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A multifactorial analysis of metaphors in political discourse:

Gendered influence in Hong Kong political speeches

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Abstract

The rising prominence of women in politics has sparked a growing interest in comparing the language of male and female politicians. Many researchers have explored whether gender in politics has had an impact on their metaphor styles. While these studies have been oriented qualitatively and have concentrated on the two-way interaction between metaphor and gender, the possibility that metaphor and gender may interact with other additional factors is largely overlooked. This article adopts a quantitatively oriented approach complemented with textual analysis to explore potential multiple-way interactions between ‘metaphor’, ‘gender’, ‘speech section’ and ‘political role’ in political discourse. By conducting a case study of metaphor use in Hong Kong political speeches, we found evidence of gendered metaphors and their variability according to politicians’ political roles and different rhetorical sections in their speeches.

Keywords: Political discourse; metaphor; gender; multifactorial analysis

1. Introduction

Metaphor is one of the primary stylistic features of political discourse, and its persuasive power has been widely acknowledged (Charteris-Black, 2005, 2006, 2013; Lakoff, 1996/2002; Musolff, 2004, 2016; Burgers & Ahrens, in press). In recent decades, the continued progress for female politicians in the political arena (Atkeson, 2003) has inevitably resulted in an upsurge of scholarly interest in the investigation of metaphor use between men and women in politics. Most current research emphasizes the qualitative descriptions of the two-way

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interaction between metaphor and gender in order to illustrate whether gender differences or ideological differences are more pronounced (Ahrens, 2009). However, the multidimensional nature of political discourse (Van Dijk, 1997, 2002) gives rise to many elements that may influence metaphor use, e.g. the social factors of political role (Ahrens, 2019), political experience (Charteris-Black, 2009), political party and goal (Semino & Koller, 2009). Despite this complexity, little attention has been paid to the question of whether and how the potential combined effects of multiple factors may play a role in shaping metaphor style in political discourse.

This article fills this gap by including the two additional factors of ‘political role’ and ‘speech section’ into the analysis of metaphor and gender interaction in political discourse. It presents a quantitatively oriented approach to examining multiple-way effects on metaphor use with a case study in a corpus of Hong Kong political speeches. A multivariate log-linear analysis will aid in the comprehension and validity of metaphor analysis.¹

To date, studies applying a multifactor quantitative approach to metaphor analysis are scarce, although corpus-based studies lend themselves well to a quantitative approach. While it is relatively easy to qualitatively explain how one single contextual factor influences metaphor use in discourse, it is difficult to analyze the combined effects among multiple factors using a qualitative approach alone. Log-linear analysis, however, allows researchers to identify the interaction between multiple factors in a discourse. In addition, it can also examine how strongly these factors interact to produce the observed frequencies in the data (Tay, 2017). These multifactorial associations, in turn, provide alternative perspectives which can further contribute to exploring and understanding metaphor use.

¹ Log-linear analysis is a statistical technique in examining the associations among three or more categorical variables (Tabachnick & Fidell, 2007). It is especially useful for exploratory data-driven research (Tay, 2017).

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In this article, we apply log-linear analysis to examine how metaphorical source domains, gender, speech sections and political roles interact in a corpus of political speeches in Hong Kong. Examples are provided for the interpretation of metaphor usage patterns and their implications based on the significant variable associations.

2. Gendered metaphor and political discourse

Researchers have long argued for the existence of gender differences in language. Beginning with Otto Jespersen's (1922) pioneering work, sociolinguistic accounts (Cameron, 2006/2012; Coates, 1987; Holmes, 1995; Holmes & Meyerhoff, 2003) have argued that different features can be categorized between male and female language, with women's style related to rapport, sympathy, intimacy and cooperation and men's style described as reporting, problem-solving, independence and competition (Talbot, 2003).

Rhetorical studies on the relation between metaphor and gender have primarily been concerned with how metaphor may reinforce gender stereotypes (Koller, 2004a, b; Philip, 2009; Velasco-Sacristán, 2005) and how gender inequality is conceptualized in metaphors (Lim, 2009; Yang, 2013). Philip (2009, p. 85) summarized the findings by noting that metaphors are labelled with stereotypical feminine and masculine traits, with feminine metaphors associated with 'mother', 'childbirth' and 'homemaker', 'nurture', 'care for the sick and elderly' and 'domestic chores', while masculine metaphors associated with 'work tools', 'workplace' and 'machinery', 'violence', 'crime', 'aggression' and 'hunting'.

In Ahrens (2009), researchers writing for this volume investigated the metaphor and gender interaction in Western politics with mixed results being reported. Clear differences in the use of metaphor source domains were found between male and female British parliamentarians (Charteris-Black, 2009) and between the female Irish president and male Irish prime minister

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(Tenorio, 2009), while no discernible differences were found regarding spatial metaphor use between male and female German parliamentarians (Stefanowitsch & Goschler, 2009) and family metaphor use between male and female US presidential candidates (Adams, 2009). They also found that gender does not drive the lexical choice of conceptual models between male and female US senators (Ahrens & Lee, 2009) or of metaphor themes by female Italian ministers (Philip, 2009).

Although some acknowledge metaphor variations may be attributed to multiple factors (Charteris-Black, 2009; Semino & Koller, 2009; Tenorio, 2009), most studies have mainly discussed the two-way effects between one single factor (i.e. gender) and metaphor use, and a few studies have shown that metaphor use is influenced by factors other than gender. For example, Ahrens (2019) found an influence of political role on politicians' metaphorical language use. She investigated the source-target domain mappings in WAR metaphors used in speeches by Hillary Clinton across her roles as US First Lady, US Senator and presidential candidate. The mappings demonstrate a shift in Clinton's political identity, e.g. in WAR metaphors used by Clinton as First Lady, she was primarily concerned with protecting citizens and stopping disease, while as senator and candidate, she used WAR metaphors in a different way with more emphasis on denouncing terrorism, protecting privacy and ensuring economic development. These findings shed light on the role of other factors in discourse in leading to the variations of metaphor use.

In addition, the political speech, as one of the typical genres of political discourse (Van Dijk, 1997), comprises several different sections (e.g., prologue, narrative, proof and epilogue), each of which has different rhetorical purposes (Charteris-Black, 2013). Since metaphor has been extensively employed by politicians in achieving various rhetorical purposes (Charteris-Black, 2005, 2013), it is possible that if male politicians in general are believed to use specific types of metaphor more frequently than female politicians, or vice versa, these may also be revealed

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in the speech sections in which they occur. Thus, we expect that the factor of ‘speech section’ is also a potential variable influencing metaphor use in political speeches.

Nevertheless, the issue of how multiple factors interact to shape metaphor use in political discourse remains unanswered in previous studies. This article moves beyond the Western-centric focus of previous studies to investigate the issue in Asian politics. We add the factors of ‘political role’ and ‘speech section’ into the analysis of gendered metaphor in a corpus of Hong Kong political speeches. Rather than focusing on the two-way effects between metaphor source domain and gender, we use log-linear analysis to examine the multiple-way effects among the four variables of SOURCE DOMAIN, GENDER, POLITICAL ROLE and SPEECH SECTION.² We then interpret the obtained effects with a textual analysis of the underlying rhetorical strategies for effective political communication. The study examines evidence from corpora to better understand the claim of ‘gendered metaphor’, to see if metaphor source domains are really ‘gendered’, and if so, there is further variability according to the speakers’ political roles and speech sections. Three research questions are addressed:

- (1) What are the associations between metaphor and gender in Hong Kong political discourse?
- (2) How do metaphor, gender and other potential variables of interest (i.e. political role and speech section) interact in Hong Kong political discourse?
- (3) What do these interactions suggest about the strategic use of metaphor in political communication?

3. Method

3.1 Corpus Creation

² We use small caps for the four variables involved in the log-linear analysis.

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The corpus was sampled from the English speeches of Hong Kong principal officials available in HTML text on the official website of the Hong Kong government (<http://www.info.gov.hk/isd/speech/sensp.htm>).³ We first collected all the speeches from July 1, 1997 to December 31, 2017, totalling 1,248 speeches by 11 male and female politicians in the three highest positions of principal official in postcolonial Hong Kong: the Chief Secretary for Administration (CSA), the Financial Secretary (FS) and the Secretary for Justice (SJ).⁴ Secondly we randomly selected 10% of the 1,248 speeches by using the RANDBETWEEN function in Excel to generate random numbers for speech selection. The final corpus comprises 125 speeches with a total of 159,519 words. The list of speakers is shown in Appendix 1, along with their political roles, gender, in office timeframes, number of speeches and word counts. All the speeches are delivered at different kinds of ceremonial occasion, like receptions, anniversaries, annual luncheons, gala dinners and ceremonial openings. Thus, the nature of the corpus is categorized as ceremonial speech.⁵

3.2 Metaphor identification

A bottom-up analysis approach was applied to manually identify metaphor on a word-by-word basis in the entire corpus. Compared with a top-down approach, which presumes a specific type of metaphor source domain or target domain for analysis, the bottom-up method ensures a more comprehensive investigation of metaphor usage patterns. The identification of metaphorical keywords follows the MIPVU approach (Steen et al., 2010). We used the

³ After the handover in 1997, both English and Chinese are the official languages of Hong Kong. Public speeches in Hong Kong have been delivered in both English and Chinese. We particularly look at English speeches in order to draw upon previous work on gendered metaphor analysis (Ahrens, 2009; Koller, 2004a, b) and political metaphor analysis (Charteris-Black, 2005, 2013) on English data.

⁴ For detailed information, refer to <https://www.cso.gov.hk/eng/role/role.htm>, <https://www.fso.gov.hk/eng/role.htm> and <https://www.doj.gov.hk/eng/about/soj.html>

⁵ While the Hong Kong government provides a secretary and information officers to the government officials for public relations purposes, writers of these speeches are not publicly identified. In addition, the public holds the politician responsible for the content and delivery of their speeches and associates those speeches with the politician, and thus, we focus on the gender of the politician giving the speech.

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dictionaries recommended in MIPVU to determine the basic meaning of a word and establish the cross-domain mapping based on the meaning contrast between a more basic meaning and a more abstract meaning.⁶ We also consulted the word senses in Wordnet (Fellbaum, 2005) and SUMO (Niles & Pease, 2001) as complementary resources.⁷

3.3 Variables

The variables included in this study are SOURCE DOMAIN, POLITICAL ROLE, SPEECH SECTION and GENDER. The categories under the variables of GENDER (male or female) and POLITICAL ROLE (CSA, FS or SJ) are straightforward. Below are the discussions of the variables of SOURCE DOMAIN and SPEECH SECTION.

3.3.1 SOURCE DOMAIN

The source domain of a metaphor is typically a more concrete conceptual domain which is used to understand a more abstract target domain (Lakoff & Johnson, 1980/2003), i.e. in “build Hong Kong’s reputation”, the abstract target domain REPUTATION is described with the concrete source domain BUILDING. Although one metaphorical keyword may involve multiple sources, and considering the assumption of log-linear analysis that the category of the variable in each cell should be independent of each other, this study identifies one single source domain per metaphor unit. In other words, each metaphorical keyword reflects the source that is most relevant to the target or “most obviously reflected by the linguistic form” (Tay, 2015, p. 39), thus ensuring the mutual exclusivity of the data units.

⁶ Following MIPVU (Steen et al., 2010), we first checked the “Macmillan Dictionary” (<http://www.macmillandictionary.com/>). The “Longman Dictionary of Contemporary English” (<http://www.ldoceonline.com/>) was used as a second opinion for ambiguous cases and the “Oxford English Dictionary” (<http://www.oed.com/>) for rare cases, e.g. seeking historical usages of some lexical units.

⁷ WordNet (<http://wordnetweb.princeton.edu/perl/webwn>) is a large lexical database of English with words interlinked by means of conceptual-semantic and lexical relations. SUMO (<http://www.adampease.org/OP/>) is the formal ontology that has been mapped to all of the WordNet lexicon.

Based on previous approaches to source domain identification (Ahrens & Zeng, 2017; Chung, Ahrens, & Huang, 2004), we apply a similar method with detailed procedures shown in Table 1.

Table 1. Source domain identification procedures

Step 1	For each metaphorical keyword, we first propose a potential source domain based on: (1) educated, fluent speakers' judgement, and (2) the surrounding context of the keyword, e.g. within one clause or sentence to examine the source domains of other metaphorical keywords, if there are any, or examine the contextual meaning of other words that can determine the contextual meaning of the target metaphorical keyword.
Step 2	Verify the source domain proposed in the first step by checking if the categories and word senses of the keywords provided in WordNet-SUMO and dictionaries relate to the proposed source domain.
Step 3	If no evidence can be found in step 2, we further refer to the collocation searches of the keywords by Sketch Engine (Kilgarriff, Rychlý, Smrž, & Tugwell, 2004) and the online Oxford Collocation Dictionary as a complementary method to WordNet-SUMO method, e.g. to check if there are any frequent collocations of the keywords related to the proposed source domains.

Overall, 5,962 metaphorical instances with 19 different categories of source domain were identified in the corpus (see Table 2).⁸ To obtain manageable categories in the log-linear analysis, this study focuses on the top six frequently applied source domains with a total of 5,164 metaphorical instances. We further labelled these source domains as ‘masculine-oriented’, ‘feminine-oriented’ and ‘neutral’ based on previous literature on the stereotypical notion of gender roles in metaphor (Flannery, 2001, p. 629; Philip, 2009, p. 85).

Table 2. List of the source domains

⁸ We grouped WAR metaphors and SPORT metaphors into the GAME metaphor category based on the semantic links between the three keywords ‘war’, ‘sport’ and ‘game’ in SUMO, e.g. ‘game’ means a single play of a sport or other contest, which is related to one of the SUMO categories of ‘war’ (Contest) and ‘sport’ (Sport).

Source domain	Examples of keywords	Gender type	Frequency	Total
BUILDING	<i>build, construct, foundation</i>	Neutral	1,176	5,164
LIVING ORGANISM	<i>person, plant, nurture</i>	Feminine-oriented	1,093	
JOURNEY	<i>travel, step, progress</i>	Neutral	975	
PHYSICAL OBJECT	<i>push, transparent, rebound</i>	Neutral	940	
GAME	<i>war, sport, competition</i>	Masculine-oriented	624	
BUSINESS	<i>brand, product, promote</i>	Masculine-oriented	356	
Others (13 types)				798
Total			5,962	5,962

We categorized source domains with keywords relating to war, sport and business into ‘masculine-oriented source domains’, as these are stereotypically masculine activities. The source domains with keywords referring to personification, plant and the stereotypical feminine traits such as empathy, caring and nurturance were categorized into ‘feminine-oriented source domains’. Sources that could not be ascertained as either masculine or feminine were labelled as ‘neutral’, e.g. the source domains of BUILDING, JOURNEY and PHYSICAL OBJECT were all labelled as neutral.

3.3.2 SPEECH SECTION

Political speeches can be classified according to their social purpose, audience and context, etc. Three branches of oratory are identified in classical rhetoric: deliberative, forensic and epideictic (Charteris-Black, 2013, p. 7). As the contexts of the speeches in this study are various ceremonial events, our corpus is classified as epideictic speech (which we refer to as ceremonial speech). Based on the speech type, we slightly adjusted the approach of “The Arrangement of a Speech” in Charteris-Black (2013, p. 22) into “The Arrangement of

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 Ceremonial Speeches” (see Table 3). The original speech section arrangement did not fully match as a reference for the segmentation of ceremonial speech sections because it includes the refutation section which may never appear in ceremonial speech and the rhetorical purposes proposed are more aligned with argumentative speech. “The Arrangement of Ceremonial Speech” and the definitions of each section were taken as criteria for the coding of speech section.

Table 3. The arrangement of ceremonial speeches

Sections	Rhetorical purpose
Prologue	Introduces the topic to the audience; establishes a relationship between the speaker and audience to make the audience well disposed towards the speaker, attentive and receptive.
Narrative	Sets out the main theme by outlining central points or key information that the proof follows
Proof	Presents facts, reasons or evidence in favour of the speaker’s points
Epilogue	Summarizes the main points in the previous parts so that the audience is left with a favourable disposition towards the speaker, and arouses appeal to the audience’s emotions.

3.4 Inter-coder reliability

The identification of metaphor, source domain and speech section were completed by two analysts with postgraduate linguistics degrees, who were experienced in metaphor identification and discourse analysis. The analysts received pre-coding training to familiarize themselves with the corpus and identification procedures. They worked independently to identify the metaphors, and then discussed and resolved ambiguous cases. Following Wimmer

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and Dominick (2013, p. 175), we calculated the inter-coder reliability in a subset of 10% of the data.⁹

Twelve speeches were randomly selected for analysis. Results show reliability is “substantial” (Cohen’s kappa = .786, qualification from Landis & Koch, 1977) for coding different speech sections. In terms of the source domain coding, we randomly selected 600 metaphorical instances (about 10% of the total metaphorical instances) for the reliability test. We obtained “almost perfect” for the source domains of BUILDING (Cohen’s kappa = .861), LIVING ORGANISM (Cohen’s kappa = .840), and GAME (Cohen’s kappa = .829), “substantial” for the coding of JOURNEY (Cohen’s kappa = .735) and BUSINESS (Cohen’s kappa = .725), but only “moderate” for PHYSICAL OBJECT (Cohen’s kappa = .476). The two coders thus discussed and resolved the problematic cases and conducted a second round of reliability tests on an additional 600 metaphorical instances for PHYSICAL OBJECT.¹⁰ The final reliability result is “substantial” for the coding of PHYSICAL OBJECT (Cohen’s kappa = .768).

4. Results and discussion

The four-way contingency table generated from the log-linear analysis is presented in Appendix 2, showing the cross-classified frequencies of all 5,164 units under the four variables. The hierarchical log-linear analysis operates a backward elimination process shown in Table 4, starting at step 0 by tentatively deleting the four-way association among all four variables and assessing the fit of the data with the remaining effects. The final best model includes four three-way associations as highlighted in the red square in Table 4. The likelihood ratio shows the

⁹ See all the data and analyses on the Open Science Framework at https://osf.io/a43k6/?view_only=330bd49baf0c45c7955b5e9f3c4f6dd0.

¹⁰ The high disagreement for PHYSICAL OBJECT was caused by the relatively vague and general definitions of ‘physical object’ in the dictionaries and SUMO. We solved this issue by giving more specific criteria, e.g. keywords related to the physical object of ‘building’ were categorized under the BUILDING source domain.

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 final fit of the model is $\chi^2(30) = 39.726$, $p = 0.110$, indicating that this model provides an adequate fit with the data. The non-significant $p = 0.110$ means that the model is not significantly different than the observed frequencies (i.e. a good fit).¹¹

Table 4. Step summary of backward elimination

(SD= Source domain, Section = Speech section, Role=Political role)

Step			Effects	Chi-Square χ^2	df	Sig.
0	Generating Class		SD*Section*Gender*Role	0	0	.
	Deleted Effect	1	SD*Section*Gender*Role	39.726	30	0.11
1	Generating Class		SD*Gender*Role,	39.726	30	0.11
			SD*Gender*Role,			
			SD*Section*Role,			
			Gender*Role*Section			
	Deleted Effect	1	SD*Gender*Role	83.218	10	0
2		SD*Gender*Section	37.625	15	0.001	
3		SD*Section*Role	53.902	30	0.005	
4		Gender*Role*Section	63.272	6	0	
2	Generating Class		SD*Gender*Role, SD*Gender*Section, SD*Section*Role, Gender*Role*Section	39.726	30	0.11
Likelihood ratio for final model: $\chi^2(30) = 39.726$, $p = .110$						

¹¹ The nature of log-linear modelling is fitting models to the observed frequencies. Models that have no resemblance to the observed frequencies are deleted. The log-linear analysis compares and chooses the most parsimonious model that fits the data. Due to space constraints, for detailed introduction of the log-linear process, see Tay (2017), Field (2013) and Gilbert (1993).

Overall, the result supports the idea that the use of source domains is associated with speakers' gender, political roles and speech sections. The final model includes effects of higher order interactions which can be analyzed from any of several perspectives, e.g. any of the two-way or three-way interactions among the four variables. In order to narrow the interpretations of the interaction patterns, it is crucial to locate the focus variables which are those “of major theoretical interest”, and contingency variables that “elaborate the interaction pattern in which the focus variables are involved” (Tay, 2017, p. 56).

Since the current study concentrates on gendered influence in metaphor use, we select SOURCE DOMAIN and GENDER as the focus variables and SPEECH SECTION and POLITICAL ROLE as the contingency variables. We first test the SOURCE-GENDER association and second see the interactions of SOURCE-GENDER associations across different speech sections and different political roles. Accordingly, the following three levels of effects are tested by chi-square tests (Gilbert, 1993), and the results are discussed:

- (1) SOURCE DOMAIN * GENDER
- (2) SOURCE DOMAIN * GENDER * SPEECH SECTION
- (3) SOURCE DOMAIN * GENDER * POLITICAL ROLE

4.1 SOURCE DOMAIN * GENDER

The first effect we tested is the overall SOURCE-GENDER association. Table 5 is the cross-tabulation with cell counts, expected counts, adjusted residuals, chi-square results and Cramer's V coefficients.¹² Variations on the source domain usages are indicated in the values of the significant adjusted residuals which are highlighted in yellow (residual > 2) and green

¹² Adjusted residual is the standardized residual divided by the standard deviation of all residuals. It reflects the degree of deviation of the observed frequencies from the expected frequencies and thus the significance in each cell. Unlike the standardized residual, the adjusted residual takes into account the overall size of the sample to ensure a fairer indication of the significance of the differences between the observed count and the expected count.

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 (residual < -2).¹³ The results show that the SOURCE-GENDER association is significant ($p < 0.05$).

The significant residuals indicate that male politicians used more feminine-oriented sources (LIVING ORGANISM) and fewer masculine-oriented sources (GAME) than expected by chance. Female politicians instead used more masculine-oriented sources (GAME) but fewer feminine-oriented sources (LIVING ORGANISM) than expected by chance.

Table 5. Cross-tabulation of SOURCE DOMAIN and GENDER

GENDER		SOURCE DOMAIN						Total	Statistics
		BUILDING	LIVING ORGANISM	JOURNEY	PHYSICAL OBJECT	GAME	BUSINESS		
Male	Count	834	801	703	631	382	248	3599	$\chi^2(5) = 34.340,$ $p = 0.000$ Cramer's $V = 0.082$
	Exp. Count	819.6	761.8	679.5	655.1	434.9	248.1	3599	
	Adj. Residual	1.0	2.9	1.8	-1.9	-4.9	0.0		
Female	Count	342	292	272	309	242	108	1565	
	Exp. Count	356.4	331.2	295.5	284.9	189.1	107.9	1565	
	Adj. Residual	-1.0	-2.9	-1.8	1.9	4.9	0.0		
Total	Count	1176	1093	975	940	624	356	5164	
	Exp. Count	1176	1093	975	940	624	356	5164	

These patterns show disparities between male and female politicians' preferences in metaphor use. The shifts resonate with findings in previous studies, that politicians conform to more masculine or feminine styles of communication in order to strategically position themselves in the political arena (Ahrens, 2009; Jones, 2016).

4.2 SOURCE DOMAIN * GENDER * SPEECH SECTION

¹³ A significant association is one where the observed frequencies deviate far from the expected frequencies. In a normal distribution, 95% of the values are within the mean plus/minus 2 standard deviations. If the value of the adjusted residual is more than +2 or less than -2, the probability of observing this value by chance will be less than 5%, thus the residual is significant.

We continue to examine the effect of SOURCE-GENDER across the level of SPEECH SECTION as shown in the cross-tabulation in Table 6. Overall, the SOURCE-GENDER association is significant ($p < 0.05$) in the narrative, proof and epilogue sections but not significant in the prologue section ($p > 0.05$). Results of the effect size indicate that the SOURCE-GENDER association is stronger in the prologue (Cramer's $V=0.157$), narrative (Cramer's $V=0.157$) and epilogue (Cramer's $V=0.156$) than in the proof section (Cramer's $V=0.089$).

Table 6. Cross-tabulation of SOURCE DOMAIN and GENDER across SPEECH SECTION

SPEECH SECTION	GENDER		SOURCE DOMAIN						Statistics
			BUILDING	LIVING ORGANISM	JOURNEY	PHYSICAL OBJECT	GAME	BUSINESS	
Prologue	Male	Count	39	59	49	52	19	25	$\chi^2(5) = 9.291,$ $p = 0.098$
		Exp. Count	44.1	63.5	49.2	50.5	16.8	18.8	
		Adj. Residual	-1.4	-1.1	-0.1	0.4	0.9	2.5	
	Female	Count	29	39	27	26	7	4	Cramer's $V = 0.157$
		Exp. Count	23.9	34.5	26.8	27.5	9.2	10.2	
		Adj. Residual	1.4	1.1	0.1	-0.4	-0.9	-2.5	
Narrative	Male	Count	115	138	122	119	61	36	$\chi^2(5) = 21.174,$ $p = 0.001$
		Exp. Count	108.9	123.3	119.2	120.5	78.8	40.4	
		Adj. Residual	1.2	2.7	0.5	-0.3	-3.8	-1.3	
	Female	Count	44	42	52	57	54	23	Cramer's $V = 0.157$
		Exp. Count	50.1	56.7	54.8	55.5	36.2	18.6	
		Adj. Residual	-1.2	-2.7	-0.5	0.3	3.8	1.3	
Proof	Male	Count	588	507	468	417	269	165	$\chi^2(5) = 27.331,$ $p = 0.000$
		Exp. Count	581	487.4	436.8	441	302.5	165.3	
		Adj. Residual	0.6	1.8	3.0	-2.3	-3.8	0.0	
	Female	Count	238	186	153	210	161	70	Cramer's $V = 0.089$
		Exp. Count	245	205.6	184.2	186	127.5	69.7	
		Adj. Residual	-0.6	-1.8	-3.0	2.3	3.8	0.0	

Epilogue	Male	Count	92	97	64	43	33	22	$\chi^2(5) = 12.051,$ $p = 0.034$
		Exp. Count	87.4	86.7	73.9	41.9	37.7	23.4	
		Adj. Residual	1.1	2.4	-2.4	0.3	-1.5	-0.6	
	Female	Count	31	25	40	16	20	11	Cramer's $V = 0.156$
		Exp. Count	35.6	35.3	30.1	17.1	15.3	9.6	
		Adj. Residual	-1.1	-2.4	2.4	-0.3	1.5	0.6	

We compare the significant differences in the use of metaphor source domains indicated by the significant adjusted residuals and illustrate the underlying rhetorical strategies by referring to the main rhetorical purposes of each speech section (see the rhetorical purposes introduction of the four speech sections in Table 3).

SOURCE DOMAIN and GENDER across the SPEECH SECTION of PROLOGUE

In the prologue, the significant residuals highlighted in Table 6 show that the masculine-oriented source domain of BUSINESS was used more frequently in male speeches while less frequently in female speeches than expected by chance. As the beginning section, the prologue mainly aims to create rapport and arouse interest from the audience (Charteris-Black, 2013, p. 22). Politicians want to create a positive view of themselves by showing their specific identities, characteristics or duties to the public. Our corpus reflects that both male and female politicians adopted self-presentation strategies to highlight their identities in the prologue: male politicians applied a more masculine style of metaphorical language, as in examples (1) and (2), while female politicians tended to avoid using masculine-oriented metaphors.

- (1) What we need most now is a bit more of that good old get-up-and-go chutzpah that has been our **trademark** so long. (Male, Donald Tsang, CSA, May 17, 2002)
- (2) I am often reminded that Hong Kong is an easy place to '**sell**', or **promote** to people overseas. (Male, Henry Tang, CSA, February 21, 2008)

In examples (1) and (2) from the prologue, male politicians use the source domain of BUSINESS to conceptualize Hong Kong as a commercial product that takes the spirit of *get-up-and-go chutzpah* as its *trademark* and can be *sold* or *promoted*. The BUSINESS source domain is labelled as typically masculine, since business is historically considered as a male activity (Koller, 2004a). The frequent use of BUSINESS metaphors constructs a communication style that highlights the masculine traits of the speakers, e.g. efficiency, decisiveness and toughness. As presenting the experience of leadership in a metaphorically masculine way makes the leadership more effective (Baxter, 2010), male politicians are able to self-present as leaders with strong leadership by the frequent use of BUSINESS metaphors. The construction of a self-image with more effective leadership in the prologue is vital for the speakers to achieve successful communication with the public.

SOURCE DOMAIN and GENDER across the SPEECH SECTION of NARRATIVE

The rhetorical purposes of the narrative are to set out the main theme of the speech, where politicians outline their key points. In the narrative section, we found that Hong Kong politicians switched their communication style: male politicians used more feminine-oriented source domains (LIVING ORGANISM) and fewer masculine-oriented source domains (GAME) than expected; female politicians changed to a more masculine style of communication by using more GAME source domains and fewer source domains of LIVING ORGANISM than expected. The results show that the potential rhetorical strategies differed between Hong Kong male and female politicians: male politicians downplayed masculinity to show the feminine traits of elaborating points which appears to be more explicit and perceivable, while female politicians tended to enhance masculinity to show strength, power and assertiveness when

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addressing central points. Examples (3) and (4) illustrate female politicians applying the masculine source of GAME in the narrative.

- (3) The Hong Kong Civil Service enjoys a well-deserved but hard earned reputation
Our high standard of probity and **performance** are acknowledged to be among the key advantages that have secured Hong Kong’s very high **position** in the **global league** of the best places to live and to invest and work. (Female, Anson Chan, CSA, May 21, 1998)
- (4) But we live in unchain and unusual times and Hong Kong has found itself thrust into the epicentre of a financial and currency crisis, the likes of which the region has not witnessed in its **post-war march** to the **front line** of world economies. (Female, Anson Chan, CSA, January 16, 1998)

In our corpus, GAME metaphors include the sub-metaphors of WAR and SPORT which are two typical masculine-oriented sources, since war and sport are “quintessentially masculine activities and an essential test of manhood” (Wilson, 1992, p. 892). In example (3), Hong Kong’s civil service is conceptualized as a SPORT in which Hong Kong has advantageous *performance* and a *high position* in the *global league*. In example (4), the female politician talks about the world financial crisis as a WAR in which Hong Kong has a *post-war march* to *the front line* in order to maintain economic stability. The frequent use of SPORT and WAR metaphors is taken as a masculinization device that functions to “masculinize both the discourse and the related social practices” (Koller, 2004a, p. 5). In the narrative, female politicians spoke in a more masculine way to emphasize their strength and assertiveness as a strategy to reinforce the soundness of their statements and present enhanced leadership before turning to the proof which is the main section of a speech.

SOURCE DOMAIN and GENDER across the SPEECH SECTION of PROOF

In the proof section of a speech, politicians mainly issue policies or present facts to support their political points. Table 6 shows that female politicians continued with a masculine communication style by applying more GAME metaphors than expected. However, male politicians changed to a more neutral way of communication by using more neutral sources (JOURNEY) than expected. Male and female politicians adopted different strategies in the proof; men used a strategy to enhance the objectiveness and persuasiveness of their statements and women continued with a masculine style to reinforce the powerfulness of their statements. Examples (5) and (6) illustrate male politicians using the neutral source JOURNEY in the proof.

- (5) We have to **catch up fast** on mediation in Hong Kong. Many in the legal profession are still sceptical. However, both the Judiciary and the Government are **taking steps** to promote mediation. (Male, Wong Yan-lung, SJ, June 7, 2006)
- (6) As you can see, the Asian financial turmoil has given us a body blow, but it has not stopped us in our **tracks**. Rather, it has provided us with an opportunity to look at where we are **going**. To consolidate. To build on our strengths. To diversify into new **directions**. And to fight back and assume leadership in our chosen **path**. (Male, Donald Tsang, FS, April 19, 1999)

The conceptualisation of the JOURNEY metaphor refers to the Source-Path-Goal schema (Lakoff, 1993) which includes elements such as starting points, path, progress, guides, companions, ending points, etc. Example (5) talks about Hong Kong's mediation development as a JOURNEY where Hong Kong has to *catch up fast* and is *taking steps* to promote mediation. In example (6), Hong Kong economic development is conceptualized as a JOURNEY where

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Hong Kong is *going* on its own *tracks* and will diversify into a new *direction* on people's chosen *path*.

JOURNEY metaphors have been commonly used in political discourse as they can create the emotions of solidarity and good-will (Charteris-Black, 2005). They present the speakers as 'guides' and the policies as a 'map' for the public, who are conceptualized as the speakers' 'companions'. JOURNEY metaphors also provide positive evaluations for speakers, as they emphasize the positive aspects of 'going forward' and 'progress'. In the proof section, politicians aim to attain support for their political views or policies. The frequent use of JOURNEY metaphor may appeal to senses of solidarity from the audience which contributes to building up public support in an effective way.

SOURCE DOMAIN and GENDER across the SPEECH SECTION of EPILOGUE

Interestingly, in the epilogue, male politicians shifted their metaphor use by invoking more feminine-oriented sources (LIVING ORGANISM) while female politicians changed to a more neutral way of communication by using more JOURNEY metaphors than expected. Referring to the rhetorical purposes of the epilogue, male politicians adopted a more feminine communication style to get closer to the audience while generating an appeal to emotions. For female politicians, the use of JOURNEY metaphors presents positive personal images and appeals to emotions of solidarity, as in examples (7) and (8).

- (7) We will continue to play a full and enthusiastic role in the gradual development and **liberalisation** of Mainland China's financial markets. This is **ingrained** in our city's financial **DNA** and endorsed by the Central Government's 12th Five-Year Plan. (Male, John Tsang, FS, May 11, 2011)

- (8) The common law legal system of Hong Kong remains firmly **in place**; the rule of law is **vigorously defended** by the Government; the Judiciary is **strong** and **independent**; and fundamental human rights are fully **protected**. (Male, Wong Yan-lung, SJ, November 18, 2005)

In the data the metaphors of LIVING ORGANISM include both PERSON metaphors and PLANT metaphors. Examples (7) and (8) relate to the use of PERSON metaphors in the epilogue (the use of PLANT metaphors will be exemplified in examples 9 and 10). Personification assigns human qualities to inanimate concepts or objects so that they can be understood in a better way, as it is frequently much easier for people to relate to things that possess human attributes. Example (7) talks about Mainland China's financial markets as a person who is *liberalized* and Hong Kong's finance as a person who has *DNA ingrained* with Hong Kong's participation in Mainland China's economic development. Example (8) personifies Hong Kong's common law legal system as a person who is *in place*, the rule of law as a being *vigorously defended* person, the judiciary as a *strong* and *independent* person, and the human rights as a person being *fully protected*.

PERSON metaphors were frequently employed by male politicians to potentially make the target issues more personable. It presents the speaker as caring, patient and amicable. In addition, personifications also bring positive evaluations to the target issues, e.g. the compliments to the financial markets in Mainland China and Hong Kong in example (7) and the Hong Kong legal system in example (8). This form of flattery may create rapport between the speakers and the target audience. The strategy is especially useful in the final section of a speech where the main rhetorical purposes are appealing to emotions and expecting the audience to applaud.

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As discussed above, results of the effects on SOURCE*GENDER across levels of SPEECH SECTION show a shifting use of a more masculine style or a more feminine style of metaphors by male and female politicians in the four sections of their speeches. In the prologue section, both male and female politicians adopted self-presentation strategies to highlight personal identities, with males using more masculine metaphors while females used less masculine metaphors. In the narrative section, however, they both switched their communication styles. Males used more feminine metaphors to address political points explicitly, and females adopted more masculine metaphors to present their political points with more force. In the proof section, females continued with masculine metaphors while males switched to more neutral metaphors. They applied different rhetorical strategies, with males aiming to enhance their objectiveness and persuasiveness and females reinforcing their power and assertiveness. When turning to the epilogue, males shifted to a more feminine style to get closer to the audience, while females turned to a more neutral style to attain positive evaluations and appeal to emotions of solidarity from the audience.

4.3 SOURCE DOMAIN * GENDER * POLITICAL ROLE

The third chi-square test tested the effect of the SOURCE-GENDER associations across the level of POLITICAL ROLE. As there have been no female politicians in the role of FS, the test will only reveal the comparisons between male and female politicians in the roles of CSA and SJ.¹⁴ Table 7 shows that overall, SOURCE-GENDER associations are significant in the CSA speeches ($p < 0.05$) and SJ speeches ($p < 0.05$), both with the same effect size (Cramer's $V=0.181$), indicating a similar degree of metaphor variations.

Table 7. Cross-tabulation of SOURCE DOMAIN and GENDER across the level of POLITICAL ROLE

ROLE	GENDER	SOURCE DOMAIN	

¹⁴ The issue of sampling zero where no instance happened to be found in the data occurs in this study. It was solved by adding small values (0.5) to zero cells in the log-linear analysis.

			BUILDING	LIVING ORGANISM	JOURNEY	PHYSICAL OBJECT	GAME	BUSINESS	Statistics
CSA	Male	Count	150	331	202	238	115	69	$\chi^2(5) = 9.291,$ $p = 0.000$ Cramer's $V = 0.181$
		Exp. Count	204.6	272.1	200.2	228.4	127.8	71.9	
		Adj. Residual	-6.3	6.2	0.2	1.1	-1.8	-0.5	
	Female	Count	220	161	160	175	116	61	
		Exp. Count	165.4	219.9	161.8	184.6	103.2	58.1	
		Adj. Residual	6.3	-6.2	-0.2	-1.1	1.8	0.5	
FS	Male	Count	424	322	300	276	160	98	
		Exp. Count	424	322	300	276	160	98	
		Adj. Residual	
SJ	Male	Count	260	148	201	117	107	81	$\chi^2(5) = 52.218,$ $p = 0.000$ Cramer's $V = 0.181$
		Exp. Count	220.1	160.8	180.4	144.6	134.3	73.8	
		Adj. Residual	4.7	-1.7	2.6	-3.8	-3.9	1.3	
	Female	Count	122	131	112	134	126	47	
		Exp. Count	161.9	118.2	132.6	106.4	98.7	54.2	
		Adj. Residual	-4.7	1.7	-2.6	3.8	3.9	-1.3	

We present the significant variations on male and female politicians' source domain preferences and explain the underlying rhetorical strategies by considering the nature of different political roles.

SOURCE DOMAIN and GENDER across the POLITICAL ROLE of CSA

The Chief Secretary for Administration of Hong Kong is the head of the Hong Kong Government Secretariat who oversees the administration of Hong Kong SAR (Special Administrative Region of the People's Republic of China) to which all other ministers belong. They are responsible for assisting the Chief Executive in the coordination of policy formulation and implementation directly related to Hong Kong citizens' ordinary lives, e.g. education, environment, food and health, home affairs, transport, housing and the civil service. It is

possible that because the role of the CSA is closely linked with people's common lives, male and female CSAs tend to adopt a language style that is more familiar to the citizens. The results in Table 7 show that in male CSA speeches, the feminine-oriented source of LIVING ORGANISM was used more frequently than expected, and in female CSA speeches, the neutral source of BUILDING was used more frequently than expected.

In other words, by using more metaphors of LIVING ORGANISM, male CSAs presented themselves with more feminine traits of patience and addressed the societal issues more understandable to the audience; female CSAs spoke in a more neutral way by using BUILDING metaphors to construct positive self-images, which creates a sense of closeness and calls for cooperation from the audience. We present examples (9) and (10) as illustrative of male CSAs' language use.

(9) A well-educated, hard-working, flexible and enterprising workforce has always been one of our greatest strengths.... But we can only hope to... boost the living standards of our people, if we can **nurture** our **home-grown** talent as well as attract the best and the brightest from around the globe. (Male, Donald Tsang, CSA, September 29, 2003)

(10) So with President Coolidge's words, as well as an economics history lesson in mind, today we are working towards sustainable development to ensure that our labour market **thrives** so that industry can continue to **flourish**.... (Male, Henry Tang, CSA, February 21, 2008)

In example (9), the male CSA talks about the talent in Hong Kong as a *home-grown* PLANT that should be *nurtured*. The PLANT metaphor brings about the concept of 'nurturing talents' equivalent to 'cultivating a plant'. It endows the speaker with the female stereotypes of 'motherhood', 'sympathy' and 'intimacy'. Example (10) conceptualizes Hong Kong labour

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market and industry as plants that can *thrive* and *flourish*. The PLANT metaphors make it easier for the audience to comprehend the abstract LABOUR MARKET in terms of a well-understood LIVING PLANT. Male CSAs frequently used the feminine-oriented sources as a strategy to bring about intimacy and closeness with Hong Kong citizens.

SOURCE DOMAIN and GENDER across the POLITICAL ROLE of SJ

By comparison, the Secretary for Justice is the principal legal adviser to the Hong Kong Chief Executive, the Hong Kong government and the individual government departments and agencies. They have been appointed to the Executive Council with legal duties relating to the conduct of criminal proceedings and the defendant in all civil actions brought against the Hong Kong government. Overall, the language style in SJ speeches is more formalized as the nature of the SJ role mainly relates to legal issues, such as law articles, policies, judiciaries, etc.

Table 7 shows that both male and female SJs spoke in a more neutral way by frequently using the neutral sources (BUILDING and JOURNEY sources for male SJs, and PHYSICAL OBJECT for female SJs). The more neutral style of communication helps to create the objectiveness and soundness of SJ's statements, and it is crucial for the construction of effective political leadership. The BUILDING and JOURNEY metaphors also possess the positive connotations of 'building' or 'progressing toward' the long-term social goals for Hong Kong. In addition, female SJs also unexpectedly used the more masculine-oriented source of GAME to enhance masculinity for attaining power. Examples (11) – (12) are illustrative of female SJs' masculine style of metaphor use.

- (11) We must **fight** to **defend** the rights guaranteed to the Hong Kong SAR by the Basic Law. (Female. SJ, Elsie Leung, January 11, 1999)

(12) The Chinese Constitution now emphasizes that the PRC exercises the rule of

law, **protects** citizens' lawful private property, and shall respect and **safeguard**

human rights. (Female, Elsie Leung, November 9, 2004)

In example (11), the female SJ uses WAR metaphors to address the concept of *fighting* and *defending* the rights in the Basic Law of Hong Kong SAR. Example (12) conceptualizes the PROTECTION OF HUMAN RIGHTS as A WAR in which Hong Kong citizens' human rights should be *protected* and *safeguarded*. The WAR metaphors create a WAR scenario (Musolff, 2016) in which the legal issues are escalated as military operations. The language thus sounds more similar to language heard in the military. We found that female SJs used this rhetorical strategy to increase the strength and assertiveness of their language.

In addition, in the WAR scenario, the Hong Kong citizens are conceptualized as soldiers. Female SJs delivered the ideology that it is necessary for citizens to possess a sense of dedication, loyalty and even the willingness to sacrifice for the good of their country. The speakers successfully appealed to the emotions of patriotism, loyalty and commitment from the audience, so as to urge them to fight for the protection of Hong Kong's legal systems. The frequent use of WAR metaphors strengthens the effectiveness of female SJs' political leadership. The results also support previous findings that women politicians adopt the strategy of gendered adaptiveness when competing for power in male-dominated settings (Dodson, 2006; Karpowitz & Mendelberg, 2014).

To sum up, the results of the effects on SOURCE*GENDER across levels of POLITICAL ROLE show how metaphor use varied between male and female politicians in different political roles. In CSA speeches, male CSAs were more likely to address issues with feminine metaphors that convey senses of familiarity, closeness and care, while female CSAs showed preferences for neutral metaphor use, to create positive self-images and appeal to cooperation from the

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audience. In SJ speeches, both male and female SJs spoke in a more neutral way which helps to create objectiveness and soundness. Female SJs also used a more masculine-oriented source of GAME to gain power, strength and authority through their rhetoric.

5. Conclusion

This study provides a quantitative-oriented analysis combined with textual analysis as a mixed-methods approach to metaphor in political discourse. We examined the effects of multiple factors on metaphor use in a corpus of Hong Kong political speeches with a focus on patterns of gendered influence. Specifically, we tested the associations between a metaphor's source domain and gender, and their variability across four speech sections and three political roles. Hong Kong male politicians and female politicians were found to show disparities as to when they conform to more masculine or feminine communication styles. Male politicians used more metaphors associated with feminine traits than expected by chance while female politicians used more metaphors associated with masculine traits than expected by chance. They also had distinct preferences for metaphor use across different speech sections and different political roles.

First, regarding gendered metaphor use in the four speech sections, we found that in the prologue, both male and female politicians were more likely to adopt self-presentation strategies for identity construction, with males using more masculine metaphors and females using less masculine metaphors than expected. In the narrative, they switched metaphor styles with males using more feminine metaphors for elaborating points more explicitly and females using more masculine metaphors to enhance strength, power and leadership. In the proof, females continued with more masculine metaphors use, while males changed to use more neutral metaphors, aiming to create objectiveness and persuasiveness. In the epilogue, males

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shifted to a more feminine style to get closer to the audience, while females used more neutral metaphors as they called for solidarity.

Second, regarding gendered metaphor use in the three political roles, we found that in CSA speeches, male CSAs were more likely to use feminine metaphors for creating rapport, while female CSAs used more neutral metaphors for positive self-presentation. In FS speeches, there was no gendered difference because of the sampling zero issue. In SJ speeches, both male and female SJs used more neutral metaphors than expected, increasing the sense of objectiveness and soundness of their statements. Female SJs also used more masculine metaphors for enhancing strength and leadership.

These results align with previous literature proposing that politicians reinforce or play down the masculinity or femininity in their language use to compete for power in the political arena and achieve effective communication with the public (Ahrens, 2009; Dodson, 2006; Gertzog, 1995; Jones, 2016; Karpowitz & Mendelberg, 2014). This study thus enriches existing gendered metaphor studies with a multifactorial analysis that provides a more comprehensive investigation of gendered influence. The focus of the Hong Kong political context also enriches studies in the Asian context and finds source domain variations that reflect those found in Western politics (e.g. Charteris-Black, 2009; Tenorio, 2009).

The present study does not test audience reaction by measuring the effects of metaphors on shaping political opinions (Thibodeau & Boroditsky, 2011, 2013; Steen, Reijnders, & Burgers, 2014). However, the log-linear approach offers a promising direction for future work on the quantitative analysis of combined effects among cross-disciplinary variables. In addition, the approach to source domain identification is replicable and aids rigour in metaphor studies. Future work can expand this study to a more systematic investigation on metaphor styles in political communication, such as to examine other factors or expand the data to a broader category of political speeches by including deliberative and forensic speeches.

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References

- Adams, K. L. (2009). Conceptual metaphors of family in political debates in the USA. In K. Ahrens (Ed.), *Politics, gender, and conceptual metaphors* (pp. 184-206). Basingstoke and New York: Palgrave-MacMillan.
- Ahrens, K. (Ed.). (2009). *Politics, gender and conceptual metaphors*. Basingstoke and New York: Palgrave-MacMillan.
- Ahrens, K. (2019). First Lady, Secretary of State and Presidential Candidate: A comparative study of the role-dependant use of metaphor in politics. In P. Julien, M. Reuchamps, & P. Thibodeau (Eds.), *Variation in political metaphor* (pp. 13–34). Amsterdam: John Benjamins.
- Ahrens, K., & Lee, S. (2009). Gender versus politics: When conceptual models collide in the U.S. Senate. In K. Ahrens (Ed.), *Politics, gender, and conceptual metaphor* (pp. 62-82). Basingstoke and New York: Palgrave-MacMillan.

- Zeng, H., Tay, D., & Ahrens, K. (2020). A multifactorial analysis of metaphors in political discourse. *Metaphor and the Social World*, 10(1), 141–168. <https://doi.org/10.1075/msw.19016.zen>
Pre-published version provided to meet funding guidelines. Refer to published version for final version.
- Ahrens, K., & Zeng, H. (2017). Conceptualizing EDUCATION in Hong Kong and China. In R. E. Roxas. (Ed.), *Proceedings of the 31st Pacific Asia Conference on Language, Information and Computation (PACLIC 31)* (pp. 303–311). Cebu, Philippines: University of the Philippines. Retrieved from <http://www.aclweb.org/anthology/Y17-1041>.
- Atkeson, L. R. (2003). Not all cues are created equal: The conditional impact of female candidates on political engagement. *The Journal of Politics*, 65(4), 1040–1061.
- Baxter, J. (2010). *The language of female leadership*. Basingstoke: Palgrave Macmillan.
- Burgers, C., & Ahrens, K. (In press). Change in metaphorical framing over time: Metaphors of TRADE in 225 years of State of the Union addresses (1790–2014). *Applied Linguistics*.
- Cameron, D. (2006/2012). *On language and sexual politics*. New York and London: Routledge.
- Charteris-Black, J. (2005). *Politicians and rhetoric: The persuasive power of metaphor*. Basingstoke and New York: Palgrave-MacMillan.
- Charteris-Black, J. (2006). Britain as a container: Immigration metaphors in the 2005 election campaign. *Discourse & Society*, 17(5), 563–581.
- Charteris-Black, J. (2009). Metaphor and gender in British parliamentary debates. In K. Ahrens (Ed.), *Politics, gender and conceptual metaphors* (pp. 139–165). Basingstoke and New York: Palgrave-MacMillan.
- Charteris-Black, J. (2013). *Analysing political speeches: Rhetoric, discourse and metaphor*. Basingstoke and New York: Palgrave Macmillan.
- Chung, S. F., Ahrens, K., & Huang, C. R. (2004). Using WordNet and SUMO to determine source domains of conceptual metaphors. In D. H. Ji, L. K. Teng, & H. Wang (Eds.), *Recent Advancement in Chinese Lexical Semantics: Proceedings of 5th Chinese Lexical Semantics Workshop (CLSW-5)* (pp. 91–98). Singapore: COLIPS. Retrieved from http://cwn.ling.sinica.edu.tw/churen/CLSW_Chung_final1.pdf.

- Zeng, H., Tay, D., & Ahrens, K. (2020). A multifactorial analysis of metaphors in political discourse. *Metaphor and the Social World*, 10(1), 141–168. <https://doi.org/10.1075/msw.19016.zen>
Pre-published version provided to meet funding guidelines. Refer to published version for final version.
- Coates, J. (1987). *Women, men and language: A sociolinguistic account of sex differences in language*. New York: Longman.
- Dodson, D. L. (2006). *The impact of women in congress*. Oxford: Oxford University Press.
- Fellbaum, C. (2005). WordNet and wordnets. In K. Brown (Ed.), *Encyclopedia of language and linguistics* (2nd ed.) (pp. 665–670). Oxford: Elsevier.
- Flannery, M. C. (2001). Quilting: A feminist metaphor for scientific inquiry. *Qualitative Inquiry*, 7(5), 628–645.
- Field, A. (2013). *Discovering statistics using SPSS* (4th ed.). London: Sage.
- Gertzog, I. N. (1995). *Congressional women: Their recruitment, integration, and behaviour* (2nd ed.). New York: Praeger.
- Gilbert, N. (1993). *Analyzing tabular data: Loglinear and logistic models for social researchers*. London: UCL Press.
- Holmes, J. (1995). *Women, men and politeness*. London and New York: Longman.
- Holmes, J., & Meyerhoff, M. (Eds.). (2003). *The handbook of language and gender* (Vol. 25). Oxford: Blackwell.
- Jespersen, O. (1922). *Language, its nature, origin and development*. London: George Allen & Unwin.
- Jones, J. J. (2016). Talk “Like a Man”: The linguistic styles of Hillary Clinton, 1992–2013. *Perspectives on Politics*, 14(3), 625–642.
- Karpowitz, C. F., & Mendelberg, T. (2014). *The silent sex: Gender, deliberation, and institutions*. Princeton, NJ: Princeton University Press.
- Koller, V. (2004a). Businesswomen and war metaphors: ‘possessive, jealous and pugnacious’? *Journal of Sociolinguistics*, 8(1), 3–22.
- Koller, V. (2004b). *Metaphor and gender in business media discourse: A critical cognitive study*. Basingstoke and New York: Palgrave Macmillan.

- Zeng, H., Tay, D., & Ahrens, K. (2020). A multifactorial analysis of metaphors in political discourse. *Metaphor and the Social World*, 10(1), 141–168. <https://doi.org/10.1075/msw.19016.zen>
Pre-published version provided to meet funding guidelines. Refer to published version for final version.
- Lakoff, G. (1993). The contemporary theory of metaphor. In A. Ortony (Ed.), *Metaphor and thought* (2nd ed.) (pp. 202–250). Cambridge, UK: Cambridge University Press.
- Lakoff, G. (1996/2002). *Moral politics: How liberals and conservatives think*. Chicago, IL: University of Chicago Press.
- Lakoff, G., & Johnson, M. (1980/2003). *Metaphors we live by*. Chicago, IL: University of Chicago Press.
- Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometric*, 33(1), 159–174.
- Lim, E. T. (2009). Gendered metaphors of women in power: The case of Hillary Clinton as madonna, unruly woman, bitch and witch. In K. Ahrens (Ed.), *Politics, gender and conceptual metaphors* (pp. 254–269). Basingstoke and New York: Palgrave-MacMillan.
- Musolff, A. (2004). *Metaphor and political discourse: Analogical reasoning in debates about Europe*. Basingstoke and New York: Palgrave Macmillan.
- Musolff, A. (2016). *Political metaphor analysis: Discourse and scenarios*. New York: Bloomsbury Publishing.
- Niles, I., & Pease, A. (2001). Towards a standard upper ontology. In C. Welty, & B. Smith (Eds.), *Proceedings of the 2nd International Conference on Formal Ontology in Information Systems (FOIS-2001)* (pp. 2–9). New York: ACM.
- Philip, G. (2009). Non una donna in politica, ma una donna politica: Women's political language in an Italian context. In K. Ahrens (Ed.), *Politics, gender and conceptual metaphors* (pp. 83–111). Basingstoke and New York: Palgrave-MacMillan.
- Semino, E., & Koller, V. (2009). Metaphor, politics and gender: A case study from Italy. In K. Ahrens (Ed.), *Politics, gender and conceptual metaphors* (pp. 36–61). Basingstoke and New York: Palgrave-MacMillan.

- Zeng, H., Tay, D., & Ahrens, K. (2020). A multifactorial analysis of metaphors in political discourse. *Metaphor and the Social World*, 10(1), 141–168. <https://doi.org/10.1075/msw.19016.zen>
Pre-published version provided to meet funding guidelines. Refer to published version for final version.
- Steen, G. J., Reijniere, W. G., & Burgers, C. (2014). When do natural language metaphors influence reasoning? A follow-up study to Thibodeau and Boroditsky (2013). *PLoS ONE*, 9(12), e113536.
- Steen, G. J., Dorst, A. G., Herrmann, J. B., Kaal, A. A., Krennmayr, T., & Pasma, T. (2010). *A method for linguistic metaphor identification: From MIP to MIPVU*. Amsterdam: John Benjamins.
- Stefanowitsch, A., & Goschler, J. (2009). Sex differences in the usage of spatial metaphors: A case study of political language. In K. Ahrens (Ed.), *Politics, gender and conceptual metaphors* (pp. 166-183). Basingstoke and New York: Palgrave-MacMillan.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. New York: Allyn & Bacon/Pearson Education.
- Talbot, M. (2003). Gender stereotypes: Reproduction and challenge. In J. Holmes & M. Meyerhoff (Eds.), *The handbook of language and gender* (pp. 468–486). Oxford: Blackwell.
- Tay, D. (2015). Metaphor in case study articles on Chinese university counseling service websites. *Chinese Language and Discourse*, 6(1), 28–56.
- Tay, D. (2017). Quantitative metaphor usage patterns in Chinese psychotherapy talk. *Communication & Medicine*, 14(1), 51–68.
- Tenorio, E. H. (2009). The metaphorical construction of Ireland. In K. Ahrens (Ed.), *Politics, gender and conceptual metaphors* (pp. 112–136). Basingstoke and New York: Palgrave MacMillan.
- Thibodeau, P. H., & Boroditsky, L. (2011). Metaphors we think with: The role of metaphor in reasoning. *PLoS ONE*, 6(2), e16782.
- Thibodeau, P. H., & Boroditsky, L. (2013). Natural language metaphors covertly influence reasoning. *PLoS ONE*, 8(1), e52961.

- Zeng, H., Tay, D., & Ahrens, K. (2020). A multifactorial analysis of metaphors in political discourse. *Metaphor and the Social World*, 10(1), 141–168. <https://doi.org/10.1075/msw.19016.zen>
Pre-published version provided to meet funding guidelines. Refer to published version for final version.
- Van Dijk, T. A. (1997). What is political discourse analysis? In J. Blommaert & C. Bulcaen (Eds.), *Political linguistics* (pp. 11–52). Amsterdam: John Benjamins.
- Van Dijk, T. A. (2002). Political discourse and political cognition. In P. Chilton & C. Schäffner (Eds.), *Politics as text and talk: Analytic approaches to political discourse* (pp. 203–237). Amsterdam: John Benjamins.
- Velasco-Sacristán, M. S. (2005). A critical cognitive-pragmatic approach to advertising gender metaphors. *Intercultural Pragmatics*, 2(3), 219–252.
- Wilson, F. (1992). Language, technology, gender, and power. *Human Relations*, 45(9), 883–904.
- Wimmer, R. D., & Dominick, J. R. (2013). *Mass media research: An introduction* (10th ed.). Belmont, CA: Wadsworth Cengage Learning.
- Yang, J. (2013). The politics of huanghua: Gender, metaphors, and privatization in China. *Language & Communication*, 33(1), 61–68.

Appendix 1. Corpus of Hong Kong political speeches

Political role	Speaker	Gender	In office time frame	No. of the speeches involved (No. of all speeches)	Word count
Chief Secretary for Administration (CSA)	Anson Chan Fang On-sang	Female	1997.07.01-2001.04.30	16 (163)	54,498
	Donald Tsang Yam-kuen	Male	2001.05.01-2005.05.31	10 (96)	
	Henry Tang Ying-yen	Male	2007.07.01-2011.09.30	9 (93)	
	Carrie Lam Cheng Yuet-ngor	Female	2012.07.01-2017.01.16	14 (144)	
	CSA Total			49 (496)	
Financial Secretary (FS)	Donald Tsang Yam-kuen	Male	1997.07.01-2001.04.30	16 (162)	50,685
	Antony Leung Kam-chung	Male	2001.05.01-2003.07.16	7 (66)	
	Henry Tang Ying-yen	Male	2003.07.17-2007.06.30	10 (95)	
	John Tsang Chun-wah	Male	2007.07.01-2017.01.16	10 (104)	
	FS Total			43 (427)	
Secretary for Justice (SJ)	Elsie Leung Oi-sie	Female	1997.07.01-2005.10.19	10 (89)	54,336
	Wong Yan-lung	Male	2005.10.20-2012.06.30	7 (72)	
	Rimsky Yuen Kwok-keung	Male	2012.07.01-2018.01.06	16 (164)	
	SJ Total			33 (325)	

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In Total	125 (1,248)	159,519
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Appendix 2. Four-way contingency table (The expected frequencies in brackets are presented beside the observed frequencies in parentheses.)

Final accepted

POLITICAL ROLE	SPEECH SECTION	GENDER	SOURCE DOMAIN					
			BUILDING	LIVING ORGANISM	JOURNEY	OBJECT	GAME	BUSINESS
Chief Secretary for Administration (CSA)	Prologue	M	6 (9.1)	41 (41.7)	17 (18.1)	33 (29.9)	8 (9.0)	16 (13.3)
		F	22 (18.9)	28 (27.3)	15 (13.9)	13 (16.1)	5 (4.0)	0 (2.7)
	Narrative	M	32 (27.6)	67 (68.1)	42 (45.2)	44 (44.7)	19 (19.0)	13 (12.5)
		F	22 (26.4)	18 (16.9)	26 (22.8)	26 (25.3)	21 (21.0)	9 (9.5)
	Proof	M	85 (88.2)	186 (182.0)	121 (119.2)	150 (150.7)	76 (73.4)	31 (35.5)
		F	158 (154.8)	99 (103.0)	96 (97.8)	126 (125.3)	76 (78.6)	47 (42.5)
	Epilogue	M	27 (25.2)	37 (39.3)	22 (19.5)	11 (12.8)	12 (13.6)	9 (7.7)
		F	18 (19.8)	16 (13.7)	23 (25.5)	10 (8.2)	14 (12.4)	5 (6.3)
Financial Secretary (FS)	Prologue	M	25 (25.0)	14 (14.0)	22 (22.0)	18 (18.0)	8 (8.0)	8 (8.0)
		F	0 (0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Narrative	M	67 (67)	50 (50.0)	44 (44.0)	61 (61.0)	33 (33.0)	12 (12.0)
		F	0 (0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Proof	M	299 (299)	214 (214.0)	203 (203.0)	173 (173.0)	105 (105.0)	72 (72.0)
		F	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Epilogue	M	33 (33.0)	44 (44.0)	31 (31.0)	24 (24.0)	14 (14.0)	6 (6.0)
		F	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Secretary for Justice (SJ)	Prologue	M	8 (5.0)	4 (3.3)	10 (8.9)	1 (4.1)	3 (2.0)	1 (3.7)
		F	7 (10.0)	11 (11.7)	12 (13.1)	13 (10.0)	2 (3.0)	4 (1.3)
	Narrative	M	16 (20.4)	21 (19.9)	36 (32.8)	14 (13.3)	9 (9.1)	11 (11.5)
		F	22 (17.6)	24 (25.1)	26 (29.2)	31 (31.7)	33 (32.9)	14 (13.5)
	Proof	M	204 (200.8)	107 (111.0)	144 (145.8)	94 (93.3)	88 (90.5)	62 (57.5)
		F	80 (83.2)	87 (83.0)	57 (55.2)	84 (84.7)	85 (82.5)	23 (27.5)
	Epilogue	M	32 (33.8)	16 (13.7)	11 (13.5)	8 (6.2)	7 (5.4)	7 (8.3)
		F	13 (11.2)	9 (11.3)	17 (14.5)	6 (7.8)	6 (7.6)	6 (4.7)

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Final accepted