BRIEF COMMUNICATION

Congressional Twitter Use Revisited on the Platform's 10-Year Anniversary

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The microblogging platform, Twitter, has been an extremely valuable tool for politicians in sharing information, fostering broader communication to constituents,

early 2017. We found Congressional tweeting habits and content have changed very little in the last 8 years. Overall, they tended to use Twitter to pass along political information and links in addition to reporting on official and unof-

motivation, communication, and impact.

and promoting their political stances. This article follows

up on previous research from 2009 on this subject. We

reexamined tweets from the US Congress collected in

ficial activities and meetings. We discuss future spaces for research that go beyond content analysis into issues of

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Introduction

2017 marks the 10-year anniversary of Twitter. In that decade, it has transformed from a niche social media platform used by a technologically savvy few to one that has a profound impact on our daily lives—including our political processes. In 2009, we analyzed the way that members of the US Congress were using Twitter (Golbeck et al., 2010). We gathered every tweet any of these users had ever posted, read and coded them, and analyzed how Twitter was being used. Although the group grew over that year, only 159 members of Congress were online at the end of 2009.

Now every member of Congress has a Twitter account, either operated by the staff or one they post to personally. It has become an indispensable tool for sharing information, communicating directly with the public, reaching the media, and increasing transparency. It is also become a way to bypass traditional media outlets and reach a different audience.

In this article, we analyze the tweets by members of Congress from early 2017 and compare them to the results that we found in 2009. We compare similarities in differences in the full corpus of tweets from Congresspeople rather than comparing changes in behavior by any individual tweeting member. We conclude with insights about the future directions of this line of research, with the goal of better understanding the platform's use and the role that Twitter and social media have among elected officials.

Congressional Twitter Habits Revisited

The focus of our original article on Congressional use of Twitter was to understand the kinds of messages members of Congress were posting. The original project used grounded theory to develop a codebook. Thus, when we set out to analyze tweets from 2017, we used the same codebook. Related work on analyzing legislative tweets has validated that earlier work; codebooks developed for other projects have been remarkably similar to the codes we used in the first study (e.g., Mergel, 2012; Shogan, 2010).

We repeat the codes here for clarity:

- Direct Communication—a message directed at a specific person either with the @id convention or in the text of the message. Direct Communication was divided into two mutually exclusive subclasses.
 - ic Internal Communication—This included messages from one Congressperson to another or from a Congressperson to a staff member.
 - oc External Communication—All other messages, such as those to constituents, were marked as external communication.
- pm Personal Message—These are nonbusiness-oriented messages or notes, such as holiday greetings or other personal sentiments.
- Activities—A message reporting on the Congressperson's activities. This was divided into two mutually exclusive subclasses.

- ob Official Business—This included any official business in Congress, including voting, committee meetings, or making speeches on the House floor.
- la Location or Activity—This code was used when a Congressperson was describing nonofficial activities including trips, meetings with constituents, lobbyists, or non-Congressional organizations, or activities in the home district.
- in Information—This code describes a message that provides a fact, opinion, link to an article, position on an issue, or resource.
- ra Requesting Action—When a Congressperson requests constituents to take some action like signing a petition or voting, the message is coded this way.
- fu Fundraising—Messages occasionally ask for donations and contributions, and we code those as fundraising.
- xx Unknown—Some messages cannot be classified, like when they are only URLs with no text, test messages, or other mistakes like a single character.

We then collected tweets to analyze. We used the Twitter accounts for each member of Congress linked from Tweet Congress (http://tweetcongress.org). These are accounts associated with each individual member of Congress and tend to be their official accounts from which they tweet about Congressional business.

Because there are 541 members of congress (including nonvoting members, like Washington, DC's Eleanor Holmes Norton), we could not repeat our analysis of every tweet ever posted by every member of Congress as we did in 2009—there are simply too many. However, we wanted to ensure our analysis had good temporal coverage so it would not be biased by tweets about the most current events (post-2016 election issues in this case). Thus, we collected the most recent 200 tweets from all members of Congress. Then we randomly selected 10 tweets from each person. This gave us 5,410 tweets.

Each tweet was randomly assigned to a coder, and all tweets were coded by two people. Tweets could be coded with multiple categories (e.g., fundraising *and* a location/activity). When there was perfect agreement between coders on all codes for a tweet, we counted this as a match. We achieved this 91.2% of the time. This is basically the same result as when we originally did this work, where we had 92.2% perfect agreement. We also allowed for partial matches. If coders agreed on one code but not another, the matching code was used and the mismatched codes were excluded. We did not count these as matches for inter-rater agreement, but we did use the partially matched data.

The vast majority of tweets had only one code (98.0%). The rest had two codes except for three tweets that had three codes. After discarding tweets with no match and duplicates, we had 4,714 tweets to analyze.

And, in the end, very little has changed in Congress in those 8 years, at least in terms of the kinds of things members share on Twitter. The distribution of codes is remarkably similar between the 2017 tweets and the 2009 tweets. Figure 1 shows the percentage of use for each label; there are no major differences between the two time frames.

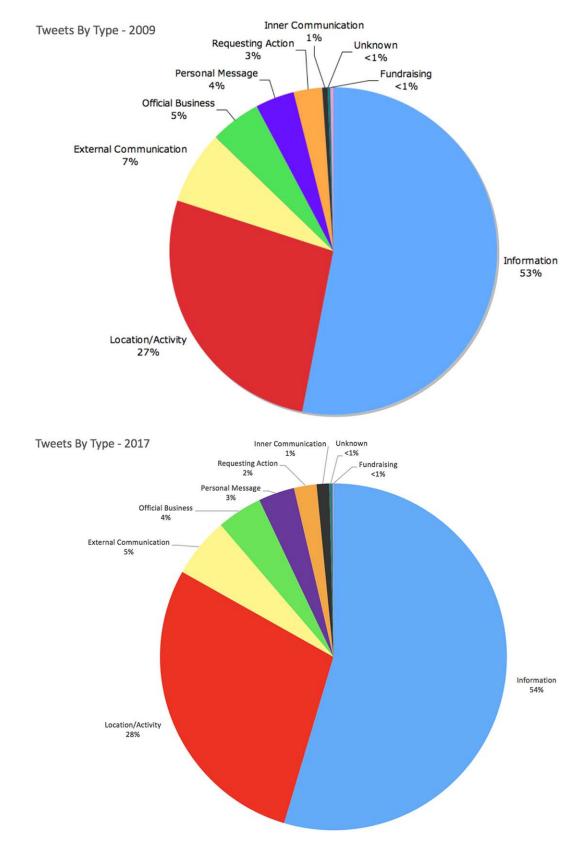


FIG. 1. Tweet code distributions on tweets collected in 2009 and 2017. [Color figure can be viewed at wileyonlinelibrary.com]

We also analyzed the following and follower relationships within Congress. We collected data about which members of Congress followed one another. We imported this into Gephi to visualize it. Republicans are colored red, Democrats blue, and independents are in yellow. The network is laid out using the Force Atlas algorithm; it is based only on

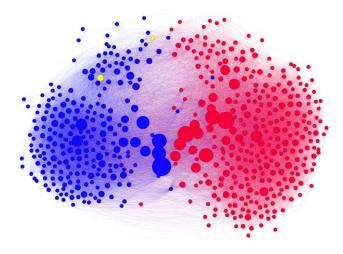


FIG. 2. A network representing the Twitter following relationships on Twitter. Republicans are red, Democrats blue, Independents yellow. [Color figure can be viewed at wileyonlinelibrary.com]

network structure and does not consider party, political affiliation, or any other personal attributes in the positioning of nodes.

As we can see, the two parties separate very clearly. The edges are directed indicating that person A follows person B. The direction of the edges is shown in the curve; clockwise edges are outgoing. Nodes are sized based on their out degree (i.e., how many people they follow). Some Representatives follow nearly every other member of the House, including Alan Lowenthal (D-CA), Mark Pocan (D-WI), Kyrsten Sinema (D-AZ), and Justin Amash (R-MI). These representatives tend toward the center of the graph because they are connected extensively on both sides.

A few nodes stand out for their placement. The Democrat in the center of the graph is John Carneyde, who became Governor of Delaware in 2017. The Democrat up and to the right of him in the midst of the Republicans is Rep. Seth Moulton of Massachusetts. The one Republican at the bottom of the graph and toward the left of center is Rep. Dan Donovan, representing Brooklyn and Staten Island, NY. The leftmost independent is Sen. Bernie Sanders of Vermont. The independent at the top is Sen. Angus King of Maine.

The strong partisan bias in who people follow does not necessarily mean there is no communication between the parties on Twitter. Members can still tweet one another even if they are not following each other. However, it does mean that they do not see one another's tweets. Although members

of Congress may not rely on Twitter to know what is happening on the other side of the aisle, this network does reflect widely voiced concerns about "filter bubbles" and how they manifest and filter what we all see on social media; Congresspeople are not immune.

A discussion of political polarization is outside the scope of this article, but readers can find excellent in-depth discussions of this topic in countless articles, many books (e.g., Devins 2008), and websites (e.g., voteview.com).

Conclusions

Eight years ago, we began an analysis of how the thensmall contingent of Twitter-using members of Congress were engaging with the platform. In the years that have passed, Twitter has become a widely used and even more widely talked about social media platform. All of Congress is on it now, and, of course, it has been warmly embraced by President Donald Trump. With all that time to mature, we set out to see what had changed in the way Congresspeople were using the platform.

We found that, other than using it *more*, they were basically tweeting the same type of content. Our analysis of tweets showed almost identical results to what we found in 2009. We also see partisan separation in which members connect on the platform, with their position in the social network closely echoing their liberal or conservative positions.

Whether Twitter will remain a viable platform and one that dominates the social media broadcast remains to be seen. However, social media will certainly endure and there is still much work to do in understanding it as a communications channel, its impact on constituents and the political process, and its connections to the deeper culture.

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