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Gender, language, and representation in the United States Senate

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We explore how gendered language in Senate floor debates evolves between the 101st and 109th sessions ($N=229,526$ speeches). We hypothesize that female Senators speak like women in the general population, that their speeches focus on traditionally designated women's issues, and that they use female linguistic strategies found in the general population when discussing low politics or women's issues. We also expect women to speak like legislators, adopting more male linguistic approaches for high politics issues or in election year speeches and for female senators to use more male linguistics as time served in the Senate increases. Using a suite of computational linguistics approaches such as topic modeling (Latent Dirichlet Allocation), syntax and semantic analysis (Coh-Metrix), and sentiment analysis (LIWC), our analyses highlight the distinct roles of women speaking for women (e.g. promoting issues like education or healthcare), women speaking like women (e.g. using personal pronouns), and women speaking as Senators.

Keywords: gender, language, linguistics, Senate, double bind

1. Introduction

Women holding public office face gender-based constraints in the issues they take up. They must reconcile their identities as women and as legislators, a phenomenon known as the “double bind.” The double bind can constrain the topics that female legislators champion and the way they talk about these issues. In this paper, we address three questions related to women in the Senate: do female Senators speak like women, as women, or as legislators in their official roles? Computational analyses of legislators' language can show not only the subject matter

discussed by a speech community such as the United States Senate, but also the way that group members talk about the content of topics.

In this paper, we explore how language in floor debates in the Senate between the 101st and 109th sessions ($N=229,526$ speeches) evolves as female representation increases. We hypothesize that female senators speak like women in the general population, that their speeches will focus on traditionally designated women's issues, and that they will use female linguistic strategies found in the general population when discussing "low politics" or women's issues. We also expect women to speak like legislators, however, adopting more male linguistic approaches for "high politics" issues or for female senators to use more male linguistic strategies as time served in the Senate increases.

Using a suite of computational linguistics approaches such as topic modeling (Latent Dirichlet Allocation), and sentiment analysis (LIWC), we model the evolution of gendered language in the U.S. Senate. We find support for our hypotheses; female Senators use more feminine linguistic styles when discussing low politics issues (poverty, safety, and environment) and masculine linguistic styles when giving floor speeches about high politics issues (crime, nuclear weapons). Language patterns in Senate speeches have also changed over time, as men have adopted more feminine linguistic styles in recent years and women have consistently employed both feminine and masculine styles.

2. Political representation and gender

As both the number of women legislators and the data options to study them have grown, our understanding of how women legislators differ from men has deepened. Beginning in the 1980s, scholars noted that women legislators pursued different policy goals from men. Thomas (1994), for example, found that women state legislators in the 1980s prioritized women, children, and family issues more than men. The connection between women legislators and the promotion of "women's issues" depends greatly on the institutional context in which women legislate, however. This institutional context varies on several dimensions.

First, partisanship within a legislative institution shapes the types of policies women in different parties will pursue and their ability to pursue them. In most American legislatures, parties have increasingly polarized (Shor & McCarty 2011; McCarty, Poole, & Rosenthal 2016). This polarization matters in two specific ways. First, women legislators have polarized along with men (Frederick 2009). This pattern of women's polarization means Democratic women are increasingly liberal and Republican women are increasingly conservative (Osborn et al 2019). Republican women, particularly, have grown more conservative as the Republi-

can party weeded out moderately ideological women and men from their ranks (Thomsen 2015). Partisan ideology shapes the types of policy alternatives that women legislators promote to address women's issues (Osborn 2012). Second, parties exert control over the legislative process. Women within a polarized majority party introduce more bills than men do, yet their bills pass less often. Women in the minority party, however, are more successful at passing their legislation than men. Within an increasingly competitive partisan legislative environment, parties can send signals to women about what kinds of legislation to support and when (Swers 2002; 2013).

A second contextual factor that moderates the relationship between women legislators and women's issues is the number of women within the legislative body, or whether there is a critical mass of women in the legislative chamber. Early studies of critical mass argued that as the proportion of women in a legislative chamber increased, women's attention to women's issues would increase because this critical mass would generate higher levels of gender consciousness among women legislators (Clark et al. 1985; Saint-Germain 1989; Thomas 1994). More recent work questions this hypothesis both theoretically and empirically. Increasing numbers of women legislators implies more ideological diversity among women. Women legislators, inversely, may feel less responsibility to manage women's issues when more women hold legislative office. These eventualities lead scholars to identify and study specific women legislators as "critical actors" on women's issues instead of expecting an essentialist outcome from the mass of women legislators (Childs & Krook 2006).

Finally, the institutional context in which women legislate helps determine the ways in which gender differences might emerge in a legislative context. Scholars have demonstrated that the content of political issues is also gendered, dividing issues into the categories of "high" and "low" politics (Waltz 2010). This distinction between high and low politics has its roots in the Realist tradition of International Relations (IR) theory. It takes the Machiavellian perspective that political actors (i.e., countries, in IR) are primarily concerned with issues of security and survival (Keohane & Nye 1977), and as such, scholars ought to prioritize operationalizing concepts that relate directly to security, such as military power. All other concerns in IR are relegated to "low politics", having little consequence on the activities of countries or large-scale processes like war.¹

1. As IR theory matured and diversified, constructivists and feminists introduced the idea that low and high politics are intimately inter-related. Scholars have linked individual, human, environmental, and gender concerns to the "hard" security issues prioritized by Realists by demonstrating how international organizations shape behavior, and how public health and climate crises affect countries' overall security (Barnett 1990; Detraz 2011; Youde 2016).

The frame of high and low politics can be extended to domestic politics. At the domestic level, the strongly masculine domain of high politics is concerned with issues of war, security, crime, and economics. Low politics, on the other hand, is feminized and relates to issues of the environment, education, poverty, and children. In articulating the problem of the gender double bind in politics, women may be tolerated in public office provided they stick to “safe” issues that reflect traditional gender norms related to women’s concerns, like family and community. Male politicians are not required – nor expected – to take up topics that reflect traditionally women’s issues, i.e., low politics.

3. Women and floor speeches

In Congress, floor speeches in the House and Senate vary greatly. House members have little unrestricted floor time. This time is used often by ideologically extreme and minority party members to voice policy concerns (Maltzman & Sigelman 1996). Despite these restrictions in floor time, women representatives in the House make more one-minute speeches than men and participate more than men in floor debate on a wide variety of issues (Pearson & Dancey 2011a). These differences likely hail from the position of women legislators as a type of legislative “outsider” (Pearson & Dancey 2011a; Maltzman & Sigelman 1996). Interestingly, there is no difference in how often Republican and Democratic women use these speaking opportunities in the House, although members of the minority party use one-minute speeches more often than members in the majority party.

Research on speeches in the House of Representatives shows that women legislators differ from men in the frequency with which they reference women as a group in their speeches. Women’s issue content within their speeches, however, is driven by their partisanship. Partisans also use the limited opportunities to speak on the floor differently in the House depending on their majority or minority party status. The representation of women in the House enlarges the scope of issue discussion, bringing “uncrystallized” perspectives on issues to the fore (Kramer Walsh 2002; Mansbridge 1999). Little evidence to date suggests women focus on women’s issues more than men, however.

Speeches in the U.S. Senate differ substantially from those in the House. Senate processes lack the strict limits of one-minute speeches and structured debate seen in the House. Senators generally can speak whenever they wish. They use these speeches to send symbolic signals to their electoral constituencies and to advocate for their preferred policies (Hill & Hurley 2002). Senate rules require unanimous consent to proceed with floor discussion and super-majoritarian agreement to suspend debate. These rules enable minority party members to use

debate or the threat of debate to stymie progress on legislation. The freedom of the Senate gives each senator more opportunities to use speech to frame policy, take positions, and speak to constituents.

The Senate as an institution also places different demands on legislators. Until very recently, few women served in the “old boys’ club” of the Senate (M.L. Swers 2013). Women’s entry into the Senate in substantial numbers coincided with change in Senate norms and rules as the Senate became a more individualistic and partisan-polarized institution (Sinclair 2018; Swers 2013). Thus, women in the Senate enter an environment with arguably more opportunities to represent women but increasing constraints from partisanship. Partisan women walk a tightrope as they balance electoral concerns, favor with party elites, and the representation of women’s issues. Republican women, for instance, might choose to promote “soft” defense issues, such as social services for veterans, in order to promote an issue important to and dominated by their party, but also represent women in the process (Swers 2013).²

3.1 Women speaking like women

Linguistic scholars have observed differences in the way men and women use language, which can translate into distinct patterns of behavior in political contexts. Broadly, the social constructionist approach (Holmes 1997, p. 202) treats language “as the site of the cultural production of gender identity: subjectivity is discursively constituted...In other words, each person’s subjectivity is constructed and gendered within the social, economic and political discourse to which they are exposed.”³ Women working in the discourses of male dominated legislatures may feel pressure to minimize their unique gender perspectives. Legislatures reward individuals who embrace male qualities such as individualism or competitiveness (Bligh & Kohles 2008, pp.383–384). In “Language, Gender, and Politics: Putting “Women” and “Power” in the Same Sentence,” Robin Lakoff describes myriad ways that women are socialized to self-censor and self-limit, and that both men and women alike marginalize “soft” political issues, known as the “pinking of politics” (Lakoff 2003, p.164). Her work argues that women in power are treated as peculiarities and that they are penalized and trivialized for flouting sex-based expectations such as expressing anger, aggressiveness, or directness.

2. Gendered linguistic patterns have been observed in other legislative contexts as well, such as the European Parliament (Wodak 2003, p.692). Interviews with EP members show three types of gender role constructions for women: assertive activist, expert, and positive difference (special bird).

3. See also the handbook edited by Holmes and Westerhoff (2003) and (Sunderland 2004).

Lakoff also notes that these sex-role differences extend to the study of gender and politics, where feminist and gyno-centric perspectives (e.g. work that studies such “soft” matters as human security, environment, and children/family issues) are viewed as alternates to the standard andro-centric political agenda. In other words, in previous generations where women’s participation in the labor market was acceptable within certain occupational venues such as teaching, in the current generation, women can be legislators but are pigeon-holed within the confines of their pedagogic legacy, championing issues such as education.

In an analysis of campaign messaging, Kahn (1993) finds that men tend to focus on economic issues, while women focus on social issues like education and health. Holman (2015) finds that women mayors adopt more nurturing and inclusive framings in their State of the City addresses, even though the specific issues being discussed do not vary much from male mayors (Holman 2016, p.201). In an analysis of speeches by 13 women U.S Senators in office in 2002, Bligh & Kohles find that women senators use “significantly less aggressive and more ambivalent speech when compared to political norms, and are less likely to use terms denoting accomplishment, praise, and human interest” (Bligh & Kohles 2008:381). Interestingly, the political norms to which they refer are undoubtedly male norms, as women are underrepresented in the American political space. Further, describing senators as “women senators” denotes that “male senator” serves as the standard, and female senator the exception to the rule, reflecting recent research from the field of medicine (Files et al. 2017). Referential terms for women in positions of power have also been shown to affect their progress and career trajectories (Madera et al. 2009). Our first hypothesis evaluates the extent to which female senators adopt the linguistic patterns common for women in the general population, reflecting general gendered linguistic differences.

Hypothesis 1: Female senators speak more like population norm-referenced women than do their male colleagues.

3.2 Women speaking for women

Many scholars examine how the presence of women in legislatures through descriptive representation influences the substantive representation of women’s issues and policies (see Swers 2001 for review). Carroll (2002: 50–51) notes that women not only stand for other women, but also act for them, including women constituents who are not in their immediate districts. She notes that women legislators see commonalities through life experiences, discrimination, caregiving, and work styles, which then translates into greater focus on women’s issues in bill sponsorship and floor speeches. Cowell-Meyers & Langbein (2009) show that

greater descriptive representation of women in state legislatures results in better substantive representation for women across a wide range of issues (e.g. violence against women, child support, welfare policies, and reproductive rights). While increasing women's representations in some state legislative contexts inhibits favorable policies for women, the empirical results suggest that gains for women outweigh these costs.

Osborn (2012) finds across ten state houses that women legislators introduce more bills that focus on women's issues than their male colleagues, although she also shows that partisanship and party control act as mediating forces (Osborn 2012). Female legislators are also more active in floor debates on women's issues (M. Swers 2001). Congresswomen are also more active legislators in general, giving more frequent one-minute floor speeches and participating frequently in important legislative debates (Pearson & Dancey 2011a, 2011b). Women candidates enhance their probability of winning elections by running on gender-owned issues that are targeted toward specific women's or social groups (Herrnson et al. 2003). Women legislators can also shift the nature of debates over gendered issues such as abortion by focusing more on the health of pregnant women rather than the moral issues surrounding the choice to terminate a pregnancy (Levy et al. 2001). Dolan notes, however, that congresswomen tend to focus on similar topics as congressmen on their campaign websites and that many differences are driven by party rather than gender preferences (Dolan 2005). In the second hypothesis, we evaluate whether women senators focus more on women's issues in their speeches than male senators.

Hypothesis 2: Female senators speak about traditionally designated women's issues more so than male senators.

3.3 Women speaking like legislators

Being in a legislature also socializes women politicians to institutional norms. Osborn and Mendez performed content analysis on Senate floor speeches from the 106th Congressional session and found that women senators represent women's issues such as health and family concerns (Osborn & Mendez 2010). When promoting issues that benefit female constituents, female Senators speak for women. Osborn and Mendez argue that women senators champion women's issues and represent women as a constituency to a greater degree than do men in the Senate, but not to the exclusion of other policy priorities.

Paraphrasing Senator Barbara Mikulski's quote – not wanting to be one of the boys but wanting to be one of the gang – Osborn & Mendez conclude that female senators have accomplished this: “women senators do in fact speak as women on

the Senate floor while at the same time representing the interests of their constituents across the spectrum of policy topics” (Osborn & Mendez 2010: 2). Two implications follow from this discussion: first, that women must perform double duty, both as women and as senators, in their role as policymakers; and second, women must speak *like* women to speak *for* women. In other words, women either innately or deliberately conform to gendered linguistics expectations with their colleagues in the Senate to maintain their identity as *not* one of the boys, but one of the gang.

Robson (2009) also examines the rhetorical style of Senator Barbara Mikulski, whom she describes as using “rhetorical strategies that functioned to broaden the lens through which women in politics are viewed by challenging the femininity/competence double bind” (Robson 2000: 205). Women must be seen as competent, but non-threatening, and compassionate, but not histrionic. Interestingly, men and women in the general population use positive emotion words at roughly the same rate, but women use more negatively-valenced words than do men (Pennebaker 2013). It bears noting that women are often penalized for speaking and acting like men. Testing gender-trait and gender-belief stereotypes, Huddy & Terkildsen (1993) write that, “Warm and expressive candidates were seen as better at compassion issues; instrumental candidates were rated as more competent to handle the military and economic issues. Moreover, masculine instrumental traits increased the candidate’s perceived competence on a broader range of issues than the feminine traits of warmth and expressiveness” (Huddy & Terkildsen 1993: 119). In other words, constituents expect male and female representatives to perform according to gender norms, both in terms of linguistic style as well as policy issue areas.

Female senators may be socialized to adopt more masculine language when discussing high politics issues such as war, military budgets, nuclear proliferation, or crime. As Lazar (2007, p.147) notes in her review of feminist critical discourse analysis, “institutions are substantively structured in terms of gender ideology...which accounts for the pervasiveness of tacit androcentrism in many institutional cultures and discourse.” Lazar notes that women in positions of power (like the U.S. Senate) may eschew feminine speech styles and utilize more authoritative speech styles associated with men (2007, p.147). Hillary Clinton’s linguistic style is consistent with this pattern, growing more masculine over time as her power and involvement in politics expanded (Jones 2016).

Because high politics issues have been male dominated historically and viewed as highly salient by many constituents, female senators may adopt the language of their male peers when discussing these issues. In areas of low politics (e.g., environment, poverty, education, and safety), women legislators will be more likely to adopt the linguistic styles of their female population peers.

- Hypothesis 3a: Women senators speak more like population norm-referenced men on topics related to high politics.
- Hypothesis 3b: Women senators speak more like population norm-referenced women on topics related to low politics.

4. Language and gender

The foundations of linguistic differences between men and women include both sociological and biological explanations. The biological explanation hinges on the competitive nature of men's language and the cooperative nature of women's language.⁴ Sheldon (1990) and others argue that women use language to maintain relationships, whereas men use language to assert dominance (Gilligan 1993, 1995; Sheldon 1990). Yet the biological explanation does not sufficiently distinguish between the prescriptive characteristics of the sociological explanation (Eckert & McConnell-Ginet 2013). For example, gendered expectations of women to be caretakers of others, including in conversation, are likely the result of social expectations that they be nurturing, not due to innate biological features. The consequences of flouting expectations are both obvious and heavily culturally dependent: women are penalized for acting in ways deemed too masculine – such as driving cars or walking unaccompanied, or by negotiating too aggressively (Dion 2008; Heilman et al. 2004).

In politics, women must walk the fine line of the gender “double bind,” meaning that they are expected to care more about issues particularly pertinent to women such as poverty and the environment, rather than “tougher” issues of security and economy (Burns & Murdie 2018; Diekman 2007). Voters prefer a strong leader defined in terms of traditional masculine strength and characterized by impersonal, dispassionate, and rational approaches to problems. These traits are antithetical to general perceptions of “the fairer sex”, whom critics deem are prone to irrationality. Women's behavior – and women's language – must fall within the acceptable limits of congeniality, cooperativeness, and gendered topical relevance. While there are clear biological differences between men and women, the sociological expectations constrain them to a greater degree because they are rooted in rigid gendered constructs that restrict women's full participation in social and civil life.

Pronounced differences between the language styles of women and men are well identified in the literature (Bell et al. 2012; Bergvall 1999; James et al. 1993;

4. For a good discussion on whether this arises due to Darwinian evolution or mate selection processes, see Knight (2008).

Lakoff 2003; Maltz & Borker 1982; Pennebaker 2013). Whether these differences are due to biology or sociology is yet unclear. Women tend to ask more questions, give verbal agreement signals, use more “we” and “you” pronouns, and act as discourse caretakers, what Maltz & Borker call the “conversational shitwork” (Maltz & Borker 1982, p.197). Pennebaker (2013) finds that women use more personal pronouns, verbs (including auxiliary, or “helper”, verbs), negative emotion words (especially anxiety), negations, words expressing certainty, and hedging phrases such as “I think” or “I believe” (Pennebaker 2013, p.43).

Men, on the other hand, are more likely to interrupt, challenge, and dispute in conversation, more likely to introduce new topics or content, and issue more declarative statements; however, they are less likely to provide minimal verbal agreement or feedback (Maltz & Borker 1982, p.198). In a more recent study, men were found to use more big words, more nouns and prepositions, more numbers, more words per sentence, and more swear words (Pennebaker 2013, p.43).

5. Gendered language operationalized

5.1 Feminine language

As noted earlier, Pennebaker (2013) identified several gendered dimensions of language. He shows that men frequently use big words, and more nouns, prepositions, numbers, words per sentence, and swear words. Women use more personal pronouns, verbs, negative emotion (anxiety), negations, certainty words, and cognitive words, including hedge phrases such as “I think” or “I believe.” Feminine language in general holds many misconceptions, including the use of nonfluencies, e.g., filler words like um, err, ah, and mmm. In the second presidential candidate debate in 2016, Clinton used significantly more nonfluencies than Trump did. Though this runs contrary to population gender norms, one reason may be the desire to “hold the floor” while formulating their next thought, so as to not leave “dead air” where someone else might start speaking (Bortfeld et al. 2001). Given that Trump interrupted Clinton around 51 times, Clinton may have adopted this typically masculine strategy in order to “hold the floor” to ensure she could articulate her message. Rather than signaling uncertainty or inexperience, nonfluencies may instead be utilized to monopolize the conversation (or rebalance a perceived bias).

We adopt Pennebaker’s approach to capture feminine and male language patterns with the following equations. Specific texts are scored on a +/- scale by comparing the language to speech patterns for women in large populations

(Pennebaker 2013). Positive values indicate the speakers adopt more feminine language styles such as the use of personal pronouns and negative emotion words.

$$\text{Femininity} = z_{\text{ppron}} + z_{\text{verb}} + z_{\text{auxverb}} + z_{\text{negemo}} + z_{\text{anx}} + z_{\text{negate}} + z_{\text{certain}} + z_{\text{cogproc}}$$

Equation 1. Feminine language

5.2 Masculine language

Many of the studies of language and politics, therefore, observe the linguistic patterns of male leaders. In a study of U.S. presidents, Slatcher et al (2007) defined a concept they call “presidentiality” based on the (all-male) inaugural speech corpus for U.S. presidents. They found that U.S. presidents use high levels of articles, prepositions, positive emotions, and big words. We adopt this measure to capture the level of presidentiality in Senate floor speeches; positive values indicate more frequent use of articles, prepositions, positive emotions, and big words. However, the study’s operationalization of leadership with exclusively masculine samples (and thereby exclusively masculine language features) is problematic, and the language of female leadership remains undefined and undistinguished from the language of the general population of women.

$$\text{Presidentiality} = z_{\text{article}} + z_{\text{preps}} + z_{\text{posemo}} + z_{\text{sixltr}}$$

Equation 2. Masculine language

5.3 Function words

Men tend to use some types of function words at higher rates than do women (Pennebaker 2013), including prepositions and articles. On the other hand, women tend to use personal pronouns at greater rates. Pennebaker explores the nature-versus-nurture aspect of these differences by accounting for the effects of socialization and innate hormonal characteristics by examining the testosterone levels of individuals undergoing gender reassignment surgery (Pennebaker 2013, pp. 56–60). Interestingly, he found no change in the usage rates of articles, prepositions, nouns, verbs, or negative emotion words. However, as individuals’ testosterone levels dropped, they used more social pronouns, including *she*, *he*, and *they*. To some extent, these findings help to contextualize spirit, if not the directionality, of the Sapir-Whorf hypothesis – that our worldview is intertwined with the language we use, and both depend on our socialized experiences as well as our biological characteristics.

5.4 Worlds colliding: Linguistic exposure over time

The U.S. Senate was a sex-segregated institution for nearly 150 years from its inception in 1789 until the first female Senator was elected in 1932.⁵ This still predominantly male body represents a unique sociolinguistic community with a hyper-masculine culture and hierarchical structure. Previous research has established that when people engage in conversation, they tend to mimic each other's communicative styles. Also known as lexical entrainment, when speakers engage with one another over time, each tends to adopt the other's terms and turns of phrase (Condon & Ogston 1966; McDowall 1978). When people spend more time together, and in conversation with one another, they adopt the others' behaviors, mimicking in both substance and style of communication (Bernieri & Rosenthal 1991). Linguistic style matching is a way of operationalizing how speakers influence each other over time. We anticipate that women senators will speak more as legislators, adopting more masculine language, the longer they have served in the Senate. We look at this in the aggregate by examining the average levels of feminine and masculine linguistic patterns in Senate speeches from 1989 to 2006.

Hypothesis 4: The longer a woman has been in the Senate, the less feminine and the more masculine her language will become.

6. Data

This Senate corpus includes speeches from the 101–109th Congress. These speeches were downloaded from THOMAS, the legislative information branch of the Library of Congress. This resulted in 229,526 speeches, Democrat = 120,397, Republican = 109,129, ($M = 574.04$, $SD = 702.64$). In this corpus, 220,308 (92%) speeches were given by men, and 19,218 (8%) by women. We downloaded each file as HTML, stripped the HTML tags, and separated each individual speech according to the method used by Diermeier et al. (2012). Each speech was identified by the Congress number, the last name of the speaker, his/her party allegiance, the date in which it was spoken, and a sequential number to disambiguate among speeches by the same senator in the same day. Information that was not a part of the actual discourse (e.g., audience reactions, editor comments) was removed in a cleaning process. Each floor speech was analyzed using two computational linguistic facilities to capture general linguistic patterns and gendered differences in

5. With due respect to Senator Rebecca Latimer Felton, who represented Georgia for a single day in 1922, we hold that her tenure did not substantively change the body of language production.

the floor speeches (LIWC). We also compare gendered topics that arise in Senate speeches (LDA) and see how Senate language varies across high and low politics areas.⁶

7. Method

We rely on computational linguistics programs to analyze the Senate discourse data. These include the following: LIWC (Linguistic Inquiry and Word Count), a dictionary-based categorical program that evaluates linguistic features of psychological and social processes, including sentiment (Pennebaker et al. 2015); and LDA (Latent Dirichlet Allocation), also known as topic modeling, which derives an endogenous set of topics from a specified corpus (Blei et al. 2003).

To perform the topic modeling (LDA) analysis, we use the Machine Learning for Language Toolkit (MALLET), an open source suite of tools that includes a framework for topic modeling using Gibbs sampling (McCallum 2002). We perform the analysis on the entire text corpus, choosing to discover 50 topics. We interpret the keywords belonging to each topic to generate labels for each of the topics. A sample of these topics is given below in Table 1.

We perform a two-tailed independent samples t-test, comparing linguistic and topic variables between the male and female populations. We compute effect sizes as Cohen's d , given by Equation 3 (Cohen 1977; Sawilowsky 2009). Larger values indicate bigger differences in speech patterns between male and female senators.

$$d = \frac{\bar{X}_{male} - \bar{X}_{female}}{\sqrt{\frac{(n_{male} - 1)\sigma_{male}^2 + (n_{female} - 1)\sigma_{female}^2}{n_{male} + n_{female} - 2}}}$$

Equation 3. Equation for Cohen's d

8. Results

In Table 1, we see the differences between men's and women's language in the U.S. Senate in the context of Cohen's d . Cohen and Sawilowski translate effect sizes

6. The categorization of low and high politics was determined based on our knowledge of American politics issues and pre-existing literature. We also had each of the paper's authors independently rate issues that arose in topic modeling as high or low politics to check the validity of our categorization.

Table 1. Cohen's *d* medium effect sizes for linguistic variables

| Variable | Instrument | Cohen's | |
|----------------|-----------------------------------|----------|-----------------------------------------------------------------|
| | | <i>d</i> | Significance (in relation to women) |
| Function words | Linguistic Inquiry and Word Count | 0.25 | Men use more function words. |
| Social | Linguistic Inquiry and Word Count | -0.21 | Men refer less to dictionary words related to social processes. |
| Clout | Linguistic Inquiry and Word Count | -0.21 | Men use more self-focused language. |
| Affiliation | Linguistic Inquiry and Word Count | -0.22 | Men demonstrate less awareness about others' social status. |
| Energy | Latent Dirichlet Allocation | -0.23 | Men talk less about energy. |
| Female | Linguistic Inquiry and Word Count | -0.27 | Men use fewer dictionary terms related to females. |
| Abortion | Latent Dirichlet Allocation | -0.37 | Men talk about abortion less. |

into several aggregate categories: very small (0.01), small (0.20), medium (0.50), large (0.80), very large (1.20), and huge (2.0). Table 1 reports the medium effect size differences (the largest effect size found in our sample) between men's and women's language. The first column is the linguistic construct, the second column the instrument, the third column the effect size and directional sign, and the fourth column a brief summary of its relevance. In general, we see that senators tend to adopt their gender's linguistic styles.

8.1 Women speak like women

In Figure 1, we show the substantial syntactic differences between the language of male and female Senators. As compared to male senators, female senators use more syntactically complex language, more concrete words, slightly more narrative style, more deep cohesion, and less referential cohesion. They convey their messages on the Senate floor using more complex language, such as sentences with many dependent clauses. They use more concrete words that have real world referents, focusing on problems with tangible concepts. Their floor speeches tend to follow a more story-like pattern than list-like descriptions, leading to speeches that relate thematically overall. These patterns suggest that women's speeches are

more scripted and prepared, while men's speeches tend to be more extemporaneous.

For example, Senator Mary Landrieu spoke the following in a May 1997 Senate floor speech: “*My distinguished colleague from New Hampshire has made the excellent argument for the minority of people in this country who believe that abortion should be banned at all times, in every circumstance, in every case, but the majority of Americans in my State of Louisiana and in this country want reason. They want to abide by the Constitution which gives the woman the right to terminate a pregnancy in the early stages, but they want most certainly to ban and prohibit late-term abortions.*”⁷ In this speech, Senator Landrieu adopts feminine linguistic styles including more complex language and sentences with many dependent clauses. This speech also covers a woman's low politics issue (abortion) and thus the feminine linguistic matching is consistent with hypothesis 3b.

We begin with two composite variables – masculine and feminine language – between male and female Senators. As Figure 1 shows, male Senators use less feminine and more masculine language than do female Senators. Female senators' use of masculine and feminine language is more exaggerated than their male counterparts': they use much more feminine language and much less masculine language. This provides convergent validity for Hypothesis 1 and shows that women Senators (even Republicans) adopt linguistic styles like women in general. In other words, we find that women speak like women in the general population.

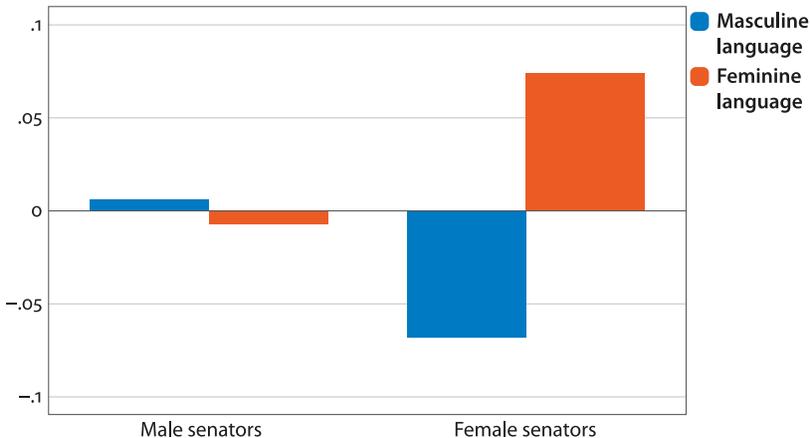


Figure 1. Feminine ($d = -0.081$) and masculine ($d = 0.074$) language

7. May 15, 1997. 105th Congress, 1st Session Issue: Vol. 143, No. 64 – Daily Edition

8.2 Women speak like legislators

Another surprising finding relates to the phenomenon of linguistic style matching, or the tendency of speakers to adjust their speech to match that of their partners (Niederhoffer and Pennebaker 2002). Though women generally speak like women and men generally speak like men in the Senate, we observe a fascinating trend over time. The number of women in the Senate has steadily increased during the timeframe of our sample (between 1989 and 2006). During this time, men increasingly adopted more feminine speech (Figure 2), while decreasing their use of population norm-referenced masculine speech. Female Senators' use of feminine language has remained constantly high, but their use of masculine language has steadily increased over time, supporting hypothesis 4. This type of adaptability supports the notion that men and women are increasingly matching each other's styles, and that both men and women may be using code-switching with greater ease and frequency. The introduction – and increased proportion – of women in the Senate is not merely descriptive, but rather they are having a substantive effect on the style of debate taking place on the floor of the Senate. Thus, while women are socialized into the mostly male Senate club, they are also changing norms of engagement for men as well.

Figure 2 also shows how male Senators have decreased their use of masculine language and increased their use of feminine language. In the year 2001, the number of women in the Senate reaches its maximum of fifteen, the same year in which male Senator's feminine language peaks above the baseline.

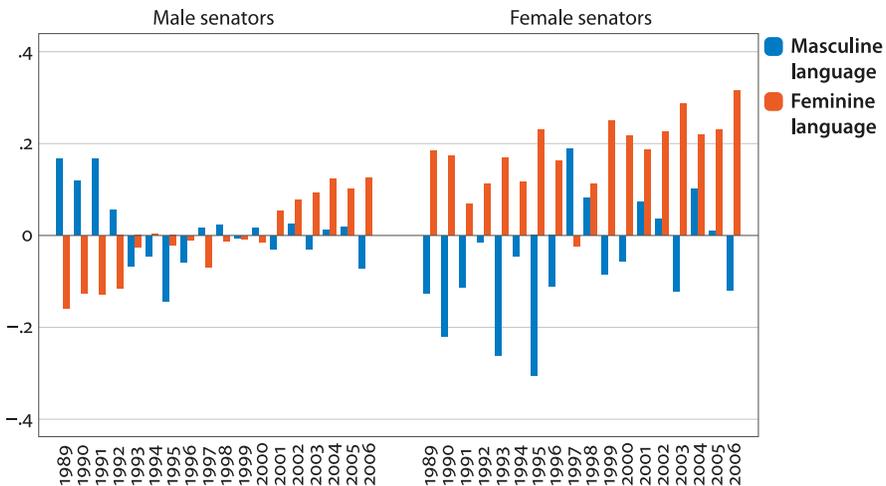


Figure 2. Masculine and feminine language over time (linguistic style matching) Women speak for women

8.3 Topics in male and female senators' speeches

Using the same method, we examined the most discussed topics among male and female senators controlling for party affiliation, as shown in Table 2 and Figure 2. Prior Congressional literature suggests that women senators may speak about women's issues more often than male senators (Hypothesis 2). Interestingly, the procedural category of "Give and Take of Floor Debate" features prominently among sex and partisanship categories, denoted by asterisks. While Republican women prioritize environment, Democratic women prioritize abortion and education. Combined, the top issue areas for female senators fall along predictable gender lines, showing that women tend to speak more about low politics than high politics issues (Hypothesis 2). All categories except for Democratic women include bipartisanship in the top ten topic areas. Both Republican and Democratic men have strikingly similar top five topic areas with the exception of "Resolution Language" (Republican) and "Service Tributes" (Democrat). Republican and Democratic women's language exhibits much more heterogeneity than men's language.

Table 2. Most discussed topics of male and female senators

| | Women | Men |
|----|--------------------------------|-------------------------------------|
| 1 | Energy | Give and Take of Floor Debate* |
| 2 | Give and Take of Floor Debate* | <i>Social Security</i> |
| 3 | <i>Women's Issues</i> | The President |
| 4 | <i>Education</i> | Temporal* |
| 5 | Temporal* | Resolution Language |
| 6 | Service Tribute* | Service Tribute* |
| 7 | Middle East War Security | Bipartisanship |
| 8 | Problem Preamble* | Problem Preamble* |
| 9 | <i>Environment</i> | <i>International Peace Security</i> |
| 10 | Medicare | <i>Income Tax</i> |

9. Discussion

The goal of this paper is to demonstrate the political double bind in the United States Senate. We use a novel approach of three distinct methods of computational text analysis: dictionary-based methods to identify parts-of-speech usage; and topic modeling. We set out to identify whether female Senators speak *like* women

in general, whether they speak *for* women (i.e. whether they concern themselves more with traditionally defined women's issues), and whether they speak as Senators. In summary, we find that female senators *do* speak like population norm-referenced women (Hypothesis 1 supported), but also that they adopt more masculine language during their time in the Senate. We find that female senators also speak about more traditionally designated women's issues than do male senators (Hypothesis 2 supported), and especially so as women's proportional representation increases.

With the exception of the post-September 11 topic of Middle East/security, women talk about issues of high politics at lower rates and use more feminine language for low politics issues (Hypothesis 3a supported). We also find that female Senators speak more like women and about traditionally women-defined topics related to low politics (Hypothesis 3b supported). Finally, we find that women speak using more traditionally masculine styles the longer they are in the Senate, while retaining high levels of feminine language (Hypothesis 4 supported). Of note, male Senators use less masculine language and adopt more feminine language as the proportion of female Senators increases. This dynamic pattern is consistent with social constructionist ideas about how discourse and speech patterns evolve through interactions in institutional settings like the United States Senate.

10. Conclusion

Female Senators conventionally play distinct political roles, which may be reflected in the topics they discuss and the ways they use language to promote their agendas. Women can speak for women in a substantive representation fashion, promoting political issues that advance women's interests (e.g. education, health, equal pay, domestic violence, daycare). Women may also speak like women, adapting syntactic patterns that are similar to their female constituents in the general population. Being part of the Senate institution may also encourage women Senators to speak like legislators, focusing on topics about which their political party's donors care and adopting linguistic styles of their male Senate colleagues.

While some scholarship asserts that women have made great strides in representation in legislative bodies in the United States (Barnes & Holman 2020), our research challenges this assumption and shows that women's language largely conforms to gender expectations both in style and substance in the U.S. Senate. While Friedman and Nakamura conclude that women are "doing well" vis-à-vis representation because more professional women have been hired in support and staff roles in the Senate, their participation falls largely along expected gender

lines. Thus, having a “seat at the table” itself alone does not ensure that a plurality of issues is prioritized, nor does it necessarily indicate progress and inclusivity.

This study confirms that the investigation of political language relies on male language as the referent category, and that while women are still caught in the political double bind, they are defining linguistic and topical issue spaces in the political sphere. We suggest that going forward, scholars need to innovate new metrics for evaluating the language of male and female elected representatives. The formula for deriving “presidential” language, which we redefined as masculine leadership language, relied entirely on a corpus of all male U.S. Presidents.

With record numbers of women seeking and winning higher offices, the linguistic and political landscape is changing. We are encouraged by the linguistic style matching findings, that increased exposure to men and women in the Senate seems to be changing the speech styles of both male and female Senators. More generally, the presence of women in political office at all levels is imperative for creating more feminine discourse styles in political speeches and conversations. Whether feminine discourse can translate into more legislative output and better representation for female constituents remains to be seen.

References

- Barnes, Tiffany D. and Mirya R. Holman. 2020. “Gender Quotas, Women’s Representation, and Legislative Diversity.” *The Journal of Politics* 84, no. 4: 000–000. <https://doi.org/10.1086/708336>
- Barnett, Michael. 1990. “High Politics is Low Politics: The Domestic and Systemic Sources of Israeli Security Policy, 1967–1977.” *World Politics* 42, no. 4 (1990): 529–62. JSTOR. <https://doi.org/10.2307/2010513>
- Bell, Courtney M., Philip M. McCarthy, and Danielle S. McNamara. 2012. “Using LIWC and Coh-Metrix to investigate gender differences in linguistic styles.” *Applied Natural Language Processing: Identification, Investigation and Resolution*. 545–56. IGI Global. <https://doi.org/10.4018/978-1-60960-741-8.ch032>
- Bergvall, Victoria L. 1999. “Toward a comprehensive theory of language and gender.” *Language in Society* 28, no. 2 (1999): 273–93. <https://doi.org/10.1017/S0047404599002080>
- Bernieri, Frank J., & Robert Rosenthal. 1991. “Interpersonal coordination: Behavior matching and interactional synchrony.” *Fundamentals of nonverbal behavior*. 401–32. Editions de la Maison des Sciences de l’Homme.
- Blei, David. M., Andrew Y. Ng, and Michael I. Jordan. 2003. “Latent dirichlet allocation.” *Journal of Machine Learning Research*, 3 (January): 993–1022.
- Bligh, Michelle C. and Jeffrey C. Kohles. 2008. “Negotiating gender role expectations: Rhetorical leadership and women in the US senate.” *Leadership* 4, no. 4 (November): 381–402. <https://doi.org/10.1177/1742715008095187>

- Bortfeld, Heather, Silvia D. Leon, Jonathan E. Bloom, Michael F. Schober, and Susan E. Brennan. 2001. "Disfluency Rates in Conversation: Effects of Age, Relationship, Topic, Role, and Gender." *Language and Speech*, 44, no.2 (June 2001): 123–47. <https://doi.org/10.1177/00238309010440020101>
- Burns, Courtney. and Amanda Murdie. 2018. "Female chief executives and state human rights practices: Self-fulfilling the political double bind." *Journal of Human Rights* 17, no. 4 (April): 470–84. <https://doi.org/10.1080/14754835.2018.1460582>
- Carroll, Susan J. 2002. "Partisan Dynamics of the Gender Gap among State Legislators.(Symposium: Trends in State Party Politics)." *Spectrum: The Journal of State Government* 75 (4): 18–23.
- Childs, Sarah and Mona Lena Krook. 2006. "Gender and politics: The state of the art." *Politics* 26, no. 1 (January): 18–28. <https://doi.org/10.1111/j.1467-9256.2006.00247.x>
- Clark, Janet, Robert Darcy, Susan Welch, M. Ambrosius, and J.A. Flammang. 1985. "Political Women: Current Roles in State and Local Government."
- Cohen, Jacob. 1977. "Statistical power analysis for the behavioral sciences" (revised ed.). New York: Academic Press.
- Condon, W.S., and W.D. Ogston. 1966. "Sound film analysis of normal and pathological behavior patterns." *Journal of Nervous and Mental Disease* 143, no. 4 (October): 338–47. <https://doi.org/10.1097/00005053-196610000-00005>
- Cowell-Meyers, Kimberly, and Laura Langbein. 2009. "Linking Women's Descriptive and Substantive Representation in the United States." *Politics & Gender* 5 (4): 491–518. <https://doi.org/10.1017/S1743923X09990328>
- Detraz, Nicole. 2011. "Threats or Vulnerabilities? Assessing the Link Between Climate Change and Security." *Global Environmental Politics* 11, no. 3 (August): 104–20. https://doi.org/10.1162/GLEP_a_00071
- Diekmann, Amanda B. 2007. "Negotiating the Double Bind: Interpersonal and Instrumental Evaluations of Dominance." *Sex Roles*, 56, no. 9 (May): 551–61. <https://doi.org/10.1007/s11199-007-9198-0>
- Diermeier, Daniel, Jean François Godbout, Yu Bei, and Stefan Kaufmann, S. 2012. "Language and Ideology in Congress." *British Journal of Political Science* 42, no. 1 (May): 31–55. <https://doi.org/10.1017/S0007123411000160>
- Dion, Michelle. 2008. "All-knowing or all-nurturing? Student expectations, gender roles, and practical suggestions for women in the classroom." *PS: Political Science & Politics* 41, no. 4 (October): 853–56.
- Dolan, Kathleen. 2005. "Do women candidates play to gender stereotypes? Do men candidates play to women? Candidate sex and issues priorities on campaign websites." *Political Research Quarterly* 58, no. 1 (March): 31–44. <https://doi.org/10.1177/1065912905055800103>
- Eckert, Penelope and Sally McConnell-Ginet. 2013. "Language and gender." Cambridge University Press. <https://doi.org/10.1017/CBO9781139245883>
- Files, Julia, Anita P. Mayer, Marica G. Ko, Patricia Friedrich, Marjorie Jenkins, Michael J. Bryan, Suneela Vegunta, Christopher M. Wittich, Melissa A. Lyle, Ryan Melikian, Treveor, Duston, Yu-Hui H., Chang, and Sharonne N. Hayes. 2017. "Speaker Introductions at Internal Medicine Grand Rounds: Forms of Address Reveal Gender Bias." *Journal of Women's Health* 26, no. 5 (February): 413–19. <https://doi.org/10.1089/jwh.2016.6044>

- Frederick, Brian. 2009. "Are Female House Members Still More Liberal in a Polarized Era? The Conditional Nature of the Relationship between Descriptive and Substantive Representation." In *Congress & the Presidency* 36:181–202.
<https://doi.org/10.1080/07343460902948097>
- Gilligan, Carol. 1993. *In a different voice*. Harvard University Press.
<https://doi.org/10.4159/9780674037618>
- Gilligan, Carol. 1995. "Moral orientation and moral development [1987]." In *Justice and care*. 31–46. Routledge. <https://doi.org/10.4324/9780429499463-4>
- Heilman, M. E., A. S. Wallen, D. Fuchs, and M. M. Tamkins. 2004. "Penalties for success: Reactions to women who succeed at male gender-typed tasks." *Journal of Applied Psychology* 89, no. 3 (June): 416–27. <https://doi.org/10.1037/0021-9010.89.3.416>
- Herrnson, Paul S., J. Celeste Lay, and Atiya Kai Stokes. 2003. "Women running 'as women': Candidate gender, campaign issues, and voter-targeting strategies." *The Journal of Politics* 65, no. 1 (February): 244–55. <https://doi.org/10.1111/1468-2508.t01-1-00013>
- Hill, Kim Quaille, and Patricia A. Hurley. 2002. "Symbolic Speeches in the US Senate and Their Representational Implications." *The Journal of Politics* 64 (1): 219–231.
<https://doi.org/10.1111/1468-2508.00125>
- Holman, Mirya R. 2014. *Women in Politics in the American City*. Philadelphia: Temple University Press.
- Holman, Mirya R. 2016. "Gender, political rhetoric, and moral metaphors in state of the city addresses." *Urban Affairs Review* 52, no. 4 (June): 501–30.
<https://doi.org/10.1177/1078087415589191>
- Holmes, Janet. 1997. "Women, language and identity." *Journal of Sociolinguistics* 1, no. 2 (June): 195–223. <https://doi.org/10.1111/1467-9481.00012>
- Holmes, Janet. and Miriam Meyerhoff, (eds.). 2003. *The Handbook of Language and Gender*. Blackwell, Oxford. <https://doi.org/10.1002/9780470756942>
- Huddy, Leonie and Nayda Terkildsen. 1993. "Gender stereotypes and the perception of male and female candidates." *American Journal of Political Science* 37, no. 1 (February): 119–47.
<https://doi.org/10.2307/2111526>
- James, Deborah, Sandra Clarke, and Deborah Tannen. 1993. "Gender and conversational interaction." *Women, Men and Interruptions: A Critical Review*, edited by Deborah Tannen. Oxford University Press.
- Jones, Jennifer J. 2016. "Talk 'like a man': The linguistic styles of Hillary Clinton, 1992–2013." *Perspectives on Politics* 14, no. 3 (September): 625–42.
<https://doi.org/10.1017/S1537592716001092>
- Kahn, Kim F. 1993. "Gender Differences in Campaign Messages: The Political Advertisements of Men and Women Candidates for U.S. Senate." *Political Research Quarterly* 46, no. 3 (September): 481–502. <https://doi.org/10.1177/106591299304600303>
- Keohane, Robert O., and Joseph Nye. 1977. *Power and interdependence: world politics in transition*. Boston: Little, Brown.
- Knight, Chris. 2008. "Language co-evolved with the rule of law." *Mind & Society* 7, no. 1 (February): 109–218. <https://doi.org/10.1007/s11299-007-0039-1>
- Lakoff, Robin. 2003. "Language, gender, and politics: Putting 'women' and 'power' in the same sentence." *The Handbook of Language and Gender*, edited by Janet Holmes and Miriam Meyerhoff, 160–78. Blackwell Publishing Ltd.
<https://doi.org/10.1002/9780470756942.ch7>

- Lazar, Michelle M. 2007. "Feminist critical discourse analysis: Articulating a feminist discourse praxis." *Critical Discourse Studies* 4, no. 2 (September): 141–64. <https://doi.org/10.1080/17405900701464816>
- Levy, Dena, Charles Tien, and Rachelle Aved. 2001. "Do differences matter? Women members of Congress and the Hyde Amendment." *Women & Politics* 23, no.1 (January): 105–27. https://doi.org/10.1300/J014v23n01_07
- Madera, J. M., M. R. Hebl, and R. C. Martin. 2009. "Gender and letters of recommendation for academia: Agentive and communal differences." *The Journal of Applied Psychology* 94, no. 6 (November): 1591–99. <https://doi.org/10.1037/a0016539>
- Maltz, Daneil N., and Ruth A. Borker. 1982. "A cultural approach to male-female miscommunication." *A Cultural Approach to Interpersonal Communication: Essential Readings*, edited by Leila Monaghan and Jane Goodman, 168–85. Blackwell Publishing.
- Mansbridge, Jane. 1999. "Should Blacks Represent Blacks and Women Represent Women? A Contingent 'Yes.'" *The Journal of Politics* 61 (3): 628–657. <https://doi.org/10.2307/2647821>
- McCallum, A. K. 2002. "Mallet: A machine learning for language toolkit." <http://www.citeulike.org/group/3030/article/1062263>
- McCarty, Nolan, Keith T. Poole, and Howard Rosenthal. 2016. *Polarized America: The Dance of Ideology and Unequal Riches*. Cambridge: MIT Press.
- McDowall, J. J. 1978. "Interactional synchrony: A reappraisal." *Journal of Personality and Social Psychology* 36, no. 9 (September): 963–75. <https://doi.org/10.1037/0022-3514.36.9.963>
- Niederhoffer, K. G., and James W. Pennebaker. 2002. "Linguistic style matching in social interaction." *Journal of Language and Social Psychology* 21, no. 4 (December) 337–60. <https://doi.org/10.1177/026192702237953>
- Osborn, Tracy L. 2012. *How Women Represent Women: Political Parties, Gender and Representation in the State Legislatures*. Oxford University Press. https://books.google.com/books?hl=en&lr=&id=KL3UkotYeqqC&oi=fnd&pg=PP2&dq=tracy+osborn+2012&ots=FN4-xXLfdi&sig=7_4h8tXMv1c92vSUquXKcFCvz8. <https://doi.org/10.1093/acprof:oso/9780199845347.001.0001>
- Osborn, Tracy and Jeanette Morehouse Mendez. 2010. "Speaking as women: Women and floor speeches in the Senate." *Journal of Women, Politics & Policy* 31, no. 1 (February): 1–21. <https://doi.org/10.1080/15544770903501384>
- Osborn, Tracy, Rebecca J. Kreitzer, Emily U. Schilling, and Jennifer Hayes Clark. 2019. "Ideology and Polarization among Women State Legislators." *Legislative Studies Quarterly* 44 (4): 647–680. <https://doi.org/10.1111/lsq.12243>
- Pearson, Kathryn and Logan Dancey. 2011a. "Elevating women's voices in Congress: Speech participation in the House of Representatives." *Political Research Quarterly* 64, no. 4 (December): 910–23. <https://doi.org/10.1177/1065912910388190>
- Pearson, Kathryn and Logan Dancey. 2011b. "Speaking for the underrepresented in the House of Representatives: Voicing women's interests in a partisan era." *Politics & Gender* 7 no. 4 (February), 493–519. <https://doi.org/10.1017/S1743923X1100033X>
- Pennebaker, James W. 2013. *The secret life of pronouns: What our words say about us*. Bloomsbury Press.
- Pennebaker, James W. 2018. "Expressive Writing in Psychological Science." *Perspectives on Psychological Science* 13 (2): 226–229. <https://doi.org/10.1177/1745691617707315>
- Pennebaker, James W., Ryan L. Boyd, Kayla Jordan, and Kate Blackburn. 2015. "The development and psychometric properties of LIWC2015." *UT Faculty/Researcher Works*. <https://utexas-ir.tdl.org/handle/2152/31333>

- Robson, Deborah C. 2000. "Stereotypes and the female politician: A case study of Senator Barbara Mikulski." *Communication Quarterly* 48, no. 3 (May): 205–22. <https://doi.org/10.1080/01463370009385593>
- Saint-Germain, Michelle A. 1989. "Does Their Difference Make a Difference? *The Impact of Women on Public Policy in Arizona Legislature*.
- Sawilowsky, Shlomo S. 2009. "New effect size rules of thumb." *Journal of Modern Applied Statistical Methods*, 8(2), 597–599. http://digitalcommons.wayne.edu/coe_tbf/4/. <https://doi.org/10.22237/jmasm/1257035100>
- Sheldon, Amy. 1990. "Pickle fights: Gendered talk in preschool disputes." *Discourse Processes* 13, no. 1: 5–31. <https://doi.org/10.1080/01638539009544745>
- Shor, Boris, and Nolan McCarty. 2011. "The Ideological Mapping of American Legislatures." *American Political Science Review* 105 (3): 530–551. <https://doi.org/10.1017/S0003055411000153>
- Sinclair, Barbara. 2018. "Tip O'Neill and Contemporary House Leadership." In *Masters of the House*, eds: Roger H. Davidson, Susan Hammond & Raymond Smock, 289–318. London: Routledge. <https://doi.org/10.4324/9780429499029-11>
- Sunderland, Jane. 2004. *Gendered Discourses*. London: Palgrave Macmillan. <https://doi.org/10.1057/9780230505582>
- Swers, Michael L. 2001. "Understanding the policy impact of electing women: Evidence from research on congress and state legislatures." *PS: Political Science and Politics* 34, no. 2 (June): 217–20. <https://doi.org/10.1017/S1049096501000348>
- Swers, Michele L. 2002. "Fighting for Women's Issues on the House Floor: An Analysis of Floor Amending Behavior in the 103d and 104th Congresses." *Legislative Studies Quarterly* 27:151–151.
- Swers, Michael L. 2013. *Women in the Club: Gender and Policy Making in the Senate*. University of Chicago Press. <https://doi.org/10.7208/chicago/9780226022963.001.0001>
- Thomas, Sue. 1994. *How women legislate*. Oxford University Press on Demand.
- Thomsen, Danielle M. 2015. "Why so Few (Republican) Women? Explaining the Partisan Imbalance of Women in the US Congress." *Legislative Studies Quarterly* 40 (2): 295–323. <https://doi.org/10.1111/lsq.12075>
- Walsh, Katherine Cramer. 2002. "Enlarging Representation: Women Bringing Marginalized Perspectives to Floor Debate in the House of Representatives." In *Women Transforming Congress*, edited by Cindy Simon Rosenthal, 370–396. Norman: University of Oklahoma Press.
- Waltz, Kenneth N. 2010. *Theory of international politics*. Waveland Press.
- Wodak, Ruth. 2003. "Multiple identities: the role of female parliamentarians in the EU Parliament." *The Handbook of Language and Gender*, edited by Janet Holmes and Miriam Meyerhoff, 671–98. Blackwell, Oxford. <https://doi.org/10.1002/9780470756942.ch29>
- Youde, Jeremy. 2016. "High politics, low politics, and global health." *Journal of Global Security Studies* 1, no. 2 (May): 157–70. <https://doi.org/10.1093/jogss/ogw001>

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