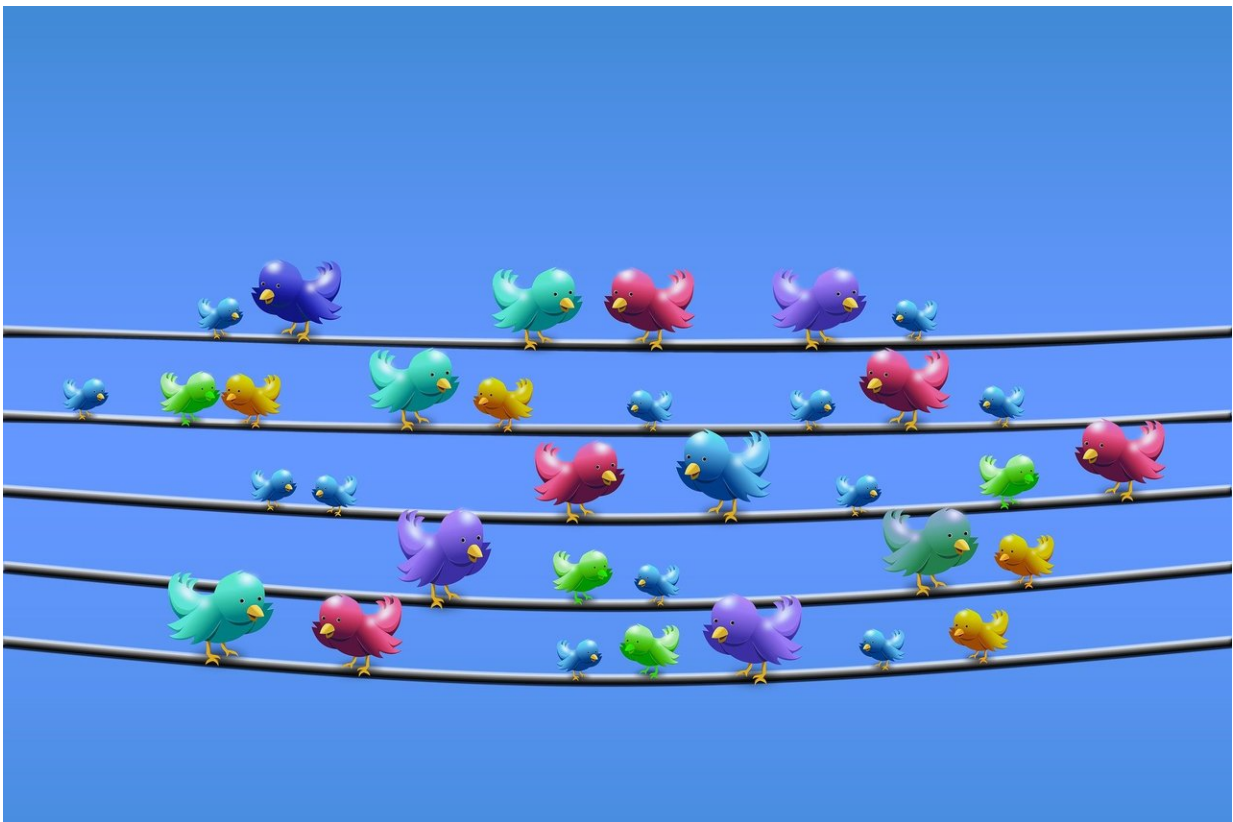# Innovative tool analyzes all 22,000 tweets from 2016 Republican presidential candidates

October 31 2019, by Bert Gambini

Credit: CC0 Public Domain

Donald Trump's Twitter activity during the 2016 presidential primaries was largely comprised of tweets characterized by competition. He

focused on performance, style, personal attacks and his standing in the polls.

Communication researchers refer to this type of political messaging as a strategy frame, which fundamentally uses the language of war, and the immediate realities of winning or losing, to deliver its point. Issue frames, meantime, deal with policy, decision-making, and identifying problems and proposing solutions.

Not surprised about the nature of Trump's tweets? There's more.

Among the other major Republican hopefuls, only John Kasich, the last of the originally crowded GOP field still standing before Trump headed to the convention as the party's presumptive nominee, emphasized strategy over issues, according to a new study by researchers from the University at Buffalo and Georgia State University.

The researchers used a new tool they've recently developed to analyze all (yes, all) of the more than 22,000 tweets sent by Republican presidential hopefuls during the 2016 primaries.

The findings published in the *International Journal of Communication* on September 22, 2019 (Volume 13) also show the candidates' framing to be dynamic over time. For instance, issue frames become more prominent around televised debates, while strategy resumes its toehold as voting day approaches.

The research, with the insights afforded by its innovative method, is providing a previously unseen glimpse into the largely unexplored genetics of politicians' Twitter activity at a time when social media sites encroach upon and prepare to eclipse television's long-standing role of defining presidential candidates for the American electorate.

"With every round of elections, more and more people are getting their information directly from the candidates through platforms like Twitter," says Yotam Ophir, an assistant professor in UB's Department of Communication, co-author of the study with Dror Walter, an assistant professor at Georgia State.

"Twitter gives candidates more control and agency over their message than the traditional mass media—yet we know little about what politicians do with this power."

The control, Ophir mentions, derives from the fact that Twitter has none of the gatekeeping functions of the traditional mass media. Account holders are information publishers, and their content is a matter of personal choice rather than the editorial judgements of television, newspaper or radio.

Strategy framing, however, comes with a cost. Ophir says research shows it has been found to consistently have detrimental effects on the democratic process, as it tends to increase cynicism among voters.

And just as traditional media over the last few decades has been strategy focused at the expense of issues, according to Ophir, so too were the two most successful GOP entries in the race—Kasich and Trump, the latter of whom had the largest volume of activity during the primaries and used the fewest number of issue-framed tweets.

But who can analyze all those 22,000 tweets? No one, actually. The data arrive so quickly and in such a torrent that manual analysis is impossible. That's why Ophir and Walter developed their Analysis of Topic Model Networks (ANTMN), which is capable of processing what's beyond human reach.

"In the past, if you wanted to know how politicians used Twitter, you'd

likely find a representative sample of a hundred tweets, or a quantity that could be read in some reasonable length of time, and code them manually," says Ophir. "Humans are good at reading individual texts, but not so good at reading thousands of texts and discerning the patterns."

Topic modeling can cope with [big data](#) and inductively analyze thematic content.

"Inductive is important, because we're not telling the algorithm what we're expecting to find," says Ophir. "It is unsupervised learning and the algorithm identifies patterns on its own by assembling distribution lists of words that tend to appear together."

Topic modeling's shortcoming is its specificity.

"One of the topics from this analysis might be, 'Trump attacks the media,' but that's too specific to learn anything about the other candidates," Ophir says.

To address this limitation, once they've finished their topic modeling, Ophir and Walter do a network analysis where they treat each topic as a node in a network.

"Just like you can analyze a social media network and see who is friends with whom, or see communities of friends from work or school, ANTMN sees associations and creates clusters of topics. In this case, it found strategy and issue—on its own and not because we programmed it to look for those two," Ophir says.

The 2016 primary analysis is among the initial steps for this tool and the researchers when analyzing complicated data sets and applying what's learned to important theoretical questions.

"We now gain insight on the political system that we didn't have," says Ophir. "The only two candidates who almost entirely ignored issues were the last two in the Republican race."

For 2016, Ophir says the Republicans, with the party's 12 main candidates, provided the study with a richer data set than the sparse Democratic field, but he still has bigger plans for the future.

"We keep developing the method. We want to test it on a larger scale, and we want to look at the effects," he says. "We assume the effects of strategy framing on social media are the same as mass media, but that might not be the case. We don't know at this point."

What is certain is that Ophir and Walter will be using their method to analyze the next presidential race.

"We'll be using it in 2020," Ophir says.

  More information: Dror Walter, Yotam Ophir. The Elephant and the Bird: Republican Candidates' Use of Strategy and Issue Framing in Twitter During the 2016 Republican Presidential Primaries. *International Journal of Communication* (2019)

Provided by University at Buffalo