

Annelise Russell*

The Politics of Prioritization: Senators' Attention in 140 Characters

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Abstract: For decades US senators have maximized their limited resources to juggle policy, party politics, and constituents, but the rise of social media sheds new light on how they make these strategic choices. David Mayhew's seminal study of Congress (1974) argues that lawmakers engage in three types of activities – credit claiming, advertising, and position taking, but equally important is understanding how lawmakers make strategic choices among these activities. Senators' limited resources and attention forces them to prioritize and make trade-offs among these activities, and new media platforms, like Twitter, offer a window into that decision-making process. This article examines what influences senators' decisions to publicly communicate these activities on Twitter. By using senators' daily Twitter activity in 2013 and 2015 as a measure of their individual agenda, I find that senators are most likely to prioritize position-taking activities. Women and committee leaders allocate the most attention to policy positions, but attention to policy may come at a cost. When senators do choose to prioritize policy through position taking, they often make trade-offs that lead to decreased attention to advertising and credit claiming. These activities and the choices among them not only have implications for lawmakers' behavior in Congress, but also the type of representation and information constituents can expect from their elected leaders.

Introduction

While much has changed in Congress over the last 50 years – party polarization, the committee system, and the budget process – the goals and goal-seeking behavior of lawmakers remains consistent. Lawmakers still make strategic choices to prioritize policy, communicate with constituents, and advertise their political brand in pursuit of what David Mayhew seminally described as the ultimate goal: re-election (1974). Members pursue re-election by juggling competing demands on their time and attention, including obligations to their policy preferences,

*Corresponding author: **Annelise Russell**, University of Kentucky, Martin School for Public Policy and Administration, Lexington KY, USA, e-mail: arussell@uky.edu

constituents, the party, and the Sunday morning talk shows. The implication for politicians is they must decide where it is most effective to put their resources, and that decision in turn affects how politicians prioritize their goals and legislative activities. Members of Congress have similar goals, but individual lawmakers will make strategic decisions about which activities are most valuable, and, in turn, some activities will get a disproportionate amount of attention. While studies by Mayhew, Fiorina (1977) and Fenno (1978) have made important contributions that outline the basic goals and activities of congressmen, they do not illustrate how lawmakers make systematic choices between those fundamental legislative activities. Studies that do explore politicians' priorities often focus on the period prior to the 1980s and do not investigate beyond the basic trade-off between constituent service and policy (Butler, Karpowitz, and Pope 2012). In an era of smaller congressional staffs and fewer resources relative to the demand, how a senator chooses to spend his time and the trade-offs he makes have important implications not only for re-election but the information and signals constituents receive.

Lawmakers are adapting new strategies to communicate those signals to constituents, journalists, and special interests. Lawmakers are no longer relying on newspapers and newsletters to frame their political brand for journalists and constituents; new media platforms like Twitter offer lawmakers a low-cost and public platform advertise their positions and signal their preferences. Lawmakers self-report that social media is considered a new and effective tool for representation (Congressional Management Foundation 2015), and Twitter offers both public and elite interests a window into politicians' decision making. More importantly, that window offers new and previously unknown details of how politicians prioritize their common – but not constant – legislative activities.

Twitter is now a norm of congressional communication – and political institutions more broadly – and politicians now use Twitter to communicate their agenda outside the confines of the campaign season. This research uses Twitter as a tool to understand how senators prioritize and communicate Mayhew's three legislative activities: position taking, credit claiming, and advertising (1974). How a senator juggles these activities has important implications for the type of representation constituents should expect from their elected officials. A senator who builds his agenda around policy offers a different type of representation than a senator who prioritizes constituency service. In this article I argue that tweets reveal the strategic choices senators make among their many legislative activities and the necessary trade-offs that occur. A senator may want to be equally responsive to his party, the institution, and his constituents – but his limited resources mean that attention will be skewed toward a senator's most important priorities. To examine how senators signal attention to each of these fundamental activities, I

analyze senators' self-promotion on Twitter. Since Barack Obama's 2008 election, social media in politics is commonplace and essential (Williams and Gulati 2010; Towner and Dulio 2012; Evans, Cordova, and Sipole 2014). Lawmakers use Twitter as a venue to spread information about preferences and priorities (Larsson and Moe 2011; Small 2011). This article will show that even though senators reference each of these activities on Twitter, there are systematic differences in the activities senators choose to prioritize that have implications for how they represent their state. In particular, senators direct most of their attention to position taking, with women and committee leaders the most likely to frame their agenda in terms of policy preferences and priorities. The choice to prioritize position taking can have negative effects on competing activities, meaning less attention toward credit claiming activities. This suggests that policy positions and issue priorities are the primary information senators are sharing with journalists and constituents and sheds light on how senators organize their time in pursuit of re-election.

Individual Attention to Congressional Activities

Scholars have been comprehensive in describing how political institutions prioritize attention, but far less research has considered the individuals making both policy and non-policy decisions within those institutions (Kingdon 1984; Dearing and Rogers 1996). Most models of decision-making center on the political system, focusing on the issues politicians take action upon in the aggregate – such as giving speeches, introducing bills, or cosponsoring legislation (Edwards and Wood 1999; Walgrave, Nuytemans, and Soroka 2008; Sevenans, Walgrave, and Vos 2015). The challenge lies in narrowing that focus to develop a sophisticated understanding of lawmaker priorities and goals at the individual level.

While re-election is a motivating factor underlying lawmakers' choices (Mayhew 1974; Fenno 1978), how members communicate those choices is variable. And much of that variation stems from the attention they allocate among their three main activities while in Congress: credit claiming, advertising, and position taking (Mayhew 1974). These activities are not mutually exclusive – politicians will often advertise their success on a vote or emphasize how a policy affects local projects. Members take credit-claiming actions to generate a belief that they are personally responsible for causing desirable ends (Mayhew 1974, p. 53). Grimmer et al. (2012) find that credit claiming messages can successfully build constituent support. Politicians communicate their service of particularized benefits or take credit for legislation or institutional roles that would benefit their state, particularly if they are the head of a relevant committee. Position taking is a statement on a particular issue, most often made via roll call votes (Mayhew 1974;

Highton and Rocca 2005). Position taking is often useful when signaling groups or constituents on issues that are complex because statements about the issue are easier to understand and respond to. Advertising is used to build the elected official's political brand. Constituents know very little about their representatives, so members of Congress attempt to shape perceptions and build their reputation through news coverage and through visits to their home state.

Lawmakers not only have different policy priorities and preferences, but they also make different choices about the legislative activities they pursue. Two senators may prioritize re-election, but in pursuit of that ultimate goal, will make different value judgments about how they prioritize position taking or advertising (Jones and Baumgartner 2005). For example, Democratic Senators Cory Booker and Charles Schumer will each seek re-election, but one may choose to tweet about local issues while the other specializes in economic policy.

A senator's choice to engage in any of these particular election-seeking activities not only affects their behavior in Congress but also the information they communicate to their constituents. Individual decision-making cannot always be measured by legislative outputs like roll-call votes because individuals have little influence on the issues up for discussion; however, senators' choice to communicate their priorities to constituents or followers on Twitter reveals issue selection and discretion. By examining what senators communicate as their top priorities, we can ascertain to what extent senators are engaging these basic activities and which activities individual senators signal to constituents as more important for evaluating their performance.

Twitter as Political Communication

The 112th Congress (2011) began with 44 percent of the Senate signed up for Twitter (Sharp 2013), but by the beginning of the 113th Congress (2013), every member of the Senate had a verified Twitter account. A 2015 report by the Congressional Management Foundation found that members of Congress and their staff are more inclined to use social media, and they expect that trend to continue. Hill staffers report that congressional offices are paying close attention to social media because they view Twitter as a valuable constituent communication tool and a way for followers to quickly garner the office's attention (Congressional Management Foundation 2015).

Twitter provides an alternative way for office holders to communicate with constituents because it is (a) public and easily accessible (b) draws in journalists and special interests who re-direct information to constituents and (c) allows politicians to link to additional material that goes beyond just the 140 (now 280)

character count, such as press releases, videos, and newsletters. Twitter is distributed to a wider audience than press releases or speeches on the floor of Congress, but it still gives the sender control of the distribution (Gainous and Wagner 2013). Twitter is not necessarily a superior medium to television or newspapers – each medium draws in a unique audience and information is then tailored to suit that audience – but it aggregates both original content and links to existing media, i.e. interviews, press releases. Twitter is just as accessible – if not more – than television or newspapers because it is easily accessed via mobile technology and on laptops – where two-thirds of Americans report they go for politics and news (Shearer and Gottfried 2017).

In many ways Twitter offers a more accessible communication tool that expands the conversation beyond Washington DC, but with the potential for a broad audience also comes the freedom to tune in. As the media environment becomes increasingly diverse, the ability to opt into media and information that coincides with pre-existing beliefs increases. That is not inherent to Twitter, but indicative of the changing media environment. Gainous and Wagner (2013) argue that Twitter is a fundamental shift away from traditional media measures because it enables two-way – if not infinite – communication networks between political actors and the public. The implication of this shift is a more accessible platform for politicians and constituents to connect, but it also leads to narrowcasting and polarized publics who seek information that reinforces their beliefs and biases (Lodge and Tabor 2000).

While those on Twitter may be more politically active, that activity does not necessarily translate into “preaching to the choir” – or at least any more so than MSNBC or Fox News. One advantage of Twitter is its ability to aggregate an audience, particularly journalists and special interests. I find that US Senators spend about one-third of all tweets linking to interviews, videos, news articles and television appearances. Politicians are using Twitter to contribute new content and information, but also to reinforce traditional media branding. By bringing journalists into the fold – through advertising traditional media and cultivating a following of journalists – information is indirectly transmitted to constituents and the public at large. And for professions of where cost cutting and efficiency are prized, Twitter offers journalists and politicians alike a new and fresh source of information.

Twitter does offer users new advantages, but this is not to suggest it is necessarily a “better” or more “democratic” source of information. Twitter is susceptible to misinformation campaigns or orchestrated attempts to influence the public or political actors. With the increased scope of engaged users comes the potential for greater variation in how it is used – both positive and negative. The rise of social movements, like the Arab Spring, illustrate the power of social media while

today's fierce partisan rhetoric highlight it's lack of a gatekeeper. Twitter will lend itself to certain types of information – shorter sound bites, quick hits, and links to more substantial conversations – but it is one of the best approximations of a politicians' daily agenda that intersects policy, representation and politics.

Scholars have extensively researched the intersection of social media and politics in recent years (e.g. Gainous and Wagner 2013; Straus et al. 2013, 2016; Stromer-Galley 2014; Auter and Fine 2016). Larsson and Moe (2011) argue Twitter contributes to a broadening of public debate by offering a new arena for mediated public communication. Twitter has the potential to extend discussion outside of the “iron triangle” by broadening the scope of relevant actors (Shogan 2010). Social media also gives political actors greater autonomy over the flow of information by removing the journalist as a gatekeeper (Gainous and Wagner 2013). Twitter alters the norms of representation to lend politicians additional leeway with fewer costs to work with and respond to followers (Shogan 2010; Straus et al. 2016), but at the same time maintain credibility (Hwang 2013).

Multiple studies of Congress and Twitter consider the individual or institutional characteristics that lead politicians to adopt Twitter as communication tool. One study finds that adoption is difficult to predict, but is more common among young members and those whom party leaders urge to join (Lassen and Brown 2011). Chi and Yang (2010) find that adoption is a function of information learning, meaning that adoption is higher when those around them – previous Twitter adopters – signal positive experiences. Straus et al. (2013) compile data from the 111th Congress (2009–2011), and find support for their theory that members adopt Twitter to better represent a broad constituency. Their research suggests Twitter adoption is not patterned by previous re-election percentages, gender, or race; however, a district's urban population and ideology have significant effects. In another analysis of Twitter adoption during the 111th Congress, Peterson (2012) conducts a multivariate analysis of the House of Representatives. His findings suggest strong Republican and ideological effects for adoption, but also consider the members' cohort as a significant predictor – similar to the information learning proposed by Chi and Yang (2010). Existing research on how politicians adopt and normalize Twitter into their daily routines provides the foundation for this research that aims to explain the variance in senators' tweets in regard to how they communicate and prioritize their many activities.

Hypotheses

Senators are faced with the daily struggle of deciding which of the many demands on their time they are going to address. Politicians are limited in their attention,

and that means they must be strategic in the activities that they do prioritize. Senators will make tough choices about how to seek re-election and which activities best serve that interest. Twitter is often discussed in terms of constituent outreach, but I argue that senators will more often communicate their position taking activities, drawing attention away from and trumping other activities. A key component of a politician's strategic communication is setting the terms by which constituents judge them, and framing those policies and positions up for debate is advantageous. A senator wants to engage constituents on policy issues that matter to their state and those issues where the senator has expertise. Fenno (1978) argues that good public policy is one of politicians' main goals, and senators take positions that reflect their issue agenda. Politicians shape the terms of debate by taking positions on relevant issues, and Twitter gives them the opportunity to succinctly explain complex issues and their implications.

Position-Taking Hypothesis: Senators will prioritize position-taking activities in their Twitter communications relative to credit claiming or advertising.

Position-taking activities attract media coverage (i.e. reports of roll call votes), and politicians who want their name to be associated with that coverage prioritize position taking. And given that there are fewer senators than House members and they serve for longer, it is easier for a senator to make a name for his or herself on an issue. Senators also represent larger constituencies than their counterparts in the House, so the explanation of particularized benefits (credit claiming) may be less beneficial to their perceived success compared to staking out policy positions. Plus, the sharp decrease in earmarks after 2007 and 2011 makes it more difficult for politicians to articulate those actions and their state-level service.

A senator's choice to prioritize position-taking activities not only means an increase in policy discussions but likely means a trade-off elsewhere. Even on Twitter where senators can address as many issues as they like and succinctly address multiple goals simultaneously, there still exists a choice. In a "perfect" world, individuals would create a weighted index of alternatives, consider their preferences for potential outcomes and allocate their attention accordingly (Simon 1947), but attention is short so lawmakers are forced to prioritize some activities and ignore others. One of the most common trade offs in normative models of representation is constituent service (appropriator) versus targeting a national audience (policy statesman) (Butler, Karpowitz, and Pope 2012; Grimmer 2013). An increase in position taking thus means senators have less time to spend on constituent issues and those who do prioritize constituent issues are less likely to communicate their policy statements on Twitter.

Trade-off Hypothesis: Senators who are most likely to prioritize position taking are less likely to prioritize credit-claiming activities.

A trade-off in these two activities on Twitter should suggest a significant choice given that these activities are not mutually exclusive and more than half of all tweets reference at least two activities.

Lawmakers are constantly looking for ways to do more with less, but one way around their constraints is to choose to combine activities in order to address as many needs or responsibilities as possible. Policy and representation are often considered at odds with one another, but the role of advertising – where senators are making themselves seen – may actually reinforce or be combined with other activities. On Twitter, a senator may hold a town a virtual hall on a specific policy issue, like Sen. Heidi Heitkamp did in 2013 surrounding debate on a long-term farm bill. Given that these activities are not always countervailing, I expect position taking and advertising to be a minimal trade-off, if any.

Simultaneous Activity Hypothesis: Senators' likelihood of prioritizing advertising activities will not be a significant trade off with position-taking activities.

Given that senators' geographic representation is large and the particular needs of the Florida peninsula are different than that of Miami, senators must actively advertise a political brand that includes policy issues. Those issues may be state specific, i.e. the Keystone pipeline in the Dakotas, but senators are more likely to associate their brand with policy issues and that brand requires promotional activities.

Data

This research examines strategic choices across legislative activities by analyzing senators' Twitter communications during the 113th and 114th Congresses (2013, 2015). The dataset includes all tweets by senators compiled via a Python-based web scraper of the Twitter API that pulls all tweets by a specified user. I select this time period because all senators maintained a verified Twitter account by the beginning of the 113th Congress, managed individually or by the member's press office. By including the 114th Congress, this captures the shift in majority control in the Senate. I chose the Senate to understand individual communication patterns due to the chamber's historical emphasis on individual autonomy. Additionally, compared to the House, fewer individuals in the Senate make the analysis and hand coding of this dataset more feasible. The dataset includes the individual or office account of each senator, excluding campaign accounts. I do

not include campaign accounts because my primary interest is individual attention while in office.

The dataset contains 181,507 total tweets.¹ The number of tweets by each user varies, as Vermont's Independent Senator Bernie Sanders totaled more than 2121 tweets in 2013, but Alabama's Republican Senator Richard Shelby totaled 23. In 2015, Democratic Senator Cory Booker totaled 4428 tweets and Florida's Ben Nelson totaled 36.

How senators use Twitter is varied and strategic, but the choice of whether to use Twitter is consistent across party, gender, and age.² Unlike previous studies that suggest Republicans are more likely to adopt Twitter (Lassen and Brown 2011; Peterson 2012), I find neither party is significantly more likely to use Twitter. Democrats and Independents make up about 54 percent of all tweets sent in 2013 – only slightly lower than their 55 percent vote share in Congress (Figure 1). In 2015, Republicans make up 54 percent of all tweets, similar to their 54 percent vote share in the Senate.

Female senators are just as likely to turn to Twitter as their male counterparts (Figure 2). In 2013, women account for 23 percent of all tweets – three percent higher than their 20 percent minority in the Senate. In 2015, that number drops to 19 percent. While the average Twitter user is younger, about 37 years old, a senator's age is not a significant predictor of Twitter activity. In 2015, I find that Twitter is somewhat normally distributed across the ages of those in the US Senate (Figure 3).³

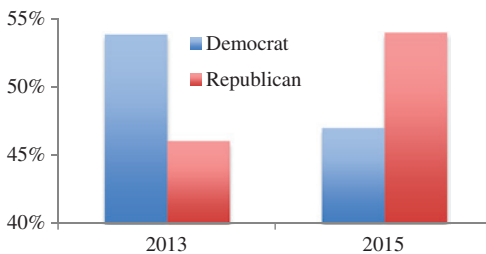


Figure 1: Percent of Senate Tweets, by Party.

¹ The dataset for the year includes all senator communications during the time period minus those from Sen. John Cornyn and Sen. Brian Schatz for whom information was not available.

² I have also considered race, but I do not examine race in this analysis due to a lack of racial diversity in the Senate.

³ A table of total tweets by age is included in the Appendix.



Figure 2: Percent of Senate Tweets, by Gender.

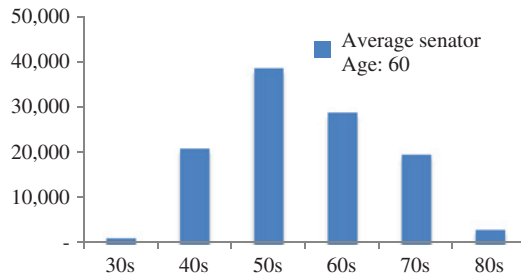


Figure 3: Total Tweets by Age, 2015.

Methodology

Senators’ tweets are coded for three activities: position taking, credit claiming, and advertising (Tables 1 and 2). Tweets are not coded as mutually exclusive

Table 1: Examples of Coding Scheme.

Position Taking	Iran is a threat. Congress must confirm the president’s Iran negotiations meet our standards and those of our allies Latest data breach is further proof that the #sequester is harming our nat’l security. Need to be investing more resources in #cybersecurity
Credit Claiming	Continuing to travel across our state to meet with Michigan advocates about my HOPE for Alzheimer’s Act Cantwell helps kickoff new @AvistaUtilities #EnergyStorage project, furthering #WA’s leadership in #SmartGrid tech
Advertising	Check out my op-ed in the Farmers & Consumers Market Bulletin about #Georgia’s vibrant agricultural tradition From noon-1pmET Sen. Sanders will be taking calls on the @Thom_Hartmann program. Watch live

Table 2: Summary Statistics: Three Activities as a Proportion of All Senators' Tweets in 2013 and 2015.

	Tweets	Mean	Median	Std. Dev.	Min	Max
2013						
Position Taking	46,762	0.6837	0.6856	0.1091	0.0784	0.9120
Credit Claiming	25,349	0.3706	0.3489	0.1162	0.1509	0.6872
Advertising	27,036	0.3953	0.4169	0.1144	0.0588	0.6448
2015						
Position Taking	68,949	0.6095	0.6414	0.1611	0.2159	0.8646
Credit Claiming	44,053	0.3894	0.3795	0.1134	0.1293	0.6191
Advertising	36,969	0.3268	0.3124	0.1137	0.1105	0.6239

categories, as many tweets included multiple categories. For example, Senator Heidi Heitkamp tweeted “@eliotwilking This should be a decision for local school districts. Our priority should be improving students’ performance. #AskHeidiH”. The senator is not only taking a position on education policy but she is directly responding to a constituent through her Twitter town hall.

I code tweets as position taking if those tweets mention a policy area, specific piece of legislation or statements on an issue (Table 1).⁴ Credit-claiming tweets include messages that reference the individual senator either (a) taking responsibility for specific action or (b) explicitly mentioning their attentiveness to constituents or state projects. Many credit-claiming and position-taking tweets overlap – members are often taking credit for policy victories that directly benefit their constituents. This multi-purpose communication is why a trade-off in position taking and credit claiming would be even stronger given that the two activities are not mutually exclusive and can be self-reinforcing. I code advertising priorities when there is mention of a media appearance, a press release, or a town hall. Each of these tweets is an opportunity for the senator to promote their political brand and expand their reach to constituents, journalists, and special interests alike.⁵

When looking at the proportion of a senator’s tweets including each of the three activities, position taking is the most frequently communicated activity by the average senator (Figure 4). Position taking is almost twice as frequently

⁴ All position taking tweets were hand-coded by a graduate student coder, and sample was double-coded by experienced student coders for reliability measures. Student double-coding yielded the following inter-coder reliability statistics for policy issues: percentage agreement = 87.4%, Cohen’s kappa = 85.6%, Krippendorff’s alpha = 85.6%. Coding guideline for policy coding is included in Appendix.

⁵ Additional examples of coding scheme included in Appendix.



Figure 4: Senate Tweets by Activity.

mentioned as credit claiming or advertising. This supports the first hypothesis that among senators' many activities, position taking is the most commonly communicated activity of senators. This echoes findings by the Congressional Management Foundation in 2015 that members of Congress report policy and legislation as the most time-consuming activity. An explanation for this may be the beginning of a new Congress when bills are filed and campaigns have just ended, but two-thirds of all tweets include a statement on a policy issue or reference to a vote.⁶

A snapshot of the top 10 senators who prioritize each of these activities gives a glimpse into who is most often communicating each activity (Table 3).

Table 3: Top Ten Senators Promoting Each Activity on Twitter.

Advertising		Position Taking		Credit Claiming	
2013	2015	2013	2015	2013	2015
King	Grassley	Lautenberg	Murray	Pryor	Vitter
Levin	Shelby	Coburn	Cantwell	M. Udall	Booker
Sessions	Johnson	Barasso	Alexander	Lautenberg	Manchin
McCain	Cotton	Alexander	Sessions	Baucus	M-Capito
Scott	McCain	Durbin	Feinstein	Hagan	Crapo
Hoeven	Risch	Wyden	Gillibrand	Begich	Rubio
Johanns	Ernst	Leahy	Blumenthal	Landrieu	Heller
Thune	Fisher	Boxer	Udall	Murkowski	Murkowski
Heitkamp	M-Capito	Murray	Baldwin	Manchin	Bennet
Sanders	King	Feinstein	Merkley	Schatz	Udall

⁶ When you break down those tweets by party, position taking still remains the most reoccurring priority on Twitter, followed by advertising and credit claiming.

Advertising appears heavily Republican – suggesting that Republicans may be using Twitter to reinforce their political brand outside of the mainstream media. Independents as well are some of the most frequent advertisers – understandable given they do not have the support of a major party to promote their agenda. Senior statesmen, such as committee leaders, and Democrats are among the top 10 position takers. This supports research by Grossman and Hopkins (2015) that Democrats more committed to specific policies designed to benefit particular groups. Committee leaders are also more likely to be tasked with pushing policy through the process and in turn that policy shapes their communication and individual goals. The final activity, credit claiming does not tell as clear a picture. In 2013, Democrats from Republican or contested states sent more credit-claiming messages, and many of those senators did not return to the Senate in 2015 after either losing re-election or stepping down. In 2015, credit claiming is less partisan and features few senators in leadership positions.

To formally examine what influences a senator's level of attention to multiple activities I estimate a fractional logit model, more specifically a generalized linear model with a binomial distribution and a link logit function with robust errors.

$$\text{logit}\{E(y)\} = x\beta, y \sim \text{Bernoulli}$$

In this model the unit of analysis is the individual tweet and the dependent variable is the proportion of a senator's Twitter output that includes each activity.⁷ Each senator has a proportion for each of the three activities. Separate coefficients relate individual characteristics of the senators to their probability for each of Mayhew's legislative activities. For each dependent variable, I estimate party effects and leadership in both committees and the party given that leadership roles within the institution carry additional responsibilities that will draw members' attention toward particular activities.⁸ The dataset includes variables for a member's age, gender, candidacy in the upcoming and previous election, the politics of the constituency, seniority, and total number of tweets.

I control for age given the youth of the Twitter audience and that older politicians may be less likely to use Twitter compared to other platforms like Facebook. Research by Evans and Clark (2015) that suggests we should expect gender to have a direct effect on political candidates' social media messages. A binary code for candidacy is included in the model to account for a senator's likelihood to

⁷ I have also modeled this with the individual senator as the unit of analysis and find no substantive difference in the results for my variables of interests. By running the analysis at the level of a tweet, the greater number of observations allows for the consideration of additional control variables with greater degrees of freedom.

⁸ Examples of party leadership include majority leader and majority whips.

focus on non-institutional issues and the influence of campaign activities. For 2015, I also include a code for those senators seeking presidential nominations. In addition to future elections, I code for electoral performance in the last election and the margin of victory as a measure of seat security. I consider the seniority of the senator because those who are more established with their constituency and less worried about their political future may be free to turn their attention to away from constituents and credit claiming toward other activities. For similar reasons, I include a variable for prior office within the state to measure the impact of existing relationships with the state. The politics of the senator's constituency may also influence a senators' priorities, and this control measures the margin of victory for President Barack Obama in each state during the 2012 election to determine whether the state. Finally, I also consider the frequency by which a senator tweets. A lawmaker's total number of tweets each year is included to ensure that those who communicate more regularly do not bias the results.

Results

I first assess position taking priorities and find evidence that across both 2013 and 2015 the level of attention to position priorities is predicted by senators' attention gender and their leadership on a committee (Table 4). Tweets by female senators

Table 4: Predicted Probability of Senators' Attention to Position Taking, 2013 and 2015.

Variable	Dy/dx*		SE		Z		p>[z]	
	2013	2015	2013	2015	2013	2015	2013	2015
Republican	0.026	-0.057	1.05e-3	8.34e-4	24.75	-68.99	0.00	0.00
Male	-0.025	-0.041	8.49e-4	9.54e-3	-60.91	-43.63	0.00	0.00
Candidate	0.047	-0.032	9.18e-4	8.54e-4	51.20	-37.36	0.00	0.00
Seniority	-0.048	-0.008	1.13e-3	8.61e-4	-42.69	-9.73	0.00	0.00
Credit Claim	-0.060	-0.662	5.14e-4	3.90e-3	-11.29	-170.5	0.00	0.00
Advertising	-0.225	-0.152	4.70e-3	4.532e-3	-47.86	-35.17	0.00	0.00
Age	0.002	0.002	5.28e-5	3.11e-5	49.55	72.63	0.00	0.00
Party Leader	0.025	-0.077	9.18e-4	1.47e-3	28.17	-52.61	0.00	0.00
Com. Leader	0.059	0.035	9.60e-4	1.31e-3	61.32	26.92	0.00	0.00
Dem. State	0.058	-2.0e-4	3.19e-5	2.43e-5	29.96	8.26	0.00	0.00
Prior Office	-0.046	-0.062	1.66e-3	1.33e-4	-27.52	-46.78	0.00	0.00
Prior Election	-0.001	4.9e-5	5.53e-5	5.21e-7	21.98	94.36	0.00	0.00
Total Output	3.11e-5	-3.0e-6	7.32e-7	3.93e-7	42.50	-7.68	0.00	0.00
Pres. Candidate		-0.204		1.34e-3		-152.2		0.00

(*) dy/dx is for discrete change of dummy variable from 0 to 1.

are more likely to mention positions on issues those tweets by their male counterparts. Women may prioritize position taking to counter perceptions that women are less policy oriented and only influential on “women’s issues” like healthcare or education (Carroll 1994; Thomas 1994). Committee leaders are also more likely to prioritize position taking in their tweets, arguably due to their roles as policy specialists on committees where they have developed expertise over a longer period of time. That expertise is also evidenced by the positive effect of tweets by older senators on levels of position taking.

In 2015, the best predictor of attention to position taking is the time senators spend on credit claiming. A senator who spends 38 percent of his tweets on credit claiming – the average – is 25 percent less likely to have tweets referencing position taking. As senators increase their attention to credit-claiming activities, their likelihood to prioritize position taking goes down; however in 2013, tweets mentioning credit claiming have a minimal effect on a tweet’s likelihood to include position taking. The result from 2015 supports the trade-off hypothesis between position taking and credit claiming, but findings from 2013 do not. One reason we may not see a consistent trade off is 23 percent of tweets containing either position taking or credit claiming actually referenced both activities. Counter to the third hypothesis, suggesting position taking and advertising are mutually reinforcing, advertising is also a trade-off in position taking, and that trade off is consistent across both years. Overall, results suggest that attention to credit claiming may sometimes have a negative effect on position taking, but advertising is consistent, albeit smaller, negative effect.

Credit claiming is the second most prioritized activity by senators in their Twitter communications. About one-in-three tweets sent by senators includes a credit-claiming activity. These tweets include references to a senator’s home state, local services and projects, or senators signaling to constituents responsibility for specific actions. Similar to position taking, I find position taking has a strong, negative effect on the proportion of tweets allocated to credit claiming activities in 2015, but a negligible effect in 2013 (Table 5). A senator who mentions position taking in 60 percent of their tweets – the average – is about eight percent less likely to spend time on credit claiming in 2015. The effect for advertising is also negative, but smaller. Variables that consistently effect credit claiming in tweets include party, institutional status, and gender. Republicans in both 2013 and 2015 are less likely to prioritize credit claiming, as well as those who are older and who have held prior office. Senators who have developed a long-term relationship with their state may be able redirect their attention to other activities. Dolan and Kropf (2004) find that gender can affect congressional credit-claiming patterns, and the results here suggest that tweets by women are two percent more likely to include credit-claiming messages.

Table 5: Predicted Probability of Senators' Attention to Credit Claiming, 2013 and 2015.

Variable	Dy/dx*		SE		Z		p > z	
	2013	2015	2013	2015	2013	2015	2013	2015
Republican	-0.111	-0.022	9.88e-4	7.06e-3	-112.77	-31.14	0.00	0.00
Male	-0.016	-0.020	8.93e-4	6.53e-4	-18.11	-27.11	0.00	0.00
Candidate	0.017	-0.038	8.83e-4	1.38e-4	19.31	-65.70	0.00	0.00
Seniority	0.006	0.021	9.39e-4	6.86e-4	6.70	-30.90	0.00	0.00
Pos. Taking	-0.050	-0.367	5.38e-3	3.05e-3	-9.32	-120.2	0.00	0.00
Advertising	-0.024	-0.269	4.44e-3	3.09e-3	-5.49	-87.16	0.00	0.00
Age	-0.002	-0.001	6.06e-5	3.01e-3	-45.28	-18.51	0.00	0.00
Party Leader	0.021	-0.120	8.41e-4	1.54e-3	25.35	-78.08	0.00	0.00
Com. Leader	-0.005	0.039	1.06e-3	1.33e-4	-5.09	29.57	0.00	0.00
Dem State	-0.001	0.001	2.29e-5	1.78e-5	-59.54	-64.89	0.00	0.00
Prior Office	-0.024	-0.027	2.24e-3	3.09e-3	-10.76	-27.40	0.00	0.00
Prior Election	-0.002	3.2e-5	4.17e-5	4.13e-7	-37.54	77.65	0.00	0.00
Total Tweets	6.24e-5	7.5e-6	5.18e-7	2.89e-7	-120.66	25.95	0.00	0.00
Pres. Candidate		-0.170			1.38e-3	-122.72		

(*) dy/dx is for discrete change of dummy variable from 0 to 1.

Advertising on Twitter is unlike traditional media and in many ways; Twitter itself is an advertising activity. Messages are not balanced with opposing viewpoints or subject to the media agenda, and politicians do not abdicate message control to journalists. Twitter's potential to share information and advertise a political brand with a wide audience makes it a tool for conflict expansion (Schattschneider 1960), and gives senators a platform to expand their advertising or promotional activities. Senators use Twitter to promote appearances on CNN, share New York Times articles, or link to press statements. Senators' most frequent advertisements are about appearances on television or press conferences. Many of these messages – about 15 percent – also include a link to a video or webcast of the appearance. I expected position taking and advertising to increase simultaneously given that promotional activities can often include policy statements; however, an increase in position taking tweets does not lead to an increase in advertising activity tweets. In 2013, a senator who spends 60 percent of his tweets on position taking is 13 percent less likely to include advertising in those tweets. Among the additional variables I expected Democrats to allocate more attention to promotional activities like television appearances, given Republican distrust of the media; but the results do not bear that out. Republican senators are up to five percent more likely to advertise their political brand in their Twitter agenda (Table 6). The results may reflect Republicans shunning traditional media sources; however, Republican Senators Kelly Ayotte and John McCain are the

Table 6: Predicted Probability of Senators' Attention to Advertising, 2013 and 2015.

Variable	Dy/dx*		SE		Z		p > [z]	
	2013	2015	2013	2015	2013	2015	2013	2015
Republican	0.017	0.052	1.18e-3	5.70e-4	14.79	91.12	0.00	0.00
Male	0.001	-0.006	1.05e-3	7.88e-4	7.64	-7.65	0.00	0.00
Candidate	-0.041	-0.057	1.07e-3	6.92e-4	-38.01	-82.02	0.00	0.00
Seniority	-0.041	-0.028	1.09e-3	7.08e-4	-37.97	-40.01	0.00	0.00
Pos. Taking	-0.249	-0.070	6.62e-3	2.76e-3	-37.85	-25.54	0.00	0.00
Credit Claim	-0.022	-0.323	5.06e-3	3.57e-3	-4.36	-90.48	0.00	0.00
Age	0.003	0.002	5.30e-5	3.91e-5	61.17	59.77	0.00	0.00
Party Leader	-0.003	-0.092	1.03e-3	1.50e-3	-2.78	-61.87	0.05	0.00
Com. Leader	-0.047	0.033	1.13e-3	1.29e-3	-42.00	25.94	0.00	0.00
Dem State	-0.001	-0.002	2.68e-5	1.73e-5	-53.49	-104.1	0.00	0.00
Prior Office	0.011	-0.021	1.85e-3	1.93e-3	6.18	-11.33	0.00	0.00
Prior Election	0.003	4.16e-5	4.52e-5	6.27e-7	68.81	66.29	0.00	0.00
Total Tweets	4.3e-5	2.78e-6	6.90e-7	3.29e-7	62.57	8.46	0.00	0.00
Pres. Candidate		-0.845		1.53e-3		-55.32		0.00

(*) dy/dx is for discrete change of dummy variable from 0 to 1.

most frequent users to link to news items – often citing editorials or news that highlight their policy preferences. Candidates running for election and those senior senators are less likely to send advertising tweets, suggesting that their attention is directed elsewhere.

Conclusion

The research on Congress is rich and vast, but if we do not understand the individuals within the institution, and their decision-making process, our understanding is incomplete. Senators' social media communications serve as an agenda-setting platform that offers insight into how senators direct their attention across multiple and often competing activities. Party affiliation may explain a lot in Congress, but the activities they pay attention to also affect politicians' pursuit of re-election or higher office. Senators are most likely to prioritize position taking activities, particularly female senators and those who have established policy expertise over time. When senators choose to prioritize policy, this can have a negative effect on the attention they allocate to both credit claiming and advertising. Credit claiming is more likely among Democrats and less likely among those who have already established a reputation with the state. More than 50 percent of advertising tweets are paired with position taking attention, but

position taking still has an overall negative effect on a senator's likelihood to prioritize advertising. A critical contribution of this study is it captures senators' attention during a party shift in the Senate to account for differences between minority and majority parties. Advertising shows the strongest partisan effects across both Congresses, suggesting that partisan effects are not just a reflection of senators' majority status.

These patterns of communication on Twitter provide an initial analysis for understanding how senators make choices among Mayhew's three activities and the trade offs that may result. Decision-making and attention are usually studied at the institution-level in Congress, but this study uses the same concepts of limited attention and satisficing trade-offs to understand the variation in how senators prioritize their individual attention to goal-seeking activities. Because politicians must sort through an oversupply of policy information, partisan cues, and media signals, how they filter their attention across their activities reveals those priorities that are most salient – or beneficial for re-election– for a given senator. Scholars have long studied legislative behavior and constituent communication, but never before have we had such an accessible and concentrated measure as Twitter. Social media aggregates politicians' many activities in one space and illuminates how those activities are prioritized. Twitter offers a new platform for measuring individual activities that spans position taking, credit claiming and advertising and enables us to assess the how they prioritize these activities and the resulting trade offs. The next step is to question what alternative explanations we have for these patterns, such as influence from the executive branch. Assessing patterns of senators' prioritization on Twitter moves legislative research toward a more complex understanding of individual legislators' decision making. Senators respond to multiple, competing demands during their political life in Congress, and Twitter broadcasts how they selectively prioritize their time and resources.

Appendix

2013 Senators

Name	Age	Total Tweets
Alexander	73	418
Ayotte	45	1812
Baldwin	51	992
Barrasso	61	666
Baucus	72	150

2013 Senators

Name	Age	Total Tweets
Begich	51	188
Bennet	49	198
Blumenthal	67	569
Blunt	64	1269
Boozman	63	328
Boxer	73	260
Burr	58	328
Cantwell	55	520
Cardin	70	1195
Carper	67	868
Casey	53	536
Chambliss	70	309
Coats	70	681
Coburn	65	389
Cochran	76	458
Collins	61	271
Coons	50	543
Corker	61	673
Cornyn	62	2272
Crapo	62	2094
Cruz	43	1826
Donnelly	58	511
Durbin	69	667
Enzi	70	576
Feinstein	80	365
Fischer	62	468
Flake	51	269
Franken	62	196
Gillibrand	47	1968
Graham	58	1075
Grassley	80	563
Hagan	60	706
Harkin	74	51
Hatch	79	51
Heinrich	42	466
Heitkamp	58	1142
Heller	53	1098

2013 Senators

Name	Age	Total Tweets
Hirono	66	394
Hoeven	56	244
Inhofe	79	905
Isakson	79	228
Johanns	63	53
Chiesa	48	30
Johnson	67	266
Kaine	55	1177
King	69	656
Kirk	54	721
Klobuchar	53	484
Landrieu	58	708
Lautenberg	89	375
Leahy	73	1348
Lee	42	644
Levin	79	198
Manchin	63	999
Markey	67	596
McCain	73	1562
McCaskill	60	403
McConnell	71	1999
Menendez	59	1035
Merkley	57	449
Mikulski	77	1077
MCowan	44	243
Moran	59	781
Murkowski	56	316
Murphy	40	1348
Murray	63	1846
Nelson	71	74
Paul	50	1057
Portman	58	758
Pryor	50	663
Reed	64	862
Reid	74	623
Risch	70	118
Roberts	77	319

2013 Senators

Name	Age	Total Tweets
Rockefeller	76	865
R Johnson	58	161
Rubio	42	285
Sanders	72	2121
Schatz	41	174
Schumer	63	940
Scott	48	487
Sessions	67	230
Shaheen	66	882
Shelby	79	23
Stabenow	63	248
Tester	57	61
Thune	52	580
T Udall	65	470
Toomey	52	896
Udall	63	904
Vitter	52	834
Warner	59	1071
Warren	64	179
Whitehouse	58	578
Wicker	62	429
Wyden	64	433

2015 Senators

Name	Age	Total Tweets
Alexander	74	912
Ayotte	46	2223
Baldwin	52	3328
Barrasso	62	671
Bennett	50	280
Blumenthal	68	1739
Blunt	64	1352
Booker	45	4428
Boozman	64	479

2015 Senators

Name	Age	Total Tweets
Boxer	74	392
Brown	62	414
Burr	59	606
Cantwell	56	619
Cardin	71	1695
Carper	67	882
Casey	54	1040
Cassidy	57	611
Coats	71	1392
Cochran	77	413
Collins	62	314
Coons	51	1348
Corker	62	634
Cornyn	62	3308
Cotton	37	1421
Crapo	63	288
Cruz	44	778
Daines	52	1328
Donnelly	59	1086
Durbin	70	2217
Enzi	70	928
Ernst	44	584
Feinstein	81	1085
Fischer	63	924
Flake	52	363
Franken	63	231
Gardner	40	1046
Gillibrand	48	2613
Graham	59	612
Grassley	81	835
Heinrich	43	780
Heitkamp	59	2472
Heller	54	1470
Hirono	67	430
Hoeven	57	561
Inhofe	80	404
Isakson	70	1034

2015 Senators

Name	Age	Total Tweets
J. Tester	58	990
Kaine	56	1478
King	70	677
Kirk	55	1375
Klobuchar	54	1281
Lankford	46	756
Leahy	74	2387
Manchin	67	1060
Markey	68	1809
McCain	78	2510
McCaskill	64	440
McConnell	72	1784
Menendez	61	557
Merkley	68	762
Mike Lee	43	532
Mikulski	78	733
M Capito	61	1350
Moran	60	391
Murkowski	57	1066
Murphy	41	3438
Murray	64	1914
Nelson	72	36
Paul	51	4071
Perdue	65	1001
Peters	56	1057
Portman	59	1262
Reed	65	869
Reid	75	561
Risch	71	90
R Johnson	59	895
Roberts	78	1581
Rounds	60	716
Rubio	43	2382
Sanders	73	2793
Sasse	42	466
Schatz	42	331
Schumer	64	2339

2015 Senators

Name	Age	Total Tweets
Scott	49	1687
Sessions	68	237
Shaheen	67	955
Shelby	80	390
Stabenow	64	247
Sullivan	50	686
Thune	54	851
Tillis	54	801
Toomey	53	435
Udall	67	639
Vitter	53	2203
Warner	60	639
Warren	65	416
Whitehouse	59	949
Wicker	63	599
Wyden	65	1068

Additional Coding Examples

Position Taking (Position on a vote, a bill, discussion of legislation, policy preferences.)

More than half of Americans “baffled” by #ObamaCare impacts. That’s why I support efforts to defund this #TrainWreck. <http://t.co/eqK28Mg1Hy>

Credit Claiming (Local project involvement, policy with local implications, credit for introducing policy and/or projects)

I have repeatedly made it clear I will not vote to raise the debt ceiling unless we address why we are going further in debt
 What does #OMDP4NM stand 4?#NMJobs & future gens. Proud to introduce #Organ-Mountains #publiclands bill today: <http://t.co/RhOeYMcM3V>

Plateau’s #broadband expansion in #NM critical 4 #smallbiz #jobs-proud 2 be in Moriarty 2 celebrate #ARRA investment <http://t.co/kWb6vbbIrs>

Advertising (Promoting your political brand through media, press, visits, and talks)

RT @Whereruproulx: #Tourism Press Conference with @SenatorShaheen at #WeirsBeach #NH. Int'l visitors spend \$4500 per ind. on avg. http://t_

Had a great time talking w/the barbers at Unique Reflections but told them my loyalty lies w/my barber back in #RVA <http://t.co/7AhiSC9Eae>

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