

## Gendered Priorities? Policy Communication in the U.S. Senate


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## Gendered Priorities? Policy Communication in the U.S. Senate

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### ABSTRACT

Women running for Congress make different choices than men about how to connect with constituents on social media, but few studies investigate how these variable strategies shape in-office messaging, particularly those of U.S. senators. This article extends research on gendered congressional communication by looking at how women in the Senate build reputations on Twitter, specifically assessing whether they set themselves apart with the policy agendas they promote online. Senators take advantage of Twitter's low-cost and user-driven messaging to cultivate a reputation with their legislative expertise, and this research shows that women are curating a more comprehensive and broad agenda than gender stereotypes would otherwise suggest. Senators' legislative communication on Twitter shows that women on both sides of the aisle are expanding their policy agenda to reach beyond "female issues." Women are often stereotyped as less policy-oriented and only capable in gender-specific policy areas, but women in the Senate are actively communicating about contested policy issues and articulating diverse agendas. By adopting a comprehensive policy agenda for their public image, women in the Senate are both meeting and defying expectations about the policy topics they are willing and ready to act on.

The rise in women serving in Congress parallels the rise in social media for constituent communication, and as the proportion of female lawmakers has increased, so too has research that examines the differences in how male and female lawmakers appeal to constituents on social media (Evans, Cordova, and Sipole 2014, Evans, Ovalle, and Green 2016; Evans and Clark 2016; Wagner et al. 2017). The normalization of Twitter gives female lawmakers new tools to self-select their own political narrative — detailing how they want to be perceived by the public. Members of Congress need to build a reputation and trust with voters (Bianco 1994), and one way they connect with constituents is through their issue agendas. Twitter

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makes it even easier to access these agendas. This research uses those rhetorical agendas on Twitter to understand whether women adopt different styles of representation as evidenced through their policy priorities on social media.

Prior research suggests that congresswomen prioritize issues differently on the campaign trail and once elected (Evans, Ovalle, and Green 2016) — women are more likely to prioritize policy and “female issues” — and this research compliments and expands that work by assessing differences in issue selection and agenda diversity in the Senate where Twitter is ever more widely adopted and consistent over time (Russell 2018). Senators are not running for reelection as frequently as their House counterparts, so they have the resources and opportunity to use their policy agendas to maintain and reinforce consistent constituent connections over time. Senators develop a style of representation that often draws on their legislative expertise and issue agenda, and if women are setting a different agenda than their male colleagues, that not only influences their actions in office but also the nature of their constituent relationships. I look more closely at senators’ issue agendas to establish if gendered policy patterns are persistent in senators’ agenda-setting behavior online — both in the specific issues they address and the diversity of policies. Studies of legislative activity suggest women in Congress counter stereotypes by being effective lawmakers with a diverse policy agenda (Atkinson and Windett 2018; Dolan and Kropf 2004), but legislative actions are only one part of a lawmaker’s agenda. In the era of social media, how lawmakers self-describe their political brand to constituents requires alternative venues to assess gendered variation in representation. Many studies have used newsletters, web sites, and press releases to study congresswomen’s communications (Gershon 2008; Fridkin and Kenney 2014; Cormack 2016), but the normalization of Twitter as a tool for strategic communication offers a new lens for observing differences in self-presentation by men and women in the Senate. Research by Evans, Ovalle, and Green (2016) offers a crucial first step to understanding the distinct issue agendas tweeted by congresswomen over a two-month period, and this article extends that work to look specifically at senators’ issue selection and agenda diversity over a full year to see whether policy communication across social media differs for men and women. This analysis considers senators’ tweets from the 114<sup>th</sup> Congress to contribute new insights into how female senators use Twitter to communicate policy priorities and whether that behavior is distinguishable from male colleagues. I assess senators’ policy messaging on Twitter across 20 policy topics and find minimal support for gendered issue selection but significant differences in the high number of issues that women in the Senate choose to address. Women in the Senate are choosing a policy-focused approach

similar to their male colleagues — extending prior research that suggests female lawmakers may adopt similar communication styles to their male colleagues once elected (Evans et al. 2016) — but when I consider issue diversity, I find that the issues women discuss on social media are extensive and not just “women’s issues.” Female senators’ rhetorical policy agendas encompass a wider range of issues than their male colleagues. Women in the Senate may be communicating a broad legislative agenda that both combats stereotypes that limit their policy bonafides while also meeting expectations about expertise on presumed “female policy” issues.

### **Gendered communication and social media**

Prior research has assessed the impact of gender on legislative behavior (Swers 2002; Dolan 1998; Thomas 1991) because lawmakers with a common identity will act in the interests of that group (Mansbridge 1999; Pitkin 1967). Having more women in Congress can affect which specific issues make it onto the agenda (Swers 2002, Dolan 1998). Women in both Congress and state legislatures are often leading on bills concerning women’s issues (Thomas 1994; Bratton and Haynie 1999; Sanbonmatsu 2002). Congressional actions, like votes, are useful for revealing preferences, but it is harder to ascertain intensity from them (Hall 1998). One way to address the intensity of policy priorities is through regular communication. By considering what senators say and the distribution of their rhetoric on issues, we get a better representation of priorities given that position-taking is often about what a lawmaker says rather than simply what one does (Mayhew 1974).

All members of Congress make strategic decisions about how they want to advertise their political brand — but not all politicians make the same choices about how to communicate. Gender is one of the most straightforward characteristics that research suggests prompts variable communication patterns (Fridkin and Kenney 2014; Gershon 2008; Kahn 1994; Cormack 2016). Much of the research on gendered communications in Congress focuses on the campaign rather than the member’s time in office, and the research is mixed as to whether women should adopt different communication strategies. Some studies suggest that gendered differences are waning and lawmakers adopt similar campaign styles such that men and women are equally likely to focus on masculine traits and similar issues (Bystrom 2006; Sapiro et al. 2011). Others argue that women and men communicate differently because female politicians can either reinforce masculine and feminine stereotypes in the policy issues they discuss (Herrnson et al. 2003; Kahn 1992, 1993; Kahn and Gordon 1997) or actively counter those stereotypes through the topic of their advertising and social media choices

(Huddy and Terkildsen 1993; Evans, Cordova, and Sipole 2014; McGregor 2017; McGregor and Rache 2016). Studies of congressional tweets that find women running for Congress spend more time advertising their policy priorities and spend more time on women's issues (Evans, Cordova, and Sipole 2014; Evans and Clark 2016).

One explanation for these communication differences stems from the role that women play as political outsiders (Evans, Ovalle, and Green 2016; Evans and Clark 2016). As insiders, male politicians may receive preferential treatment as part of the established political order. An example of this effect is political media coverage that reinforces gender stereotypes (Niven and Zilber 2001; Witt, Paget, and Matthews 1994) and more often references male leadership (Shor et al. 2015). And research suggests that once women are elected to office, they continue to communicate differently as political outsiders. Research by Fridkin and Kenney (2014) suggests that gender may predict the type of issues senators highlight in their press releases such that women are more willing to take credit for issues typically associated with men. As political communication has moved online, female and minority lawmakers have used their websites to address issues related to gender and race (Gershon 2008). Websites give lawmakers the opportunity to highlight their top issue priorities with minimal constraints, giving female lawmakers the discretion to emphasize "women's issues" more frequently than male colleagues (Nevin and Zilber 2001). The "out group" distinction persists post-campaign as female lawmakers are more likely to present themselves on their webpages as political outsiders (Gulati 2004). These studies shed light on gendered patterns of constituent communication, but many questions remain about how those patterns play out over time and on new media platforms.

The normalization of Twitter forces us to consider how these communication patterns translate on a new, hybrid media platform. Research by Evans, Ovalle, and Green (2016) suggests that female House members, once in office, adopt similar styles of Twitter communication as their male colleagues; however, when looking specifically at policy issues, women in office are talking about women's issues at an increased rate compared to their male colleagues. A similar style of policy agenda is reflected by the mention of masculine issues by both men and women in the House, but this also suggests that women are engaging on both those issues where they are expected to have expertise as well as those issues where they do not.

This article builds on this research by Evans, Ovalle, and Green (2016) — shifting the analysis to the Senate and over a longer period of time — to assess how women develop an issue agenda as members of a legislative body with even less gender parity than the House. Senators' extended tenure and individual autonomy relative to the party give them a unique

platform that incentivizes policy expertise within the institution over time. Given the additional resources senators have to devote to policy, in terms of fiscal and human resources, and the different electoral pressures, I expect senators have the latitude to communicate an extensive policy agenda. This research looks both at women's policy priorities by issue area and considers the diversity of issues presented as women in office seek to shore up any voter doubt about their capabilities or perceived expertise.

### Theoretical considerations

Seeking favor with constituents by relaying the impact of policy is one of a senator's primary duties; however, gender stereotypes and perceptions of constituent expectations may shape how women in the Senate present their issue agenda to constituents. Once in office, female senators may perceive the need to shore up their policy expertise compared to male counterparts for whom that expertise is automatically expected. To counter these stereotypes, I expect female senators to be equally vocal as their male copartisans about their policy priorities (Osborn 2012) or even additionally policy oriented (Evans and Clark 2016; Evans, Ovalle, and Green 2016) when discussing their policy priorities on Twitter. Research from campaigns suggests female lawmakers are more likely to use Twitter to emphasize policy issues and those issues often considered "women's issues," (Evans, Ovalle, and Green 2016). The perception of policy as a male-dominated arena may incentivize female senators to remain more outspoken on policy issues with communicating their agenda on Twitter.

*Similar Policy Priority Hypothesis (H1): Female Senators will devote an equal proportion of their tweets to policy relative to their male colleagues.*

*Higher Policy Priority Hypothesis (H2): Females Senators will be more likely to devote a higher proportion of their tweets to policy relative to their male colleagues.*

Female lawmakers communicate policy in unique ways given that they are the "out party" or "political outsiders" (Evans and Clark 2016), but their approach to communication is compounded for some women, Democratic women, as the out party within the chamber as well. This expectation aligns with work by Osborn (2012) who finds lawmakers' sex and party influences their approaches such that Democratic women introduce more policy and legislation. Republican women may be more likely to adopt more stereotype-confirming styles of representation that emphasize constituency and place lower emphasis on policy. Democratic senators, whose base consists of many more women, may feel more able to break from those stereotypes and emphasize policy priorities in their political brand on social media. This opportunity to counter stereotypes is even

more necessary for Democratic women in 2015 when the Republican Party controlled the legislative agenda within the chamber.

*Partisan Policy Priority Hypothesis (H3): Female Democratic senators will be more likely to devote more tweets to policy relative to female Republicans.*

Female senators of both parties face a second bias in that not only are men more closely associated with policymaking, but gender stereotypes infer expertise in certain policy areas. Women of each party may hold different policy preferences, but there is a common expectation about the issues they are associated with. Given this specialization and expertise, women may communicate on these issues to bolster their reputation with constituents. And given the overlap between “women’s issues” and Democratic-owned issues, I expect partisan differences among female senators.

*Issue Area Hypothesis (H4): Female senators will devote a higher proportion of policy tweets to “women’s issues” relative to male senators when they discuss policy on Twitter.*

*Partisan Issue Area Hypothesis (H5): Female Democratic senators will spend a higher proportion of policy tweets on “women’s issues” relative to Republican female senators when they mention policy on Twitter.*

While some studies suggest that women may focus on specific issues, research by Atkinson and Windett (2018) suggests that female House members also counter stereotypes with issue diversity. Female lawmakers do introduce legislation on women’s issues, but that is only part of a complex issue agenda. Research by Evans, Ovalle, and Green (2016) finds that women in the House not only tweet more about women’s issues, but also traditionally defined “men’s issues.” I expect similar diversity in the Senate where female senators communicate a diverse agenda to a comparatively diverse constituency in order to both assert their policy responsiveness and overcome perceptions that women lack expertise on masculine issues like defense or foreign affairs (Huddy and Terkildsen 1993).

*Issue Diversity Hypothesis (H6): Female senators are more likely to address a wider variety of policy issues than their male colleagues.*

## Research design

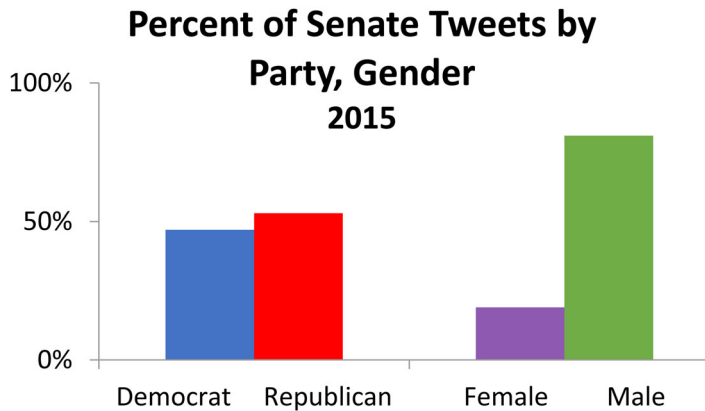
Constituents are more likely to know something about their representatives if they are exposed to media content (Lipinski 2004; Bickers et al. 2007), and increasingly social media is the source of information. Senators’ public-facing communication on Twitter offers a necessary tool for understanding how senators link their preferred policy agenda with potential voters. Personalization is a fundamental component of constituent communication both in the U.S. and abroad (Graham et al. 2013; Kousser 2019), and

Twitter is a political marketing mechanism for engaging journalists, special interests, and voters (Enli and Skogerbø 2013). Journalists report that Twitter has induced changes to daily reporting practices (Parmelee 2014) such that tweets by notable politicians headline the news. The audience on Twitter is broader than that of press releases or newsletters due to its ability to link to and aggregate these existing measures, but Twitter's interactive nature may better narrow the gap between policymakers and the public through a reciprocal relationship between elected officials and constituents. Social media sites enable politicians to publicly advertise their brand and build personal relationships with constituents and activists alike. Those relationships are especially important for female politicians because psychology research suggests limiting the "social distance" matters for descriptive representation.

Given that politicians are adapting their behavior to project their policy priorities on social media, we must similarly adapt our analysis to consider the implications of that digital agenda-setting. This study analyzes how men and women in the Senate communicate by studying their tweets during the first session of the 114<sup>th</sup> Congress (2015). In general, senators have adopted Twitter more readily than House members, allowing further analysis of gendered communication in the Senate rather than the House (Fridkin and Kenney 2014). This analysis departs from many social media studies by looking specifically at senators rather than House members, where chamber size, electoral constraints and relative number of responsibilities shape how and when lawmakers are able to specialize by issue area. Senators' longer electoral clock and individual autonomy relative to the party give them a unique platform that incentivizes policy expertise within the institution and also via their public-facing communications. Given the latitude senators have to devote to policy, due in part to additional fiscal and human resources, I expect senators to have even more comprehensive policy agendas and diverse policy communication. House members regularly rely on the party for institutional support but this support, while necessary, may also limit their individual agenda-setting capacity to address any number of issues. For example, a House member may be more likely to rely on a party-drafted press release or sample tweet simply given their resource constraints.

This Senate data is derived from each senator's Twitter activity between January 3, 2015, and December 31, 2015. I select this time period because my primary interest is gendered political rhetoric outside of the campaign, and politicians are least likely to be distracted by upcoming elections in a non-election year. Each senator has a verified Twitter account, either managed individually or by the member's press office. All tweets, by both staff and senator, are attributed to the senator, treated as an extension of the elected official and his priorities. The accounts in this study include either





**Figure 1.** Percent of all Senate tweets in 2015 according to party and gender.

the member's individual account or office account. I do not consider campaign accounts because my interest is specifically on communications while in government rather than on the campaign trail.

The dataset contains 113,112 total tweets.<sup>1</sup> The number of tweets by each user varies, as Democratic Senators Chris Murphy totaled more than 3,400 tweets, but Republican Senators Jim Risch totaled just 90. In today's polarized Congress, party is the most common predictor of behavior, but on Twitter, neither party is significantly more likely to use Twitter. Republicans make up about 53 percent of all tweets sent — only slightly lower than their 54 percent vote share in Congress (Figure 1).<sup>2</sup> If we look at the differences between men and women, it becomes clear that the percent of total tweets sent mirrors the gender disparity in the Senate (Figure 1). In 2015, 20 women held Senate seats and sent about 19 percent of all tweets by senators. The average number of tweets by party and sex does reflect marginal differences, but those differences in Twitter frequency are not significant (Table 1). This finding actually runs counter to many studies in the House that find female lawmakers are actually more vocal in office, both on social media (Evans, Cordova, and Sipole 2014) and on the House floor (Pearson and Dancey 2011).

Given that Twitter is common across most senators regardless of party or sex, I move to analyzing the content of those tweets to understand the role that policy plays in senators' tweets. Each tweet is automatically scraped through the Twitter API and then manually coded by its mention of senators' policy priorities.<sup>3</sup> Tweets with policy mentions are coded by trained student coders according to the U.S. Policy Agendas Project coding scheme that categorizes public policy into 20 major topics (Tables 2 and 3).<sup>4</sup> I identify policy content following the project's coding guidelines that allocate policy codes to any document or policy output, regardless of position-taking considerations. This would include both explicit references to

**Table 1.** Average number of Senate tweets across party and gender in 2015.

GOP	1,049	Male GOP	1,045
Democrats	1,250	Female GOP	1,076
Male	1,135	Male Democrats	1,268
Female	1,169	Female Democrats	1,208

**Table 2.** U.S. policy agendas topic codes.

Macroeconomics	Energy	Defense
Civil Rights	Immigration	Space & Science
Health	Transportation	Foreign Trade
Agriculture	Law, Crime, and Family	International Affairs Government Operations
Labor	Social Welfare	Public Lands
Education	Community & Housing	
Environment	Banking and Finance	

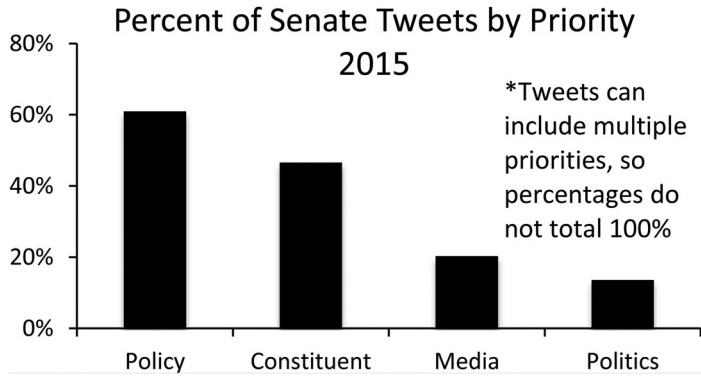
**Table 3.** Examples of policy messages in tweets

Health	Sen. McConnell is speaking now on the Senate floor about <b>healthcare</b> .
Economy	Looking forward to continue working to move our #MadeInWI <b>economy</b> forward.
Labor	<b>\$8.75 &amp; \$9/hr</b> at the end of 2015 are still too low
Immigration	<b>Immigration reform</b> should matter to all of us who understand the importance of family.

legislation and policy preferences about specific solutions. By using a wide lens to detect policy attention, rather than specific mentions of legislation, I am able to capture policy priorities without the constraints of institutional or party action.<sup>5</sup> About two-thirds of all senators' tweets include reference to a policy issue. For instance, a tweet that mentions the appropriations for the National Defense Authorization Act is coded as policy under the defense code. To identify those policies considered as "women's issues," I rely on Fridkin and Kenney's (2014) categorization of "communal issues" and "competitive issues." They define communal issues as those more stereotypically associated with women, including healthcare, elderly, education, welfare, childcare, and environmental issues. Competitive issues are those associated with men, including defense, economy, budget, taxes, inflation, energy, farming, and business issues.

For both men and women in the Senate, policy is the predominant frame for senators' communication on Twitter (Figure 2). Comparing policy to politics (elections and partisan attacks), constituent outreach (state issues, town halls, service), or media messaging (op-eds, TV appearances, press releases), policy is consistently the primary vehicle for reaching out to elite and public audiences (Figure 3).<sup>6</sup> This echoes research that finds senators' tweets are most often used for position-taking activities (Russell 2018).

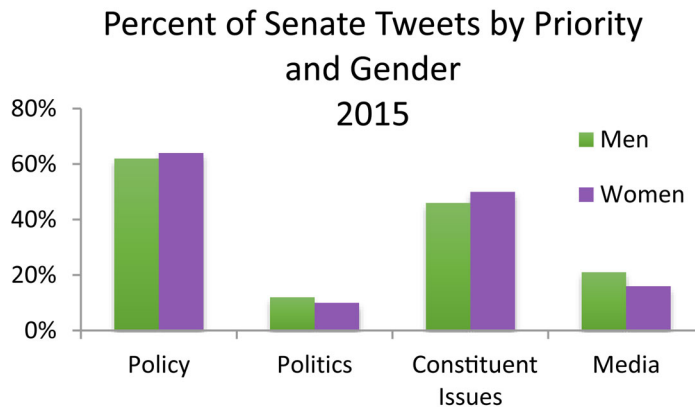
When I break those priorities out for men and women, the differences are variable across each type of communication (Figure 4). First, female senators reference policy at a higher rate than men, but only by about two percent, and the difference is not significant. Women allocate about 64 percent of all tweets to policy while it is 62 percent for men. The slightly



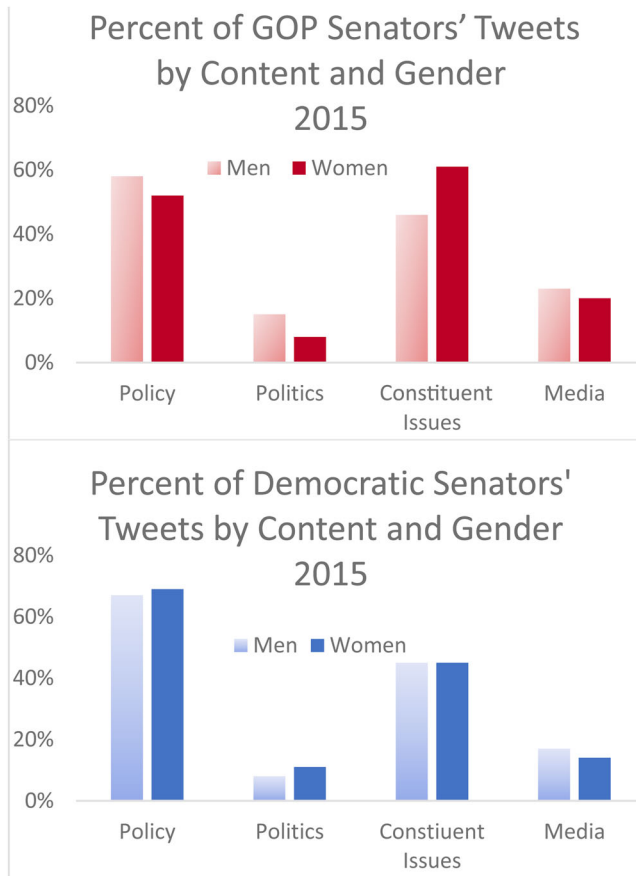
**Figure 2.** Percent of senators’ tweets distributed across multiple priorities, 2015.



**Figure 3.** Examples of female senators’ policy tweets in 2015.



**Figure 4.** Percent of Male and Female Senators’ Tweets Distributed Across Multiple Priorities, 2015.



**Figure 5.** Percent of Senators' Tweets Distributed Across Multiple Priorities by Sex and Party, 2015.

higher average of policy-specific tweets by women suggests that women are at least equaling the policy messages sent by their male colleagues. This result speaks to the first hypothesis that posits equal levels of policy attention on Twitter by female senators (H1) but offers less certain evidence for the second hypothesis that the proportion of a female senator's tweets that mention policy is higher than that of a male senator. This extends research from the House to the Senate that female lawmakers are equally policy oriented on Twitter (Evans, Cordova, and Sipole 2014) and reflects female lawmakers' active introduction of policy proposals (Atkinson and Windett 2018).

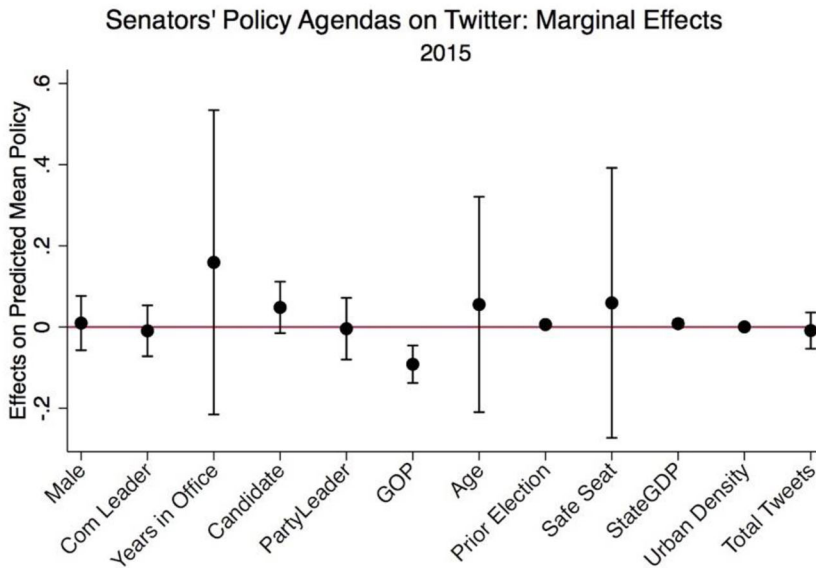
Looking more closely at differences within each party, I find the Twitter agendas of the 14 Democratic women differ marginally from that of the six Republican women (Figure 5). Democratic women mimic the overall trend with a slightly higher percentage of policy tweets, while Republican women actually devote somewhat less of their Twitter agenda to policy than Republican men. The most notable difference between Republican and

Democratic women is the deference to constituent issues by Republican female senators. This finding for GOP women conforms to stereotypes that women value relationship building given their sizable and significant difference in constituent attention compared to male Republican senators. Republican women spend a slightly lower percentage of tweets on policy but there is a 15 percent difference between GOP men and women in addressing constituent issues.

### **Multivariate analysis**

To determine whether men and women in the Senate communicate different issue agendas on Twitter, I estimate a fractional logit model that examines how senators allocate their tweets toward policy.<sup>7</sup> The unit of analysis is at the senator level and the dependent variable is the proportion of a senator's annual Twitter output that includes policy priorities. I use the percentage of a senator's tweets that include policy, rather than a simple count, because I am interested in how female senators divide their attention between policy priorities rather than the total output or frequency of policy priorities (controlled for in the model).<sup>8</sup> While sex is the variable of interest, I also consider a senator's candidacy with a dummy variable for whether that senator is up for reelection that session and include a measure of senators' electoral safety by their performance in their most recent reelection, specifically measuring the margin of victory. Senators with wide margins of victory may be free to express their political priorities without fear of electoral effects. I measure for age and total years in office as Evans, Cordova, and Sipole (2014) find that incumbents exhibit distinct behavior on social media during the campaign. The state's political climate and the safety of the seat is measured by the margin of victory achieved by the presidential candidate of a senator's party. Additionally, I consider a state's urban density as this may affect the viability of advertising across media markets and the state's GDP percentage changes. Finally, I consider senators' total Twitter activity given that some senators may be more active on Twitter and that influences how and when they communicate about policy issues.

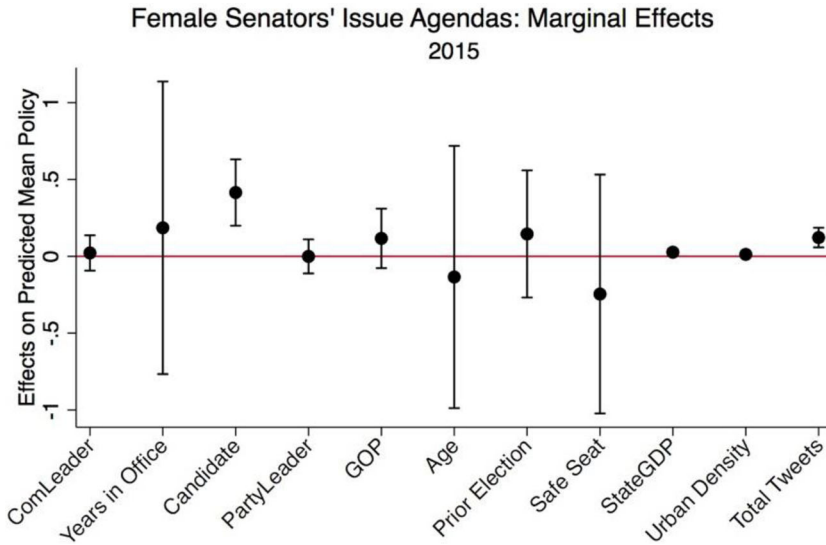
For the first model, the dependent variable is the percentage of a senator's agenda that mentions overall policy — regardless of the specific issue. The model tests whether women in the Senate are communicating a more policy-dense agenda for constituents, and I find that women are not prioritizing policy communication on Twitter differently from their male colleagues (Figure 6).<sup>9</sup> The effect for male senators communicating policy is not significant. Fridkin and Kenney argue that some women may be more likely to communicate on policy issues because it directly counters stereotypes that women are less policy focused (2014), but there is no evidence that women overcompensate for that stereotype by dedicating a higher



**Figure 6.** Logistic Regression with Marginal Effects of Senators' Policy Priorities on Twitter.

percentage of their Twitter agenda to policy. Similarly, Cormack (2016) hypothesizes female legislators work harder to convey higher levels of policy effort to voters, but female senators' tweets do not offer evidence to this effort in the overall output. These results do not support the hypothesis that women are communicating about policy at a greater level than their male colleagues while in office (H2). Electoral considerations or perceptions that women have to "do more" to be equally qualified do not necessarily evaporate once women are in office, but they are not evidenced simply by the level of policy as a proportion of Twitter communication. The only statistically significant variables for predicting policy attention are party and prior margin of victory. On average, party affiliation offers the strongest explanation of policy priorities, as the average Democrat is more likely to mention policy as a larger percentage of his or her total tweets. This partisan result may be a function of different styles of representation across both parties, drawing from work by Grossman and Hopkins (2016) on the policy-oriented nature of the Democrats versus ideology for Republicans.

The next model addresses partisan variation by women only. For the model the dependent variable is the percentage of all female senators' tweets that mention overall policy with the same independent variables as above. Similar to the first model inclusive of all senators, when narrowing the analysis by gender, I find little evidence of policy rhetoric variation on Twitter (Figure 7). Despite the descriptive findings above that Republican women are less policy-oriented than their Republican male counterparts, there is no significant difference between Democratic and Republican women. Those women in the Senate who are more active on Twitter use the platform to



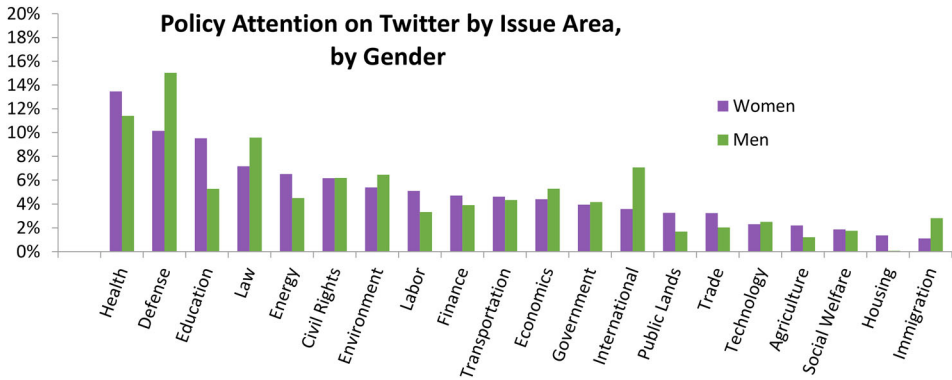
**Figure 7.** Logistic Regression with Marginal Effects of Female Senators' Policy Priorities on Twitter.

address policy at higher rates. Also, those women who are up for reelection use policy to connect with potential voters in the next election cycle more often than those whose campaigns are four or six years off.

### ***Issue-specific policy agendas***

The results of the previous models suggest limited effects for sex on the proportion of tweets female senators send regarding policy; however, the context of that policy may diverge. I expect that women will be more likely to focus on traditional “women’s issues” like education and healthcare, and that Democratic women will be particularly vocal on these issues given their overlap with Democrats’ issue reputation on social welfare.

In [Figure 8](#), I break down male and female senators’ policy attention by the issue area. About one-third of all tweets mention no policy, but the most mentioned areas are health, defense and education. Most of the categories have less than a one-percent difference between male and female attention, however, there are notable exceptions. Female senators spend about three percent more of their agenda on health — stemming from discussions about Planned Parenthood, drug prevention, and insurance. This finding echoes research that shows that women are more likely to sponsor health related legislation (Swers 2016). Women also spend more time on education, with advocates like Democratic Senator. Patty Murray, a former educator, pushing for better education policy. While female legislators are often associated with and active on these social issues (Bratton and Haynie 1999; Swers 2002) women, on average, also spend more time talking about



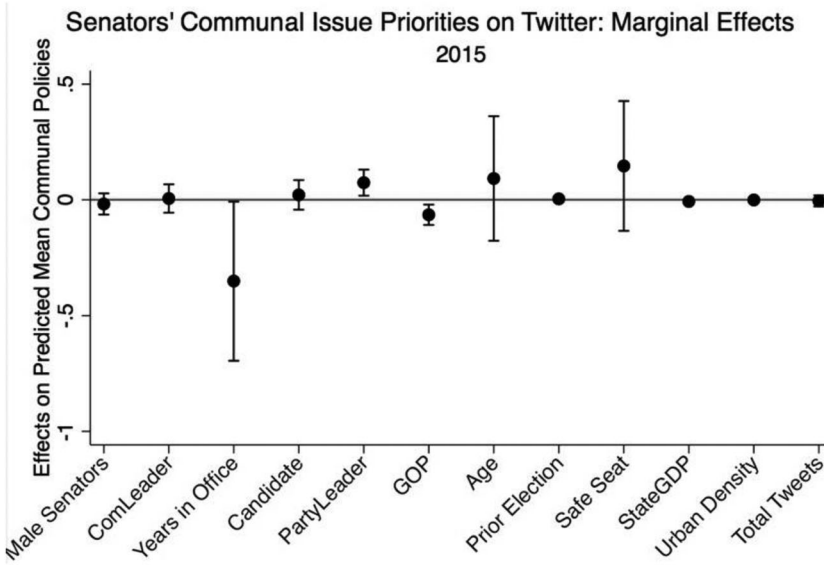
**Figure 8.** Percentage of Male and Female Senators Tweets Categorized by the Policy Agendas Project Codes, in 2015.

labor issues, energy, finance, and public lands. Male senators — as stereotypes would predict (Huddy and Terkildsen 1993) — devote more attention to defense policy. In 2015, this included the debate over a nuclear deal, funding, and veterans care.

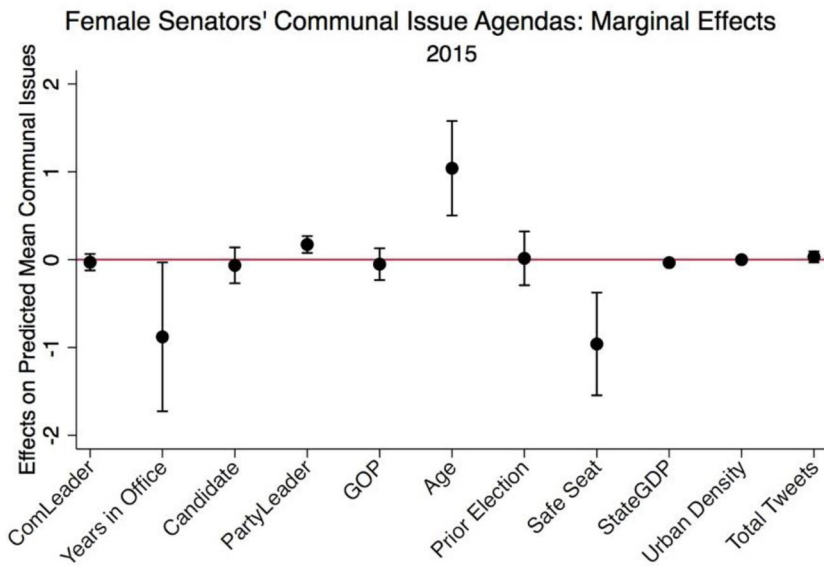
I formally test how attention is allocated to issues with another fractional logit where the dependent variable is the proportion of a senator’s tweets that mention those issues traditionally considered as “women’s issues” or “men’s issues” as described by Fridkin and Kenney’s (2014) categorization of “communal issues” and “competitive issues.”<sup>10</sup>

Similar to the effects for all policy, the specific issues that women communicate on Twitter are not statistically different than their male counterparts (Figure 9). By looking at those issues typically associated with women versus those associated with men (communal vs. competitive), I find that party rather than sex is the best predictor of issue communication. The strong effect for party compared to gender may be due to competing assumptions about party-owned issues where each party develops a reputation (Egan 2013; Petrocik 1996). Party leader is the only other variable in the model that has any explanatory power for the types of lawmakers who prioritize “communal” or “women’s issues.” Additionally, measures of issue prioritization do not account for preferences and tone, which may reveal more nuanced differences among lawmakers. For example, male senators may be equally likely to address communal issues by voicing opposition. Contrary to my issue area hypothesis (H4), women in the Senate are no more likely to devote Twitter attention to communal issues like healthcare and education once you hold other factors like party and leadership status constant. While the small effect for men on communal issues is negative, it is not significant. This finding runs counter to work see (Volden et al. 2013) that finds congressional activity on those issues associated with women is higher among female members. This suggests that the agendas on Twitter are not a perfect representation of legislative activity.



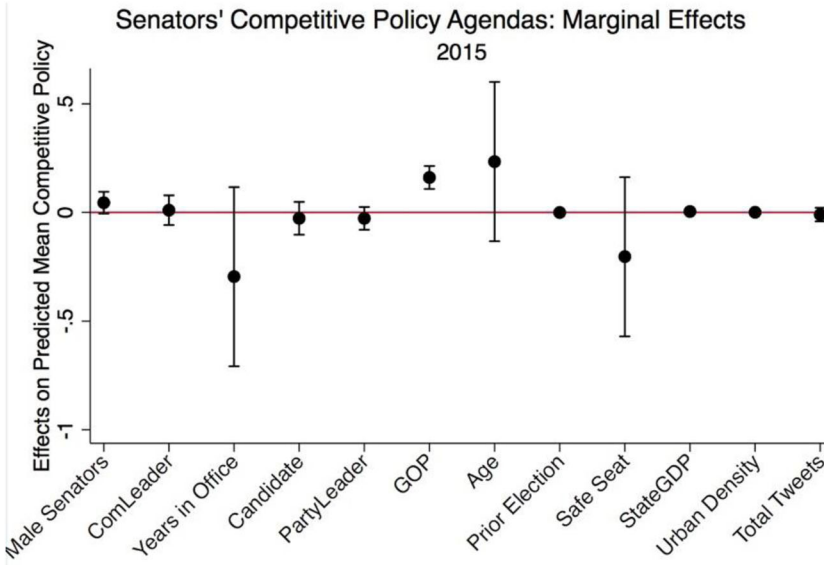


**Figure 9.** Logistic Regression with Marginal Effects of Senators' Mentions of Communal or "Women's" Issues on Twitter in 2015.

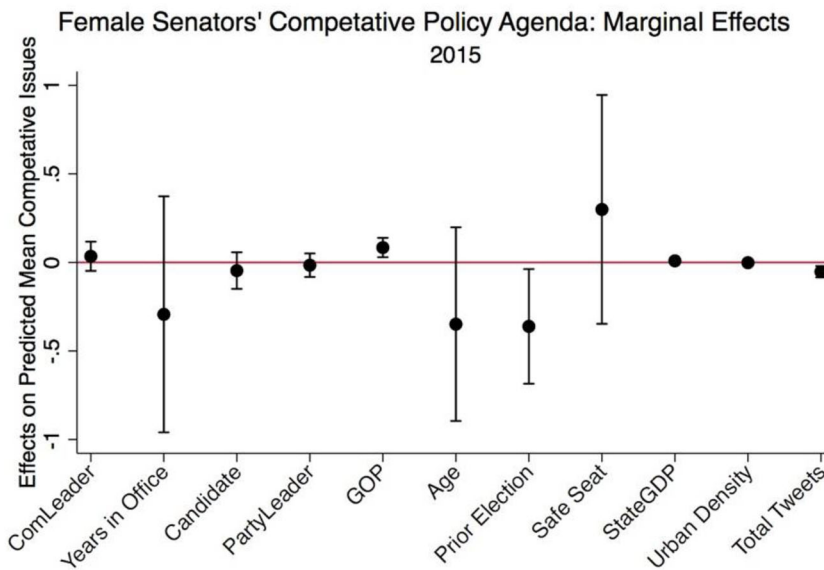


**Figure 10.** Logistic Regression with Marginal Effects of Female Senators' Mentions of Communal or "Women's" Issues on Twitter in 2015.

When I restrict the analysis to just female senators, the results offer no support for my hypothesis that Democratic women would prioritize "women's issues" (Figure 10). I find that among all women in the Senate, older senators are more likely to tweet about communal issues and those with more electoral security are less likely to address these issues.



**Figure 11.** Marginal Effects of Fractional Logit Modeling Senators’ Mentions of Competitive Issues on Twitter in 2015.



**Figure 12.** Marginal Effect of Fractional Logit Modeling Female Senators’ Mentions of Competitive Issues on Twitter in 2015.

The estimates for senators’ differences on “competitive” or traditionally male issues reveal that men in the Senate are somewhat more likely to build a reputation on Twitter with issues like defense or international affairs; however, that effect is small compared to the influence of party and only significant at  $p < 0.1$  (Figure 11). Similar to the results for communal

issues, party is the best predictor of more attention to competitive issues, as Republicans spend a higher percentage of their Twitter communications on these issues. Republicans are 16 percent more likely to direct attention to competitive issues. Among female senators, party remains a significant, albeit smaller, predictor of Twitter agendas with higher proportions of competitive or male-associated policy rhetoric (Figure 12).

The takeaway from the gendered issue analyses is that women may be discussing “owned issues” like education or healthcare, but they are not necessarily sticking to those issues. Female senators, particularly Republican women, are also engaging constituents on male-associated issues, suggesting that if they are countering stereotypes, they do so by developing and communicating a robust policy agenda that is comprehensive and patterned by party-based issue reputations.

### **Diverse agendas**

I test the assumption that women communicate to constituents a more robust or broad policy agenda — both countering gender stereotypes of “owned issues” and taking advantage of perceived policy expertise — by examining the narrowness of senators’ policy agendas on Twitter. The final hypothesis (H5) suggests that women build more diverse agendas because they feel they have to be responsive across all policy areas, whereas men may not feel the burden to be as comprehensive. I measure that diversity by the concentration of policy issues that each senator addresses in their Twitter feeds, with the expectation that female senators address a wider variety of policy topics. I test that expectation with the Shannon’s H Information Entropy formula, an appropriate model for statistical analysis that captures attention (Boydston et al. 2014)<sup>11</sup>. The formula is a measure of information entropy that measures the concentration and categorization of information (Boydston et al. 2014). The Shannon’s H measure increases as information becomes more diffuse, signaling a broader range of attention that would signify a broader Twitter agenda with more topics addressed.

The diversity measure of senators’ tweets (Table 4) suggests that among all senators, women have more diverse attention in their policy agendas on Twitter indicated by their inclusion of more policy topics on Twitter. Despite the breadth of senators’ responsibilities — relative to House

**Table 4.** Diversity measures for senators’ policy agendas on Twitter, 2015.

All Senators	Shannon H	GOP	Shannon H	Democrats	Shannon H
Female	2.525	Female	2.111	Female	2.647
Male	2.327	Male	2.211	Male	2.451

members — that could curb policy attention, I find that female senators articulate a diverse policy agenda with their public-facing communication. This finding is strongest amongst Democratic female senators whereas GOP female senators are slightly less likely to have broad and comprehensive agendas compared to Republican male senators. This partisan difference may be due to constituent expectations or the style of representation supported by the base of each party (Grossman and Hopkins 2016).

Scholars have referred to women’s diverse agendas as a balancing strategy (Swers 2007; Atkinson and Windett 2018) — where women attend to a range of policy issues to avoid any perceived weakness. These findings support that balancing theory regardless of congressional chamber, reinforcing research from House members’ diverse legislative action (Atkinson and Windett 2018) and furthering Senate-specific research that finds that female senators use their floor speeches to talk about women’s issues, in addition to defense and international affairs (Osborn and Mendez 2010). The rhetorical agendas on Twitter suggest that agenda diversity is not constrained by the institution or the medium, offering new insight into the role of Twitter as a tool for congressional representation and also how it fits among the many existing communications alternatives.

## Conclusion

The addition of women to legislatures makes a tangible difference in policy outcomes (Besley and Case 2003; Chattopadhyay and Duflo 2004), so it is equally important to understand the policy communication stemming from that influence. Introducing bills gives lawmakers unique discretion over their policy agendas (Schiller 1995), but Twitter takes that discretion a step further with a public and low-cost way to signal issue priorities. Senators’ social media communications offer lawmakers unparalleled discretion to determine his or her message and build a reputation with legislative expertise. Social media provides new insight into how senators advertise themselves as legislative entrepreneurs (Wawro 2000) to constituents, journalists, and copartisans. Women in the Senate are still a minority voice, and Twitter is an appealing venue for disadvantaged lawmakers to promote their policy priorities on Twitter; but both women and men in the Senate are finding Twitter a promising venue for their policy agendas. Female senators on Twitter are just as likely as men to connect with constituents on policy issues, and they are equally likely to address “communal” or “women’s issues,” such as healthcare and welfare. Democratic women are somewhat less likely to prioritize defense and international affairs on Twitter, but when considering the diversity of senators’ agendas, women are more likely to address a wide range of policy areas compared to their

male colleagues. A women's policy agenda on Twitter isn't necessarily restricted to a certain set of issues, but rather women in the Senate have policy agendas on Twitter that are more diverse — matching what other scholars find in female lawmakers' legislative activity (Atkinson and Windett 2018; Swers 2007; Osborn and Mendez 2010). Women don't stick to "women's issues" but rather they have a diverse rhetorical agenda that they communicate on social media — evidenced by this research and work on women in the House (Evans, Ovalle, and Green 2016). There are few differences among female senators between Republicans and Democrats, with Republican women spending more time on "men's issues" and somewhat less comprehensive agendas. Democratic women may represent constituencies that expect women to have robust policy agendas whereas Republican women may not have a similar expectation. Given the limited number of Republican women (six) in the Senate in 2015, it's unclear if this is a lasting and meaningful pattern of policy agenda setting. As women are a greater core constituency of the Democratic Party, it is more difficult to tease out gender and party differences among senators compared to the House where there are more than 100 women. But in a chamber where one senator can disrupt the policy process, these policy differences held by just a few senators can have outsized impact. An additional limitation regarding the difference between the House and Senate concerns the impact of elections and different electoral constraints over time. Senators who are up for reelection in a given cycle may communicate more like their House colleagues given the electoral incentives, but directly examining that assumption is one limitation of the present study.

Senators' patterns of political communication on Twitter add to a growing body of research that explores how politicians communicate their agendas to the public, particularly on policy issues. Campaign communications serve as one venue for assessing these patterns and is the most common in research, but as more women are elected to office, their in-office activity becomes equally relevant. All elected officials need to build a reputation, and policy knowledge is part of that political brand that daily communications on Twitter can facilitate. Scholars have long studied the media's agenda setting and framing capabilities, but never before have we had such an accessible and concentrated measure like Twitter that tallies politicians' communicated priorities. Twitter offers a new type of agenda that is similar to press releases and e-newsletters, but it also offers increased lawmaker discretion with minimal tradeoffs and appeals to both women and men in elected office. The next step is to question how patterns of communication hold across politicians' communications over time, and whether gender stereotypes can play a factor given a change in the political climate or policy process. As the number of women in office changes, the patterns of political

communication may change as well. Assessing senators' communication on Twitter moves legislative research toward a more complex understanding of how politicians represent their constituents and share information. Senators routinely address policy and political problems during their political life in Congress, and Twitter broadcasts how they selectively communicate on those issues in light of stereotypes or perceptions of gender bias.

## Notes

1. The dataset for the year includes all senator communications during the time period minus those from Senator. Orrin Hatch for whom information was not available.
2. This includes two independent senators who caucus with the Democrats.
3. Coding was completed by trained graduate students and undergraduate research assistants. Samples of the coding were double-coded by two trained coders. Automated coding was not suitable for the analysis as the complexity and specificity of the data limited reliable measures.
4. All policy tweets were hand-coded by a graduate student coder, and a 6,000-observation sample was double-coded by experienced student coders for reliability measures. Student double-coding 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 the [Appendix](#).
5. Additionally, I think the direction of the policy is an important measure that would offer valuable nuance to how women's issues are discussed in the Senate, but adding that additional measure was beyond the feasibility of this project.
6. Additional information about the coding and categorization of alternative priorities is located in the [Appendix](#).
7. The fractional logit model allows for proportions of 0 and 1, and models the means. Variations in the logit model are common practice with explanatory variables that are attributes of individuals, or more specifically in this case, U.S. senators. The hierarchical structure of the data does involve some methodological challenges, such that tweets from the same official are more alike than those from other politicians. With this type of clustering, traditional estimation techniques often produce downward biased estimates of standard errors, so I conduct the logit model with clustered standard errors.
8. Negative binomial count models produce similar results to the fractional logit results detailed in the text.
9. Tables for the corresponding margins plots are included in the [Appendix](#).
10. Given the 20-topic Policy Agendas Project (PAP) framework and the "competitive/communal" framework, some "women's issues" may not be accounted for in the coding. Competitive issues include: Defense, economy, budget, taxes, inflation, energy, farming, and business issues. Communal issues include healthcare, elderly, education, welfare, childcare, and environmental issues.
11. Shannon's H Formula  $H_{i=1}^s = -\sum (P_i * \ln P_i)$

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