The viral diffusion of campaign messages about political issues during the 2016 U.S. presidential election

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Keywords: Social Media, Virality, Twitter, Political Issues, Elections.

1 Introduction

With candidates using social media sites like Facebook and Twitter as part of their campaign strategies, social scientists are trying to understand the diffusion of political messages. Viral events can spread messages fast and far from the source, bringing candidate’s messages to new audiences and bringing new followers to candidates [4]. To date, no studies have focused on understanding specifically what kinds of political issues the public spreads into their own networks. While the kinds of issues that spread will likely change from election to election, this work provides a comparison point for future work and is the first step in more real-time analysis that could be useful for researchers, journalists, and politicians.

For this poster abstract we highlight part of our analysis, specifically, the frequency with which presidential candidates tweeted about specific issues and how the public responded by retweeting. To accomplish this, we use data visualization for exploratory data analysis. We find that that candidates and the public are most interested in advocacy messages than attack messages for every topic. For the final poster we will present analysis of both Facebook and Twitter, as well as confirmatory statistical analysis using regression modeling.

2 Literature

As more voting age Americans use social media (especially Facebook and Twitter), candidates for political office have turned to these platforms as another tool for their campaigns [3]. Candidates post text, images, videos, and links to other websites on Facebook and Twitter strategically as part of their efforts to win elections. Among other things, candidates talk about their positions on issues and their competitors’ positions on issues [6].

Politicians want these messages to reach a wide audience: on Twitter, this means that politicians want their messages to be retweeted. Prior research has identified a number of factors related to how far a tweet is likely to spread. For example, we know
that tweets with hashtags, URLs, and @mentions, are more likely to be retweeted, and that people with more followers tend to be retweeted more [9], and that when someone with many followers retweets a message, the message tends to get more retweets [4]. Given the difficulty of identifying political topics in tweets, though, no research has examined whether the topic of political messages affects that message’s diffusion.

Scholars have found that one of the important factors driving the viral spread of messages is emotionality. That is, emotional messages tend to spread more [7, 8]. Based on the functional theory of emotion, which postulates that emotion serves its role as an adaptive system to help individuals to manage environmental changes [2], strategic messages are inextricably linked to emotion. Particularly in politics, the role that emotions play in strategic messages gains much importance, regardless of which political candidates are under attack [1]. Although past research has investigated strategic messages (attack and advocacy messages) in terms of emotions in politics, we are unable to find work examining the spread of these messages, particularly when combined with topical areas. Based on the above, we expect attack messages to spread more widely in social media than advocacy messages. Thus, our questions are: 1) what topics are candidates most likely to use in their messages to the public? 2) Are the topics the public tends to retweet most the same as the topics the candidates tend to post most?, and 3) Do attack tweets about each topic tend to be retweeted more than advocacy tweets?

3 Data and Methods

Data for this project come from the Illuminating 2016 project, which collected Facebook and Twitter messages posted by all of the Republican, Democratic, Green and Libertarian candidates during the 2016 U.S. Presidential election [5]. Data collection started on January 3, 2015 and continued through November 8, 2016. In total, we have 29,503 Facebook posts and 79,102 tweets from candidates. For this analysis, we are only interested in messages that candidates send to advocate for themselves or to attack their opponents, which we identify using the Illuminating 2016 project’s categorization of messages by political purpose [10]. Sub-setting the data on these categories leaves us with 8,627 Facebook posts and 10,596 tweets.

For this analysis, we utilize a new method for identifying the topics of political messages sent by candidates on social media (these topics are high-level, such as Economics, Foreign Policy, and Social Programs) [6]. After removing messages without topics, we have 2,910 tweets and 3,670 Facebook posts, each of which is a candidate advocating for herself or attacking an opponent with at least one topic.

EDA is an approach that is useful for searching for patterns, structures and the unexpected in data. The tools of EDA include descriptive statistics, tables, and data visualizations. Due to space constraints, we only show EDA on our Twitter data here. We also include only a small sample of our EDA here. The final poster will contain both Twitter and Facebook analysis as well confirmatory statistical analysis (e.g. regression modeling) to verify the patterns we observe.
4 Analysis and Findings

Panel a) in figure 1 shows the frequencies of each topic, broken down by message type. Candidates tended to send out the most tweets about Foreign Policy and Economic issues. They also tended to advocate for themselves more than attacking their opponent. In panel b), we see that the issues that seemed to get the most traction with the public, as measured by the distribution of retweets, were Immigration and Social and Cultural tweets. Comparatively, Foreign Policy and Economic tweets did not interest the public as much. Panel b) also shows us that the public tended to retweet more advocacy tweets than attack tweets.

Fig. 1. Panel a shows the frequency of topics by type and panel b shows the distribution, in log 10, of the number of times tweets were retweeted in each group.

5 Conclusions/Future Directions

This poster presents an analysis of the diffusion of social media messages sent by candidates in the 2016 U.S. presidential election, focusing on whether topics drive the level of diffusion. Our preliminary results show that diffusion rates do vary based on the topics of messages. Additionally, our results show that topics diffuse more when they are in advocacy messages rather than attack messages. These results reveal a gap between the topics that candidates care about most (measured by the volume of topics) and the topics that the public care about most (measured by the distribution of retweets): candidates talk the most about Foreign Policy and Economic issues, but the public retweets messages about Immigration and Social and Cultural issues the most.

Though the literature on emotion in the spread of information led us to expect that the public would diffuse attack messages most, our results show that candidates and the public both seem to value advocacy messages more. This was for all topic categories. Candidates advocate for themselves more than they attack others, and the public retweets advocacy messages more than attack messages.

This poster lays the groundwork for more sophisticated analysis about the diffusion of social media messages about political issues. Future work will examine whether the relationship between topics, message types, and diffusion varies over time (i.e., did immigration matter more at the beginning of 2016 than closer to Election Day?), and will also account for exogenous shocks (for example, the terrorist attack in Nice,
France on July 14) that may have had short-term effects on what candidates were talking about and what the public retweeted.

Future work will also look for differences in the relationships examined here between parties and between candidates. For example, do messages that Clinton sent to attack Trump for his immigration policies receive more retweets than messages that Clinton sent to advocate for her own policies or that Trump sent to attack Clinton for her policies? An important step in moving forward will be to determine how much of the patterns shown in our results are driven by Trump, who is often considered a highly atypical candidate who behaved differently than all other candidates.

References


