"I'd have to vote against you": Issue Campaigning via Twitter

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Abstract

Using tweets posted with #SOPA and #PIPA hashtags and directed at members of Congress, we identify six strategies constituents employ when using Twitter to lobby their elected officials. In contrast to earlier research, we found that constituents do use Twitter to try to engage their officials and not just as a "soapbox" to express their opinions.

Author Keywords

Twitter; Congress; legislation; SOPA; PIPA

ACM Classification Keywords

K.4.1. [**Computers and Society**]: Public Policy Issues – regulation.

General Terms

Human Factors, Legal Aspects.

Introduction

Both the public and elected officials increasingly use social networking sites, and Twitter specifically, to discuss politics [9,16]. While existing research confirms that politics are being discussed on social media [13], the form of those conversations is still unknown. Here, we begin to address that gap by examining the Twitter conversation around a pair of bills, the Stop Online Piracy Act (SOPA) and the PROTECT IP Act (PIPA). We focus on members of the U.S. Congress and people

Lobbying Strategies

(1) Thank you for opposing: User explicitly thanks MOC for opposing SOPA and/or PIPA

(2) Please oppose: User politely urges MOC to oppose SOPA and/or PIPA

(3) I'm your constituent, and I oppose: User points out that s/he is a constituent of the MOC mentioned and urges MOC to oppose SOPA and/or PIPA

(4) Because you're not opposing: User mentions consequences (e.g., losing support, being voted out of office) if an MOC does not oppose SOPA and/or PIPA

(5) Asking position: User asks MOC to clarify his/her position on SOPA and/or PIPA

(6) Directly oppose: User expresses his/her opinion on SOPA and/or PIPA without requesting action from MOC

(7) Other: Tweets that don't fit in other categories, including those supporting SOPA and/or PIPA

who replied to or retweeted them in order to understand how constituents used social media to lobby their elected officials about legislative issues.

Related Literature

The body of research on social media use for political conversation is small but growing. When examining how political figures use social media and the Internet, for instance, researchers have studied campaign websites [7], Twitter adoption [1], and Twitter use [5,9,14].

Findings from the Congressional Research Office suggest that Congress increasingly uses social media such as Twitter, Facebook, and YouTube to reach out to their constituents [4,17], but little is known about the nature of the interactions that take place. Research suggests that those interactions are largely one-sided, that officials use social media as a broadcast platform rather than an interactive tool [5,9].

Little is known, however, about the constituent side of political discussions via social media. Some studies suggest that the public at-large is increasingly engaging in political discourse online [13,16] and they do actually interact with others when discussing political issues [11]. Researchers in Sweden found that citizens used the retweet and mention conventions on Twitter to discuss candidates in an election [10], but others found that Twitter users engaged in political discussions more often to obtain information or for entertainment rather than to express political opinions [15]. Engaging with politicians made those users feel "heard" even if they didn't receive responses [15].

We contribute to the literature on political communication in social media by identifying strategies constituents use to lobby their officials on a specific legislative issue. We also demonstrate the utility of existing machine learning tools for classifying tweets.

Methods

We used the Twitter Database Server [6] to collect tweets through the Twitter Streaming API. The API statuses filter allowed us to provide user ids for MOCs and to receive replies to their tweets[1]. We added an additional filter for tweets containing one of two hashtags - #SOPA or #PIPA. Between December 22, 2011 and September 29, 2012, we collected 12,589 tweets posted by 15,379 users.

In coding constituent tweets for their lobbying strategies, we used an inductive coding strategy to develop a set of codes, and we reached very high agreement [2] between two coders ($\kappa > 0.8$) when coding a subset of 390 tweets. We used these tweets to train a naïve Bayes (NB) classifier to automatically code the remaining tweets ($N = 12,589$). To train and evaluate our classifier, we used WEKA 3-6-8 [8]. An NB classifier[2] infers a label for the tweet based on the conditional probabilities of the words it contains. Our classifier produced a mean classification accuracy of 0.86 (s.d. 0.23). The large standard deviation suggests there's room for improvement in the classifier, especially in labeling tweets "directly opposing" (m = 0.8, s.d. = 0.29) and "other" (m = 0.8, s.d. = 0.27).

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[1] https://dev.twitter.com/docs/api/1.1/post/statuses/filter

[2] See [3,12] for more discussion of naïve Bayes classifiers.

	Manual		Automatic	
	N	%	N	%
1	43	11%	1090	9%
2	106	27%	4188	33%
3	40	10%	1492	12%
4	36	9%	1349	11%
5	23	6%	354	3%
6	108	28%	2856	23%
7	34	9%	1260	10%

Table 1. Frequencies of lobbying strategies coded manually and with automated classifier

Results

We used two rounds of inductive coding to develop a coding scheme for "lobbying strategies". The scheme included seven codes (six strategies and one "other" code) to categorize the approach users took to lobbying against SOPA or PIPA. Table 1 shows the frequencies with which each lobbying strategy was employed, and Table 2 lists examples for each strategy. We present the frequencies from both the human coders and the automated classifier. The results indicate that "please oppose" was the most common lobbying strategy, followed by "direct opposition". 90% of the tweets coded fell reliably into one of the six strategies we identified.

Discussion

We were able to identify six unique strategies users employed in lobbying their elected officials about specific legislation. Earlier research on constituent use of social media for political communication suggested users thought of Twitter as a "soapbox" where they could express an opinion but not really a place to interact with their officials [15]. Our results show that's not the case. 23% of tweets (those in the "directly opposing" category) were "soapbox" tweets where a user expressed an opinion without asking for an MOC to act, but "please oppose" tweets were more common (33%). In those tweets, users politely urged their MOCs to oppose SOPA and/or PIPA, implying their own opposition but also explicitly asking an MOC to act. Other categories such as "thank you for opposing," "because you're not opposing," and "asking position" were also interactive. Constituents, at least around the issues of SOPA and PIPA, were attempting to engage their elected officials on Twitter, not just to express their opinions.

Our study has many limitations, and here we mention just two we will address in future work. First, none of the 390 tweets we used in developing a coding scheme expressed support for either bill. Although we chose the discussion of SOPA and PIPA in part because we expected lopsided support among social media users, the complete lack of support was somewhat surprising. The lobbying strategies we identified, therefore, are all opposition strategies, tactics constituents employed to get their officials to vote "no" on particular legislation. We expect that additional strategies are employed by users urging their officials to support particular legislation.

Second, our classifier's mean accuracy is high but so is its standard deviation. We allowed tweets to fall into only one category, and yet we know from earlier work [9] that users can accomplish many speech acts in a single tweet. For instance, one user posted the following: "@RepFrankGuinta Please stop all incarnations of #SOPA and PIPA. Many of my friends would be out of work and I'd have to vote against you." This tweet uses the adverb "please" to express politeness, much like tweets in the "please oppose" category. The user also mentions a consequence when s/he says "I'd have to vote against you". Tweets like this one likely explain much of the standard deviation in the accuracy of our classifier.

References

[1]   Chi, F. and Yang, N. Twitter adoption in Congress. *Review of Network Economics 10*, 1 (2011).

[2]   Cohen, J. A Coefficient of Agreement for Nominal Scales. *Educational and Psychological Measurement 20*, 1 (1960), 37–46.

ID	Example
1	@petestark Thank you for opposing #SOPA and #PIPA.
2	@BradSherman Please do not support #SOPA and #PIPA they are very bad bills.
3	@RepMikeRoss I am your constituent, and I oppose #SOPA and #PIPA. End Piracy not liberty!
4	@RepGoodlatte Remove the stain of #SOPA from your record, Congressman, or we will remove you from Congress. Love, the Internet.
5	@repjerrylewis What is your stand on #SOPA and similar legislation?
6	@RepGoodlatte Stop #SOPA
7	@darrellissa Hi Darrell, are you available for a Skype interview with Australian TV News on #SOPA? Please get in touch if so

Table 2. Examples of tweets employing each strategy

[3]   Domingos, P. and Pazzani, M. On the Optimality of the Simple Bayesian Classifier under Zero-One Loss. *Machine Learning 29*, 2-3 (1997), 103–130.

[4]   Glassman, M.E., Straus, J.B., and Shogan, C.J. *Social Networking and Constituent Communication: Member Use of Twitter During a Two-Week Period in the 111th Congress*. Washington, D.C., 2009.

[5]   Golbeck, J., Grimes, J.M., and Rogers, A. Twitter use by the U.S. Congress. *Journal of the American Society for Information Science and Technology 61*, 8 (2010), 1612–1621.

[6]   Green, A. Twitter database server. 2011. http://140dev.com/free-twitter-api-source-code-library/twitter-database-server/.

[7]   Gulati, G.J. and Williams, C.B. Closing the gap, raising the bar: Candidate web site communication in the 2006 campaigns for congress. *Social Science Computer Review 25*, 4 (2007), 443–465.

[8]   Hall, M., Frank, E., Holmes, G., Pfahringer, B., Reutemann, P., and Witten, I.H. The WEKA Data Mining Software: An Update. *SIGKDD Explorations 11*, 1 (2009).

[9]   Hemphill, L., Otterbacher, J., and Shapiro, M.A. What's Congress Doing on Twitter? *CSCW'13*, (2013).

[10]   Larsson, A.O. and Moe, H. Studying political microblogging: Twitter users in the 2010 Swedish election campaign. *New Media & Society 14*, 2 (2011).

[11]   Mascaro, C.M., Black, A., and Goggins, S. Tweet Recall : Examining Real-time Civic Discourse on Twitter. *GROUP'12*, (2012).

[12]   McCallum, A. and Nigam, K. A comparison of event models for naive bayes text classification. *AAAI-98 workshop on learning for text … 752*, (1998), 41–48.

[13]   Munson, S.A. and Resnick, P. The prevalence of political discourse in non-political blogs. *Fifth International AAAI Conference on Weblogs and Social Media*, (2011).

[14]   Otterbacher, J., Hemphill, L., and Shapiro, M.A. Tweeting vertically? Elected officials' interactions with citizens on Twitter. *CeDEM (Conference for E-Democracy and Open Government) Asia 2012*, (2012).

[15]   Parmelee, J.H. and Bichard, S.L. *Politics and the Twitter Revolution: How Tweets Influence the Relationship Between Political Leaders and the Public (Google eBook)*. Lexington Books, 2011.

[16]   Rainie, L., Aaron Smith, Kay Lehman Schlozman, Henry Brady, and Sidney Verba. *Social Media and Political Engagement*. 2012.

[17]   Shogan, C.J. Blackberries, Tweets, and YouTube: Technology and the Future of Communicating with Congress. *PS: Political Science & Politics 43*, 2 (2010), 231–233.