Proceedings of the Third Purdue Linguistics, Literature, and Second Language Studies Conference

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Edited by

Libby Chernouski and David O'Neil

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INTRODUCTION: DIVERSITY & DIVERGENCE

LIBBY C. CHERNOUSKI AND DAVID O'NEIL

This volume contains the selected proceedings of the third annual Purdue Linguistics, Literature, and Second Language Studies Conference (PLLS). Exceptional among graduate student conferences in its interdisciplinary purview, PLLS was founded in 2016 as a collaboration of three graduate student organizations: the Purdue Linguistics Association, the School of Languages and Cultures Graduate Committee, and the English as a Second Language Graduate Organization. This year's conference committee was formed by representatives from each of the three organizations:

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Before the institution of PLLS, each of the three organizations had held its own academic conference on Purdue's campus independently. Reasoning that they could achieve more if they worked together, the members of the three organizations decided to pool their talents, resources, and experience. They understood that the whole is often greater than the sum of its parts, and that a joint effort could multiply opportunities for professional networking and the cross-fertilization of new ideas in language scholarship. The fruits of this collaboration are impossible to deny. At the 2018 event, the conference hosted twenty-eight themed panels, a poster session, and three distinguished plenary speakers. More than 100 presenters were in attendance, including both graduate students and faculty

from thirty different universities. The academic range of these presenters was truly impressive, befitting both the conference theme of Diversity and Divergence and the vigor and increasing breadth of the three disciplines represented at the conference.

As the proceedings of the 2018 PLLS, this volume brings together scholarship in theoretical and applied linguistics, literary and cultural studies, and second language studies. The selected essays represent various and complementary approaches to the study of language, drawing from both primary and secondary research. Guided by the conference's theme, the authors investigate the nature of linguistic, cultural, and cognitive diversity, offering rich insights for theoretical advancement and historical and bibliographical understanding, while also considering implications for language learning and teaching. Specific areas in which advances are made include sociolinguistics, where our authors present original and nuanced ways of approaching the issues of prescriptivism and gendered language; second language pedagogy, where the universality of critical thinking is defended and L2 discourse is investigated; and in literature studies, where cognitive and cultural studies of personhood and metaphor provide deep insight into the social structuring of disability and emotion.

From the poetry of Emily Dickinson to disability studies, from North American French to Ghanaian Student Pidgin, from cognitive theory to second language pedagogy, these proceedings contain a diverse array of languages, literary genres, and current theories in language-directed research. This volume joins together these conversations and fosters discussion on the social and cultural influences behind them, addressing a range of issues that occupy language scholars today. While theoretical advances in linguistics, second language writing, and cultural theory are vigorously explored, instructors of foreign languages, composition, or literature will also find many useful pedagogical recommendations across the three disciplines represented by the conference.

The essays in this volume have been arranged into four sections: Language and Society, Theoretical Linguistics, Second Language Discourse, and Spirit, Religion, and Self.

Language and society

In Chapter 1, "Nevertheless, She Persisted: Gender Indexicality in the Speech of Elizabeth Warren, 2007-2017," Matthew Jennings analyzes gendered linguistic markers in a ten-year corpus of Warren's political speech. His method of analysis explicitly follows Jennifer Jones's study,

"Talk 'Like a Man' The Linguistic Styles of Hillary Clinton, 1992-2013," in which Clinton's speech is studied in the context of two decades of her political career and personal life. Just like Jones, Jennings examines markers of masculine and feminine speech as they reflect the speaker's changing roles and environments—in Warren's case, her transition from a Harvard law professor without large-scale political engagements to her present position as senior Democratic Senator of Massachusetts and leading figure in the progressive movement. Jennings's study is sorted into three clearly defined periods from 2007-2017: 1) before political involvement, 2) Senate campaign and early years, and 3) national prominence. Jennings initially hypothesized that his results would parallel findings for the speech of Hilary Clinton—that is, Warren's speech would show a feminine or near-neutral feminine/masculine ratio of speech before her political involvement, followed by an uptick in masculine speech in the latter two periods. However, changes in Elizabeth Warren's speech were less clear cut. Despite an initial decrease during her Senate campaign and her early years as a senator, markers of femininity in Warren's speech later increased. This finding is further complicated, Jennings observes, by the fact that Warren's use of "we," a typically masculine marker, actually increases as part of a performatively feminine communication style that expresses authority and political status. This conclusion confirms previous findings that gender plays an important role in political discourse, but adds complexity to any simple interpretation of its role or effects in specific individuals and contexts.

Chapter 2 ("Mansplaining: The Effects of Gendered Language and Speech Practices on Women") also focuses on the topic of language and gender. Author Rachel Knowles investigates the linguistic practice of "mansplaining," which she defines as a woman being talked over, corrected, or patronized by a man who perceives himself as "saving" her from her own mistaken sense of agency or intellect. The term "mansplaining" dates back to Rebecca Solnit's 2008 essay, "Men Explain Things to Me," which provides several anecdotes that reveal the practice as a pertinent social problem and potential women's rights issue. Knowles's objective in this chapter is to build on Solnit's work, bringing greater awareness to the linguistic phenomenon. This is accomplished by means of an extended definition of the term, a consideration of linguistic dynamics, and an illustration of how mansplaining shifts the balance of power away from the woman to the so-called male expert. Knowles also explores the linguistic features of the speech practice, analyzing the communication styles of both men and women and questioning the derivation of gendered communication behaviors. The chapter has a clear

place in this volume on Diversity and Divergence, as it calls attention to a gendered—and oppressive—linguistic tactic, which, as Knowles asserts, poses real harm to women's interests and necessitates consideration as both a linguistic phenomenon and gender equity issue.

In the final chapter of the "Language and Society" section (Chapter 3, "Is Critical Thinking a Social Practice? An update for Second Language Studies"), Kyle Lucas investigates whether and to what extent the cognitive processes, skills, and dispositions associated with critical thinking (CT) are socially constructed. If CT is a socially constructed practice, this raises concerns about bias and unfairness in teaching CT across cultures, which has important implications for SLS because CT is often connected to academic reading and writing, including in ESL curricula. While there are varied conceptions of CT in the literature, Lucas argues that there is a common understanding found within this conceptual diversity. Lucas also draws a comparison between prescriptive and descriptive elements of CT, the former being normative skills and dispositions associated with the ideal critical thinker (for example, being open to alternative points of view, being fair, being skilled at analyzing arguments, etc.), while the latter are cognitive elements and processes assumed to be possessed by all persons. This chapter contributes to the literature on CT by rebutting two claims made by several scholars from the discipline of SLS: 1) that cognitive processes are fundamentally shaped by one's social environment and 2) that CT is therefore a social practice. Such views would imply that the skills and dispositions taught in CT pedagogies are socially constructed rather than universal, normative behavior. Lucas disputes the foundation of these implications and argues that CT pedagogies may have an important place in EFL and ESL instruction

Theoretical linguistics

In Chapter 4 ("Linguistic Prescriptivism: A Framework"), Jonathan Jibson answers a call for linguists to treat prescriptivism as a matter of scientific inquiry. Following a comprehensive review of previous work on the subject, he examines three taxonomies and identifies a distinction between a stigma-avoiding type of prescriptivism and a prestige-seeking type. In Jibson's original framework, these distinct types serve as poles on either side of a continuum, where the category boundary is a neutral, unmarked social value. The framework relies on a model that sees speakers as choosing between two alternative linguistic forms, with these forms being associated in the minds of the speakers with a salient

linguistic variable. In this mental association, only one form is markedly valued as prestigious or stigmatized, while the other form is itself unmarked. Turning towards linguistic rather than strictly social constraints on form selection, Jibson argues that linguistic principles guide the process of selection. Moreover, the language module at work at a particular usage point—whether phonetics/phonology, morphology, syntax, or the lexicon—affects the social value carried by proscribed or prescribed language forms. Jibson suggests that syntactic points offer the most prestige and the least stigma, with lexical points being the opposite, and that phonology and morphology lend themselves most readily to group affiliations, which then define the social value signaled.

Jibson received the Best Paper in Linguistics Award at the 2018 Purdue Linguistics, Literature, and Second Language Studies Conference.

In Chapter 5, ("Telicity in Motion Predicates in Tati, Mandarin and Ghanaian Student Pidgin (GSP)") Pin-His Chen, Kwaku Osei-Tutu, and Neda Taherkhani propose a formal analysis of telicity in motion predicates in three diverse, genetically unrelated languages: Tati (Indo-European, Indo-Iranian, SOV), Mandarin (a Sinitic language), and Ghanaian Student Pidgin (an English-lexified expanded pidgin spoken in Ghana). Following previous work in theoretical syntax that examines telicity from a typological perspective, the authors evaluate the theoretical issues involved in motion predicates based on the arguments of Borer (2005), Ramchand (2008), and particularly Benedicto and Salomon (2014); they analyze the subcomponents of motion predicates as being layered in a complement structure along the lines of Larson (1988), with each subcomponent c-commanding the next. The data examined in this chapter were collected from nine speakers through an elicitation task requiring participants to engage with animated video-clips designed to elicit and contrast the relevant parameters. Based on these data, they argue that, for all three languages, there are two conditions under which telicity is achieved: 1) the figure reaches an endpoint (i.e. VP-endpoint) which is headed by a verb of reaching, and 2) through head-to-head agreement between a [+PRF] Aspo and the Vo head of the VP-Endpoint (with or without a PlaceP as its complement). Theoretically rich and diverse in its linguiste data, the work of these authors clearly demonstrates the parallels in telicity across languages.

Second language discourse

In Chapter 6 ("Analysis of the Discourse Marker *quoi* in the Speech of French L2 Speakers: The Case of the Chinese Living in Paris"), Delin

Deng presents a study of the discourse marker quoi as used by a group of L2 speakers of French. Deng notes that although *quoi* is still neglected in dictionaries and grammar books, usage of the discourse marker has been increasing in the last few decades, and analyses of L1 usage have recently appeared in the scholarly literature. This chapter complements that work with an investigation of the use quoi by Chinese L2 speakers living in Paris. Particular attention is given to the contexts in which this discourse marker appears and the influence of social factors on its usage. Deng concludes that L2 speakers learn to use quoi as a discourse marker in various contexts, though these contexts are less varied and complex than in the speech of L1 speakers. As to the extralinguistic factors, Deng observes that male speakers use *quoi* more frequently than female speakers and that the rate of usage is influenced by length of stay and employment status. These findings are of importance not only scholars of French, but also for SLS researchers interested in differences between L1 and L2 language acquisition.

In Chapter 7 ("Are Overpassivization Errors Due to Nontarget Causativization?"), Hiroyuki Oshita, Talal Alharbi, and Fnu Sudiman propose a refinement of current analyses of English overpassivation in L2 speakers. The authors note that L2 learners of English tend to produce and accept ungrammatical passive sentences with intransitive verbs (e.g. "The accident was happened so suddenly"), which has been attributed to the presence of Conceptualizable Agent (CA) in this context. The rationale is that CA induces learners to causativize intransitive verbs, leading them to produce and accept ungrammatical constructions. In this chapter, Oshita, Alharbi, and Sudiman examine the plausibility of the CA analysis with grammaticality judgment data obtained from Arabic learners of English. The suitability of L1 Arabic speakers as a source of data is justified on the grounds that the language exhibits extensive causative morphology and allows sentences like "Khalid arrived Ahmed at the airport." If the CA analysis is correct, the authors argue, Arabic learners should be more prone to overpassivization errors than other groups because of the extensive causative morphology in their L1. On the other hand, if these learners correctly reject ungrammatical causatives but still accept ungrammatical passivized sentences, the plausibility of the CA analysis should be called into question. For this study, the authors administered a computerized grammaticality judgment test to thirty Arabic-speaking graduate and undergraduate students, who were asked to evaluate the grammaticality of active and passive sentences with three types of intransitive verbs. The results showed that although the participants accepted alternating unaccusatives in both causative and passive structures

(as the authors expected), they correctly rejected both non-alternating unaccusatives and unergatives in their causative usage. The participants also accepted passivized sentences more frequently with non-alternating unaccusatives than with unergatives. Based on these results, Oshita, Alharbi, and Sudiman conclude that the CA analysis (and the Nontarget Casuativization analysis in general) fails to account for the overpassivization phenomenon in L2 English.

In Chapter 8 ("Linguistic Transfer in the Functional Categories of New England French"), Laura Demsey makes a compelling case for studying the influence of English syntax on Francophone speakers in North America. As she observes, the French-speaking communities in the New England region of the United States, though dwindling and a fraction of their original size, have a complex past and present. Moreover, due to bilingualism with English and the minority status of French in the area, New England French has the potential for exhibiting extensive linguistic transfer and divergence from 'standard' French grammar. Demsey is particulary interested in transfer from English in functional categories (specifically, prepositions and the definite determiner) and presents preliminary results for native speakers of French in two New England speech communities: Lewiston, Maine and Manchester, New Hampshire. Three phenomena are examined via a series of tasks (guided conversation. translation, targeted elicitation) that were administered to a small set of participants. While this is a pilot study of a much larger planned project. Demsey's current results suggest that Francophone speakers follow English word order and grammatical rules due to transfer from English into their French definite determiner and prepositional systems. Demsey also observes that those who most frequently produce English-like structures are younger speakers with the least exposure to French and the least frequent, most contextually limited use of French.

Spirit, religion, and self

In Chapter 9 ("Truth is Stirless': Rereading God's Truth in Dickinson"), Regina Yoong Yui Jien provides a nuanced analysis of Emily Dickinson's poetry and traces the nineteenth-century poet's revisioning of popular notions of religious truth. According to Yui Jien, the significance of Dickinson's search for truth lies in the unrelenting dialectic process of seeking, being guided by one's personal principles, rather than in the attainment of truth itself. Yui Jien also examines the role of literature in supporting the free expression of female identity and making sense of the complexities involved in searching for truth in a society hostile to women

in the literary vocation. Building off of the work of previous scholars who have identified Dickinson's poetry as an expression of her discontent with Puritan religious institutions and her own personal faith in God, Yui Jien explores features of liminality and illocality in Dickinson's understanding and definition of truth. Unpacking Dickinson's poetry and inviting us into her act of interpretation and recreation, Yui Jien demonstrates the very essence of her characterization of Dickinson's work as a participatory exercise in liminal thought.

Yui Jien's paper received the Best Paper Award in Literature at the 2018 Purdue Linguistics, Literature, and Second Language Studies conference.

In Chapter 10 ("The Ghost Dance-Accessing and Accepting Intersectional Identity Through Spectrality"), Emily Naser-Hall analyzes the spectral journeys depicted in Toni Morrison's Paradise, Louise Erdrich's Antelope Woman, and Maxine Hong Kingston's The Woman Warrior, all featuring women who delve into their ancestral pasts by entering the ghost world. In these works, the women call upon the influence of the past to understand the present and plan for the future, and Naser-Hall presents these journeys as a form of haunting. In Naser-Hall's analysis of these texts, the 'inbetween' spaces these characters inhabit require a form of spectral reconciliation with and through the past—at the intersection between life and death, presence and absence, and reality and imagination. In her detailed interpretation of these texts. Naser-Hall analyzes the women as intersectional individuals who themselves embody in-betweenness, as they simultaneously exist in multiple worlds. She argues that the struggle to reconcile one form of identity with another resembles the specter's battle to negotiate existence between life and death. Moving beyond the texts themselves to propose a wider framework for analysis, Naser-Hall positions intersectionality and spectrality as analogous literary devices, showing how understanding intersectionality entails an invitation to be the victim of a haunting, a calling forth of the spirits of the past to help an intersectional subject reconcile her identity.

In Chapter 11 ("Interiority and the (In)visible Self in Carly's Voice"), Kathleen Spada analyses the contemporary, non-fiction work *Carly's Voice*, which was co-authored by a young woman diagnosed with Autism and the woman's father, and which chronicles the family's experiences and struggles with negotiating the young woman's diagnosis. Through her reading of the text, Spada's contribution to this collection interrogates Simon Baron-Cohen's theory of mindblindness, an inborn dissociative state that characterizes diagnoses of Autism. Drawing on Relational-Cultural Theory (RCT) and the social model of disability, Spada invites us

to analyze the cultural construction of disability as a rhetorical act 'in/forming' identity. Spada's work focuses on the minutia of interpersonal relationships, as she looks closely at the role of eye contact to demonstrate how non-verbal autism speaks in *Carly's Voice*, challenging us to reconfigure the theories with which we have approached mindfulness. In addition, Spada argues, we should consider the human need for connection and growth-fostering relationships in a relational context, examining how assumptions based on stereotypes related to autism can themselves result in chronic disconnection. In this essay, *Carly's Voice* becomes a lens through which we view the autistic experience in order to construct a counternarrative to Baron Cohen's Theory of Mind.

SECTION ONE LANGUAGE AND SOCIETY

CHAPTER ONE

NEVERTHELESS, SHE PERSISTED: GENDER INDEXICALITY IN THE SPEECH OF ELIZABETH WARREN, 2007-2017

MATTHEW JENNINGS

Introduction

A recent star of American political life, Senator Elizabeth Warren of Massachusetts has gone from a professor of bankruptcy law at Harvard University to one of the modern progressive movement's most visible figures. Indeed, the visibility of Warren among both the American public and her Senate colleagues is exemplified by such monikers as "the Elizabeth Warren phenomenon" being used to single out the Senator's influence and opposition to certain financial reforms (Davis 2015). Despite Warren's immense public and political celebrity, however, Walker (2016) notes that "no published studies of Warren exist in any discipline beyond analysis of her published work in bankruptcy law" (3). Given this dearth of research, this study attempts to contribute to the understanding of Warren's public political persona through an analysis of public speech events.

Literature Review

This work is heavily based in the social psychology research of James Pennebaker on the importance and meaning of function words and pronouns in human speech. Importantly, when Pennebaker (2011) speaks of "masculine" and "feminine" linguistic markers, this is not a normative statement steeped in gendered language stereotypes. Rather, these statements are drawn from the work of Newman et al. (2008), who analyzed a corpus of over 14,000 texts whose author's sex was known, using the software known as Linguistic Inquiry and Word Count, or

LIWC, more commonly (Pennebaker 2015a). In rejecting ideas of essentialism, an important distinction is put forth by Cameron (1998) that what is considered "women's language" is in fact a symbolic category, while "the language used by women" is an empirical one and thus a measurable phenomenon. The work done by Newman et al. (2008) and Pennebaker (2011) strictly limits itself to language used by women.

Quantifying perceived gender differences in language is hardly a novelty in linguistics. Following the assertions of Lakoff (1973) that women use allegedly tentative linguistic features, such as tag questions, more than men, researchers were quick to test this hypothesis. As described in Weatherall (2002, 60), work by McMillan, Clifton, McGrath, and Gale (1977) and Dubois and Crouch (1974) investigated the use of tags in different contexts; McMillan et al. examined their use in a structured experimental setting, while Dubois and Crouch instead recorded spontaneous speech interactions.

Though the researchers found contradictory outcomes—more tag use by women in the structured setting and more tag use by men in the spontaneous recordings—their research spurred further investigation and highlighted the importance of contextual differences in language use. Deborah Cameron highlights the difference that context can yield, noting that language "is *radically* contextual" (Cameron 1992, cited in Holmes 2006, 17). While quantitative studies can be conducive to ignoring such contextually-bound meanings, Tausczik and Pennebaker (2010) contend that, despite the failure of word-counting software to detect irony and nuanced meaning, use of pronouns, for instance, can still be detected and reflect speakers' attention and focus.

Previous research in the analysis of gendered language in political speech has been done by Pearson and Dancey (2011), who found that the content raised by legislators in the House of Representatives differed along gendered lines, with female representatives of either party being more likely to draw attention to women's issues in speeches. Additionally, Osborn and Mendez (2010) found that female senators were more likely than their male colleagues to make speeches on subjects that directly impact women's lives, such as family issues and women's health.

While the previous two studies analyzed content words in speech, Yu (2014) used the word-counting software LIWC to analyze function words in twenty years of speeches delivered by legislators in the United States Congress. Yu's findings were largely in line with existing theories, showing that female members consistently used more emotion words of all types across the data, while males displayed a markedly higher preference for articles. Moreover, Yu found a higher frequency of possessive pronouns

among women than among men, including bigrams such as "our community," "our families," and "our students," all of which situate the speaker socially with reference to the group mentioned. This result is consistent with the findings of Newman et al. (2008), who observed higher use of social words and references in the speech of women.

The foundation for the present study is Jennifer Jones's (2016) analysis, "Talk 'Like a Man': The Linguistic Styles of Hillary Clinton, 1992-2013." Following the usage-based approach of Pennebaker and Newman, in which "masculine/feminine speech" is measured by the ratio of features appearing more often in the speech of men to that of features appearing more often in the speech of women, Jones assembled an original corpus of 567 documents and analyzed Clinton's speech with regard to gendered speech markers, evaluating how Clinton's gendered self-presentation varied in relation to her standing in the political world.

In order to contextualize Clinton's use of language, Jones analyzed her data in five subsets correlating with important stages in her political career: her time as First Lady, her first Senate campaign, her first term as Senator, her first presidential campaign, and her tenure as Secretary of State. Ultimately, Jones's findings were that Clinton did in fact display more masculine speech while in traditionally male settings, such as during her presidential campaign and during her term as Secretary of State, while her language was most feminine when she served as First Lady (Jones 2016). More specifically, analyzing the trends among the linguistic markers, Jones concluded that Clinton's speech was not necessarily decreasingly feminine, "but it is clear that her speech was increasingly masculine" (633). Given the recent publication of the parent study, no major breakthroughs in the field have been identified since its publication, and thus the theoretical framework remains the same.

According to Eckert and McConnell-Ginet (1992), "we speak of practices...as 'gendered' where they enter in some important way into 'gendering' people and their relations," and go on to clarify that "we do not want to suggest that gendered identities and relations have any common core 'fixed' by their...link to reproductive biology" (463). This second claim serves to support a typical Butlerian model wherein gender is not a static social category but instead a performative construct enacted by actors and thus flexible (Butler 1990). Through this lens of gender as performativity, it is reasonable to assume that a politician such as Warren or Clinton can modify her language and, thus, gendered perception in order to make necessary political and social gains.

Methodology

The methodology in this study is derived from that used in Jones's (2016) original study. An original corpus of twenty-six interview and debate transcripts was assembled and transcriptions were made or corrected, as needed. Of these transcripts, twenty-three of the speech events are interviews, while the remaining three are debates. As in the parent study, only spontaneous speech events were included in the data set, and thus any speeches or prepared remarks were excluded.

In the selection of Warren as a subject for study, several criteria were taken into consideration. First, the subject had to be a notable female-identifying figure in American politics. By strictly focusing the study on a speaker of American English, there are no concerns of misunderstanding gendered cultural markers in the speech of a speaker of British English, for instance. Moreover, Warren also possessed several personal and ideological characteristics akin to Clinton in the parent study. Most notably, the two women are nearly equal in age—Warren is sixty-eight and Clinton, seventy—and have educational backgrounds steeped in law. Furthermore, both women have acknowledged formerly belonging to the Republican party before eventually registering as Democrats. In addition to these similarities, Warren's limited political tenure—only six years in elected office—allows for research of much smaller scope than a subject with more longevity, such as Nancy Pelosi.

Much like Jones established five periods for analysis of her data, this study sorts the data into three discrete periods: Warren's life before political involvement (pre-2011), Senate campaign and early political career (2011-2015), and party leadership and progressive icon (2016-2017). These divisions serve to help contextualize Warren's use of language and to suggest factors that could have driven her choice of linguistic style in some way. Table 1 shows the speech events analyzed in each of the three periods.

Since the analysis is based on proportional word frequencies, all transcripts were processed using the software Linguistic Inquiry and Word Count (LIWC) to calculate percentages of total word count in the data. As discussed in the introduction, the categories of "masculine" and "feminine" speech as measured in LIWC in this study are operationally aggregates of words and word categories that appear more often in the speech of females and males rather than features essentially linked to sex

Table 1: List of Speech Events				
Speech Event	Date	WC		
2007 Conversations with History Interview	3/8/2007	7252		
2008 NPR Morning Edition Interview	12/16/2008	465		
2009 Frontline PBS Interview	6/16/2009	4833		
2009 Now on PBS Interview	11/13/2009	1795		
2009 NPR Fresh Air Interview	5/9/2009	4564		
2009 NPR Planet Money Interview	5/8/2009	8373		
2010 Charlie Rose Interview	3/4/2010	2434		
2010 Tavis Smiley PBS Interview	4/14/2010	1305		
2011 WBUR Interview	9/14/2011	999		
2012 Senate Debate 1	9/20/2012	4384		
2012 Senate Debate 2	10/1/2012	2979		
2012 Senate Debate 3	11/3/2012	4072		
2012 NPR All Things Considered Interview	9/4/2012	496		
2013 Salon Interview	8/22/2013	944		
2014 ABC David Muir Interview	4/21/2014	3550		
2014 Moyers and Company Interview	9/4/2014	2319		
2014 NPR Fresh Air Interview	10/1/2014	1096		
2014 WBUR NPR Interview	12/14/2014	611		
2015 NPR Politics TPP Interview	5/12/2015	589		
2016 Maddow Interview	6/9/2016	2360		
2016 Mic Interview	5/12/2016	1641		
2017 Axe Files Interview	6/12/2017	7867		
2017 Charlie Rose Interview	4/19/2017	4194		
2017 Maddow Interview	7/25/2017	922		
2017 NPR Book Club Interview	4/18/2017	896		
2017 WBUR NPR Interview	9/7/2017	1495		
Italics indicates second period; bold indicates third period				

or gender. Accordingly, the two categories are independent, and it is entirely possible for a person's speech to score high or low in both or neither. Thus, "feminine" speech in this study should be taken to mean a high ratio of feminine to masculine indicators, and "masculine speech" is shorthand for a low ratio.

In contrast to Jones's work, the 2015 version of the software was used instead of the 2007 version that was used in the parent study. Per notes following the software's release, the "cognitive mechanisms" category of the 2007 version was replaced with "cognitive processes," a conceptually similar marker that limits its elements to "true markers of cognitive activity" (Pennebaker et al. 2015b, 15). Beyond this, the software added four new summary variables based on research published by Pennebaker Labs—analytical thinking, clout, authenticity, and emotional tone—which were not available to Jones at the time of her research. These four variables do not count percentages of text as do the other variables and are instead scored from 0 to 100; the mechanics behind this scoring represent "the only non-transparent dimensions in the... output" (Pennebaker et al. 2015b, 6).

In one departure from Jones's (2016) methodology, instead of merely the aggregate of all masculine and feminine markers being taken, some categories were calculated in order to minimize overlap. For instance, "pronoun" necessarily includes all first-person plural pronouns—so-called "we" words. So as not to count these pronouns in the wrong category, the percentage of text composed of this marker was subtracted from the broader "pronoun" category. This methodology was also applied in the categories of "negative emotion" and "anger," as all words marked for "anger" shared the "negative emotion" tag; hence, all "anger" words were subtracted from the broader "negative emotion" category in order to more accurately reflect the true values of word usage in Warren's speech.

Replicating Jones's methods, the sums of both the masculine and feminine variables were calculated, and the feminine total was divided by the masculine total in order to calculate the feminine/masculine ratio in Warren's speech. These calculated ratios were then plotted over time to observe any general trends in Warren's gendered self-presentation. Debates were not analyzed separately from interview transcripts as the only debate data available was a series of three debates during Warren's campaign for Massachusetts Senator, and there were no differences in content among the three debates substantial enough to warrant further investigation.

As in the parent study, R was used to perform the statistical analysis of the data. Jones's original code was used with minor alterations, namely the deletion of extraneous code relating to Clinton's presidential campaign in 2007-2008 and the replacement of a now-deprecated function.

The prevailing limitation of this study is the limited size of the corpus, which contains only twenty-six speech events, a dramatically smaller quantity than Jones's original corpus of 567. Consequently, some years

and periods are more heavily represented than others in the data. While there is at least one speech event represented per year, almost half of the years under analysis—2007, 2008, 2011, 2013, and 2015—have only one speech event in total, compared to more robust years, such as 2014 and 2017. Given that this study (following the parent study's methodology) uses a per-year basis for analysis, these isolated speech events could incorrectly be assumed to be indicative of the whole year. Expanding the corpus to include such events as Senate floor debates or questions in confirmation hearings would help to alleviate such limited representation in the data, in addition to providing other contexts in which one could analyze spontaneous speech.

A limitation discovered in performing the statistical analysis in R was that the data displayed autocorrelation under the Durbin-Watson test at lags 1 and 2. Effectively this means that a different model for analysis may be called for in order to account for this discovery. Moreover, it indicates that the results from the analysis could be misleading, as some factors for which statistical significance was determined may in fact be incorrectly labeled as such.

It is perhaps equally important to note that, though the principal object for comparison in this study is Hillary Clinton, extrapolating findings too broadly to apply to all female politicians would be a mistake, especially with the limited corpus size of this study. As Jones (2016) herself notes of Clinton, she "has experienced a unique trajectory into politics and, arguably, her career is not a 'typical' case" (631). That said, by expanding the size of the corpus as discussed above, one could more reasonably make claims about Warren's gendered self-presentation over time than with the current data.

Results and discussion

In contrast to the data yielded by Jones's work, which showed that Clinton developed markedly more masculine tendencies in her speech over time, the findings presented here show that Warren's speech displays a higher feminine/masculine ratio in the first period of analysis, becomes more masculine in the second period, and actually displays a higher feminine/masculine ratio on average in the third period than in both others, despite her having the greatest amount of political involvement at this point. That said, the ratio model results in Table 3 display a general decrease in the feminine/masculine ratio, but without statistical significance. While the generalized linear model measures change on a per-year basis across all years of analysis, Table 2 instead shows Warren's use of each

linguistic token delineated by period with the data in a given year weighted by word count.

Table 2: Weighted Average for all Linguistic Markers				
	(Percentage of V	Word Cou	nt)	
	Examples	Pre-	2011-	2016-
		2011	2015	2017
Feminine style				
Pronouns	I, you, they, it	14.30	14.44	16.46
First-person	I, me, my	2.52	3.76	3.18
singular				
Verbs	Is, do, make	20.13	20.56	20.39
Auxiliary verbs	Have, will, is	11.13	10.95	10.36
Social references	Help, family, we	9.60	9.70	12.23
Positive emotion	Fair, good, love	2.32	2.78	2.77
Negative	Shaken, wrong,	1.01	0.70	0.59
emotion	worry			
Tentative words	May, probably,	3.02	2.18	2.03
	possible			
Cognitive	Because, think,	11.78	12.1	10.36
processes	bet			
Masculine style				
Words > 6		15.25	16.53	13.36
letters				
First-person	We, our, let's	1.92	2.13	2.39
plural				
Articles	A, an, the	7.48	6.88	6.99
Prepositions	In, over, of, by	13.26	13.58	13.84
Anger words	Hate, argue, kill	0.09	0.24	0.70
Swear words	Heck, damn, shit	0.00	0.01	0.03
Feminine/Masc		2.00	1.96	2.10
uline ratio				
Word count		31021	22039	19375
No. documents		8	11	7
Total word	72435			
count				
Total	26	1		
Documents				

1	model 5.00**** 99) **** 1))4****	Ratio Model 2021.799**** (14.49)
1	5.00**** 99) **** 1))4****	2021.799****
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Pronouns 2.40 (0.3 First-person singular -24. (2.8:	****) 4***	
First-person singular -24.0 (2.8))4****	
First-person singular -24.0 (2.8))4****	
(2.8)		
))	
Verbs 3.48	****	
(0.33	3)	
Auxiliary Verbs 10.0	9****	
(1.36		
Social references -4.3	****	
(0.5		
Positive emotion -15.3	38****	
(1.8)		
	31****	
(2.39)	9)	
Cognitive processes -1.12		
(0.49)	9)	
Tentative words -6.88	3****	
(0.69	9)	

(0.8)	1)	
	5****	
(1.38	3)	
Articles -42.0	54***	
(5.70))	
Prepositions 2.55	****	
(0.40	5)	
Anger words -17.8	39****	
(2.79		
Swear words 320.	29****	
(46.9	94)	
Feminine/Masculine ratio		-5.21
		(7.31)
N 43		10
Log Likelihood -26.0)6	-25.43
AIC 84.1		54.87
****p<.0001; ***p<.001; **p<.01;*p<	.05; italics indicate m	nasculine variable
Standard errors are in parentheses. Both		
full model is a quarterly time series; the		

The generalized linear model, as seen in Table 3, produced mixed results for Warren's use of masculine and feminine markers across all years of analysis. While her use of only three masculine markers prepositions, swear words, and words of more than six letters—increased by a statistically significant amount, her use of feminine speech markers, with the exception of pronouns, verbs, and auxiliary verbs, almost uniformly dropped at the same time. All of these results achieve robust statistical significance, holding true at p<0.0001, while the decrease in cognitive processes is significant at p<0.01. Given the general negative trend in feminine variables and slight positive trend in masculine variables, it appears that Warren's speech was overall decreasingly feminine and slightly more masculine across the entire analysis. While all results are statistically significant, some variables display more pronounced change than others in the model results. Swear words, for instance, did indeed see a significant increase in use, but the data indicate that these were only a negligible fraction of the words Warren used overall.

In the first period, Warren held no elected political office, with her only public office being her tenure as the chair of the Congressional Oversight Panel (COP), established in 2008 to oversee the allocation of funds per the Treasury Department's Trouble Asset Relief Program (TARP). Besides one interview conducted in 2007 about her life and the state of the American middle class, all speech events analyzed here were interviews conducted with Warren regarding her opinion as a financial expert or as the chairwoman of the COP. One element of Warren's use of language that stands out and contributes to the comparatively higher feminine/masculine ratio in this period is her use of tentative words, a typically feminine marker. Words labeled as tentative do not necessarily indicate verbal hesitation on the speaker's part (e.g., *uh*) but rather express possibility or uncertainty in quantity or actor (e.g., "Most of the [money] has already been committed, but Treasury may want the second \$350 billion.")

In fact, the highest value for tentative words in the unweighted data set—5.38 percent of words in the text—comes in an interview given in 2008. This high use of tentative language during the period is likely indicative of the uncertainty and shaken confidence of the American public in the midst of the Great Recession, a phenomenon explained by Owens and Cook (2013). Despite speaking from a place of power, Warren voices a question on the efficacy of the bailout and its nature, noting that "one of the real *questions* we're asking here is whether *or* not *any* of that money is in *any* way helping end the mortgage crisis," highlighting the lack of transparency from financial institutions and the Treasury

department (emphasis added). In an exchange with Tavis Smiley, for instance, Warren can only speculate on the possibility of a Consumer Financial Protection Agency, saying "I hope so, but Tavis, I don't know. Right now this consumer agency is our one hope to try to straighten out a consumer credit market that's broken... Whether or not it'll go through or not... that's up in the air" (emphasis added). While some of this tentative language could be attributed to feminine speech alone, it seems more likely that some such language is the result of the relevant economic and historical factors.

In the second period of analysis, Warren's speech initially displays a fairly similar level of feminine to masculine markers as at the end of first period. Her speech, however, quickly drops in terms of relative femininity, reaching the lowest point in the data set during her third debate with then-Senator Scott Brown during the Massachusetts Senate race, as seen in the dramatic drop in 2012 in the graph below.

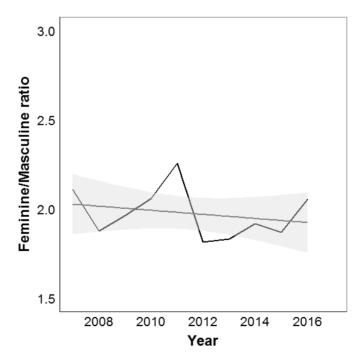


Figure 1: Ratio of Masculine to Feminine Styles over Time

This lowest value does seem in stark contrast to the incredibly high feminine/masculine ratio found in an interview following Warren's campaign announcement in 2011, but the general trend towards masculine speech at the time is not. Rather, it is consistent with Jones's own findings, drawn from her analysis of Clinton's Senate races, that female candidates' self-presentation skews more masculine in order to appear "tough enough" for the position in question. Notably, Warren's use of big words rises at this time, again peaking in the third debate, where these words represent approximately 21 percent of all words used in the text.

Additionally, following her very positive campaign announcement, Warren begins to display an increase in anger words over the preceding period that only continues to rise going into the third period. This rise can be attributed to Warren's impassioned style of speaking and her preferred way of pitching her economic beliefs to her audience—for example, her vivid descriptions of the middle class as "hammered" and "cheated" by a wealthy elite (Madigan 2012). Walker (2016) encapsulates the spirit of Warren's arguments, noting that her narrative offers "an idealized image of citizenry made even clearer by the ongoing presence of the villain...[a] powerful, wealthy and corrupt financial sector...referred to with the short hand [sic] of 'Wall Street'" (9).

Perhaps the most interesting results can be seen in the data from the third period. Warren, now a Senator in her fourth and fifth years in office, has established herself as an outspoken critic of Donald Trump and the Republican majority in Congress, and for most of 2016 her endorsement for president was highly sought by both Democratic contenders, Bernie Sanders and Hillary Clinton. Presumably, then, per Jones's findings Warren's speech should decrease in relative femininity. Instead, Warren's speech actually displays a higher feminine/masculine ratio on average than in either of the preceding periods. Moreover, this increase occurs despite the fact that Warren's use of "we" words, a masculine speech marker, also sees a sizeable increase in this period, as seen in Figure 2.

This heightened use of "we" can be easily attributed to a change in Warren's messaging strategy, which strongly emphasizes Democratic unity at the time and tends to define her party in contrast to the opposition. In all previous periods, Warren's use of "we" had a much less consistent referent, ranging from speaking on behalf of the members of the COP to aligning herself with Massachusetts voters in order to win over their support. In contrast, Warren's use of "we" forms in the third period is almost uniquely partisan. In one exchange, for instance, Warren says to the interviewer "As a Democrat, one of the things that frustrates me the most is there are a lot of times we [emphasis added] just don't get in the fight.

We ask pretty please if we can have things or we make the argument for why it is the best thing to do..." (Warren 2016).

Warren's marked and frequent identification with her party at this point in her career is an important implicit marker of her status of authority in the party. Reicher and Hopkins (2001, 386) note that people "will agree with and follow a would-be leader to the extent that the individual is seen as prototypical of the in-group and acts in terms of in-group norms." That said, Warren's shift towards a more collective style of speech could also be in line with the theory put forth by Volden, Wiseman, and Wittmer (2013) that the general tendency of women in minority parties to emphasize cooperation is a useful asset in forming coalitions with members of the majority party. Nonetheless, it is telling of Warren's status as a leader and figurehead of the party that her use of tentative words is lowest in the third period, suggesting certainty in her speech and status.

Simultaneously, despite Warren's increasingly feminine language, the clout dimension, which measures a speaker's perceived confidence and expertise, is consistently at its highest values in this period. Although the exact means by which this variable are calculated are unclear, as the equations are proprietary in LIWC, clout is associated with work done by Kacewicz et al. (2014) on standing in social hierarchies as measured by pronoun use (Pennebaker et al. 2015b).

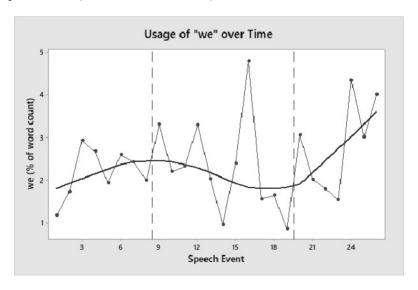


Figure 2: Usage of "we" over Time (unweighted data)