

2017

Is feminine style executive style?

Textual analysis of State of the State addresses 2001-2016

<https://hdl.handle.net/2144/24077>

"Downloaded from OpenBU. Boston University's institutional repository."

BOSTON UNIVERSITY
GRADUATE SCHOOL OF ARTS AND SCIENCES

Thesis

**IS FEMININE STYLE EXECUTIVE STYLE?
TEXTUAL ANALYSIS OF STATE OF THE STATE ADDRESSES 2001-2016**

by

AVA MARIE MACK

B.A., Boston University, 2017

Submitted in partial fulfillment of the
requirements for the degree of

Master of Arts

2017

© Copyright by
AVA MARIE MACK
2017

Approved by

First Reader

Maxwell Palmer, Ph. D.
Assistant Professor of Political Science

Second Reader

Dino Christenson, Ph. D.
Associate Professor of Political Science

For my family.

For Erin.

Acknowledgements

First, I would like to acknowledge and thank professors Maxwell Palmer, Judith Swanson and Spencer Piston for their invaluable guidance and advice over the course of this project and my college career. Second, to all my teachers and mentors, academic and otherwise, who believed in my potential along the way, thank you.

IS FEMININE STYLE EXECUTIVE STYLE?

TEXTUAL ANALYSIS OF STATE OF THE STATE ADDRESSES 2001-2016

AVA MARIE MACK

ABSTRACT

Political speeches are powerful communicative capital. Speeches signal policy positions, preferences and priorities to other legislators, executives and constituents. Current literature diverges over the prime factor that influences political speech. One body of literature claims institutions influence speech. The authority and constraints of political offices condition speeches' purpose. Legislators use speeches to credit claim and executives to agenda set. A second body focuses on gender. These authors unanimously find that female legislators speak with a "feminine style", emphasizing traditional women's issues including healthcare, education and social spending. The institutional literature that examines executive speech ignores gender. The gender-based literature only examines legislators, ignoring executives. The overlap, female executive speech, has not been studied. There has never been a female US national executive, but female executives on the state level, governors, are a valuable resource. Using an original data set of 668 State of the State addresses given by US governors 2001-2016, I attempt to answer whether gender conditions executive speech. My textual analysis suggests that institutions are more important, and that regardless of gender, governors emphasize similar issues in their speeches. However, male governors address national issues more frequently than female governors who tend to focus on state-specific issues.

Table of Contents

I. Introduction	1
II. Literature Review	11
III. Data	17
IV. Methodology	21
V. Findings	23
VI. Discussion	31
Appendix A	33
Appendix B (Coding Appendix)	47
Bibliography.....	53
Vita	55

List of Tables

Table 1: Overall Top 100 Terms Categorization Counts.....28

Table 2: Female Top 100 Terms Categorization Counts.....28

Table 3: Male Top 100 Terms Categorization Counts.....28

List of Figures

<i>Figure 1: The Missing Overlap in Political Speech Literature</i>	2
<i>Figure 2: Concentration of Female Governors in US History</i>	9
<i>Figure 3: Concentration of US Female Governors, 2001-2016</i>	9
<i>Figure 4: Concentration of State of the State Addresses, 2001-2016</i>	20
<i>Figure 5: 15 Most Frequent Female Terms</i>	23
<i>Figure 6: 15 Most Frequent Male Terms</i>	24
<i>Figure 7: Top 31 Terms for Female and Male Governors</i>	27
<i>Figure 8: Combined Dataset Word Cloud</i>	29
<i>Figure 9: Male Word Cloud</i>	30
<i>Figure 10: Female World Cloud</i>	30

I. Introduction

Political speeches are powerful communicative capital. They signal policy positions, preferences and priorities to other legislators, executives and constituents. What influences political speech and how is the broad interest of this research. I focus on two conditioning factors: institutions and gender. By institutions I refer to the legislative and executive branches. While one body of literature addresses institutional effects on political speech and another addresses the effects of gender, no research examines female executive speech. This is because the sample size of female executives is zero in the US and miniscule internationally. Until the 1992 “Year of the Woman”, women were virtually absent from national politics. Now, increasing numbers of women have been elected representatives, senators, run for and been nominated by a major political party for president. With these electoral gains and augmented representation, the effect of gender on political speech has become salient. Research on female congressional speech has increased accordingly, but the problem of sample size continues to impede female executive research.

A sufficiently large sample size including a diverse set of women from across the political spectrum is needed, but nonexistent on the national level. However, such a set can be found on the state level. To study female executives in the American political context, my research transitions from the national to the state level. I use governors and analyze text from State of the State addresses. I briefly turn to a discussion of each conditioning factor and of governors before presenting an overview and plan of the

paper. Figure 1 shows where I plan to situate my research within the existing literature, namely at the previously unstudied intersection of female executive speech.

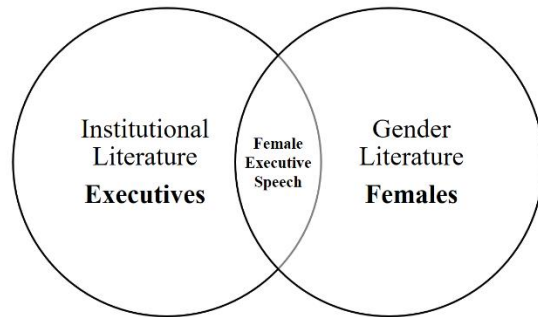


Figure 1: The Missing Overlap in Political Speech Literature

Institutions

Legislators and executives develop distinct communicative styles in response to institutional authority and constraints. Congress has lawmaking authority, and legislators use speeches as verbal résumés to publicize successful records or credit claim on influential legislation. Though presidents cannot make law, the sole executive possesses considerable influence. The executive does not have to compete with 434 other representatives or 99 other senators for publicity. Members of Congress have many colleagues to compete with, and to distinguish themselves they speak more often. The more an MC speaks, the more recognizable they become to constituents and senior legislators. In this way, Members of Congress build a “brand”, distinguishing them from their colleagues. As a unitary actor and the most prominent American political actor, the executive does not need to work to distinguish himself or herself (Heidbreder 2012).

Executive speech is far less constrained in topic and time. Though Senate floor speeches are unconstrained, and the House allows “one-minutes” of unconstrained floor time for representatives “to advance agendas and engage in partisan rhetoric,” (Osborn and Mendez 2010). Members of Congress are largely constrained to debating relevant bills and amendments. By contrast, the president can use his bully pulpit to command the public’s attention and set a broad national agenda covering perhaps the economy, defense and education in just one speech: The State of the Union (Heidbreder 2012).

Given annually in January, the president’s State of the Union address provides Congress and the nation with an assessment of the country’s welfare and the president’s vision for the future. The State of the Union allows the president to set forth an agenda and influence lawmaking in an indirect, but effective, way. The policy issues included are at the president’s discretion. Issues placed on the agenda are important because agenda space is finite, and for every issue included dozens are consciously ignored (Heidbreder 2012). For presidents with a large electoral mandate, the agenda laid out in the State of the Union arguably represents what the national electorate desires.

Gender

The gender-based political speech literature uses congressional records to compare the of verbal style, word frequency and choice, tone and emotional quality of men and women’s floor speeches. Findings are in general agreement: female Members of Congress speak with a unique “feminine style”, devoting more time than their male

counterparts to traditional women's issues including healthcare, education and social spending and exhibiting an overall tone of inclusiveness.

This theory of feminine style, though widely agreed upon, offers limited paths for continuing research. Instead of using the same congressional datasets to carve out a new, narrow corner of research, I seek to synthesize the two bodies of literature by applying the executive speech literature to women. There has been no research on female executive speech to date, but female executives are an important test for the "feminine style" argument developed and widely accepted in congressional literature. My work begins the conversation about women executives and female executive speech, and my findings have important implications for the effect of gender on political speech. With the number of women increasing in US politics at both the state and national levels, and a woman coming as close to the national executive office as ever in the US in 2016, it is time to consider whether women use a feminine style in political speech by nature of their gender or by nature of their office. If the latter is true, which I argue it is, there is no need to distinguish feminine style from executive style. They are one in the same.

Governors

While there have been 37 female US governors, the disparity in the ratio of male to female governors remains extensive. I attempt to include as many female governors as possible by extending the scope of my dataset. I collected 668 State of the State addresses across all 50 states from 2001-2016; the largest dataset of State of the State addresses to my knowledge. The dataset includes 23 female governors.

Governors are an appropriate proxy to the national executive in several ways. First, with the exception of Maine, governors are elected statewide just as the president is elected nationwide.¹ Governors are also unitary executives who work with a bicameral legislature as the president works with Congress. Governors have advisors similar to the president's cabinet including state-level secretaries of state and treasury, an attorney general and lieutenant governor who acts like a vice president. With a few biennial exceptions, governors deliver an annual State of the State address similar to the president's State of the Union.

In some respects, governors may possess more power than the president. First, while presidents are constitutionally bound to two elected terms or a 10-year maximum in extenuating circumstances, governors' terms vary across states. For example, Indiana allows for governors who have served two consecutive terms to run again after an interim period of four years. Montana allows eight years of service out of every 16 years, and in Virginia governors cannot serve immediate successive terms, but may be elected to unlimited non-consecutive terms. As of 2016, Connecticut, Idaho, Illinois, Iowa, Massachusetts, Minnesota, New Hampshire, New York, North Dakota, Texas, Utah, Vermont, Washington and Wisconsin had no term limits in place.²

¹ The Center for American Women in Politics through Rutgers University <http://www.cawp.rutgers.edu/women-statewide-elective-executive-office-2017> Accessed Mar. 16, 2017.

² National Governors Association 2016 Roster <https://www.nga.org/files/live/sites/NGA/files/pdf/GOVLIST16.PDF> Accessed Mar. 16, 2017.

Unlike the president, 27 governors have full budgetary responsibility.³ On the national level, the House of Representatives has the power of the purse. The President merely submits a budget request to Congress based on the budget requests of each federal agency. The president can sign the final budget into law or veto, but the national executive does not determine budget authority.⁴ Gubernatorial veto powers are also more extensive than the president's. 10 governors have line-item veto power on all bills while 38 can use the line-item veto on appropriations.⁵ By contrast, the Supreme Court ruled the presidential line-item veto unconstitutional in *Clinton v. City of New York* in 1998.⁶ The line-item veto allows governors to significantly alter legislation without destroying it, providing more direct influence over legislation formation than the president (Heidbreder 2012). There is an additional benefit to studying governors. Because only one president serves at a time, they must be examined over many years. At any one time, there are 50 governors in office, "essentially holding the effects of time on leadership constant" (Ferguson and Barth 2002).

Beginning in the 1980s, institutional devolution from national to state governments granted governors autonomy over a wider range of policy areas, but they

³ 2016 Book of the States which outlines state legislative and executive powers, responsibilities and salaries
<http://knowledgecenter.csg.org/kc/system/files/4.4%202016.pdf> Accessed Mar. 16, 2017.

⁴ National Priorities Project <https://www.nationalpriorities.org/budget-basics/federal-budget-101/federal-budget-process/> Accessed Mar. 16, 2017.

⁵ 2016 Book of the States.

⁶ "Understanding the Line Item Veto with a Twist"
<https://www.nolabels.org/understanding-the-line-item-veto-with-a-twist/> Accessed Mar. 16, 2017.

were not always granted sufficient funding to pursue agenda initiatives across issues (Heidbreder 2012). In many instances, “governors were forced...to innovate...governors thus became important policy entrepreneurs in agenda-setting processes” (Heidbreder 2012). As a result of institutional devolution, governors are responsible for ‘the very genesis of the policy process...through the evaluation stage’ (Bernick and Wiggins 1991). Governors can truly claim legislation as their own in a way presidents and even national legislators, who must work in various committees and subcommittees with multiple sponsors on legislation, cannot. Governors’ extensive executive power, eclipsing the president’s in some instances, agenda setting power and ability to speak as a single voice makes them appropriate proxies for national executives.

According to the Center for American Women and Politics, there were 74 statewide female executives as of January 2017 including four governors and 14 lieutenant governors. Of the four governors, two are Democrat and two are Republican. Historically, 37 female governors have served in 27 states excluding one from Puerto Rico and two from the District of Columbia. 22 were Democrat, and 15 were Republican.⁷ The first woman to fulfill the role of governor was Carolyn B. Shelton who served as acting governor for a weekend in 1909 in Oregon, 11 years before women were granted the constitutional right to vote. Soledad Chávez de Chacón held acting gubernatorial powers in New Mexico in 1924 for two weeks. Whether a coincidence or trend, Oregon and New Mexico have had and continue to have successful female

⁷ Center for American Women in Politics <http://www.cawp.rutgers.edu/women-statewide-elective-executive-office-2017> Accessed Mar. 16, 2017.

governors today. Nellie Tayloe Ross was sworn into office in Wyoming in 1925 after her husband and governor William Ross died. Miriam Ferguson was also sworn in in 1925 in Texas to replace her husband who was impeached and removed from office. The first female governor elected without being the wife or widow of a past state governor was Ella Grasso in Connecticut. She was elected in 1974 and sworn in in 1975.⁸

Arizona was the first state to have a woman succeed another woman as governor and the first state to have four women governors. The record number of female governors serving simultaneously is nine, set in 2004 and matched again in 2007.⁹ Figure 1 shows where women have served as governor in the history of the US. White states represent where a woman has never served, lighter shades of red indicate one or two female governors in the state's history, New Hampshire is dark red with three female governors and Arizona is the darkest with four. Figure 2 shows the concentration of US female governors for my 2001-2016 dataset. The maximum is still Arizona with three. New Hampshire has two, and the remaining shaded states have one.

⁸ "Women Governors Through US History." WPRI <http://wpri.com/news/u-s-women-governors-through-history/> Accessed Mar. 16, 2017.

⁹ Ibid.

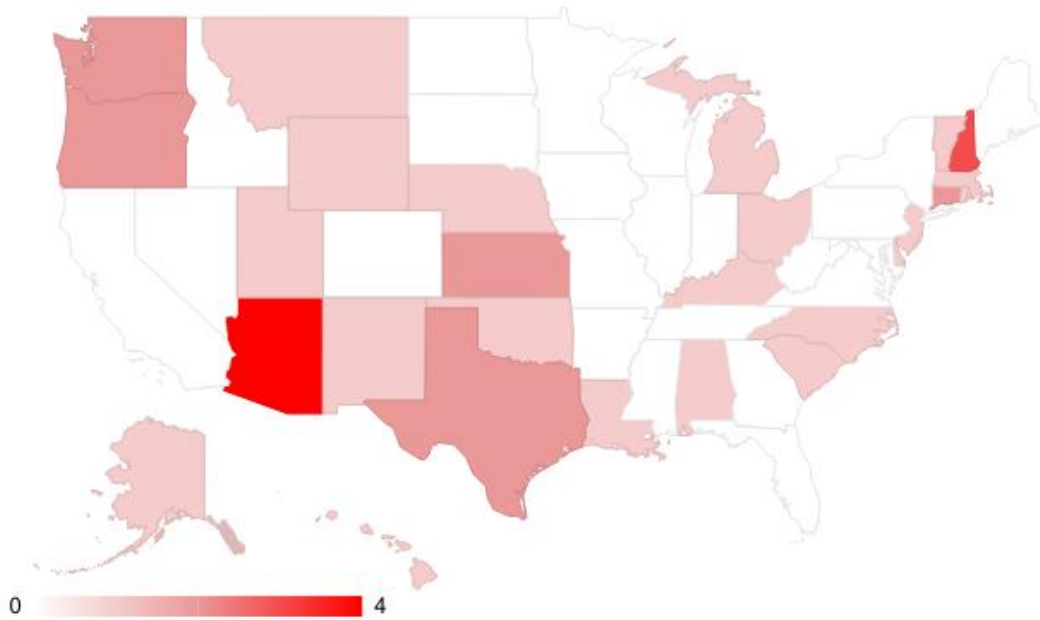


Figure 2: Concentration of Female Governors in US History

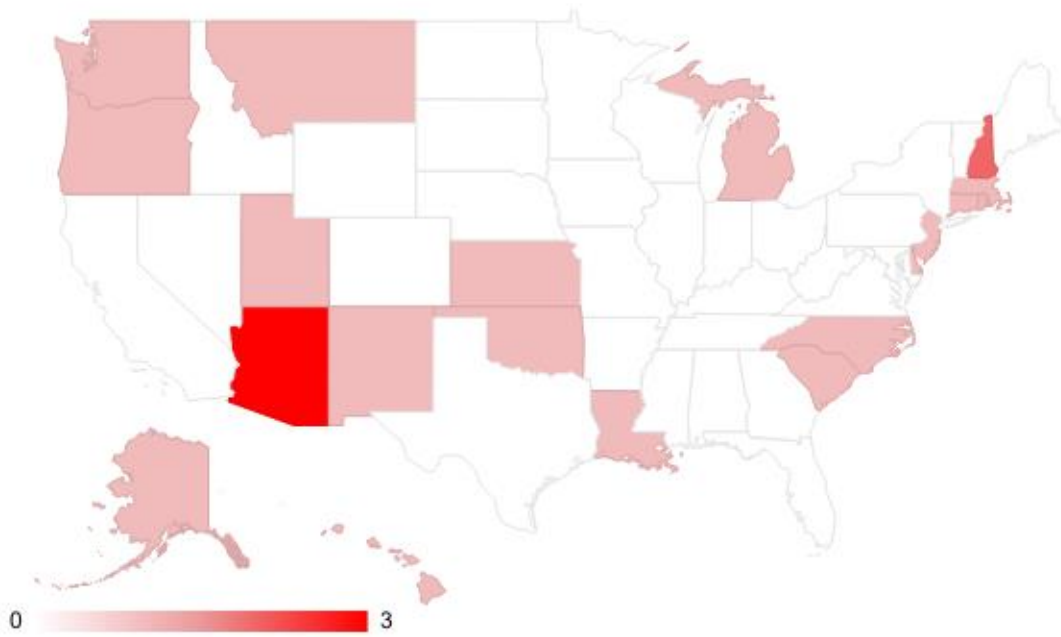


Figure 3: Concentration of US Female Governors, 2001-2016.

It is worth noting that female governors often represent more “firsts” than their gender. For example, current New Mexico Governor Susana Martinez is the first female governor of New Mexico, the first female Hispanic governor in history and the first female Chairman of the Republican Governors Association. South Carolina Governor Nikki Haley was the first female governor of South Carolina and appointed Ambassador to the UN in 2017. Oregon Governor Kate Brown was the first LGBT governor in the US. Alaska Governor Sarah Palin was a Vice Presidential nominee in 2008. Arizona Governor Janet Napolitano was appointed the Secretary of Homeland Security in 2009. Kansas Governor Kathleen Sebelius was named Secretary of Health and Human Services in 2009 and was the first female Chair of the Democratic Governors Association. New Hampshire Governor Jeanne Shaheen was New Hampshire’s first female governor and the first woman ever to be elected both a US governor and US senator. Maggie Hassan, who succeeded Shaheen, was the second woman governor of New Hampshire and the second woman elected US governor and US senator.

Overview

The paper proceeds as follows. In part two I review the existing literature on female congressional speech and gubernatorial speech. In part three, I introduce my original dataset of 668 State of the State addresses from 2001-2016 across all 50 states. I briefly discuss missing speeches and where I have supplemented with budgetary, inaugural or special addresses. In part four, I present my textual analysis methodology. In part five I discuss findings. My results indicate that regardless of gender, governors speak

homogenously. This supports my hypothesis that as a unitary actor, female governors cannot emphasize women's issues in the way that female Members of Congress can. As an executive, women must focus on statewide and state-specific issues which may or may not include traditional women's issues. This finding suggest that institutions are more salient to political speech than gender on the state level. However, one difference between men and women is male governors emphasize national issues more so than female governors who tend to focus on state-centric issues. Male governors take a broader view in their speeches in general. Finally, I conclude with a discussion in which I consider potential avenues for future research building upon the results of my study.

II. Literature Review

Gender-Based Literature

Gender has been studied as a conditioning factor in the congressional speech context. Current literature reinforces a widely-accepted finding: female Members of Congress speak differently than men. Each study attempts to extend and build upon this truism in its own way. As a basis, Blankenship and Robson identify feminine style and its characteristics in women's political discourse. Among basing political judgements on lived experience, approaching policy formation holistically and empowering others, this feminine style includes "valuing inclusivity" and "moving women's issues to the forefront of the public arena" (Blankenship and Robson 1995). These two concepts are foundational to the continuing literature on female political speech.

A decade after the Blankenship and Robson essay, Yu tests congressional speeches from the 101st and 110th Congresses (1989, 2008) to examine gender differences in language, specifically focusing on parts of speech such as nouns, pronouns, verbs, adverbs, adjectives and articles. Yu also examines types of speech including social processes, long words (six letters or more), swear words and emotion (Yu 2014). She finds that women used more first-person singular, third-person and possessive case pronouns (Yu 2014). This supports Blankenship and Robson's inclusivity aspect of the feminine style. Yu's contribution to the literature is that female legislators demonstrate both feminine and masculine characteristics in their speech forming a unique style that combines feminine characteristics with professional masculine expectations (Yu 2014).

Shogan, in agreement with Blankenship and Robson, finds that Republican and Democratic female House members invoke the distinct interests of women at the same frequency. Using *Congressional Record* entries from females of the 105th (1997) Congress, her distinct contribution is that Republican and Democratic female legislators emphasize different issues' effects on women. For example, Republican women emphasize how tax, business and pension laws affect working women while Democratic women discuss funding for welfare state programs (Shogan 2001).

In a content analysis of floor speeches of the 106th Senate (1999-2000), Osborn and Mendez find that "women do speak more about policy concerns with direct relevance to women, such as women's health and family issues" (Osborn and Mendez 2010). Osborn and Mendez confirm that "overall...it appears that women senators do focus a greater percentage of their speeches on women's issues, and particularly those that affect

women most directly” (Osborn and Mendez 2010). That “women use floor speeches to speak as women in the Senate” (Osborn and Mendez 2010) again offers support for the feminine style identified by Blankenship and Robson. Osborn and Mendez’s tweak to the literature is that they also find that women and men devote similar percentages of their overall speeches to most non-women’s policy issues such as budgetary and monetary policy, agriculture, the environment, race relations and religion (Osborn and Mendez 2010).

Finally, Pearson and Dacey agree with Blankenship and Robson, Osborn and Mendez and Shogun that congresswomen use floor speeches to advocate for women’s policy interests (Pearson and Dancy 2011). Analyzing over ten thousand one-minute floor speeches during the 103rd (1993-1994) and 109th (2005-2006) Congresses, Pearson and Dacey contribute to the literature by finding that “Across two politically distinct congresses, regardless of whether the debate is constrained or unconstrained, congresswomen speak at significantly higher rates than congressmen” (Pearson and Dancy 2011). While each study contributes a new facet to the study of women’s congressional speech, whether in part of speech usage, partisanship, focus on non-women’s policy issues, or frequency of speech, the same foundational findings are confirmed: women’s political speech emphasizes inclusivity and focuses on women’s issues.

Gubernatorial Literature

Ferguson and Barth study governors in the legislative arena, specifically their ability to influence lawmaking (Ferguson and Barth 2002). They identify two traditions

in studying executive leadership: a focus on the characteristics of the incumbent and a focus on the features of the office. Ferguson and Barth measure three different motive types: achievement, affiliation and power (Ferguson and Barth 2002). Their data comes from the first inaugural addresses of 46 governors in office 1993-1994. Their regression model includes a laundry list of variables including most importantly the *power x achievement* interaction and affiliation/intimacy score (Ferguson and Barth 2002). Other variables are legislative professionalism, limited tenure, size of governor's staff, split legislature, unified legislature, interest group density, electoral margin, scandal and mean rate of unemployment among others (Ferguson and Barth 2002). What is striking is that there is no mention of the potential effect of gender on a governor's ability to achieve legislative goals. During 1993-1994, there were only two female governors: Barbara Roberts in Oregon and Ann Richards in Texas. But by 2002, the time of Ferguson and Barth's writing, there were five sitting female governors in the US. Of all the factors the authors took into consideration, they could have offered speculation about the effect gender would have to future research.

Crew Jr. and Lewis also examine the relationship between gubernatorial verbal style and success in achieving legislative goals (Crew, Jr. and Lewis 2011). Studying six Floridian governors serving between 1996-2006, the authors find that governors who "use words and phrases the connotate enthusiasm, activity and realism are more successful in the legislative arena" (Crew, Jr. and Lewis 2011). Policymaking success, Crew Jr. and Lewis find, is not only "a function of formal and political factors, but also...a function of the governor's communication style" (Crew, Jr. and Lewis 2011). In

their section on defining verbal style, Crew Jr. and Lewis write, “State of the State addresses are typically the first opportunity that the governor has to communicate his agenda for the upcoming legislative session” (Crew, Jr. and Lewis 2011) While this pronoun usage may just be an antiquated grammatical mistake, or the authors limiting their discussion to their dataset of male Floridian governors, the article was written in 2011 when there were eight sitting female governors. Crew Jr. and Lewis do not extrapolate their findings that overall, governors who are more optimistic, active and realistic are more successful in the legislative arena to women (Crew, Jr. Lewis 2011). While the authors address the concern that their results are Florida-specific, they express no concern that their findings may be male-specific as well.

Coffey performs a content analysis of State of the State speeches from 2000-2001 to measure governors’ ideology. Using content analysis software, TEXTPACK, Coffey codes each sentence in an ideological direction and finds that gubernatorial ideology is multidimensional (Coffey 2005). Coffey divides ideology into two dimensions: social and economic. It is important to measure gubernatorial positions across issue dimensions when assessing ideology because a single governor may be liberal on the economic dimension, but conservative on the social dimension. For example, Alabama Governor Don Siegelman scored moderately on overall ideology, but showed pronounced liberalism on the economic score and conservatism on the social score (Coffey 2005). Coffey lists the governors’ ideology scores from 2000-2001. Of the 50 governors, five were women, yet no discussion is given to their economic, social or overall ideology scores. Each woman governor shows a positive overall ideology score, indicating overall

liberalism even for Republican female governors, but Coffey does not attempt to explain this pattern.

Finally, Heidbreder comes closest to synthesizing the congressional and executive speech literature with her study of “gubernatorial agenda attention to social welfare and health-care policy, assessing the extent to which liberal agenda attention is a function of state politics and policy needs” (Heidbreder 2012). Because social welfare is considered a women’s issue and this article was written by a woman in 2012 when there were seven sitting female governors, a discussion of gender might be expected, but there is none. Heidbreder instead discusses partisanship, finding Democratic and Republican governors react differently to state environments when constructing their agendas. In her overall panel-corrected regression model, variables included are democratic legislative control, governor’s party identification, citizen ideology, citizens over 65, poverty and minority population (Heidbreder 2012). Heidbreder concludes that Democrats are more reactive to political state environments and that “treating all governors alike is not wise” (Heidbreder 2012). Indeed not, and my research aims to show that treating all governors alike and without considering the effect of gender on speech is not wise either.

My contribution to these existing bodies of literature is twofold. My theoretical contribution is synthesizing gubernatorial speech literature and female speech literature. Female executives will serve as an important test to the feminine style theory that has emerged from the female congressional speech literature. My methodological contribution is the largest dataset of State of the State addresses to my knowledge. This not

only expands my research out of one or a few states to the entire United States, it covers 16 years and includes 23 of 37 female governors.

III. Data

All governors possess the State of the State as a resource and serve as indicators of the governors' policy agenda (Ferguson and Barth 2002). The timing of State of the State addresses is also important. They are "typically the first highly public opportunity that the governor has to communicate his agenda for the coming legislative session" (Crew, Jr. and Lewis 2011). Because the speech proceeds most legislative action, the governor can truly be said to "set" the agenda. Additionally, the timing of the State of the State removes the possibility that the style of the speech is endogenous to success in the legislative session (Crew, Jr. and Lewis, 2011). According to Heidbreder, with a State of the State address, governors "send a signal to the legislature as well as the general public that certain issues are important to the state" (Heidbreder 2012). My research takes this insight and investigates State of the State addresses to ascertain whether gender also conditions what a governor considers important issues in the state. Do female governors, like female legislators, exhibit a feminine style emphasizing traditional women's issues?

State of the State addresses are not the only way governors can agenda set or signal their preferences. Indeed, they have many opportunities to do so through press releases and conferences and through private lobbying of certain legislators (Heidbreder 2012). The value of State of the State, other than being publicly available and relatively

easy to find (at least in recent years), is they are a highly comparable unit of analysis across states and across time (Coffey 2005).

Collecting State of the State addresses dating to 1990-1991 would have been ideal to bolster the female sample size. That ideal dataset would have included 1,300 speeches. Unfortunately, no single collection of State of the State addresses exists and states vary in their record maintenance. For example, in searching for a budgetary address given by New Hampshire Governor Maggie Hassan in 2015, the links direct to the NH Office of the Governor's page where the speech could previously be found. But the website has been taken over by newly elected Governor Sununu's team, and Governor Hassan's address subsequently removed. Drawing on several online resources including [Governing.com](#), [stateofthestate.com](#), [multistate.com](#), [Ballotpedia](#), the National Governors Association website and various state office of the governor websites, I compiled an original dataset of State of the State addresses. Due to time restraints and availability of speech sources, I amended my dataset to 2001-2016. This includes 668 speeches (584 male, 84 female), 1,362,657 words, across all 50 states. This remains, to my knowledge, the largest State of the State dataset over the longest period of time in existence.

One issue with collecting State of the State addresses is that speech records become less consistent further back in time. For example, 2010-2016 collections are relatively robust, but my earliest set, 2001, contains only 35 speeches. A second issue is that though delivering a State of the State address is a constitutional directive in all 50

states, some governors only deliver an address biennially, or once every two years.¹⁰ In Montana, Nevada, North Carolina, North Dakota and Texas, governors deliver a State of the State address only during odd years. Where possible, the State of the State is supplemented with gubernatorial budgetary addresses, inaugural addresses or addresses to the joint legislature. Though budgetary addresses focus on economic and fiscal policy, they often cover funding of various state institutions including healthcare, education, infrastructure and environmental protection. Inaugural addresses take a broad view of the future, laying out a four-year agenda and naming specific policy areas that will be given more attention and improved over the governor's term. Addresses to the joint legislature are also fitting proxies since the governor has a full legislative audience as he or she would when delivering the State of the State. Special addresses may hone in on one issue area that might be covered in a State of the State address.¹¹ The concentration of speeches per state 2001-2016 is represented in Figure 3. States with 16 speeches (no missing years) like California, Washington and Mississippi are the darkest shade of red.

¹⁰ Ballotpedia https://ballotpedia.org/State_of_the_state_addresses. Also see State of the State Index <http://stateofthestate.com/index.aspx>, Governing.com <http://www.governing.com/topics/politics/gov-2015-state-addresses.html> and Multistate.com <https://www.multistate.us/> for State of the State addresses. Accessed Mar. 16. 2017.

¹¹ For reference and full transparency, Appendix A includes tables listing all missing addresses for 2001-2016 and a full inventory of where budgetary, inaugural or special addresses were supplemented for State of the State addresses. See Tables A1 and A2.

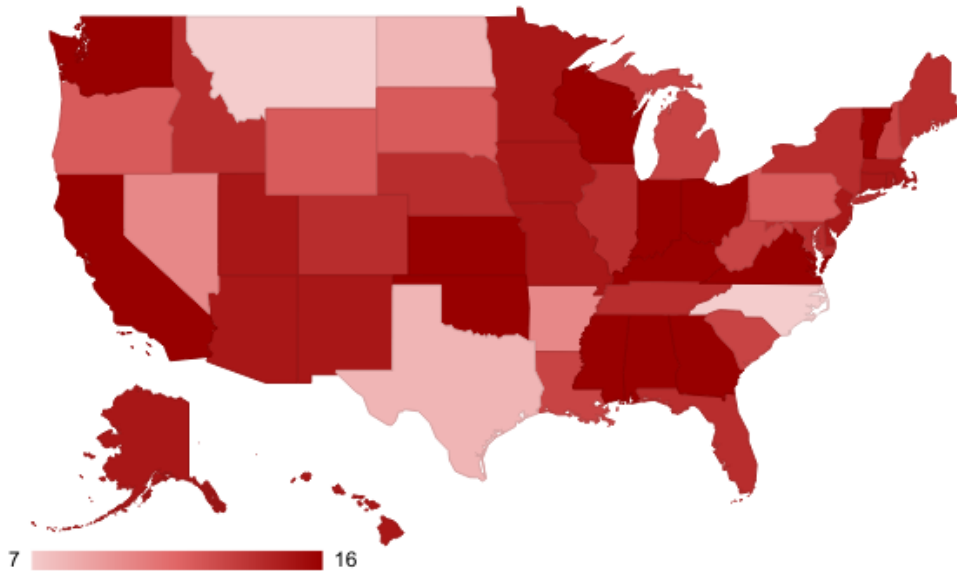


Figure 4: Concentration of State of the State Addresses, 2001-2016.

My data is text. In their 2000 article, Laver and Garry pioneered computer-coded analysis to “derive reliable and valid estimates of policy positions from political texts” (Laver and Gary 2000). “Quantitative” content analysis removes the subjective judgment of a human coder. Text units are allocated “according to mechanical criteria...by defining a content analysis ‘dictionary’ of words or phrases systematically associated with particular coding categories in relevant texts” (Laver and Gary 2000). Computer-assisted coding allows for an enormous volume of text to be examined. In her 2001 article, for example, Shogan analyzed each entry in the *Congressional Record* for the 105th Congress by hand (Shogan 2001). Analyzing 668 speeches containing over 1 million terms would simply not be possible without the aid of textual analysis software.

Coffey also uses computer-assisted content textual analysis to measure gubernatorial ideology. Coffey writes, “Researchers should consider the content analysis

of speeches...as a useful way of assessing the views of governors...and incorporating them into models of state policy and politics” (Coffey 2005). Aforementioned, Coffey used a content analysis software program called “TEXTPACK” which codes sentences in speeches from a predefined dictionary.

The software available for textual analysis is far more advanced than what Laver and Garry and Coffey used in the early 2000s, and textual analysis can be used for more than the scope of this research. The focus of this research is comparing word frequencies of male and female governors to discover whether they exhibit different speech patterns, and if so on what issues. More complex methods can and should be applied to the dataset I have compiled. It is certainly a promising avenue for future research, but lies beyond the scope and purpose of the project at hand.

IV. Methodology

Preprocessing and staging data are the two critical steps to performing textual analysis. Preprocessing allows the researcher to remove numbers, capitalization, common words, punctuation and generally prepares texts for analysis.¹² Without removing punctuation, a computer would treat it as a part of text. Converting the entire dataset to lowercase also ensures that a word appears exactly the same every time it appears.¹³ Removing “stopwords” or common words in R removes words such as “the” “my” and

¹² Basic Text Mining in R, https://rstudio-pubs-static.s3.amazonaws.com/132792_864e3813b0ec47cb95c7e1e2e2ad83e7.html. Accessed Mar. 16, 2017.

¹³ Basic Text Mining in R.

“was” that have no analytic value. After removing stopwords, I manually removed words that I deemed did not have analytic value such as “today”, “last”, “first” and state names. A full list of removed words can be found in Appendix A. “Stemming” refers to collapsing words into a common root to aid comparison of vocabulary. Stemming removes common word endings such as “ing”, “es” and “s”.¹⁴ Preprocessing leaves documents with “white space” which is the result of left over spaces that were not removed along with deleted words.¹⁵ The white space is removed with “stripWhitespace”.

The second step is staging the data. A term document matrix summarizes the number of terms, the number of documents, non-/sparse entries, sparsity, maximal term length and weighting. Sparse terms are those that occur in only a very few documents. Removing them reduces the size of the matrix without losing significant data within the matrix.¹⁶ Staging the data and creating a term document matrix is essential for exploring the data and extrapolating findings from word frequencies and term correlations.

Word frequencies form the basis of my analysis. The frequency of terms is a proxy for salience of terms. The logic is simple: the more frequently a term is used, the more important it is to a governor. Grouped by gender, the most frequently used terms can be compared for men and women to discover whether these governors emphasize

¹⁴ After stemming the dataset, the terms “econom” and “economy” were separate. I collapsed them manually which is reflected in Figure 4.

¹⁵ Basic Text Mining in R.

¹⁶ Ingo Feinerer “Introduction to the tm Package Text Mining in R” 2017 <https://cran.r-project.org/web/packages/tm/vignettes/tm.pdf> Accessed Mar. 16, 2017.

similar or dissimilar issues. Of the 1,362,657 words in my dataset, I focused on the top 100 terms overall, for females and for males.¹⁷

V. Findings

The 15 most frequent terms for females and males are represented in Figures 5 and 6 respectively.

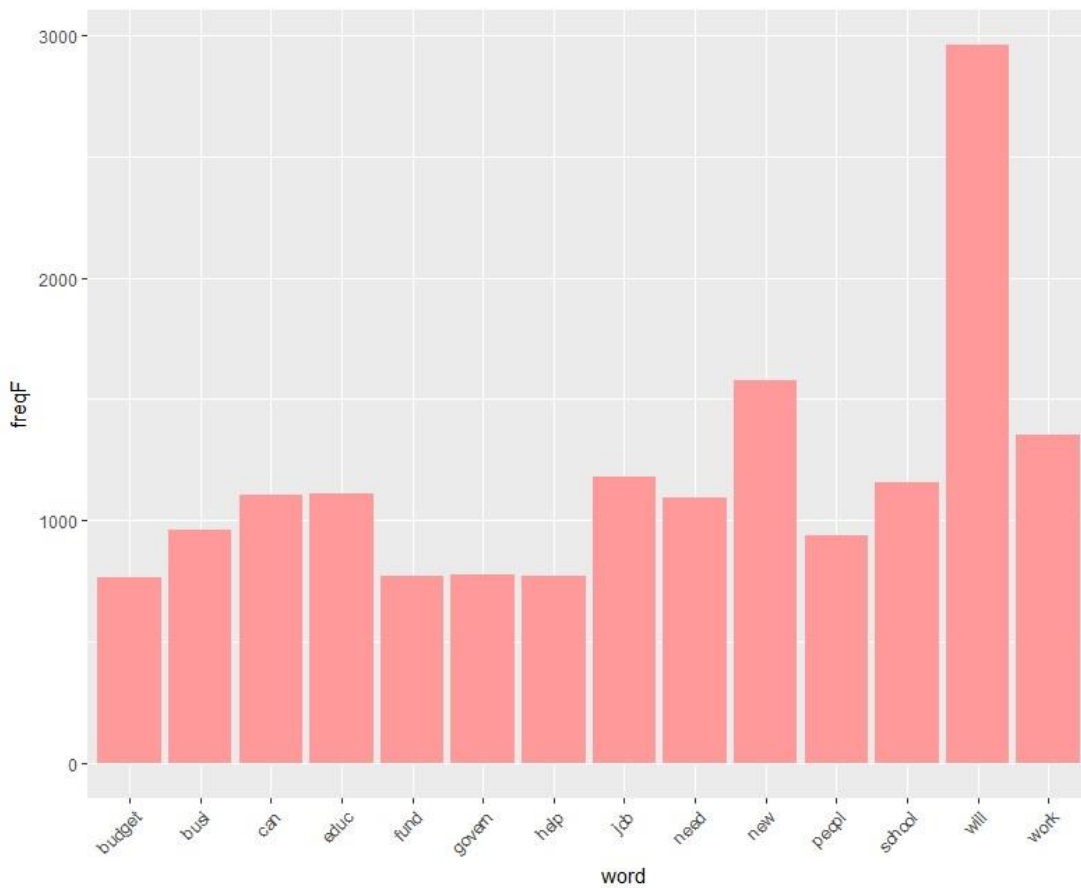


Figure 5: 15 Most Frequent Female Terms

¹⁷ Listed in Appendix A, Tables A6 and A7.

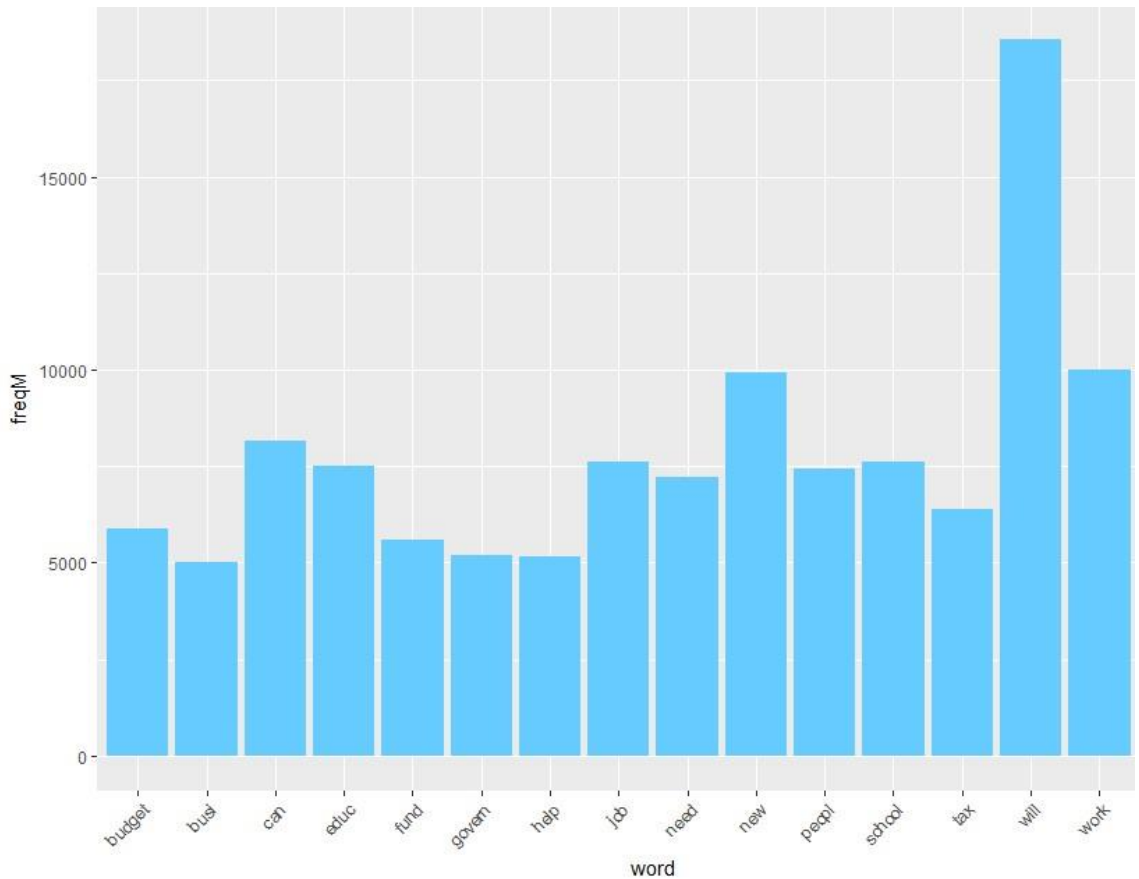


Figure 6: 15 Most Frequent Male Terms

Notice the scaling difference between the frequency y-axes. For males, the frequency threshold is set to terms that appear 5,000 times or more. For females, the frequency threshold is 750 or more. The lower threshold for females reflect the smaller female sample size. If both were set to frequency >5,000, the female graph would be empty since no term is used 5,000 times or more. The most used term, “will” comes in just below a frequency of 3,000.

The top 31 terms are listed in Figure 7 in relative rather than raw frequencies. 31 takes into account the top 25 terms plus those terms used by only one gender. The relative frequency is calculated by dividing the raw frequency of a term by the raw

frequency of the most common term, “will”, for both genders. Therefore, the relative frequency of “will” equals 1 and the relative frequency of all other terms is less than 1. Lines connect matching terms. Red lines represent terms used more frequently among women than among men. Blue lines represent terms used more frequently among men than among women. A gray line indicates that these terms are in the same position for men and women. A gray dot indicates that term only appears in the top 31 for that gender. This list does *not* compare the male and female subsets to one another. Rather, “among” means, “in their female set, women use the term more frequently than men do in their male governor set.” For example, “job” is the fourth most frequently used term used by females within the female governor set, and fifth for males within the male governor set.

Figures 5-7 reveal a significant amount of consistency and homogeneity between males and females. The top 15 terms for men and women are the same, and “will”, “new” and “work” are the top three terms used by both. In the top 25 terms, the only term women use that men do not is “public”. For men, the only term they use that women do not is “thank”. The top 15, 25 and expanded 100 term lists in the appendix also reveal a trend in tone: female and male governors speak positively. The most frequent term overall, for females and for males by far is “will”. Other terms like “new”, “can”, “creat”, “futur” and “togeth” convey a forward-looking, optimistic outlook in both female and male gubernatorial speech.

Despite a high degree of homogeneity, there are differences in term frequency and emphasis among female and male governors. For example, traditional women’s issues,

represented by terms such as “health”, “children”, “care” and “student” rank higher in the female set. However, so does “busi”, the root for “business”, “job” and “econom”. This is significant because business and the economy are considered traditionally masculine issues. “Masculine” economic terms such as “tax” and “invest” do rank higher among men, but so do social, feminine terms like “peopl” and “program”. “Educ”, the root of “education” would fall in the traditional women’s issue category according to congressional female speech literature, but in Figure 7 men and women mention “educ” at the same rate in their respective sets. “Budget”, “fund”, “govern” and “help” are also all used at the same rate.

Male and female governors do diverge over scope. For male governors, “million” and “nation” rank much higher than for female governors in Figure 7. Male governors tend to take a broader, more nationalistic view in their speeches while female governors appear to focus on state-centric issues. For example, terms “world”, “general”, “billion”, and “univers” appear in the top 100 most frequent male terms but not in the top 100 female terms. In sum, my findings represented in Figures 5-7 and Tables A5-A7 in the appendix reveal *diversity within but homogeneity across male and female gubernatorial speech with the exception of scope.*

Female Terms

Male Terms

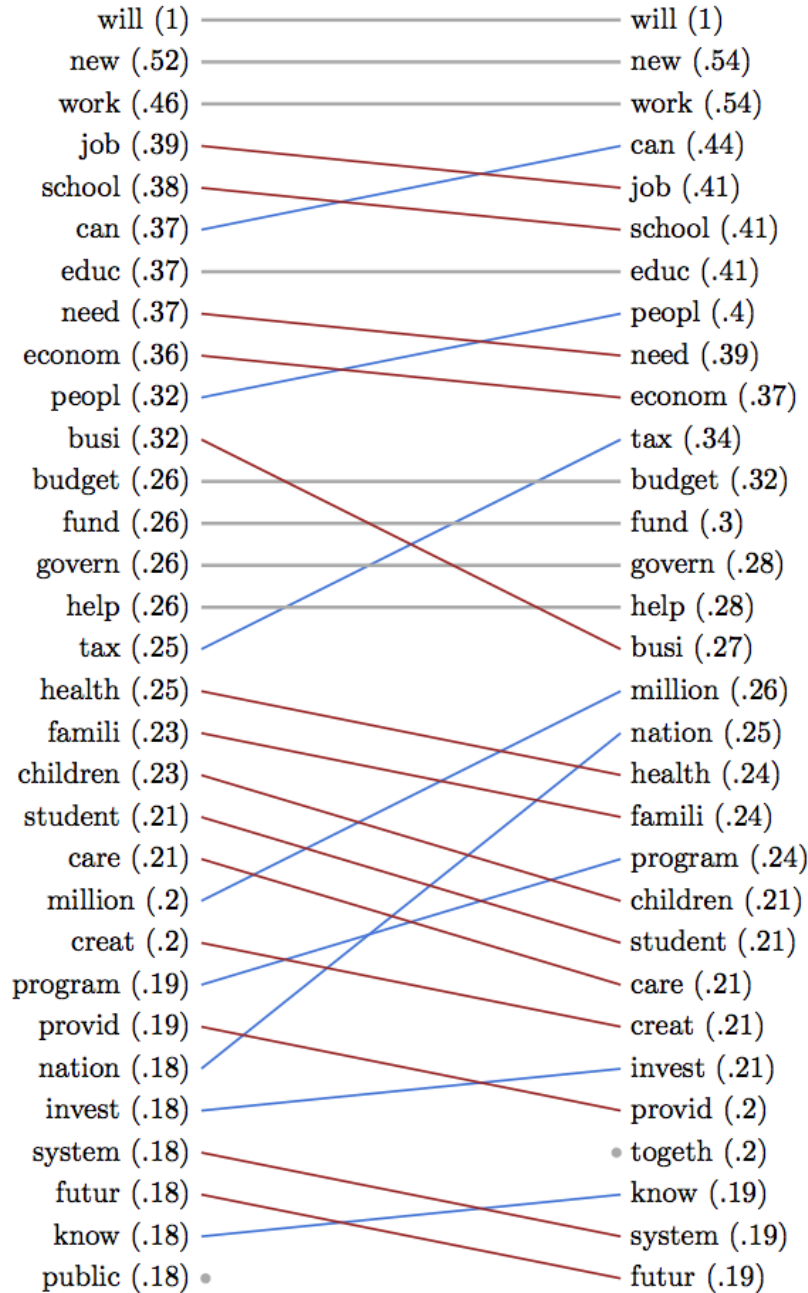


Figure 7: Top 31 Terms for Female and Male Governors

Another way to broadly test whether female and male governors speak homogenously is by grouping terms and comparing group frequency. The top 100 female and male terms were each assigned to one of five categorizations: *Positive, Economy, Social, Political and Rhetoric*.¹⁸ Tables 1-3 provide the categorization counts for the combined dataset, females and males. Female and male governors are equally positive in tone. Male governors use more rhetoric and speak just slightly more about the economy. Female governors speak slightly more about social and political topics. This second tier of broad, categorical analysis confirms homogeneity of governors’ speech across gender. In other words, “busi” and “econom” ranking higher for women is not by chance. Overall, women frequently speak about the economy, and men about social issues.

Overall Top 100 Terms Categorization Counts					
Positive	Economy	Social	Political	Rhetoric	Total
28	19	21	19	13	100

Table 1: Overall Top 100 Terms Categorization Counts

Female Top 100 Terms Categorization Counts					
Positive	Economy	Social	Political	Rhetoric	Total
29	20	21	19	11	100

Table 2: Female Top 100 Terms Categorization Counts

Male Top 100 Terms Categorization Counts					
Positive	Economy	Social	Political	Rhetoric	Total
29	21	18	18	14	100

Table 3: Male Top 100 Terms Categorization Counts

¹⁸ The justification and a detailed definition of each of these categories is explained in A4.

VI. Discussion

Female governors have been entirely neglected in political speech literature and research until now. While there continues to be a striking disparity in the number of male and female governors, female executives are an important test for the feminine style argument put forth and widely accepted in the congressional literature. While gender-based literature finds that female legislators emphasize issues such as healthcare, education and social spending more so than male legislators and exhibit a more inclusive tone, I find that female executives speak on a diverse range of issues and homogeneously with males. Along with traditional women's and social issues, female governors also speak on economic and business issues, using terms "busi" and "econom" more frequently in their speeches than men do in theirs. While male governors use broader and more nationalistic terms, both male and female governors exhibit an overwhelmingly positive and optimistic tone.

As executives, governors are responsible for the full range of policy issues in their states. For this reason, female governors do not have the luxury of solely advocating women's issues, as female legislators do. Rather, they must address policy issues specific to their state environments which may or may not include women's issues. Their feminine style is executive style, shaped by the nature of their office rather than their gender.

This paper has started the conversation of women executives and female gubernatorial speech. My finding that male and female governors speak homogeneously in

topic and tone suggests that the institution conditions speech more than gender does.

With the number of women in politics increasing at both the state and national levels, and a woman coming as close to the national executive office as ever in America in 2016, it is time to consider whether gender plays as large a role in political speech patterns as has been assumed in the congressional literature. Future research could and should expand upon the difference in scope I found between males and females. A second exciting avenue for future research that will complete the trio of American female political speech would be to compare male and female judicial speech and written opinions.

Appendix A

Table A1: Missing State of the State Addresses

Year	States
2016	MT, NC, ND, NV, TX
2015	MD, NH
2014	AR, MT, NE, NC, ND, NV, OR, TX
2012	AR, MI, MT, NC, ND, NV, TX, WY
2011	IA
2010	MT, NC, ND, TX
2008	MT, NC, ND, NV, TX
2007	NC
2006	AR, CO, DE, MA, MD, MT, NC, ND, NC, TX, WY
2005	PA
2004	AR, FL, MT, NC, ND, NH, NM, NV, OR, PA, SC, SD, TN, TX
2003	AK, AR, HI, LA, ME, NE, PA, SC, SD, TN, WV
2002	AR, AZ, CT, ID, IL, LA, ME, MI, MT, NC, ND, NH, NJ, NV, NY, OR, PA, RI, SC, SD, TX, UT, WV, WY
2001	CO, FL, ID, IL, LA, MI, MN, MO, MT, NY, OR, SD, WV, WY

Total: 109

Table A2: Supplemented Addresses

Year	State	Type of Address
2016	AR	Special Session on Arkansas Works
2015	AR	Inaugural
	MA	Inaugural
	RI	Inaugural
	VT	Inaugural
2012	LA	Inaugural
2011	IL	Budgetary
	MA	Inaugural
	NH	Inaugural
	PA	Budgetary
	RI	Budgetary
	VT	Budgetary
2010	PA	Budgetary
2009	NH	Budgetary
	PA	Budgetary
2008	PA	Budgetary
2007	PA	Budgetary
2006	PA	Budgetary
2005	NH	Inaugural
2001	NH	Inaugural
	PA	Budgetary

Total: 21

A3: Hand removed words from Male and Female corpuses:

State, year, make, must, one, time, also, everi, first, now, get, want, like, mani, way, just, let, come, carolina, arizona, michigan, south, use, made, delawar, put, back, look, say, move, continu, high, day, two, keep, call, place, face, rate, even, take, percent, ask, next, thing, 've, much, ago, number, pass, tonight, mean, kansa, today, last.

Total: 55

A4: Explanation of Top 100 Term Categorizations

Positive – Includes terms such as “will”, “can”, “future”, “opportun”, “good”, “better” and “great”. Reflect the tone of governor’s speeches. Both male and female governors’ speeches were overwhelmingly positive, forward-looking and encouraging.

Economy – Includes terms such as “fund”, “budget”, “tax”, “job”, “dollar” and “cost”. These terms refer to monetary and fiscal policy, budgetary policy, the workforce or state economy as a whole.

Social – Includes terms such as “school”, “educ”, “need”, “children”, “care” and “student”. This category focuses on people and services and includes the traditional women’s issues of healthcare, education and spending for children and families that are associated with the feminine style.

Political – Includes terms such as “govern”, “legislatur”, “law”, “office”, “feder” and “bill”. Refers to any action taken by the government and any terms that describe the political offices or duties.

Rhetoric – Includes terms such as “know”, “challeng”, “protect”, “support”, “chang” and “billion”. This category includes abstract ideas and calls to action. The rhetoric category is intended to include those terms which may not be directed at the legislative process or credit claiming but are rather flourishes of speech.

Table A5: Top 100 Overall Terms (Male and Female Combined) by Raw Freq and Relative Freq (% of freq of 'will')

Terms	Raw Freq	Relative Freq	Categorization
<i>will</i>	21505	1	<i>Positive</i>
<i>new</i>	11504	0.53	<i>Positive</i>
<i>work</i>	11365	0.53	<i>Economy</i>
<i>can</i>	9246	0.43	<i>Positive</i>
<i>job</i>	8803	0.41	<i>Economy</i>
<i>school</i>	8782	0.41	<i>Social</i>
<i>educ</i>	8627	0.4	<i>Social</i>
<i>peopl</i>	8365	0.39	<i>Social</i>
<i>need</i>	8300	0.39	<i>Social</i>
<i>tax</i>	7092	0.33	<i>Economy</i>
<i>budget</i>	6650	0.31	<i>Economy</i>
<i>fund</i>	6381	0.3	<i>Economy</i>
<i>busi</i>	5986	0.28	<i>Economy</i>
<i>govern</i>	5975	0.28	<i>Political</i>
<i>help</i>	5942	0.28	<i>Social</i>
<i>million</i>	5480	0.25	<i>Rhetoric</i>
<i>nation</i>	5192	0.24	<i>Political</i>
<i>health</i>	5128	0.24	<i>Social</i>
<i>famili</i>	5040	0.23	<i>Social</i>
<i>program</i>	5028	0.23	<i>Social</i>
<i>children</i>	4628	0.22	<i>Social</i>
<i>student</i>	4596	0.21	<i>Social</i>
<i>care</i>	4563	0.21	<i>Social</i>
<i>creat</i>	4470	0.21	<i>Political</i>
<i>invest</i>	4438	0.21	<i>Economy</i>
<i>provid</i>	4331	0.2	<i>Political</i>
<i>togeth</i>	4124	0.19	<i>Positive</i>
<i>futur</i>	4100	0.19	<i>Positive</i>
<i>know</i>	4062	0.19	<i>Rhetoric</i>
<i>system</i>	4047	0.19	<i>Political</i>
<i>increas</i>	4040	0.19	<i>Positive</i>
<i>economi</i>	3999	0.19	<i>Economy</i>
<i>econom</i>	3972	0.18	<i>Economy</i>
<i>thank</i>	3889	0.18	<i>Positive</i>
<i>public</i>	3845	0.18	<i>Social</i>
<i>opportun</i>	3806	0.18	<i>Positive</i>
<i>great</i>	3777	0.18	<i>Positive</i>

<i>better</i>	3773	0.18	<i>Positive</i>
<i>servic</i>	3749	0.17	<i>Social</i>
<i>propos</i>	3692	0.17	<i>Political</i>
<i>communiti</i>	3690	0.17	<i>Social</i>
<i>good</i>	3671	0.17	<i>Positive</i>
<i>develop</i>	3441	0.16	<i>Political</i>
<i>teacher</i>	3412	0.16	<i>Social</i>
<i>build</i>	3307	0.15	<i>Positive</i>
<i>cost</i>	3294	0.15	<i>Economy</i>
<i>dollar</i>	3276	0.15	<i>Economy</i>
<i>plan</i>	3230	0.15	<i>Political</i>
<i>support</i>	3206	0.15	<i>Rhetoric</i>
<i>live</i>	3076	0.14	<i>Rhetoric</i>
<i>improv</i>	3065	0.14	<i>Positive</i>
<i>import</i>	2981	0.14	<i>Economy</i>
<i>challeng</i>	2953	0.14	<i>Rhetoric</i>
<i>chang</i>	2889	0.13	<i>Rhetoric</i>
<i>well</i>	2834	0.13	<i>Positive</i>
<i>best</i>	2802	0.13	<i>Positive</i>
<i>energi</i>	2799	0.13	<i>Positive</i>
<i>governor</i>	2792	0.13	<i>Political</i>
<i>right</i>	2786	0.13	<i>Positive</i>
<i>spend</i>	2769	0.13	<i>Economy</i>
<i>reform</i>	2758	0.13	<i>Positive</i>
<i>colleg</i>	2743	0.13	<i>Social</i>
<i>pay</i>	2646	0.12	<i>Economy</i>
<i>citizen</i>	2595	0.12	<i>Social</i>
<i>home</i>	2584	0.12	<i>Social</i>
<i>legisl</i>	2555	0.12	<i>Political</i>
<i>cut</i>	2550	0.12	<i>Economy</i>
<i>protect</i>	2536	0.12	<i>Political</i>
<i>give</i>	2516	0.12	<i>Social</i>
<i>money</i>	2512	0.12	<i>Economy</i>
<i>effort</i>	2419	0.11	<i>Positive</i>
<i>grow</i>	2229	0.1	<i>Positive</i>
<i>member</i>	2221	0.1	<i>Social</i>
<i>commit</i>	2218	0.1	<i>Positive</i>
<i>billion</i>	2211	0.1	<i>Rhetoric</i>
<i>success</i>	2198	0.1	<i>Positive</i>
<i>life</i>	2188	0.1	<i>Rhetoric</i>
<i>compani</i>	2186	0.1	<i>Economy</i>

<i>serv</i>	2170	0.1	<i>Political</i>
<i>respons</i>	2118	0.1	<i>Rhetoric</i>
<i>believ</i>	2109	0.1	<i>Positive</i>
<i>legislatur</i>	2102	0.1	<i>Political</i>
<i>includ</i>	2089	0.1	<i>Positive</i>
<i>leader</i>	2081	0.1	<i>Political</i>
<i>growth</i>	2080	0.1	<i>Positive</i>
<i>world</i>	2061	0.1	<i>Rhetoric</i>
<i>feder</i>	2047	0.1	<i>Political</i>
<i>start</i>	2031	0.09	<i>Positive</i>
<i>offic</i>	2009	0.09	<i>Political</i>
<i>past</i>	1997	0.09	<i>Rhetoric</i>
<i>save</i>	1981	0.09	<i>Economy</i>
<i>reduc</i>	1978	0.09	<i>Positive</i>
<i>addit</i>	1940	0.09	<i>Rhetoric</i>
<i>local</i>	1940	0.09	<i>Social</i>
<i>law</i>	1938	0.09	<i>Political</i>
<i>project</i>	1929	0.9	<i>Political</i>
<i>issu</i>	1908	0.09	<i>Political</i>
<i>resourc</i>	1895	0.09	<i>Economy</i>
<i>qualiti</i>	1877	0.09	<i>Positive</i>
<i>univers</i>	1872	0.09	<i>Rhetoric</i>

Table A6: Top 100 Female Terms by Raw Freq and Relative Freq (% of freq of 'will')

Terms	Raw Freq	Relative Freq	Categorization
<i>will</i>	2906	1	<i>Positive</i>
<i>new</i>	1522	0.52	<i>Positive</i>
<i>work</i>	1329	0.46	<i>Economy</i>
<i>job</i>	1146	0.39	<i>Economy</i>
<i>school</i>	1111	0.38	<i>Social</i>
<i>educ</i>	1081	0.37	<i>Social</i>
<i>need</i>	1075	0.37	<i>Social</i>
<i>can</i>	1072	0.37	<i>Positive</i>
<i>busi</i>	934	0.32	<i>Economy</i>
<i>peopl</i>	925	0.32	<i>Social</i>
<i>fund</i>	766	0.26	<i>Economy</i>
<i>budget</i>	761	0.26	<i>Economy</i>
<i>govern</i>	759	0.26	<i>Political</i>
<i>help</i>	750	0.26	<i>Social</i>
<i>health</i>	731	0.25	<i>Social</i>
<i>tax</i>	713	0.25	<i>Economy</i>
<i>children</i>	674	0.23	<i>Social</i>
<i>famili</i>	655	0.23	<i>Social</i>
<i>care</i>	607	0.21	<i>Social</i>
<i>student</i>	601	0.21	<i>Social</i>
<i>million</i>	594	0.2	<i>Rhetoric</i>
<i>economi</i>	588	0.2	<i>Economy</i>
<i>creat</i>	572	0.2	<i>Political</i>
<i>provid</i>	544	0.19	<i>Political</i>
<i>program</i>	543	0.19	<i>Social</i>
<i>nation</i>	531	0.18	<i>Political</i>
<i>propos</i>	525	0.18	<i>Political</i>
<i>communiti</i>	517	0.18	<i>Social</i>
<i>know</i>	517	0.18	<i>Rhetoric</i>
<i>futur</i>	512	0.18	<i>Positive</i>
<i>invest</i>	512	0.18	<i>Economy</i>
<i>public</i>	512	0.18	<i>Social</i>
<i>system</i>	512	0.18	<i>Political</i>
<i>develop</i>	508	0.17	<i>Political</i>
<i>servic</i>	479	0.16	<i>Social</i>
<i>increas</i>	475	0.16	<i>Positive</i>
<i>plan</i>	474	0.16	<i>Political</i>
<i>econom</i>	468	0.16	<i>Economy</i>

<i>opportun</i>	447	0.15	<i>Positive</i>
<i>togeth</i>	445	0.15	<i>Positive</i>
<i>thank</i>	433	0.15	<i>Positive</i>
<i>dollar</i>	414	0.14	<i>Economy</i>
<i>challeng</i>	408	0.14	<i>Rhetoric</i>
<i>protect</i>	404	0.14	<i>Rhetoric</i>
<i>import</i>	401	0.14	<i>Economy</i>
<i>good</i>	400	0.14	<i>Positive</i>
<i>better</i>	397	0.14	<i>Positive</i>
<i>support</i>	395	0.14	<i>Rhetoric</i>
<i>teacher</i>	393	0.14	<i>Social</i>
<i>chang</i>	391	0.13	<i>Rhetoric</i>
<i>build</i>	377	0.13	<i>Positive</i>
<i>cost</i>	373	0.13	<i>Economy</i>
<i>citizen</i>	372	0.13	<i>Social</i>
<i>great</i>	371	0.13	<i>Positive</i>
<i>live</i>	370	0.13	<i>Rhetoric</i>
<i>improv</i>	364	0.13	<i>Positive</i>
<i>legislatur</i>	355	0.12	<i>Political</i>
<i>includ</i>	353	0.12	<i>Positive</i>
<i>colleg</i>	348	0.12	<i>Social</i>
<i>right</i>	345	0.12	<i>Positive</i>
<i>home</i>	342	0.12	<i>Social</i>
<i>give</i>	335	0.12	<i>Political</i>
<i>well</i>	331	0.11	<i>Positive</i>
<i>energi</i>	328	0.11	<i>Positive</i>
<i>effort</i>	327	0.11	<i>Positive</i>
<i>feder</i>	323	0.11	<i>Political</i>
<i>legisl</i>	315	0.11	<i>Political</i>
<i>success</i>	312	0.11	<i>Positive</i>
<i>governor</i>	310	0.11	<i>Political</i>
<i>reform</i>	305	0.1	<i>Positive</i>
<i>serv</i>	300	0.1	<i>Political</i>
<i>pay</i>	298	0.1	<i>Economy</i>
<i>cut</i>	295	0.1	<i>Economy</i>
<i>best</i>	294	0.1	<i>Positive</i>
<i>life</i>	292	0.1	<i>Rhetoric</i>
<i>law</i>	290	0.1	<i>Political</i>
<i>compani</i>	288	0.1	<i>Economy</i>
<i>ensur</i>	287	0.1	<i>Positive</i>
<i>grow</i>	287	0.1	<i>Positive</i>

<i>respons</i>	286	0.1	<i>Rhetoric</i>
<i>money</i>	276	0.09	<i>Economy</i>
<i>addit</i>	274	0.09	<i>Rhetoric</i>
<i>commit</i>	268	0.09	<i>Positive</i>
<i>offic</i>	268	0.09	<i>Political</i>
<i>resourc</i>	262	0.09	<i>Economy</i>
<i>worker</i>	262	0.09	<i>Economy</i>
<i>address</i>	259	0.09	<i>Rhetoric</i>
<i>bill</i>	258	0.09	<i>Political</i>
<i>qualiti</i>	257	0.09	<i>Positive</i>
<i>member</i>	250	0.09	<i>Social</i>
<i>start</i>	250	0.09	<i>Positive</i>
<i>afford</i>	247	0.08	<i>Economy</i>
<i>issu</i>	247	0.08	<i>Political</i>
<i>believ</i>	246	0.08	<i>Positive</i>
<i>industri</i>	245	0.08	<i>Economy</i>
<i>hous</i>	242	0.08	<i>Social</i>
<i>focus</i>	241	0.08	<i>Positive</i>
<i>leader</i>	240	0.08	<i>Political</i>
<i>join</i>	239	0.08	<i>Positive</i>
<i>child</i>	237	0.08	<i>Social</i>

Table A7: Top 100 Male Terms by Raw Freq and Relative Freq (% of freq of 'will')

Terms	Raw Freq	Relative Freq	Categorization
<i>will</i>	18617	1	<i>Positive</i>
<i>work</i>	10046	0.54	<i>Economy</i>
<i>new</i>	9989	0.54	<i>Positive</i>
<i>can</i>	8185	0.44	<i>Positive</i>
<i>school</i>	7674	0.41	<i>Social</i>
<i>job</i>	7672	0.41	<i>Economy</i>
<i>educ</i>	7550	0.41	<i>Social</i>
<i>peopl</i>	7446	0.4	<i>Social</i>
<i>need</i>	7234	0.39	<i>Social</i>
<i>tax</i>	6381	0.34	<i>Economy</i>
<i>budget</i>	5891	0.32	<i>Economy</i>
<i>fund</i>	5615	0.3	<i>Economy</i>
<i>govern</i>	5221	0.28	<i>Political</i>
<i>help</i>	5195	0.28	<i>Social</i>
<i>busi</i>	5057	0.27	<i>Economy</i>
<i>million</i>	4886	0.26	<i>Rhetoric</i>
<i>nation</i>	4661	0.25	<i>Political</i>
<i>program</i>	4485	0.24	<i>Social</i>
<i>famili</i>	4399	0.24	<i>Social</i>
<i>health</i>	4398	0.24	<i>Social</i>
<i>student</i>	3996	0.21	<i>Social</i>
<i>care</i>	3959	0.21	<i>Social</i>
<i>children</i>	3957	0.21	<i>Social</i>
<i>invest</i>	3930	0.21	<i>Economy</i>
<i>creat</i>	3907	0.21	<i>Political</i>
<i>provid</i>	3790	0.2	<i>Political</i>
<i>togeth</i>	3683	0.2	<i>Positive</i>
<i>futur</i>	3589	0.19	<i>Positive</i>
<i>increas</i>	3565	0.19	<i>Positive</i>
<i>know</i>	3553	0.19	<i>Rhetoric</i>
<i>system</i>	3536	0.19	<i>Political</i>
<i>econom</i>	3505	0.19	<i>Economy</i>
<i>thank</i>	3459	0.19	<i>Positive</i>
<i>economi</i>	3416	0.18	<i>Economy</i>
<i>great</i>	3407	0.18	<i>Positive</i>
<i>better</i>	3381	0.18	<i>Positive</i>
<i>opportun</i>	3368	0.18	<i>Positive</i>
<i>public</i>	3335	0.18	<i>Social</i>

<i>good</i>	3274	0.18	<i>Positive</i>
<i>servic</i>	3274	0.18	<i>Social</i>
<i>communiti</i>	3174	0.17	<i>Social</i>
<i>propos</i>	3167	0.17	<i>Political</i>
<i>teacher</i>	3019	0.16	<i>Social</i>
<i>build</i>	2934	0.16	<i>Positive</i>
<i>develop</i>	2934	0.16	<i>Political</i>
<i>cost</i>	2922	0.16	<i>Economy</i>
<i>dollar</i>	2863	0.15	<i>Economy</i>
<i>support</i>	2814	0.15	<i>Rhetoric</i>
<i>plan</i>	2756	0.15	<i>Political</i>
<i>live</i>	2707	0.14	<i>Rhetoric</i>
<i>improv</i>	2703	0.14	<i>Positive</i>
<i>import</i>	2583	0.14	<i>Economy</i>
<i>challeng</i>	2552	0.14	<i>Rhetoric</i>
<i>spend</i>	2543	0.14	<i>Economy</i>
<i>best</i>	2508	0.13	<i>Positive</i>
<i>chang</i>	2503	0.13	<i>Rhetoric</i>
<i>well</i>	2503	0.13	<i>Positive</i>
<i>governor</i>	2485	0.13	<i>Political</i>
<i>energi</i>	2471	0.13	<i>Positive</i>
<i>reform</i>	2453	0.13	<i>Positive</i>
<i>right</i>	2442	0.13	<i>Positive</i>
<i>colleg</i>	2396	0.13	<i>Social</i>
<i>pay</i>	2348	0.13	<i>Economy</i>
<i>cut</i>	2256	0.12	<i>Economy</i>
<i>home</i>	2242	0.12	<i>Social</i>
<i>legisl</i>	2240	0.12	<i>Political</i>
<i>money</i>	2238	0.12	<i>Economy</i>
<i>citizen</i>	2225	0.12	<i>Social</i>
<i>give</i>	2183	0.12	<i>Social</i>
<i>protect</i>	2132	0.11	<i>Political</i>
<i>effort</i>	2092	0.11	<i>Positive</i>
<i>billion</i>	2028	0.11	<i>Rhetoric</i>
<i>member</i>	1971	0.11	<i>Social</i>
<i>commit</i>	1953	0.1	<i>Positive</i>
<i>grow</i>	1945	0.1	<i>Positive</i>
<i>compani</i>	1900	0.1	<i>Economy</i>
<i>life</i>	1897	0.1	<i>Rhetoric</i>
<i>success</i>	1886	0.1	<i>Positive</i>
<i>serv</i>	1871	0.1	<i>Political</i>

<i>believ</i>	1866	0.1	<i>Positive</i>
<i>world</i>	1849	0.1	<i>Rhetoric</i>
<i>growth</i>	1847	0.1	<i>Positive</i>
<i>leader</i>	1845	0.1	<i>Political</i>
<i>respons</i>	1832	0.1	<i>Rhetoric</i>
<i>start</i>	1782	0.1	<i>Positive</i>
<i>past</i>	1770	0.1	<i>Rhetoric</i>
<i>reduc</i>	1770	0.1	<i>Positive</i>
<i>local</i>	1749	0.09	<i>Social</i>
<i>save</i>	1748	0.09	<i>Economy</i>
<i>legislatur</i>	1747	0.09	<i>Political</i>
<i>offic</i>	1742	0.09	<i>Political</i>
<i>includ</i>	1738	0.09	<i>Positive</i>
<i>feder</i>	1724	0.09	<i>Political</i>
<i>project</i>	1716	0.09	<i>Political</i>
<i>addit</i>	1666	0.09	<i>Rhetoric</i>
<i>issu</i>	1661	0.09	<i>Political</i>
<i>general</i>	1660	0.09	<i>Rhetoric</i>
<i>univers</i>	1649	0.09	<i>Positive</i>
<i>law</i>	1648	0.09	<i>Political</i>
<i>expand</i>	1643	0.09	<i>Positive</i>

A8: R Packages Used in Analysis

RStudio - open-source program within R that functions as a text editor and graphics viewer.

tm - foundational text mining package. *tm* provides the basic infrastructure necessary to organize, transform and analyze textual data

SnowballC - implements Porter's word stemming algorithm for collapsing words to a common root to aid comparison of vocabulary.

NLP - natural language processing infrastructure.

foreign – functions for reading and writing data stored in some versions of Epi info, Minitab, S, SAS, SPSS, Stata, Systat and Weka and for reading and writing some dBase.

cluster - allows cluster analysis.

wordcloud - allows the data to be transformed into visual word clouds with size and color based on frequency.

ggplot2 - creates elegant data visualizations using the grammar of graphics. The researcher provides the data, tells *ggplot2* how to map variables to aesthetics, what graphical primitives to use and it outputs the graph according to specifications.

Table A9: Female Governors 2001-2016

Name	State	Party	Years in Dataset
Christine Todd Whitman	NJ	R	2001
Jeanne Shaheen	NH	D	2001-2002
Judy Martz	MT	R	2001-2004
Ruth Ann Minner	DE	D	2001-2008
Jane Dee Hull	AZ	R	2001
Jane Swift	MA	R	2002
Olene Walker	UT	R	2003-2004
Jennifer Granholm	MI	D	2004-2010
Kathleen Sebelius	KS	D	2003-2008
Linda Lingle	HI	R	2003-2009
Janet Napolitano	AZ	D	2003-2008
Kathleen Babineaux Blanco	LA	D	2004-2007
M. Jodi Rell	CT	R	2004-2010
Christine Gregoire	WA	D	2005-2012
Sarah Palin	AK	R	2006-2008
Jan Brewer	AZ	R	2009-2014
Beverly Perdue	NC	D	2009-2013
Nikki Haley	SC	R	2011-2016
Mary Fallin	OK	R	2011-2016
Susana Martinez	NM	R	2011-2016
Maggie Hassan	NH	D	2013-2016
Gina Raimondo	RI	D	2015-2016
Kate Brown	OR	D	2015-2016

Total: 23, 12R/11D

Appendix B Replication Code

```
##R website for code, 'Basic Text Mining in R':  
##https://rstudio-pubs-  
static.s3.amazonaws.com/31867_8236987cf0a8444e962ccd2aec46d  
9c3.html  
  
#install.packages("tm")  
#install.packages("SnowballC")  
  
library(foreign)  
library(tm)  
library(SnowballC)  
library(NLP)  
library(cluster)  
library(wordcloud)  
library(ggplot2)  
library(RColorBrewer)  
  
## Tell R where to find your data files, forward slashes  
only - All Governor Speeches  
setwd("C:/Users/Ava/Dropbox/Ava Mack MA Thesis/All Governor  
Speeches/")  
  
corpus.raw <- Corpus(DirSource(directory =  
as.character(seq(2001,2016)),pattern=".txt"))  
corpus.raw  
  
## make lower case  
corpus.prep <- tm_map(corpus.raw,  
content_transformer(tolower))  
## remove white space  
corpus.prep <- tm_map(corpus.prep, stripWhitespace)  
## remove punctuation  
corpus.prep <- tm_map(corpus.prep, removePunctuation)  
## remove numbers  
corpus.prep <- tm_map(corpus.prep, removeNumbers)  
  
## remove stop words  
head(stopwords("english"))
```

```

corpus.prep <- tm_map(corpus.prep, removeWords,
stopwords("english"))
corpus <- tm_map(corpus.prep, removeWords, c("state",
"year", "make", "must", "one", "time", "also", "everi",
"first", "now", "get", "want", "like", "mani", "way",
"just", "let", "come", "carolina", "arizona", "michigan",
"south", "use", "made", "delawar", "put", "back", "look",
"say", "move", "continu", "high", "day", "two", "keep",
"call", "place", "face", "rate", "even", "take", "percent",
"ask", "next", "thing", "'ve", "much", "ago", "number",
"pass", "tonight", "mean", "kansa", "today", "last"))
## finally stem remaining words
corpus <- tm_map(corpus, stemDocument)

##treat preprocessed documents as text
corpus <- tm_map(corpus, PlainTextDocument)

##staging the data
dtm <- DocumentTermMatrix(corpus)
dtm
tdm <- TermDocumentMatrix(corpus)
tdm

##Organize frequency
freq <- colSums(as.matrix(dtm))
length(freq)
ord <- order(freq)

##Word frequency most=tail, least=head
freq[head(ord)]
freq[tail(ord)]

##Terms that appear 50 or more times - use a higher number
findFreqTerms(dtm, lowfreq=1000)

##Plot World Frequencies
wf <- data.frame(word=names(freq), freq=freq)

pdf(file= "../Visuals/bar_graph_all.pdf", width = 4, height
= 4, family = "Helvetica", pointsize = 10)
p <- ggplot(subset(wf, freq>5000), aes(word, freq))
p <- p + geom_bar(stat="identity")
p <- p + theme(axis.text.x=element_text(angle=45, hjust=1))
p
dev.off()

```

```

##Tell R where to find your data (forward slashes only) -
Male Speeches
setwd("C:/Users/Ava/Dropbox/Ava Mack MA Thesis/Male
Governor Speeches/")
corpus.rawM <- Corpus(DirSource(directory =
as.character(seq(2001,2016)),pattern=".txt"))
corpus.rawM

## make lower case
corpus.prepM <- tm_map(corpus.rawM,
content_transformer(tolower))
## remove white space
corpus.prepM <- tm_map(corpus.prepM, stripWhitespace)
## remove punctuation
corpus.prepM <- tm_map(corpus.prepM, removePunctuation)
## remove numbers
corpus.prepM <- tm_map(corpus.prepM, removeNumbers)

## remove stop words
head(stopwords("english"))
corpus.prepM <- tm_map(corpus.prepM, removeWords,
stopwords("english"))
corpusM <- tm_map(corpus.prepM, removeWords, c("state",
"year", "make", "must", "one", "time", "also", "everi",
"first", "now", "get", "want", "like", "mani", "way",
"just", "let", "come", "carolina", "arizona", "michigan",
"south", "use", "made", "delawar", "put", "back", "look",
"say", "move", "contin", "high", "day", "two", "keep",
"call", "place", "face", "rate", "even", "take", "percent",
"ask", "next", "thing", "'ve", "much", "ago", "number",
"pass", "tonight", "mean", "kansa", "today", "last"))
## finally stem remaining words
corpusM <- tm_map(corpusM, stemDocument)

##treat preprocessed documents as text
corpusM <- tm_map(corpusM, PlainTextDocument)

##staging the data
dtmM <- DocumentTermMatrix(corpusM)
dtmM
tdmM <- TermDocumentMatrix(corpusM)
tdmM

##Organize frequency

```

```

freqM <- colSums(as.matrix(dtmM))
length(freqM)
ordM <- order(freqM)

##Word frequency most=tail, least=head
freqM[head(ordM)]
freqM[tail(ordM)]

##Terms that appear 50 or more times - use a higher number
findFreqTerms(dtmM, lowfreq=1000)

##Plot World Frequencies
wfM <- data.frame(word=names(freqM), freqM=freqM)
p <- ggplot(subset(wfM, freqM>5000), aes(word, freqM))
p <- p + geom_bar(stat="identity", fill="#66CCFF")
p <- p + theme(axis.text.x=element_text(angle=45, hjust=1))
p

##Tell R where to find your data (forward slashes only) -
Female Speeches
setwd("C:/Users/Ava/Dropbox/Ava Mack MA Thesis/Female
Governor Speeches/")
corpus.rawF <- Corpus(DirSource(directory =
as.character(seq(2001,2016)),pattern=".txt"))
corpus.rawF

## make lower case
corpus.prepF <- tm_map(corpus.rawF,
content_transformer(tolower))
## remove white space
corpus.prepF <- tm_map(corpus.prepF, stripWhitespace)
## remove punctuation
corpus.prepF <- tm_map(corpus.prepF, removePunctuation)
## remove numbers
corpus.prepF <- tm_map(corpus.prepF, removeNumbers)

## remove stop words
head(stopwords("english"))
corpus.prepF <- tm_map(corpus.prepF, removeWords,
stopwords("english"))
corpusF <- tm_map(corpus.prepF, removeWords, c("state",
"year", "make", "must", "one", "time", "also", "everi",
"first", "now", "get", "want", "like", "mani", "way",
"just", "let", "come", "carolina", "arizona", "michigan",
"south", "use", "made", "delawar", "put", "back", "look",

```

```

"say", "move", "continu", "high", "day", "two", "keep",
"call", "place", "face", "rate", "even", "take", "percent",
"ask", "next", "thing", "'ve", "much", "ago", "number",
"pass", "tonight", "mean", "kansa", "today", "last"))
## finally stem remaining words
corpusF <- tm_map(corpusF, stemDocument)

##treat preprocessed documents as text
corpusF <- tm_map(corpusF, PlainTextDocument)

##staging the data
dtmF <- DocumentTermMatrix(corpusF)
dtmF
tdmF <- TermDocumentMatrix(corpusF)
tdmF

##Organize frequency
freqF <- colSums(as.matrix(dtmF))
length(freqF)
ordF <- order(freqF)

##Word frequency most=tail, least=head
freqF[head(ordF)]
freqF[tail(ordF)]

##Terms that appear 50 or more times - use a higher number
findFreqTerms(dtmF, lowfreq=1000)

##Plot World Frequencies
wfF <- data.frame(word=names(freqF), freqF=freqF)
p <- ggplot(subset(wfF, freqF>750), aes(word, freqF))
p <- p + geom_bar(stat="identity", fill="#FF9999")
p <- p + theme(axis.text.x=element_text(angle=45, hjust=1))
p

##Save data frame to.csv file
#data(freqF)
##use the write.csv command followed by the file path
write.csv(freqF, '/Users/Ava/Dropbox/Ava Mack MA
Thesis/freqF.csv', row.names=T)
write.csv(freqM, '/Users/Ava/Dropbox/Ava Mack MA
Thesis/freqM.csv', row.names=T)
write.csv(freq, '/Users/Ava/Dropbox/Ava Mack MA
Thesis/freq.csv', row.names=T)

```

```
##Combined Word Cloud
set.seed(142)
wordcloud(names(freq), freq, min.freq=1000, scale=c(5,.1),
colors=brewer.pal(5, "Paired"))

##Female Word Cloud
set.seed(142)
wordcloud(names(freqF), freqF, min.freq=200, scale=c(5,.1),
colors=brewer.pal(8, "RdYlGn"))

##Male Word Cloud
set.seed(142)
wordcloud(names(freqM), freqM, min.freq=1000,
scale=c(5,.1), colors=brewer.pal(8, "PiYG"))
```

Bibliography

- Bernick, E. Lee, and Charles W. Wiggins. 1991. "Executive-Legislative Relations: The Governor's Role as Chief Legislator." In *Gubernatorial Leadership and State Policy*, ed. Eric B. Herzik and Brent W. Brown. New York: Greenwood Press: 73-91.
- Blankenship, Jane, and Deborah C. Robson. 1995. "A 'Feminine Style' in Women's Political Discourse: An Exploratory Essay." *Communication Quarterly*. Vol. 43, No. 3: 353-366.
- Coffey, Daniel. 2005. "Measuring Gubernatorial Ideology: A Content Analysis of State of the State Addresses." *State Politics and Policy Quarterly*. Vol. 5, No. 1: 88-103.
- Crew, Jr., Robert E., and Christopher Lewis. 2011. "Verbal Style, Gubernatorial Strategies, and Legislative Success." *Political Psychology*. Vol. 32, No. 4: 623-642.
- Feinerer, Ingo, Kurt Hornik, David Meyer. 2008. "Text Mining Infrastructure in R." *Journal of Statistical Software*. Vol. 25, Issue 5: 1-54.
- Ferguson, Margaret R., and Jay Barth. 2002. "Governors in the Legislative Arena: The Importance of Personality in Shaping Success." *Political Psychology*. Vol. 23, No. 4: 787-807.
- Heidbreder, Brianne. 2012. "Agenda Setting in the States: How Politics and Policy Needs Shape Gubernatorial Agendas." *Politics & Policy*. Vol. 40, No. 2: 296-319.
- Laver, Michael, and John Garry. 2000. "Estimating Policy Positions from Political Texts." *American Journal of Political Science*. Vol. 44, No. 3: 619-634.
- Laver, Michael, Kenneth Benoit and John Garry. 2003. "Extracting Policy Positions from Political Texts Using Words as Data." *The American Political Science Association*. Vol. 97, No. 2: 311-331.
- Mayhew, David. 1974. *The Electoral Connection*. New Haven: Yale University Press.
- Osborn, Tracy, and Jeanette Morehouse Mendez. 2010. "Speaking as Women: Women and Floor Speeches in the Senate." *Journal of Women, Politics & Policy*. Vol. 31, No. 1: 1-21.

Pearson, Kathryn, and Logan Dancey. 2011. "Elevating Women's Voices in Congress: Speech Participation in the House of Representatives." *Political Research Quarterly*. Vol. 64, No. 4: 910-923.

Shogan, Colleen J. 2001. "Speaking Out." *Women & Politics*. Vol. 23, No. 1-2: 129-146.

Yu, Bei. 2014. "Language and gender in Congressional speech." *Literary and Linguistic Computing*. Vol. 29, No. 1: 118-132.

Vita

