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**METAPHORICAL FRAMING IN PUBLIC DISCOURSE IN
POST-COLONIAL HONG KONG**

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PhD

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The Hong Kong Polytechnic University

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**Metaphorical Framing in Public Discourse in
Post-Colonial Hong Kong**

Zeng Huiheng

**A thesis submitted in partial fulfilment of the requirements for the degree
of Doctor of Philosophy**

September 2020

CERTIFICATE OF ORIGINALITY

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Abstract

Metaphor has been widely exploited by politicians to frame various issues in public discourse. This thesis undertakes a discourse-based analysis of metaphorical framing in a corpus of public speeches by Hong Kong political leaders in post-colonial Hong Kong (1997-2017). The thesis includes five studies which are divided into three major parts. The first part investigates the overall distribution patterns of metaphors across multiple linguistic and social factors (Study 1). The second part is concerned with the improvement of approaches to corpus-based metaphorical framing analysis (Studies 2 & 3). Study 2 examines the role of Mapping Principles between metaphor source-target domain pairings in corpus-based metaphorical framing analysis and Study 3 explores the potential of Time Series Analysis of discourse method to metaphor analysis in public discourse over time. The third part of the thesis draws upon the approaches proposed in the second part to examine the diachronic changes in metaphorical framing of specific societal issues in post-colonial Hong Kong (Studies 4 & 5). Study 4 focuses on changes in FREE ECONOMY metaphorical frames over time and Study 5 investigates changes in ELECTION metaphorical frames over time.

These five studies contribute to the development of corpus-based metaphorical framing research from methodological, theoretical, and empirical perspectives. First, the establishment of an operational approach for analysing metaphorical framing based on source-target Mapping Principles provides a principled way to analyze the framing functions of metaphors in corpora. This approach links cognitive level (source-target mapping) and discourse-level (corpus evidence) analyses of metaphor with communication-level (framing function) aspects of metaphorical framing, contributing to the development of the three-dimensional model of metaphor (metaphor in thought, language, and communication) by presenting empirical support for metaphor analysis at the communicative dimension. Second, the presentation of

two novel quantitative methods for metaphor analysis (a multifactorial analysis of metaphors in discourse and Time Series Analysis of metaphors across time) emphasizes the significance of a mixed-method approach combining both quantitative and qualitative analyses to corpus-based metaphorical framing studies. Lastly, the diachronic analysis of the fundamental and incremental changes in metaphorical frames over time presents a comprehensive picture of the diachronic changes in metaphorical framing of specific societal issues in post-colonial Hong Kong (i.e., FREE ECONOMY and ELECTION) and its underlying ideological implications.

Overall, this thesis enriches the current corpus-based metaphorical framing research. It shows the patterns of metaphorical frame use in a distinct context of Hong Kong public discourse and provides insight from an Outer Circle English context during the early post-colonial period in Hong Kong.

Publications arising from the thesis

Journal articles

Chapter 2

Zeng, H., Tay, D., & Ahrens, K. (2020). A multifactorial analysis of metaphors in political discourse: Gendered influence in Hong Kong political speeches. *Metaphor and the Social World*, 10(1), 139-166. <https://doi.org/10.1075/msw.19016.zen>

Chapter 5

Zeng, H., Burgers, C., & Ahrens, K. (2021). Framing metaphor use over time: ‘Free Economy’ metaphors in Hong Kong political discourse (1997-2017). *Lingua*, 252, 102955. <https://doi.org/10.1016/j.lingua.2020.102955>

Conference presentations

Chapter 2

Zeng, H., Tay, D., & Ahrens K. (2018). A mixed-method analysis of metaphors in public discourse: gendered influence in Hong Kong political speeches. Presented at the 12th conference of the Association for Researching and Applying Metaphor (RaAM 12). The Hong Kong Polytechnic University, Hong Kong, 27-30 June 2018.

Chapter 3

Zeng, H., & Ahrens, K. (2018). Metaphorical framing in post-colonial Hong Kong political speeches (1997-2017): The role of Mapping Principles in corpus-based metaphor analysis. Presented at the 17th Conference on the Processing of East Asian Languages and the 9th Conference on Language, Discourse, and Cognition (ICPEAL 17-CLDC 9). National Taiwan University, Taiwan, 19-21 October 2018.

Zeng, H., & Ahrens, K. (2021). Corpus-based metaphorical framing analysis: WAR metaphors in Hong Kong public discourse. To be presented at the 22th Chinese Lexical Semantic Workshop (CLSW 2021). Nanjing Normal University, China, 15-16 May 2021.

Chapter 4

Zeng, H., Tay, D., & Ahrens, K. (2019). Applying Time Series Analysis to study metaphors across time: The case of public speeches by principal officials of Hong Kong SAR (1997-2017). Presented at RaAM Seminar 2019 – Metaphor studies at the intersection of multiple disciplines. University of Liège, Belgium, 16-17 May 2019.

Chapter 5

Zeng, H., & Ahrens, K. (2019). Metaphorical framing of ‘Free Economy’: The liberalization of economy in Hong Kong (1997-2017). Presented at Metaphor Festival 2019, University of Amsterdam, Netherlands, 28-31 August 2019.

Chapter 6

Zeng, H., & Ahrens, K. (submitted). Metaphorical framing of ELECTION over time: The road to universal suffrage in Hong Kong (1997-2017). To be presented at The 17th International Conference for Language and Social Psychology, The Hong Kong Polytechnic University, Hong Kong, 9-12 December 2020 (postponed to 2022).

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List of Abbreviations

| | |
|------------------|--|
| ACF | Autocorrelation function |
| ARIMA | Autoregressive integrated moving average |
| CDA | Critical Discourse Analysis |
| CE | Chief Executive of Hong Kong |
| CEPA | The Mainland and Hong Kong Closer Economic Partnership Arrangement |
| CMA | Critical Metaphor Analysis |
| CMM | Conceptual Mapping Model |
| CMT | Conceptual Metaphor Theory |
| CPG | Central People's Government of People's Republic of China |
| CSA | Chief Secretary for Administration of Hong Kong |
| EC | The Election Committee |
| FC | Functional constituency |
| FS | Financial Secretary of Hong Kong |
| GC | Geographical constituency |
| GDP | Gross domestic product |
| GPRD | The Greater Pearl River Delta |
| HKSAR | Hong Kong Special Administrative Region of the People's Republic of China |
| IVS | The Individual Visit Scheme |
| LegCo | The Legislative Council of Hong Kong |
| MA | Moving average |
| MIPVU | Metaphor Identification Procedures VU University Amsterdam |
| MP | Mapping Principle |
| NPCSC | The Standing Committee of the National People's Congress of the People's Republic of China |
| PACF | Partial autocorrelation function |
| PRC | People's Republic of China |
| REA | Response-elicitation approach |
| RQ | Research question |
| SARS | The Severe Acute Respiratory Syndrome |
| SD | Source domain |
| SJ | Secretary for Justice of Hong Kong |
| SOU _s | US State of the Union addresses |
| SUMO | Suggested Upper Merge Ontology |
| TD | Target domain |
| TSA | Time Series Analysis |
| WTO | World Trade Organization |

Chapter 1

Introduction

1.1 Metaphorical framing in public discourse

Words are defined relative to frames and conceptual metaphors. Language ‘fits reality’ to the extent that it fits our body-and-brain-based understanding of that reality. Since we all have similar bodies and brains and live in the same world, it will appear in many cases that language just fits reality directly. But when our understandings of reality differ, what language means to us may differ as well, often radically. In politics that happens so often we have to pay close attention to the use of language. (Lakoff, 2008, p. 15)

What is metaphorical framing? From a communication-science perspective, framing is typically defined as a process of communication that essentially involves the selection and salience of specific aspects in a communication text, so as to define a particular problem, provide causal interpretation, moral evaluation, and problem solutions (Entman, 1993). In discourse, framing is considered as a cognitive strategy for positioning oneself by activating the frames which are supportive of the rhetorician’s arguments through various linguistic means. From a cognitive-linguistics perspective, Conceptual Metaphor Theory (Lakoff, 1993; Lakoff & Johnson, 1980/2003) defines metaphors as cross-domain mappings in the conceptual system, where more abstract target domains (e.g., ELECTION) were understood in terms of more concrete source domains (e.g., JOURNEY).¹ The selection of source domain highlights specific aspects of the target domain and, at the same time, downplays other aspects. This function makes metaphor an important linguistic means for framing in communication and cognition

¹ Following the tradition in metaphor literature, the words related to metaphor source and target domains are in small caps.

(Burgers, Konijn, & Steen, 2016; Cameron, Low, & Maslen, 2010; Lakoff, 1996/2002, 2004/2014, 2008; Ritchie, 2013; Semino, 2008; Semino, Demjén, & Demmen, 2018). Metaphorical framing thus refers to the use of metaphorical language “to reflect and facilitate particular understandings and evaluations of topics or situations” (Semino et al., 2018, p. 636). For instance, in example (1) below, extracted from a public speech by the Financial Secretary of Hong Kong in 2000, the economic issue of ‘maintaining Hong Kong’s reputation as the world’s free economy’ was metaphorically described in terms of a ‘battle’:

(1) We have had a tough *battle* during the past couple of years to maintain Hong Kong's reputation as the world's **freest economy**. (Donald Tsang, Financial Secretary, 14 June 2000)²

The MAINTAINING A FREE ECONOMY IS A BATTLE metaphor in example (1) involved mappings of elements from the source domain of BATTLE to the target domain of MAINTAINING A FREE ECONOMY. The BATTLE frame was realized via emphasizing the elements such as ‘fight’, ‘violence’, ‘soldiers’, ‘leaders’, ‘competitiveness’, ‘strategy’, ‘solidarity’, and ‘sacrifice’ in the BATTLE source domain to conceptualize the target domain of MAINTAINING A FREE ECONOMY. In the BATTLE frame, Hong Kong was fighting with other countries for the position of world’s freest economy. The aspects of competitiveness, violence, and sacrifice were the cause of a ‘tough battle’, which implies the government has spent great efforts in maintaining Hong Kong’s reputation as the world’s freest economy and thus provides positive evaluations for the government. The BATTLE frame also suggests potential solutions to win the tough battle of maintaining free economy: appealing for solidarity from Hong Kong people who were

² Words related to the target domains were shown in bold and metaphorical keywords were italicised and underlined in all the examples.

conceptualized as soldiers, to follow the economic strategies or policies proposed by the government, who was the leader in the battle for Hong Kong being the world's freest economy.

Metaphors are therefore “overarching frames which inform and influence discourse” (Cameron et al., 2010, p. 138), functioning as important rhetorical devices deployed by politicians for reasoning and persuasion in public discourse. In this thesis, I aim to investigate politicians' use of metaphors in the framing of different societal issues in a corpus of public speeches focusing on the context of post-colonial Hong Kong (1997-2017). My first research question is:

RQ1: What metaphorical frames have been used, and how were they distributed in public speeches in post-colonial Hong Kong (1997-2017)?

Next, in view of the lack of studies on developing approaches to metaphorical framing analysis, another part of this thesis focuses on the establishment of an operational approach to corpus-based metaphorical framing analysis. The approach developed in this thesis will enrich the existing few approaches to metaphor and framing in discourse (e.g., Semino et al., 2018). Therefore, my second research question is:

RQ2: What improvements can be made to the current approaches to corpus-based metaphorical framing analysis?

Furthermore, variations in metaphorical frames can often be found in diachronic data. For instance, one same societal issue can be framed in terms of different metaphors in different periods. As illustrated in examples (2)-(3), the ELECTION issue was described in terms of a JOURNEY frame in a public speech from 1997 (see example 2) and a BUILDING frame in a public

speech from 2015 (see example 3):

(2) We have already drawn up a framework and *timetable* for those **elections** in May next year. I am confident they will be free, fair, open and governed by rules that are transparent. But I see them first and foremost as a *stepping stone* that will set Hong Kong firmly *on the road to* the **universal suffrage** that is envisaged in the Basic Law. (Anson Chan, Chief Secretary for Administration, 15 September 1997)

(3) Any constitutional development, including development towards **universal suffrage**, has to *be built on* the relevant legal and constitutional *basis*...All these would not be possible unless the rule of law is well and alive. Constitutional development or **universal suffrage** without the rule of law is no different to *a house without foundation*. (Rimsky Yuen, Secretary for Justice, 12 January 2015)

Examples (2) conceptualized UNIVERSAL SUFFRAGE in terms of A JOURNEY as evidenced in the linguistic expressions of ‘timetable’, ‘stepping stone’, and ‘on the road to’. The elements under the JOURNEY frame implied a scenario in which the Hong Kong government was the guide who set out timetables and led Hong Kong people who were the travelers on the road to the destination of universal suffrage. The government’s policies (e.g., the Basic Law) were stepping stones that facilitated Hong Kong people arriving at the destination. In example (3), UNIVERSAL SUFFRAGE was understood in terms of A BUILDING as evidenced in ‘be built on’, ‘basis’, and ‘a house without foundation’. The BUILDING frame defined UNIVERSAL SUFFRAGE as a house that should be built on the rule of law, which was conceptualized as the foundation and basis of the house.

Although both JOURNEY and BUILDING frames are goal-oriented with the positive

connotations of stepping toward or building up long-term social goals, and thus provide positive evaluations for the politicians (Charteris-Black, 2005/2011), different aspects of UNIVERSAL SUFFRAGE were highlighted when using the two frames in the above two examples. Under the JOURNEY frame in example (2) from 1997, the measures (i.e., ‘timetable’, ‘stepping stone’) and path (i.e., ‘road’) for achieving UNIVERSAL SUFFRAGE were emphasized, while under the BUILDING frame in example (3) from 2015, the elements of UNIVERSAL SUFFRAGE (i.e., ‘basis’, ‘foundation’) and the action for achieving UNIVERSAL SUFFRAGE (i.e., ‘be built on’) were emphasized by the speakers. The use of different metaphorical frames here led to different ways of reasoning about the same target issue, reflecting in the variations of the metaphorical framing functions, e.g., the Hong Kong government shifted the focus on ‘the measures for achieving universal suffrage’ in 1997 to ‘building the basis and foundation of universal suffrage’ in 2015. The changes in the metaphorical frame patterns here show the changes in the political agenda of achieving universal suffrage in Hong Kong.

The above discussion is based on the comparisons between two examples. A closer inspection of the corpus and a more systematic examination of the associations between time and metaphorical frames is needed for providing a comprehensive picture of the changes in metaphorical framing over time and the underlying ideological implications. The rest of this thesis, therefore, is devoted to a diachronic analysis of metaphorical frames of different societal issues in the corpus of Hong Kong public speeches spanning the past two decades from 1 July 1997 to 31 December 2017. The third research question is:

RQ3: To what extent does metaphorical framing of specific societal issues undergo change in public speeches in post-colonial Hong Kong (1997-2017)?

This thesis centres on the above three research questions concerning: 1) the overall

usage patterns of metaphorical frames in the corpus, 2) the improvements to the current approaches to corpus-based metaphorical framing analysis, and 3) the diachronic changes in the metaphorical framing of specific issues in the corpus. In the following section, I point out four key issues in the current metaphorical framing research as the main research gaps and outline the corresponding four main research objectives of this thesis.

1.2 Gaps in the current metaphorical framing research

To date, metaphor has been widely studied in contexts such as politics (Ahrens, 2009; Lakoff, 1996/2002), media (Koller, 2004), literature (Semino & Steen, 2008), psychotherapy (Tay, 2013; Tay, Huang, & Zeng, 2019), and advertising (Feng, 2011; Forceville, 1996; Zeng, 2019). Within political framing research, the effectiveness of metaphorical framing has been analyzed by two main approaches. One is the critical discourse analysis (CDA) approach, which focuses on how metaphorical frames from real-life contexts affect the social relation and structure in society (Charteris-Black, 2004a, 2005/2011, 2006, 2013; Lakoff, 1996/2002; Musolff, 2004, 2016). Previous discourse-based studies have acknowledged that metaphorical framing effects occur in societal issues as diverse as the EU politics (Musolff, 2004, 2006), Brexit (Musolf, 2017), Euro trading (Charteris-Black & Musolff, 2003), immigration (Charteris-Black, 2006; Quinsaas, 2014), housing (Nelson & Oxley, 1999), health care (Semino et al., 2018; Schlesinger & Lau, 2000), climate, taxation and religion (Lakoff, 1996/2002), etc. The other approach is the response-elicitation approach (REA), which examines people's responses to certain types of metaphors in a controlled environment, e.g., experiments (Reijnierse, Burgers, Krennmayr, & Steen, 2015; Steen, Reijnierse, & Burgers, 2014; Thibodeau, 2016; Thibodeau & Boroditsky, 2011, 2013, 2015), focus groups (Landau, Sullivan, & Greenberg, 2009) or interviews (Lau & Schlesinger, 2005; Schlesinger & Lau, 2000). The REA studies (Casasanto, 2010; Gibbs & Steen, 1999) support the idea that the effects of metaphorical frames "can only be detected by

testing falsifiable hypotheses using measuring methods that go beyond the systematic analysis of language patterns, in a (semi) controlled environment” (Boeynaems, Burgers, Konijn, & Steen, 2017, p. 120).

This thesis takes a corpus-based discourse-analytical approach to metaphorical framing. Sections 1.2.1-1.2.4 briefly talk about four key issues in the current literature of corpus-based discourse analysis of metaphorical framing. A more detailed discussion of these issues can be seen in Chapters 2-6, which are written in the form of five independent articles. Four research objectives of this thesis are also presented accordingly in Sections 1.2.1-1.2.4.

1.2.1 Issue related to multiple factors on metaphor use in public discourse

Metaphor researchers have noticed that many factors may influence metaphor use in public discourse. For instance, the linguistic factors of language (Fukuda, 2009; López & Liopis, 2010; Negro, 2016) and discourse genre (Semino, Deignan, & Littlemore, 2013; Skorczynska & Ahrens, 2015; Skorczynska & Deignan, 2006), or the social factors of culture (Ahrens & Zeng, in press; Charteris-Black, 2004b; Deignan, 2003; Gibbs, 1999; Jing-Schmidt & Peng, 2017; Kövecses, 2005), speakers’ gender (Ahrens, 2009), political role (Ahrens, 2019), political experience (Charteris-Black, 2009), and political party and goal (Semino & Koller, 2009).

However, almost all the current studies have focused on a two-way interaction between metaphor and one single factor of interest (e.g., metaphor variations across gender). One possible reason is that discourse-based metaphor research primarily takes a qualitatively oriented approach to discuss the variations of metaphors across factors. Qualitative methods can elaborate on how one factor influences metaphor use, while it is hard to detect multiple-way effects on metaphor use by qualitative analysis alone. This would lead to the question of whether and how other factors may also influence metaphor use in those two-way interaction analyses, as conducted in previous studies. In other words, if we found metaphor variations in

discourse in different languages, this might be caused by language difference, or different gender of the speakers, different genres of discourse, or the combined effects of language, gender, and genre. Analysis including more factors will enhance the validity and comprehension of metaphor research. A closer inspection of the potential combined effects of multiple factors on metaphor use in discourse is thus necessary.

The study in Chapter 2 of this thesis aims to fill this gap by providing a quantitatively oriented approach to exploring to what extent the potential combined effects among the multiple factors of GENDER, POLITICAL ROLE, and SPEECH SECTION may influence metaphor use in public discourse. The first research objective of this thesis is:

Objective 1: To present the overall distribution patterns of the frequently used metaphors in the corpus through a multivariate analysis (i.e., log-linear analysis) of the interaction between metaphor source domains and multiple linguistic and social factors.

1.2.2 Need for an operational method for corpus-based metaphorical framing analysis

Previous studies on metaphor and framing have emphasized the effects of metaphorical framing in public discourse (Boeynaems et al., 2017; Brugman, Burgers, & Vis, 2019; Brugman, Burgers, & Steen, 2017) and how metaphors are deployed in public discourse for particular framing purposes (Burgers & Ahrens, 2020; Burgers, Jong Tjien Fa, & de Graaf, 2019; Lakoff, 2004/2014; López & Llopis, 2010; Zeng, Burgers, & Ahrens, 2021). Yet, few studies have been devoted to developing a practical approach for corpus-based metaphorical framing analysis. Although Semino et al. (2018) presented an integrated approach to analysing metaphorical framing function in discourse from cognitive, discourse-based, and practice-based dimensions, no practical methods for identifying specific metaphorical frames in corpora

have been provided. Thus, the issue of how to generate metaphorical frames from corpora is still underexplored.

The study in Chapter 3 proposes a practical approach for analyzing corpus-based metaphorical framing in a principled way. As mentioned in Section 1.1, the essential part of framing in communication is selection and salience (Entman, 1993, p. 53), it is plausible to hypothesize that patterns of the salient lexical items and source-target domain pairings of metaphors may reflect the selection and salient process of metaphorical framing, leading to the generation of specific frame categories in discourse. Drawing upon the Conceptual Mapping Model theory (Ahrens, 2010), which holds the same argument that patterns of lexical usage in real-life discourse can reflect cognitive models which evaluate implicit ideologies, the present study argues that by examining the prominent linguistic mappings in a particular source-target domain pairing and evaluating the underlying reason for the salience of this conceptual mapping (i.e., Mapping Principles), we can generate specific metaphorical frames and explain their functions in the discourse. Chapter 3 verifies this hypothesis with a case study of metaphorical framing analysis based on patterns of Mapping Principles between metaphor source-target domain pairings in the corpus of Hong Kong public speeches. The second research objective of this thesis is:

Objective 2: To offer an operational approach for generating metaphorical framing functions in corpora by exploring the role of Mapping Principles in corpus-based metaphorical framing analysis.

1.2.3 Issue related to the autocorrelation function among temporal data in diachronic metaphor analysis

Time is also a potential factor among the many factors that influences metaphor use in discourse (Tay, 2017, 2019). As metaphors have been used to frame societal issues, analysing diachronic changes in metaphorical frames in discourse is an effective way to reflect social changes over time (Burgers, 2016). The existing diachronic studies have examined changes in metaphors to uncover when particular metaphorical frames may exert different functions in diachronic data (Ahrens, 2011; Ahrens, Jiang, & Zeng, in press; Ahrens & Zeng, 2017; Burgers & Ahrens, 2020; De Landtsheer, 2015; Jing-Schmidt, 2016; López & Llopis, 2010; Lu & Ahrens, 2008; Nerghes, Hellsten, & Groenewegen, 2015). The quantitative method for testing the association between time and metaphor in previous diachronic studies have mainly focused on the independent observations among the temporal data, e.g., based on the bivariate Pearson correlation coefficients to see the significance of differences in metaphor use.

While metaphor and time may auto-correlated, which means metaphor use in past time intervals may influence its use in future time intervals (Tay, 2017, 2019), the aspect of autocorrelation is seldom discussed in diachronic metaphor studies. Autocorrelation refers to “the correlation between values within the same series, separated by a given time interval” (Tay, 2019, p. 26). When dealing with time series data, the conventional correlation tests, which assume the independence of the data, would overlook the possibility of the autocorrelation functions and the interdependence among temporally ordered observations (Koplenig, 2017; Tay, 2019). In recent studies, Tay (2017, 2019) proposed a novel method to address this limitation by applying a Time Series Analysis (TSA) method in discourse studies. TSA is the analysis of a series of observations made across time using statistical techniques. It assumes the presence of autocorrelation among the observations across time and extracts components and internal structure (autocorrelation) of the series with its modelling and

forecasting features (Box, Jenkins, Reinsel, & Ljung, 2015). The case studies in Tay (2017, 2019) showed the potential of the TSA method in discourse analysis, which offers complementary structural insights into the qualitative interpretations of how a discourse feature changes across time.

The study in Chapter 4 applies the TSA method to metaphor analysis to see how metaphor usage patterns are systematically structured in public discourse over time. It addresses the limitations of the conventional correlation tests by checking if autocorrelation exists among the consecutive temporal data. The third research objective of this thesis is:

Objective 3: To address the limitations of the current statistic method for diachronic analysis of metaphorical frames in discourse by exploring the potential of Time Series Analysis of metaphor use in public discourse over time.

1.2.4 Lack of metaphorical framing studies in Non-Western context

Up to now, metaphorical framing studies have primarily focused on Western contexts (e.g., Lakoff, 1996/2002, 2004/2014). Findings of a meta-analysis show that no less than 65% of recent experimental studies on metaphorical framing in political discourse were conducted in the United States, and the rest were mostly in European countries (Brugman et al., 2019). In other words, English contexts and European language contexts have been intensively investigated in terms of metaphorical frame use. It is thus not surprising to see most of the diachronic studies of metaphorical frames have also been conducted in English contexts (e.g., Ahrens, 2011; Burger, & Ahrens, 2020; Musolff, 2017; Nerghes et al., 2015; Ohl et al., 2013), or European language contexts (e.g., Arrese & Vara-Miguel, 2016; De Landtsheer, 2015; López & Llopis, 2010; Negro, 2016; Romano & Porto, 2018).

As the current findings of diachronic patterns of metaphorical frame use are mainly obtained from a solely Western-cultural context, it is not clear whether diachronic use of specific metaphorical frames is universal or culture-dependent. Empirical research using data from other cultures can bring different perspectives to enhance the awareness of the role of culture in metaphor-theory building (Boers, 2003; Deignan, 2003; Gibbs, 1999; Kövecses, 2005).

This thesis focuses on a corpus of English public speeches in post-colonial Hong Kong, a unique social-cultural context combining both traditional Chinese culture with aspects of Western culture brought in during its time as the British colony. Based on the sociolinguistic view of ‘World Englishes’, English can be categorized into three circles: the Inner Circle, the Outer Circle, and the Expanding Circle (Evans, 2010; Jenkins, 2009; Kachru, 1985, 1992). The Inner Circle English refers to the English used in the countries using English as the mother tongue, such as US, UK, Australia, Canada, and New Zealand. The Outer Circle English refers to the English used as an official language in countries that have gone through colonization periods, e.g., Hong Kong, Singapore, and India. The Expanding Circle English refers to the English used in countries such as China, Japan, and Korea, where English is a foreign language and mainly applied on international occasions.

Given that the Inner Circle English has been largely emphasized among the previous Western studies on metaphorical frames, this thesis particularly looks at the Outer Circle English context by focusing on the English public speeches in post-colonial Hong Kong. Analysing English data provides a better ground for comparison with previous studies on English language data as it excludes the possibility of language as a factor influencing metaphor use. The findings will enrich our understanding of the distinctive hybrid cultural context that is found in Hong Kong and extend our understanding of the difference in metaphor beyond a solely Western-cultural context. The two diachronic studies in Chapter 5 and Chapter

6 examine the changes in the metaphorical framing of the two societal issues of FREE ECONOMY and ELECTION in the corpus covering two decades from 1997 to 2017. The fourth research objective of this thesis is:

Objective 4: To examine patterns of diachronic changes in the metaphorical framing of specific societal issues in a distinct context of Hong Kong public discourse, and provide insight from a unique Outer Circle English context during a post-colonial period in Hong Kong.

1.3 Background of post-colonial Hong Kong

Metaphorical framing analysis in public discourse primarily focuses on the connection between metaphor, speaker, and society. The social context of the metaphors is crucial as it serves as the background knowledge for interpreting the underlying reasons of the speakers' metaphor choices. This section presents an overview of the post-colonial Hong Kong context. Section 1.3.1 introduces the political-economic situations of Hong Kong during the first two decades of the post-colonial era. Section 1.3.2 presents the structure of the current Hong Kong government; Section 1.3.3 introduces the principal officials and the role of the Secretaries of Departments in Hong Kong.

1.3.1 Post-colonial Hong Kong revolution: political reform and economic integration

The past two decades have witnessed an enormous change in the political-economic environment of Hong Kong. Politically, the sign of the Sino-British Joint Declaration in 1984 sets out the agreement that on 1 July 1997, the sovereignty over Hong Kong, a British colony for over 150 years, would pass to the People's Republic of China (PRC). According to the Basic Law, the mini-constitution, Hong Kong became a special administrative region of China

(HKSAR) under the “One Country, Two Systems” policy, which granted Hong Kong with a high degree of autonomy for 50 years starting from 1 July 1997. For instance, Hong Kong is allowed to maintain the capitalistic economy and the common-law system of justice inherited from the colonial era.

Despite enjoying a high degree of autonomy, Hong Kong has been undergoing political instability caused by the interplay between the Central People’s Government of PRC (CPG) and the pro-democracy political parties in Hong Kong. Conflicts over issues such as universal suffrage, human rights, freedom of press, and freedom of speech regularly arise between the two mainstream political camps in Hong Kong, namely, the pro-democratic camp and the pro-establishment/pro-China camp (Ma, 2012; Wong, 2015). Scholars both in political science (Lam, Liu, & Wong, 2012; Poon, 2008; Scott, 2010) and linguistics (Bhatia, 2016; Chan & Yap, 2015; Feng & Wu, 2015; Flowerdew, 2002, 2004, 2016; Flowerdew & Jones, 2016; Flowerdew & Leong, 2007) observed that the pro-democratic camp has continuously been trying to speed up the realization of democratization with universal suffrage indicated by the Basic Law, while the pro-China camp has been conforming to the overarching guidance of China to Hong Kong. The protests calling for universal suffrage for Hong Kong elections have never ceased since the 1997 handover, e.g., the annual 1 July protests to coincide with the 1 July handover anniversary, the 2014 Occupy Central Movement (Umbrella Revolution) for ‘genuine universal suffrage’, and the ongoing 2019-2020 protests proposing ‘five demands’, one of which refers to ‘double universal suffrage for the election of the Chief Executive and the Legislative Council.’³

³ The 2019-2020 Hong Kong protests were triggered by the protests over an extradition bill which would allow criminals in Hong Kong extradited to China and subjected to the legal system in China. The five demands proposed by the protesters are: 1) a complete withdrawal of the extradition bill from the legislative process, 2) retraction of the ‘riot’ label for protests, 3) release and exoneration of arrested protesters, 4) establishment of an independent commission of inquiry into police conduct and use of force during the protest, and 5) double universal suffrage for the election of the Chief Executive and the Legislative Council.

Economically, Hong Kong has reconstructed after six years of dramatic downturn influenced by the Asia Financial Crisis of 1997, the outbreak of avian flu in May 1997, and the spread of the Severe Acute Respiratory Syndrome (SARS) in March 2003. The region's economy experienced gradual recovery since 2003, largely related to the economic integration with Mainland China (Chiu, 2006; Sung, 2005), which has been experiencing an economic boom since the implementation of the Open Door Policy in the later 1970s (Sung & Song, 1991; Wei, 1995) and its entry into the World Trade Organization in 2001. With its geographical proximity with Mainland China, Hong Kong grasped the opportunity to relocate its manufacturing hub to southern China, sharing China's natural resources and cheap labour, and gradually became an integral part of the regional economy of the Greater Pearl River Delta (Lui & Chiu, 2001).⁴

The financial links and the economic cooperation between Hong Kong and Mainland have been substantially strengthened over the period. Hong Kong has been ranked as the world's freest economy for the past twenty-five consecutive years (The Heritage Foundation, 2019). Free economy has long been the core competitiveness of Hong Kong. Economic policies have been issued for intensifying free economy and speeding up the economic integration between Hong Kong and Mainland China. For instance, the ratification of the first bilateral Free Trade Agreement, the Closer Economic Partnership Arrangement (CEPA) on 20 June 2003, set a milestone in the economic integration process between the two regions (Chiu, 2006).

In addition, many projects for facilitating the flow of people and goods have been initiated, e.g., the introduction of the Individual Visit Scheme (IVS) in 2003, the construction of the Guangzhou-Shenzhen-Hong Kong Express Rail Link in 2004 and the Hong Kong-Zhuhai-Macao Bridge in 2009. Figure 1.1 shows a surge in the number of Mainland visitors to

⁴ The Greater Pearl River Delta (GPRD) covers the areas of Hong Kong, Macau, and the Pear River Delta Economic Zone portion of Guangdong Province (incl. the nine municipalities of Guangzhou, Shenzhen, Dongguan, Foshan, Jiangmen, Zhongshan, Zhuhai, and the urban area of Huizhou and Zhaoqing). More detailed overview of the GPRD can be seen at https://www.info.gov.hk/info/gprd/pdf/F_GPRD_Overview.pdf.

Hong Kong after the launch of the IVS in 2003. By 2013, Mainland visitors accounted for around 75% of the total 54.3 million visitors in Hong Kong, approximately four times that of in 1997 (Individual Visit Scheme in Hong Kong, 2015).

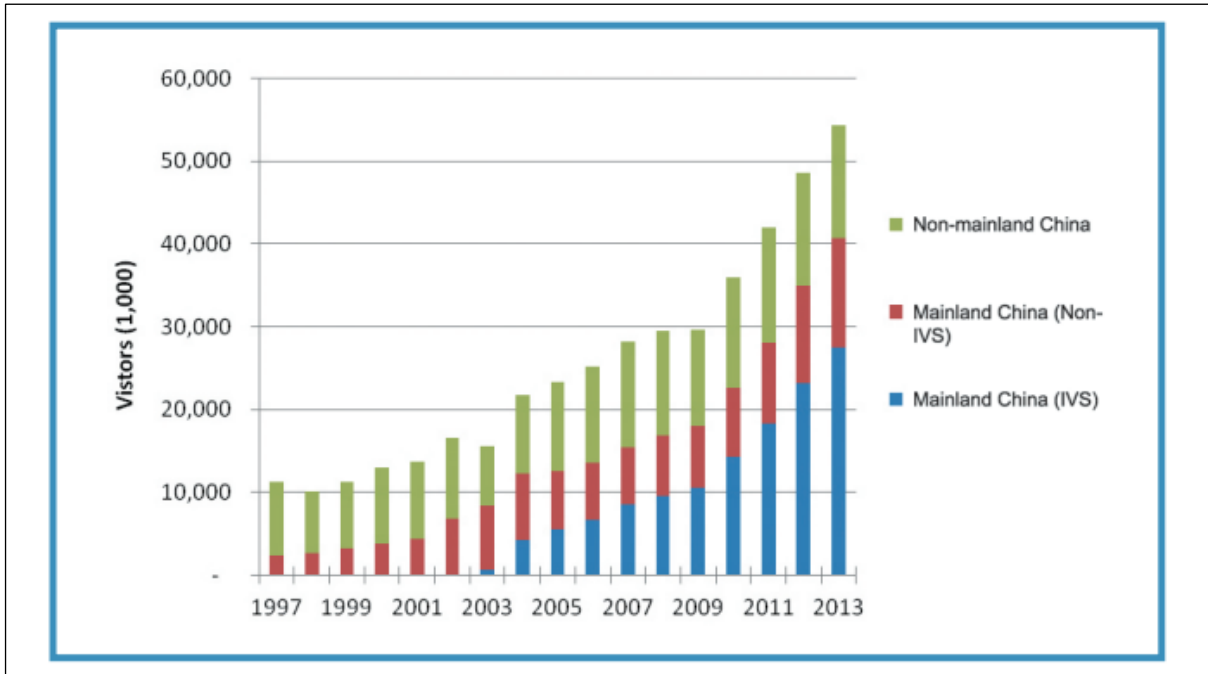


Figure 1.1 Visitor arrivals in Hong Kong from 1997 to 2013 (Individual Visit Scheme in Hong Kong, 2015, p.6)

The trading value between Hong Kong and the Mainland also increased rapidly from 1997 to 2017. According to the 2017 Hong Kong Yearbook, by 2017, Hong Kong is the third largest trading partner of China after the US and Japan, totalling about 7% of China’s total trade value. China remains Hong Kong’s largest trading partner, accounting for more than half of Hong Kong’s total trade value. Figure 1.2 presents the statistics about the goods trade between Hong Kong and the Mainland from 1997 to 2017, showing a notable growth of the visible trade between the two regions, approximately four times that of twenty years ago in 1997.

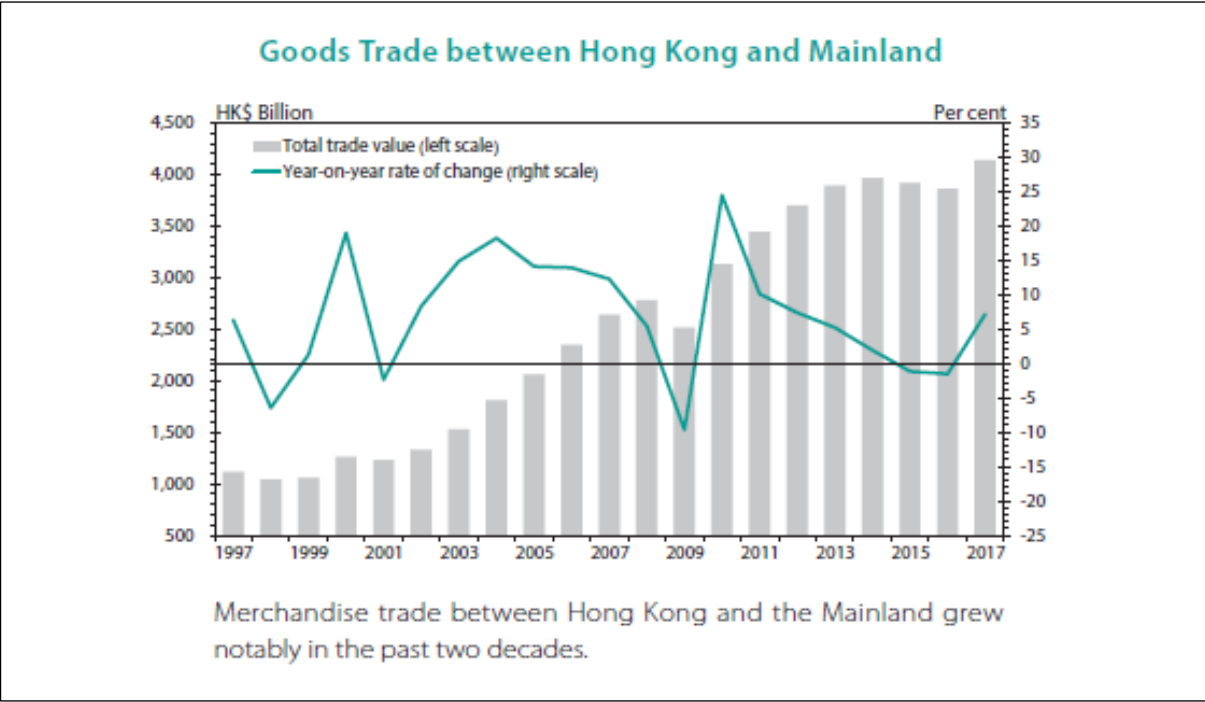


Figure 1.2 Merchandise trade between Hong Kong and the Mainland (Hong Kong Yearbook, 2017, p. 39)

Along with the upsurge influx of mainland tourists, business persons, students, and workers across the border to Hong Kong since the handover in 1997, the culture and lifestyle of Hong Kong are going through a gradual merging with Mainland China's. The most recent signing of the Framework Agreement on Deepening Guangdong-Hong Kong-Macao Cooperation in the Development of the Bay Area in 2017 indicates Hong Kong's active participation in the development of the Guangdong-Hong Kong-Macao Greater Bay Area. Still, there are thorny societal issues that exist, of which the most pressing one is the shortage of land for housing. The government has been implored to build more affordable housing for citizens. In addition, the need for long-term sustainable transportation policy to solve the well-known traffic congestion problem and the need for the promotion of education and healthcare are also identified as the focus of attention in contemporary Hong Kong.

In this thesis, the two studies conducted in Chapters 5 & 6 focus on the economic issue of FREE ECONOMY and the political issue of ELECTION as two representative societal issues in

post-colonial Hong Kong, aiming to examine whether and how the use of metaphors by political leaders in the framing of these two issues change over the past two decades.

1.3.2 Structure of the Hong Kong SAR government

Like many other countries, the Hong Kong Special Administrative Region (HKSAR) adopts ‘bureaucracy’ as the organisational form of its government (Wong, 2012, p. 96). The three key structural features of bureaucracy - high formalisation, high centralisation, and high complexity (Rosenbloom & Kravchuk, 2002), are useful concepts for understanding the government structure of HKSAR. First, the government is highly formalised, as it mainly operates via rules and regulations, which are often backed up by legislation. As introduced on the official website of the HKSAR government (https://www.doj.gov.hk/en/our_legal_system/index.html):

The legal system of the Hong Kong Special Administrative Region (HKSAR) is based on the principles of the rule of law and the independence of the judiciary. The constitutional framework for the legal system is provided by the Basic Law enacted by the National People’s Congress of the People’s Republic of China (PRC) in accordance with Article 31 of the Constitution of the PRC. Under the principle of ‘one country, two systems’, the HKSAR legal system, which is different from that of Mainland China, is based on the common law, supplemented by statutes. All legislation in force in the HKSAR is accessible on the Hong Kong e-Legislation website... The main powers and functions of the Government of the HKSAR (which is headed by the Chief Executive) include the formulation and implementation of policies, the conduct of administrative affairs and the drawing up and introduction of budgets and bills. The HKSAR’s legislature is the Legislative Council, and the Basic Law prescribes the specific method for forming the Legislative Council and its procedures for voting on bills and motions. Under the Basic Law, the Legislative Council's functions include the making of laws, approving budgets and public expenditure and monitoring the work of the government in general. The Judiciary is responsible for the administration of justice in Hong Kong. It

hears all prosecutions and civil disputes. It is completely independent of the executive authorities and the legislature.

The second structural feature of the government is high centralization, which means a large degree of power and authority is concentrated in the higher levels of the hierarchy. The power of the Hong Kong government has been highly centralized since the beginning of the colonial era in 1843. In the former government, the top level was the Governor and the second level was the Colonial Secretary. The Colonial Secretariat contained the cadets who were in charge of policy-making, the regulation of finance and civil service. After the handover in 1997, the central powers and functions of the Hong Kong government began to be carried out by a number of policy bureaux, departments and agencies, staffed mostly by civil servants. The Chief Executive (CE) replaced the Governor at the apex of the structure and has similar authority over the civil service. The next level of the government is the Chief Secretary for Administration (CSA), the head of the civil service, who replaced the Colonial Secretary. Slightly beneath the CSA in the hierarchy are the Financial Secretary (FS) and the Secretary for Justice (SJ), who replaced the colonial Attorney General. Figure 1.3 presents the organization structure of the current Hong Kong government, including all the bureaux, departments, and agencies in the high levels of the hierarchy.

1.3.3 Principal officials in Hong Kong and the role of the Secretaries of Departments

According to the Basic Law, the principal officials in post-colonial Hong Kong are government officials who are appointed by the Central People's Republic of China upon the nominations by the Chief Executives. Table 1.1 presents the 21 Principle Officials in the Administration of the current Chief Executive Carrie Lam Cheng Yuet-ngor, including 3 Secretaries of Departments, 13 Directors of Bureaux, and 5 Heads of the Disciplined Services.

Table 1.1 Principle officials in the government of Hong Kong (as of July 2020)⁷

| Secretaries of Departments | |
|---|---|
| Chief Secretary for Administration | |
| Financial Secretary | |
| Secretary for Justice | |
| Directors of Bureaux | |
| Finance | Secretary for Commerce and Economic Development |
| | Secretary for Development |
| | Secretary for Financial Services and the Treasury |
| | Secretary for Innovation and Technology |
| Administration | Secretary for the Civil Service |
| | Secretary for Constitutional and Mainland Affairs |
| | Secretary for Education |
| | Secretary for the Environment |
| | Secretary for Food and Health |
| | Secretary for Home Affairs |
| | Secretary for Labour and Welfare |
| | Secretary for Security |
| Secretary for Transport and Housing | |
| Heads of the Disciplined Services | |
| Commissioner of Police | |
| Commissioner, Independent Commission Against Corruption | |
| Director of Audit | |
| Commissioner of Customs and Excise | |
| Director of Immigration | |

⁷ For a detailed introduction of the principle officials in the government of Hong Kong, see <https://www.gov.hk/en/about/govdirectory/po/index.htm>.

On 1 July 2002, the Chief Executive Tung Chee-hua implemented the Principal Officials Accountability System, which aims at building ‘a comprehensive system of public accountability’ for a more accountable government. The system carried out a new way of appointing 16 of the Principle Officials (the 3 Secretaries of Departments and the 13 Directors of Bureaux), who would serve on contract as political appointees rather than permanent and pensionable civil servants in pre-2002. The Chief Executive has the power to nominate and remove suitable candidates, either from within or outside the civil service, for the 16 principal officials’ positions to the CPG of China. The five other Principle Officials in the positions of the Heads of the Disciplined Services (See Table 1.1), who were all civil servants according to the Basic Law, retained an unchanged position.

Among the total 21 Principle Officials, the Secretaries of Departments including the Chief Secretary for Administration (CSA), the Financial Secretary (FS), and the Secretary for Justice (SJ) are the most important officials within the Government of Hong Kong. Regarding the role of CSA in the government, the information provided on the official website of the CSA (<https://www.cso.gov.hk/eng/role/role.htm>) shows:

The Chief Secretary for Administration is a member of the Executive Council and the most senior of the three officials authorised to temporarily assume the duties of the Chief Executive when the latter is not able to discharge his duties for a short period. The Chief Secretary for Administration assists the Chief Executive in supervising the bureaux as directed by him and plays a key role in ensuring co-ordination in policy formulation and implementation. This is particularly important in areas which cut across bureaux. The Chief Secretary for Administration also covers specific priority areas of the Chief Executive’s policy agenda, and is responsible for forging a closer and more effective working relationship with the Legislative Council and drawing up the Government’s legislative programme. In addition, the Chief Secretary for Administration exercises statutory functions vested in him by law, such as those concerning the handling of appeals and certain public bodies. The

Administration Wing of the Chief Secretary for Administration's Office provides support for some of the above duties.

For the role of FS in the government, the introduction on the official website of FS (<https://www.fso.gov.hk/eng/role.htm>) shows:

The Financial Secretary's primary responsibility is to assist the Chief Executive in overseeing policy formulation and implementation of financial, monetary, economic, trade and development as well as innovation and technology matters. The Financial Secretary exercises control over the Exchange Fund with the assistance of the Monetary Authority and is a member of the Executive Council. The Financial Secretary is also in charge of the Government Budget and is responsible under the Public Finance Ordinance for laying before the Legislative Council each year the government's estimates of revenue and expenditure. The Financial Secretary outlines in the annual budget speech the government's vision and policies for sustainable economic development, presents budgetary proposals and moves the Appropriation Bill, which gives legal effect to the annual expenditure proposals in the Budget.

The information on the official website of SJ (<https://www.doj.gov.hk/en/about/secretary.html>) shows the role of SJ in the government includes:

- 1) ensuring effective, efficient and equitable administration of justice to facilitate access to justice and that the independence of our Judiciary, as enshrined in the Basic Law, is respected and not arbitrarily attacked,
- 2) ensuring that our independent role of conducting criminal prosecutions would be in no way compromised,
- 3) strengthening the education on the Constitution and the Basic Law to enable the public to better understand the essence of "One Country, Two Systems", bearing in mind the purpose of the Basic Law - upholding national unity and territorial integrity, maintaining the prosperity and stability of Hong Kong,
- 4) providing honest, independent and professional advice to the Government including on the legality of its acts and its compliance with the laws,
- 5) ensuring that all legislation is in plain language and readily accessible

to the public, and 6) enhancing and promoting Hong Kong's international legal and dispute resolution services.

As presented above, the Secretaries of Departments play influential roles in the Government of Hong Kong. This thesis particularly focuses on public speeches by the Secretaries of Departments (CSA, FS, and SJ) serving in the office during the post-colonial period from 1 July 1997 to 31 December 2017. Section 1.4 listed the detailed information of the corpus.

1.4 The corpus

The corpus was manually collected from the official website of the Hong Kong government (<http://www.info.gov.hk/isd/speech/sensp.htm>). Speeches were delivered by the Secretaries of Departments – four CSA, four FS, and three SJ in Hong Kong after the handover of sovereignty from Britain to China on 1 July 1997. The list of the eleven speakers is shown in Table 1.2, along with their political roles, gender, time in office, the total number of speeches, and the number of words.⁸

In total, the corpus contains 1,248 public speeches spanning two decades from 1 July 1997 to 31 December 2017, with a total word count of 1,793,611, as calculated by the WordList function in WordSmith 6.0.⁹

⁸ There is the possibility that the speeches were prepared and written by speechwriters or political advisors employed in the Government of Hong Kong. The speakers may edit the draft version of the speeches and confirm the final version of the speeches. The fact that it is the speakers who delivered the speeches in public to reflect their own opinions, and they are responsible for the content of the speeches which represent their views. Thus, analyzing the language style of these speeches can reveal the underlying political views of the political leaders in Hong Kong.

⁹ The time span of the public speeches in our corpus is from 3 July 1997 to 27 December 2017. The first speech was delivered on 3 July 1997 by the Financial Secretary - Donald Tsang Yam-kuen. The last speech was delivered on 27 December 2017 by the Secretary for Justice - Rimsky Yuen Kwok-keung.

Table 1.2 Corpus of public speeches by principal officials in Hong Kong (1997-2017)

| Political roles | Speakers | Gender | Time in office | No. of speeches | No. of words |
|--|----------------------------|--------|-----------------------|-----------------|--------------|
| Chief Secretary for Administration (CSA) | Anson Chan Fang On-sang | Female | 01.07.1997-30.04.2001 | 163 | 244,773 |
| | Donald Tsang Yam-kuen | Male | 01.05.2001-31.05.2005 | 96 | 144,105 |
| | Henry Tang Ying-yen | Male | 01.07.2007-30.09.2011 | 93 | 91,665 |
| | Carrie Lam Cheng Yuet-ngor | Female | 01.07.2012-16.01.2017 | 144 | 162,459 |
| | CSA Total | | | 496 | 643,002 |
| Financial Secretary (FS) | Donald Tsang Yam-kuen | Male | 01.07.1997-30.04.2001 | 162 | 268,009 |
| | Antony Leung Kam-chung | Male | 01.05.2001-16.07.2003 | 66 | 91,539 |
| | Henry Tang Ying-yen | Male | 17.07.2003-30.06.2007 | 95 | 89,357 |
| | John Tsang Chun-wah | Male | 01.07.2007-16.01.2017 | 104 | 138,637 |
| | FS Total | | | 427 | 587,542 |
| Secretary for Justice (SJ) | Elsie Leung Oi-sie | Female | 01.07.1997-19.10.2005 | 89 | 171,989 |
| | Wong Yan-lung | Male | 20.10.2005-30.06.2012 | 72 | 141,007 |
| | Rimsky Yuen Kwok-keung | Male | 01.07.2012-06.01.2018 | 164 | 250,071 |
| | SJ Total | | | 325 | 563,067 |
| | In Total | | | 1,248 | 1,793,611 |

Speeches were delivered at various ceremonial occasions, including ceremonial openings, receptions, anniversaries, annual luncheons, and gala dinners. Thus, the nature of the speeches is ceremonial speech or epideictic speech (Charteris-Black, 2013), with the primary rhetorical purpose being celebration of various social, economic, and political events in Hong Kong.

1.5 Outline of the thesis

This thesis comprises of seven chapters. Chapter 1 (the current chapter) presents a general introduction to the thesis. Chapters 2-6 include five studies (Studies 1-5) that were written in the form of five independent research papers.¹⁰ Chapter 7 concludes the thesis. A schematic overview of the thesis can be seen in Figure 1.4.

¹⁰ As the five studies use the same corpus and the same approaches to metaphor and source domain identifications, there is some overlap in terms of corpus introduction, metaphor identification, and source domain determination procedures.

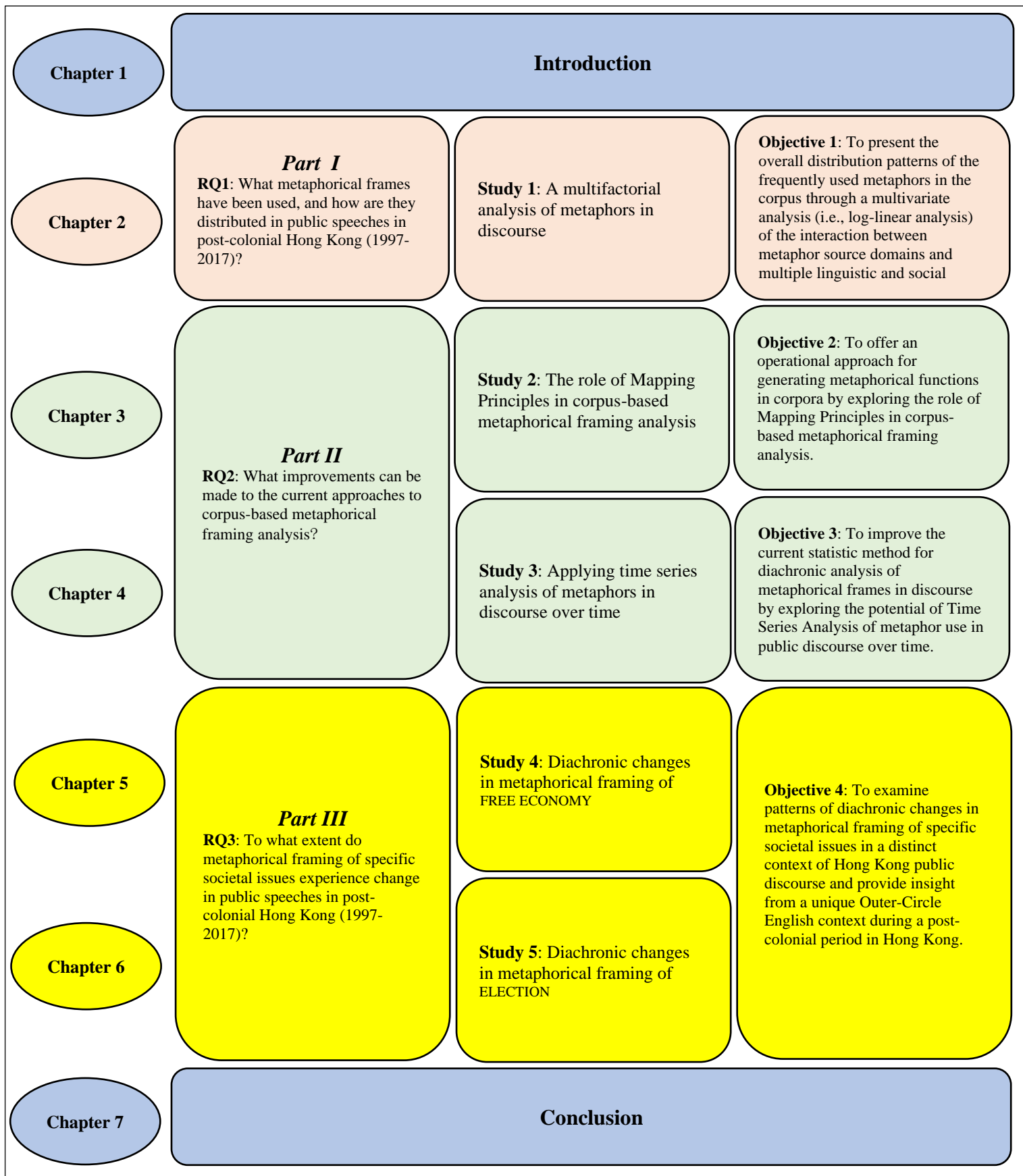


Figure 1.4 Schematic overview of the thesis

Chapter 1 (the current chapter) provides an overall view of this thesis. First, this chapter starts with a discussion of three examples to introduce the topic of metaphorical framing in public discourse and the three main research questions of this thesis. Second, it points out the four main issues in the current literature on corpus-based metaphorical framing analysis and lists the corresponding four research objectives of this thesis. Third, it presents a detailed introduction of the contextual background of post-colonial Hong Kong. Finally, it outlines the main structure of the thesis.

The following five chapters present five studies which can be divided into three parts. *Part I* includes one study in Chapter 2, *Part II* includes two studies in Chapter 3 & 4, and *Part III* includes two studies in Chapter 5 & 6.

Part I

The first part of the main body of this thesis answers RQ1 concerning what metaphorical frames have been used, and how are they distributed in public speeches in post-colonial Hong Kong (1997-2017). Chapter 2 adopts a multifactorial analysis of metaphors in the corpus to investigate the overall distribution patterns of metaphors across multiple social and linguistic factors in public discourse.

Part II

Chapter 3 and Chapter 4 comprises the second part of the main body of this thesis which answers RQ2 regarding what improvements can be made to the current approaches to corpus-based metaphorical framing analysis. Each of the two chapters improves specific approaches or methods for corpus-based metaphorical framing analysis. The study in Chapter 3 explores the role of Mapping Principles in corpus-based metaphorical framing analysis, which develops an operational approach for analysing metaphorical framing functions in corpora. The study in Chapter 4 explores the potential of Time Series Analysis

of metaphor use in public discourse over time, which addresses the limitations of the current statistic method for the diachronic analysis of metaphor use in discourse.

Part III

The third part of the main body including Chapter 5 and Chapter 6 draws upon the approaches proposed in the second part (Chapters 3-4), aiming to examine the diachronic changes in the metaphorical framing of two specific societal issues (i.e., FREE ECONOMY and ELECTION) in the corpus. The study in Chapter 5 examines the fundamental and incremental changes in the metaphorical framing of the FREE ECONOMY issues over time. The study in Chapter 6 investigates the fundamental and incremental changes in the metaphorical framing of the ELECTION issues over time.

Finally, Chapter 7 summarises the main findings of the five studies in Chapters 2-6 in response to the corresponding research questions and objectives. It also discusses the implications for corpus-based metaphorical framing analysis from the theoretical, methodological, and empirical perspectives. In addition, this chapter mentions specific limitations of the present studies, and points out directions for future research.

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Chapter 2

A multifactorial analysis of metaphors in political discourse:

Gendered influence in Hong Kong political speeches¹

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.

2.1 Introduction

Metaphor is one of the primary stylistic features of political discourse, and its persuasive power has been widely acknowledged (Burgers & Ahrens, 2020; Charteris-Black, 2005, 2006, 2013; Lakoff, 1996/2002; Musolff, 2004, 2016). In recent decades, the continued progress for female politicians in the political arena (Atkeson, 2003) has inevitably resulted in an upsurge of

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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 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.²

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).

² 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).

These multifactorial associations, in turn, provide alternative perspectives which can further contribute to exploring and understanding metaphor use.

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.

2.2 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 (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 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.³ 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 We use small caps for the four variables involved in the log-linear analysis.

2.3 Method

2.3.1 Corpus Creation

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>).⁴ 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).⁵ 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 Table 2.1, 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.⁶

⁴ 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.

⁵ 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>

⁶ 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.

Table 2.1 Corpus of public speeches by principal officials in Hong Kong (1997-2017)

| 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) | |
| In Total | | | | 125 (1,248) | 159,519 |

2.3.2 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 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.⁷ We also consulted the word senses in Wordnet (Fellbaum, 2005) and SUMO (Niles & Pease, 2001) as complementary resources.⁸

2.3.3 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.

2.3.3.1 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.

⁷ 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.

⁸ 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 & Jiang, 2020; Ahrens & Zeng, 2017; Chung, Ahrens, & Huang, 2004), we apply a similar method with detailed procedures shown in Table 2.2.⁹

Table 2.2 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 et al., 2014) and the online Oxford Collocation Dictionary as a complementary method to the WordNet-SUMO method, e.g., to check if there are any frequent collocations of the keywords related to the proposed source domains. |

For instance, following the above procedure, the source domain of the metaphorical keyword ‘*pace*’ in example 1 is ascertained as JOURNEY (see the detailed procedures in Table 2.3).

(1) In Hong Kong, we have stepped up the *pace* and intensity of these efforts in the face of growing competition in our region. (John Tsang, FS, 3 April 2012)

⁹ In step 1, educated, fluent speakers’ judgement about potential source domains can be related to the notion of ‘unity of domains’ which refers to ‘a background assumption on the part of the listener that sentences (involving metaphor or metonymy) are semantically coherent’ (Croft, 2003, p. 195).

Table 2.3 Example for source domain identification

| | |
|--------|--|
| Step 1 | Based on a native speaker’s intuition and the surrounding phrase ‘ <i>step up</i> ,’ which is a typical metaphorical keyword in the source domain of JOURNEY (Charteris-Black, 2009, p.147), we propose the potential source domain of ‘ <i>pace</i> ’ is JOURNEY. |
| Step 2 | <p>1) By searching the word “pace” in SUMO, we find that according to WordNet, the noun ‘pace’ has six senses with one of the relevant senses under the Noun Synset 100285889-walking;</p> <p>2) By searching the Noun Synset 100285889, we determine it is derivationally related to the Noun Synset 201904930-walk;</p> <p>3) By searching the Noun Synset 201904930-walk, we determine it is derivationally related to 100284798-walk;</p> <p>We thus confirm that “pace” is within the Noun Synset of 100284798-walk.</p> <p>4) By searching the word ‘journey’ in SUMO, we find that according to Wordnet, the noun ‘journey’ has one sense: the act of traveling from one place to another (Noun Synset 100306426);</p> <p>5) By searching the Noun Synset 100306426, we locate one of its relevant hypernym synset (Noun Synset 100295701 - travel, traveling, travelling);</p> <p>6) By searching the Noun Synset 100295701, we locate one of its relevant hypernym synset (Noun Synset 100284798-walk);</p> <p>We thus confirm that ‘journey’ is also within the Noun Synset of 100284798-walk.</p> |
| Step 3 | We conclude that ‘ <i>journey</i> ’ and ‘ <i>pace</i> ’ are conceptual-semantically interlinked both within the Noun Synset of 100284798-walk. Therefore, the source domain of ‘ <i>pace</i> ’ is ascertained to be JOURNEY. |

Overall, 5,962 metaphorical instances with 19 different categories of source domain were identified in the corpus (see Table 2.4).¹⁰ 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-

¹⁰ 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).

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 2.4 Frequencies of the source domains in the corpus

| Source domain | Examples of keywords | Gender type | Frequency | Total |
|-------------------|--------------------------------|--------------------|--------------|--------------|
| BUILDING | <i>build, construct</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,</i> | Neutral | 940 | |
| GAME | <i>war, sport, competition</i> | Masculine-oriented | 624 | |
| BUSINESS | <i>brand, product</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.¹¹

¹¹ The concept of ‘gendered metaphor’ in the existing literature has been mostly assumed rather than tested. Future studies may test the extent to which specific metaphor source domains are gender stereotyped, e.g., conducting norming studies to source domains with reference to their gender stereotypicality.

2.3.3.2 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 Ceremonial Speeches” (see Table 2.5). 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 2.5 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. |

2.3.4 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 and Dominick (2013, p. 175), we calculated the inter-coder reliability in a subset of 10% of the data.¹²

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.¹³ The final reliability result is “substantial” for the coding of PHYSICAL OBJECT (Cohen’s kappa = .768).

¹² See all the data and analyses on the Open Science Framework at https://osf.io/a43k6/?view_only=330bd49baf0c45c7955b5e9f3c4f6dd0.

¹³ 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.

2.4 Results and discussion

The four-way contingency table generated from the log-linear analysis is presented in Appendix 2.1, 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 2.6, 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 2.6. The likelihood ratio shows the 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).¹⁴

¹⁴ 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 Field (2013), Gilbert (1993), and Tay (2017).

Table 2.6 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 |
| 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: $\chi^2(30) = 39.726, p = .110$

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

2.4.1 SOURCE DOMAIN * GENDER

The first effect we tested is the overall SOURCE-GENDER association. Table 2.7 is the cross-tabulation with cell counts, expected counts, adjusted residuals, chi-square results and Cramer's V coefficients.¹⁵ 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 (residual < -2).¹⁶ 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.

¹⁵ 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.

¹⁶ 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.

Table 2.7 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).

2.4.2 SOURCE DOMAIN * GENDER * SPEECH SECTION

We continue to examine the effect of SOURCE-GENDER across the level of SPEECH SECTION as shown in the cross-tabulation in Table 2.8. 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 2.8 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 | $\chi^2(5) = 9.291$, $p = 0.098$ Cramer's $V = 0.157$ |
| | | 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 | |
| | | 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 | $\chi^2(5) = 21.174$, $p = 0.001$ Cramer's $V = 0.157$ |
| | | 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 | |
| | | 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 | $\chi^2(5) = 27.331$, $p = 0.000$ Cramer's $V = 0.089$ |
| | | 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 | |
| | | 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 | $\chi^2(5) = 12.051$, $p = 0.034$ Cramer's $V = 0.156$ |
| | | 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 | |
| | | 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 2.5).

2.4.2.1 SOURCE DOMAIN and GENDER across the SPEECH SECTION of PROLOGUE

In the prologue, the significant residuals highlighted in Table 2.8 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.

2.4.2.2 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 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.

2.4.2.3 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 2.8 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 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.

2.4.2.4 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.

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.

2.4.3 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.¹⁷ Table 2.9 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 2.9 Cross-tabulation of SOURCE DOMAIN and GENDER across POLITICAL ROLE

| ROLE | GENDER | | SOURCE DOMAIN | | | | | Statistics | |
|------|--------|---------------|---------------|-----------------|---------|-----------------|-------|------------|--|
| | | | BUILDING | LIVING ORGANISM | JOURNEY | PHYSICAL OBJECT | GAME | | BUSINESS |
| 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 | |

¹⁷ 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.

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.

2.4.3.1 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 2.9 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 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.

2.4.3.2 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 2.9 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 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.

2.5 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 conformed 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 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 the sample size was zero. 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, Reijniere, & 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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Appendix 2.1 Four-way contingency table (The expected frequencies in brackets are presented beside the observed frequencies in parentheses)

| 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) |

Chapter 3

The role of Mapping Principles in corpus-based metaphorical framing analysis: The case of WAR metaphors in Hong Kong public discourse¹

Abstract

This study proposes an operational approach to metaphorical framing analysis in large-scale data. Drawing on the framework of the Conceptual Mapping Model, we conducted a case analysis of the WAR metaphors in a corpus of Hong Kong public speeches. By investigating the semantic meanings of the salient lexical choices under the source domain of WAR and the underlying reasons for the source-target domain mappings (i.e., Mapping Principles), we found that SOCIAL ISSUES in Hong Kong are primarily conceptualized in terms of a VIOLENCE frame with more negative evaluations. ECONOMIC ISSUES are primarily addressed in terms of a STRATEGY frame, and POLITICAL ISSUES are primarily talked about in terms of a PROTECTION frame, both of which are more positively evaluated. The analysis shows that identifying patterns that underlie Mapping Principles for metaphors allows for a principled way to move to and provide support for a metaphorical framing analysis in corpora. The paper enriches the existing Critical Discourse Analysis based studies of metaphorical framing in public discourse. The proposed approach links conceptual level analyses of metaphor with communicative level aspects of metaphor framing and bridges the connection between framing in communication science and conceptual metaphor in cognitive linguistics.

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3.1 Introduction

Framing is one part of the communication process that uses language as a tool to facilitate and reveal various ways of understanding and reasoning. As defined in Entman (1993), to frame is to “select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described” (p. 52). While the concept of ‘framing’ is constantly acknowledged in communication science (Entman, 1993, 2004, 2007; Kosicki & Pan, 2001; Pan & Kosicki, 1993), it has yet to be emphasized in discourse studies. In discourse, framing has been considered to be a cognitive strategy for positioning oneself by activating the frames which are supportive of rhetoricians’ arguments through various linguistic means. One of the primary linguistic means for framing in discourse is conceptual metaphor.

Research has pointed out that metaphors function as both framing devices and reasoning devices (Burgers, Konijn, & Steen, 2016). Most of the existing studies on metaphor and framing have focused on how metaphors are deployed in public discourse for particular framing purposes (Burgers & Ahrens, 2020; Burgers, Jong Tjien Fa, & de Graaf, 2019; Lakoff, 2004/2014; Zeng, Burgers, & Ahrens, 2021). Several other studies have provided systematic reviews on metaphorical framing effects in political discourse (Boeynaems, Burgers, Konijn, & Steen, 2017; Brugman, Burgers, & Steen, 2017; Brugman, Burgers, & Vis, 2019). While these studies have showed the effects of metaphors in the framing of various issues in public discourse, so far no practical methods for analysing metaphorical framing functions in discourse have been proposed in the current literature. One exception is the recent study in Semino, Demjén, & Demmen (2018), which presents an integrated approach to analysing metaphorical framing function in discourse from the three dimensions of cognitive, discourse-based, and practice-based. However, Semino et al. (2018) has not specified approaches to

identifying specific metaphorical frames in corpus-based discourse analysis. The issue of how to generate specific metaphorical frames from corpora is still underexplored.

Since an essential part of framing in communication is the process of selection and salience (Entman, 1993, p. 53), it is plausible that patterns of the salient lexical items and source-target domain pairings of metaphors may reflect the selection and salient process of metaphorical framing, leading to the generation of specific frame categories in discourse. Drawing on the Conceptual Mapping Model theory (Ahrens, 2010), which uses the same argument that patterns of lexical usage in real-life discourse can reflect cognitive models that evaluate implicit ideologies, this study generates a practical method for corpus-based metaphorical framing analysis. We propose that by examining the prominent linguistic mappings in a particular source-target domain pairing and evaluating the underlying reason for the salience of this conceptual mapping (Mapping Principles), we can generate specific metaphorical frames and explain their functions in the discourse. Based on evidence from large sets of empirical data focusing on Hong Kong public discourse, this study aims to test this hypothesis. The analysis will enrich the existing Critical Discourse Analysis (CDA) studies engaging in the connection between metaphor and framing.

In what follows, we first review research related to metaphorical framing and the CDA approach to metaphorical framing analysis, followed by an introduction to Conceptual Mapping Model and Mapping Principles for conceptual metaphors. We then select WAR metaphors as examples to illustrate the method of applying the Mapping Principle in corpus-based metaphorical framing analysis.

3.2 Metaphorical framing analysis in public discourse

3.2.1 The connection between frame and domain

The connection between ‘frame’ and ‘domain’ can be established in previous work. The term ‘frame’ and the importance of ‘framing’ have been emphasized in fields such as artificial intelligence (Minsky, 1975), cognitive semantics (Fillmore, 1975, 1977, 1982, 1985; Fillmore & Atkins, 1992), and sociology (Goffmann, 1974). Fillmore (1982) adopted the term ‘frame’ from Minsky (1975) and interpreted ‘frame’ as a conceptual knowledge structure in long-term memory that relates elements, entities, and events in the human experience. The Conceptual Metaphor Theory (CMT) defines metaphors as cross-domain mappings between more concrete source domains and more abstract target domains (Lakoff, 1993; Lakoff & Johnson, 1980/2003). Metaphors are considered able to select and highlight aspects from source domains and map onto target domains.

Lakoff (1987) and Langacker’s (1987) theory of conceptual ‘domain’ extends Fillmore’s theory of frame semantics. They claim that in cognitive semantics, concepts can only be comprehended in a context of presupposed, background knowledge structures; the most generic term for this background knowledge structure is ‘domain’. Hence, ‘domain’ is defined as the background knowledge for representing concepts. In Fillmore’s view, domains are more than experientially related concepts but instead have a structure that is highlighted by frames. Frames emphasize the semantic supporting function of domains for representing concepts.

Accordingly, ‘frame’ tends to be defined as a part of background knowledge, and ‘framing’ refers to the process of highlighting the structural nature of the background knowledge. The connection between ‘frame’ and ‘domain’ is that frame is used to represent a sub-domain structure. In other words, one domain can include multiple frames, e.g., the WAR domain includes frames such as FIGHT, PROTECT, ENEMY, etc. In this study, we seek to

determine the specific frames underlying the source domain and target domain in order to investigate the framing functions of metaphors.

3.2.2 Critical Metaphor Analysis

Within studies that adopt the Critical Discourse Analysis (CDA) approach to metaphors in public discourse, many are based on the framework of Critical Metaphor Analysis (CMA) proposed in Charteris-Black (2004, 2005, 2006, 2013). CMA combines the approaches of CDA (Fairclough, 1995; Van Dijk, 1993, among others) and CMT (Lakoff & Johnson, 1980/2003; Lakoff, 1993) into a method for more in-depth metaphor analysis. It identifies, interprets, and explains metaphors that are used to create discourse of legitimisation or delegitimisation. CMA studies claim that metaphor can transfer inequality because of their ability to highlight certain aspects while downplaying others. CMA aims to discover how the lexical choices of metaphors influence people's views; this is done by providing a positive representation of the preferred speakers and their policies, or a negative representation of opponents and their policies (Charteris-Black, 2013, p. 174).

Since the development of corpus-based approaches to metaphor analysis (Degian, 2005; Stefanowitsch, 2004, 2005, 2006a, b), extensive studies have applied CMA in political corpora across different topics and regions. For instance, Charteris-Black analyzed the rhetorical purposes of metaphors in corpora of British party manifestos (Charteris-Black, 2004, p. 65) and US presidential speeches (Charteris-Black, 2004, p. 87, 2013, p. 155). Gender issues have been discussed in US presidential speeches (Ahrens, 2019), US senatorial speeches (Ahrens & Lee, 2009), speeches by Chancellors of Germany (Koller & Semino, 2009), and Italian Prime Ministers (Phillip, 2009; Semino & Koller, 2009). The cognitive models of moral politics have been explored in US presidential speeches (Ahrens, 2011; Lim, 2004). EU politics (Charteris-Black, 2004, p. 47; Chilton & Ilyin, 1993; Musolff, 2000, 2004) and immigration issues in

Britain (Charteris-Black, 2006) and the US (Quinsaas, 2014) have also been investigated to a large extent.

Compared to the literature on Western politics, the number of studies that focus on Asian politics is still scarce. In the relevant existing work, Lu & Ahrens (2008) examined the ideological influence on BUILDING metaphors in Taiwanese presidential speeches. Ahrens & Zeng (2017) compared the conceptualisation of EDUCATION between Hong Kong policy addresses and the Chinese Premiers' reports of government work. Metaphors related to the corruption issues in China's official anti-corruption discourse have been studied in Jing-Schmidt & Peng (2017).

The essential part of the CMA approach is the keyword approach, namely, by examining the patterns of metaphorical keywords at the linguistic level and source domain choices at the conceptual level. The analytical procedure of CMA has always been a top-down approach. Charteris-Black (2004, 2005/2011, 2009), together with a series of others' work (Deignan, 1995; Kövecses, 2002), uses a top-down approach to search a list of keywords that have been commonly used as metaphors in politics. In Charteris-Black (2009, p. 147), he selected four source domains of metaphors with lists of keywords for analysis based on his previous findings of the frequent source domains and keywords that occurred in other political corpora. However, the frequent lexical items of metaphor vary in different corpora; some frequent source domains might be overlooked if the keyword search is based solely on a unified lexical list.

Although Charteris-Black (2004) examined specific source domains and keyword lists for specific corpora, there is no systematic analysis that indicates which target domain corresponds to which source domain; therefore, the patterns of the conceptual-level mappings and the underlying reasons for the mappings remain implicit in his discussion. For instance, Charteris-Black (2004) presented the frequencies of the common source domains (e.g.,

CONFLICT, BUILDING, JOURNEY, PLANT, RELIGIOUS, LIGHT, and FIRE) in the corpora of New Labour manifestos, British political party manifestos, and American presidential speeches; a comparison of the lexical choices under each source domain is also included, but there is no discussion regarding the target domain patterns. In addition to the lack of discussion surrounding target domain patterns and frequent source-target pairings, these studies have never explicated the underlying reasons why a metaphor maps from a specific source domain to a specific target domain.

However, we argue that target domain choices and patterns of source-target pairings also have a potential influence on metaphor use in political discourse, especially in cases of politicians using the same source domain in the conceptualisation of different target domains. For example, in TRADE IS A WAR and ELECTION IS A WAR metaphors, whether TRADE and ELECTION have been framed as WAR in similar or different aspects remain unknown without a more in-depth investigation on the Mapping Principles between the source-target pairings of WAR-TRADE and WAR-ELECTION.

This study is intended to fill this gap by using the framework of the Conceptual Mapping Model to not only look at the metaphorical keywords and source domains in the corpus, but to also systematically identify the corresponding target domains that the common source domains map to. The investigation of metaphor source domains, target domains, and the source-target pairing patterns will contribute to a more comprehensive analysis of metaphor usage patterns in corpora. It will also enhance the generalizability of how politicians select and highlight specific aspects of metaphors to present implicit ideologies in public discourse. The use of the Conceptual Mapping Model (CMM) and the Mapping Principles (MP) will extend the current CMA approach to political metaphor analysis.

3.2.3 Existing approaches to metaphorical framing analysis

A few existing work engaging in the connection between metaphor and framing is limited to listing metaphors as a framing resource or framing as one of the functions of metaphors. For instance, Burgers, Konijn, and Steen (2016) claimed that metaphors could fulfil one or more of the functions of framing by working as both the framing devices (serving as linguistic packaging cues) and as reasoning devices (containing important conceptual content). They exemplified the metaphorical framing functions (e.g., THE TAX IS A BURDEN frame, THE ELECTION IS HORSERACE frame) and also pointed out that metaphorical frames can foreground a particular problem definition, give a causal interpretation, address a problem evaluation, and/or promote a possible problem solution. Semino, Demjén, and Demmen (2018) examined the notion of framing as a function of metaphor from the perspectives of cognitive (i.e., conceptual metaphors), discourse-based (i.e., metaphor scenarios), and practice-based (i.e., specific linguistic expressions). Although they propose that the framing implications of metaphors in discourse can be adequately explained by analyzing elements in sub-domains/scenarios and the actual data in the discourse, no practical methods for identifying or generating specific metaphorical frames in corpora have been provided.

Drawing on the Conceptual Mapping Model theory (Ahrens, 2010), we aim to propose an operational method specifically for corpus-based metaphorical framing analysis by focusing on the Mapping Principles between source-target domain pairings in corpora. As the nature of framing refers the processes of ‘selection’ and ‘salience’, we hypothesize that by examining the prominent linguistic mappings in a particular source-target domain pairing and evaluating the underlying reason for the salience of this conceptual mapping (Mapping Principles), we can generate specific metaphorical frames and explain their functions in the discourse.

3.3 Conceptual Mapping Model

Although the Conceptual Metaphor Theory claims that there is a general principle constraining the source to the target mapping in metaphors, Lakoff (1993) has said that this principle cannot be precisely formulated because it is conceptually based. However, the framework of Conceptual Mapping Model (Ahrens, 2010) proposes the existence of Mapping Principles for conceptual metaphors and offers practical methods to identify the principles for source to target domain mappings:

The Conceptual Mapping Model is designed to operationally define a method to determine the underlying reasons for the source-target domain pairings of a conceptual metaphor. These reasons, called Mapping Principles, can be tested experimentally in both off-line and on-line studies. The main idea is that the lexemes involved in the conceptual metaphor must be identified and the associated groupings analysed. Once the lexemes that map for a certain conceptual metaphor have been analyzed, the underlying reason why a particular target has selected a particular source domain will be able to be postulated. This underlying reason will be stated in terms of a Mapping Principle (Ahrens, 2010, p. 6).

The Mapping Principles can be formulated by examining the linguistic evidence (i.e., the entities, qualities, and functions that map between the source and target) or the corpus evidence for the frequency of mapping (Ahrens, 2010, p. 30). For instance, in IDEA IS BUILDING metaphor, it is found that the expressions relating to the concepts of ‘foundation’, ‘stability’, and ‘construction’ were mapped, while concepts relating to other aspects, e.g., ‘the position of the building’, ‘internal wiring’ and ‘plumbing’, ‘the exterior of the buildings’, ‘windows’, and ‘doors’ were not mapped, so the target domain of IDEA uses the source domain of BUILDING to emphasize the concept of ‘structure’. The Mapping Principle for IDEA IS A BUILDING metaphor is that IDEA is understood as a BUILDING because buildings have a (physical) structure while ideas have an (abstract) structure (Ahrens, 2010, p. 10). The validity of the Mapping Principle

has been tested in psycholinguistic experiments (Ahrens, 2010, p. 13), and also verified on the grounds of evidence from frequency-based data in large-scale corpora (Ahrens, Chung, & Huang, 2004; Chung, Ahrens, & Huang, 2004a, b); that is, the most frequently occurring lexical item in a source-target domain pairing is postulated to correspond to the Mapping Principle. Ahrens et al. (2004) and Chung et al. (2004a, b) studied the source domain determination and verified the Mapping Principles in conceptual metaphors.

Mapping Principles have provided approaches that allow for a much closer investigation of metaphor usage in corpora. Based on Mapping Principles, studies that focus on the variations between source domain and/or target domain in political corpora have explored how politicians from both Western and Eastern countries select specific source domains to conceptualize specific target domains in order to present their implicit ideologies (Ahrens, 2011; Ahrens & Lee, 2009; Ahrens & Zeng, 2017; Lu & Ahrens, 2008). For instance, by investigating the source-target domain mappings in WAR metaphors used in speeches by Hillary Clinton in her roles as the US First Lady, a US Senator, and a presidential candidate, Ahrens (2019) demonstrates a shift in Clinton's political identity. As the First Lady, Clinton tended to employ metaphors related to the protection of citizens and the stopping of diseases; however, as Senator and presidential candidate, she more frequently used WAR metaphors related to denouncing terrorism, protecting privacy, and ensuring economic development. Ahrens (2011) investigated the source domains related to the Nurturant Parent cognitive model underlying the US Democrats' speeches and the source domains related to the Strict Father model underlying the US Republicans' speeches. These results verified Lakoff's (1996/2002) two contrasting models, which have been adopted in US politics and are reflected in the differing ideologies between Democratic and Republican politicians. The above studies focusing on Mapping Principle analysis have showed that patterns of lexical usage in real-life corpora can reflect cognitive models that evaluate implicit ideologies.

In metaphor studies in Asian political discourse, Ahrens & Zeng (2017) compared the use of different source domains in the conceptualisation of the target domain of EDUCATION between Hong Kong policy addresses and Chinese Premiers' reports of government work. They found that Chinese Premiers primarily use the source domain of BUILDING with an emphasis on 'structure' and 'foundation' when addressing the issue of EDUCATION, while Hong Kong Governors and Chief Executives primarily talk about EDUCATION in terms of a PRODUCT that can be 'promoted' or 'advertised' and its 'quality' and 'quantity' should be 'improved'. Lu & Ahrens (2008) analyzed the Mapping Principles between BUILDING source domain and different target domains in Taiwanese presidential speeches, identified two types of BUILDING metaphors: the 'retrospective BUILDING metaphors' including the sub-metaphors of PAST HISTORY IS FOUNDATION and FORERUNNERS ARE BUILDERS, and the 'reconstruction BUILDING metaphors' including the sub-metaphors of THE COMMUNIST TAKEOVER IS DESTRUCTION and COMMUNISTS ARE DESTROYERS. They found Kuomintang presidents' preferences on using the 'retrospective BUILDING metaphors' as they hold the political stance of mainland China being part of Taiwan's history and foundation. However, the Democratic Progressive Party show preferences toward the use of 'reconstruction BUILDING metaphors', indicating they hold the opposite stance of anti-mainland China and position themselves as Taiwan-originated.

Previous studies have shown the possibility that the variation or similarity patterns of the Mapping Principles of specific metaphors can reflect the implicit political ideologies. In corpus-based metaphor analysis, Mapping Principles can be formulated by examining the corpus evidence for the frequency of mapping (Ahrens, 2010, p. 30). This type of analysis focuses on the most frequent lexical words selected from the source domains and the reasons for the salience of these lexical words. In terms of the 'framing' analysis in communication, as mentioned above, the focus is also put on the processes of 'selection' and 'salience' (Entman,

1993). We thus hypothesize that the patterns of Mapping Principles can reflect the metaphorical framing process and shed light on the implicit political ideologies. In this study, this hypothesis is tested with a case study focusing on a corpus of Hong Kong political speeches. Four research questions are addressed:

- (1) What are the common source domains found in the corpus? (*see Section 3.5.1*)
- (2) What do these common source domains frequently map to in terms of target domains? (*see Section 3.5.2*)
- (3) What are the Mapping Principles between these target and source domains? (*see Section 3.5.3.1 - steps 1 & 2*)
- (4) How do patterns of metaphor Mapping Principles reflect the ways in which metaphors are used in the framing of different societal issues? (*see Section 3.5.3.1 – step 3*)

3.4 Method

3.4.1 Corpus creation

The corpus utilized in this study are taken from the 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>). We first collected all of the speeches from July 1, 1997 to December 31, 2017, totaling 1,248 speeches by 11 political leaders 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).² 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 contains 125 speeches with a total of 159,519 words. The list of speakers is shown in Table 3.1, along

² 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>

with each speaker's political role, gender, in office timeframe, number of speeches, and word count.

Table 3.1 Corpus of public speeches by principal officials in Hong Kong (1997-2017)

| 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) | |
| In Total | | | | 125 (1,248) | 159,519 |

3.4.2 Metaphor and source domain identification

3.4.2.1 Metaphor identification

A bottom-up analysis approach was applied in this study to manually identify metaphor on a word-by-word basis throughout the entire corpus. Compared to 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). 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, this study uses

the dictionaries recommended in MIPVU.³ We also consult the word senses in Wordnet (Fellbaum, 2005) and SUMO (Niles & Pease, 2001) as complementary resources.⁴

3.4.2.2 Source domain identification

The source domain of a metaphor is typically a more concrete conceptual domain that 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 (Kimmel, 2012), this study identifies one single source domain for one metaphor unit. In other words, each metaphorical keyword is supposed to reflect one source that is most relevant to the target. Based on previous approaches to source domain identification (Ahrens & Jiang, 2020; Ahrens & Zeng, 2017; Chung, Ahrens, & Huang, 2004a, b; Zeng, Tay, & Ahrens, 2020), we apply a similar method with the detailed procedures shown in Table 3.2.⁵

³ The Macmillan Dictionary (<http://www.macmillandictionary.com/>), the Longman Dictionary of Contemporary English (<http://www.ldoceonline.com/>) and the Oxford English Dictionary (<http://www.oed.com/>).

⁴ 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.

⁵ In step 1, educated, fluent speakers’ judgement about potential source domains can be related to the notion of ‘unity of domains’ which refers to ‘a background assumption on the part of the listener that sentences (involving metaphor or metonymy) are semantically coherent’ (Croft, 2003, p. 195).

Table 3.2 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 et al., 2014) and the online Oxford Collocation Dictionary as a complementary method to the WordNet-SUMO method, e.g., to check if there are any frequent collocations of the keywords related to the proposed source domains. |

For instance, following the above procedure, the source domain of the metaphorical keyword '*pace*' in example 1 is ascertained as JOURNEY (see the detailed procedures in Table 3.3).

(1) In Hong Kong, we have stepped up the *pace* and intensity of these efforts in the face of growing competition in our region. (John Tsang, FS, 3 April 2012)

Table 3.3 Example for source domain identification

| | |
|--------|--|
| Step 1 | Based on a native speaker’s intuition and the surrounding phrase ‘ <i>step up</i> ,’ which is a typical metaphorical keyword in the source domain of JOURNEY (Charteris-Black, 2009, p.147), we propose the potential source domain of ‘ <i>pace</i> ’ is JOURNEY. |
| Step 2 | <p>1) By searching the word “pace” in SUMO, we find that according to WordNet, the noun ‘pace’ has six senses with one of the relevant senses under the Noun Synset 100285889-walking;</p> <p>2) By searching the Noun Synset 100285889, we determine it is derivationally related to the Noun Synset 201904930-walk;</p> <p>3) By searching the Noun Synset 201904930-walk, we determine it is derivationally related to 100284798-walk;</p> <p>We thus confirm that “pace” is within the Noun Synset of 100284798-walk.</p> <p>4) By searching the word ‘journey’ in SUMO, we find that according to Wordnet, the noun ‘journey’ has one sense: the act of traveling from one place to another (Noun Synset 100306426);</p> <p>5) By searching the Noun Synset 100306426, we locate one of its relevant hypernym synset (Noun Synset 100295701 - travel, traveling, travelling);</p> <p>6) By searching the Noun Synset 100295701, we locate one of its relevant hypernym synset (Noun Synset 100284798-walk);</p> <p>We thus confirm that ‘journey’ is also within the Noun Synset of 100284798-walk.</p> |
| Step 3 | We conclude that ‘ <i>journey</i> ’ and ‘ <i>pace</i> ’ are conceptual-semantically interlinked both within the Noun Synset of 100284798-walk. Therefore, the source domain of ‘ <i>pace</i> ’ is ascertained to be JOURNEY. |

3.4.2.3 Target domain identification

For target domain identification, we read through the contexts surrounding each metaphorical keyword and analyzed the target issues that each keyword relates to. We found that all of the specific issues can be subsumed into five broad target domains which are ECONOMIC ISSUES, SOCIAL ISSUES, POLITICAL ISSUES, ISSUES, and MISCELLANEOUS ISSUES.⁶ For instance, issues

⁶ The categorization of the broad target domain types was only used in Chapter 3 of this thesis. In the bottom-up analysis of this chapter, a large number of specific target domain types were identified and were further grouped into five broad target domains in order to see the general patterns of the source-target domain mappings in the corpus (see Appendix 3.1). Considering that the level of abstraction of the target domain may influence the ability

related to economy or trade are classified into the category of ‘economic issues’; issues regarding civil services, protection, housing, or education are included in ‘social issues’; issues discussing the legal system, universal suffrage, or elections are classified into ‘political issues’, and, personal issues, such as the speakers’ political career or life experiences are in the ‘personal issues’ category. A few cases referring to multiple issues are subsumed under the category of ‘miscellaneous issues’ (see example 2).

(2) The growing proportion of immigrants born outside Hong Kong will inevitably have a major impact on our social and economic *structure*. (Donald Tsang, FS, 29 September 2003)

The BUILDING metaphorical keyword ‘*structure*’ in example (2) refers to both the social issues and the economic issues in Hong Kong. The target domain for ‘*structure*’ is thus categorized as ‘miscellaneous issues.’

3.4.2.4 Reliability

The identifications of metaphor and source domain were completed by two analysts with postgraduate degrees in linguistics, and both are experienced in metaphor identification and discourse analysis. The analysts received pre-coding training to familiarize themselves with the corpus and the specific identification procedures. They worked independently to do the metaphor identification, and they discussed and resolved ambiguous cases. Following Wimmer & Dominick (2013, p. 175), we calculated the inter-coder reliability agreement in a subset of 10% of the data by randomly selecting 600 metaphorical instances for reliability test.

of the source domain to highlight specific aspects of the target domain, e.g., if a target domain is too broad, the distinctive role of the source domain in highlighting the entailments for the target cannot be made salient, Chapters 5 & 6 of this thesis focused on two more specific target domains (i.e., FREE ECONOMY and ELECTION) for the analysis of how different source domains were used to highlight specific aspects of the target domains.

We obtain ‘almost perfect’ for coding the source domains of BUILDING (Cohen’s $\kappa = .861$, qualification from Landis & Koch, 1977), LIVING ORGANISM (Cohen’s $\kappa = .840$), WAR (Cohen’s $\kappa = .865$), and SPORT (Cohen’s $\kappa = .869$). We obtain ‘substantial’ for 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. The final reliability results are ‘substantial’ for the coding of PHYSICAL OBJECT (Cohen’s $\kappa = .768$). The reliability results are ‘almost perfect’ for coding the target domains of ECONOMIC ISSUES (Cohen’s $\kappa = .923$), PERSONAL ISSUES (Cohen’s $\kappa = .955$), and MISCELLANEOUS ISSUES (Cohen’s $\kappa = .871$), and ‘substantial’ for the coding of SOCIAL ISSUES (Cohen’s $\kappa = .766$) and POLITICAL ISSUES (Cohen’s $\kappa = .769$). All of the data and analyses on the Open Science Framework are available at https://osf.io/5k4qh/?view_only=23e23636aa1a4141ba65fc0681f83adb

3.5 Results and discussion

3.5.1 Seven types of common source domains

The first research question of this study (RQ1) is about what common source domains are used in the corpus. In total, we identified 5,962 metaphorical instances with 21 types of different source domains. Table 3.4 shows the specific 21 types of source domains, frequencies of tokens (metaphorical keywords) under each source domain, cumulative frequencies, cumulative percentages, and frequency levels determined by the cumulative percentages.⁷

⁷ Highly frequent types refer to source domains with a cut-off of the cumulative percentage up to 50%. Frequent types refer to source domains with a cut-off of the cumulative percentage up to 90% (Zeng, Burgers, & Ahrens, accepted).

Table 3.4 Frequencies of the source domains in the corpus

| | Source domains | Frequencies of tokens | Cumulative frequencies | Cumulative percentages % | Frequency levels | |
|----|--------------------|-----------------------|------------------------|--------------------------|------------------|--|
| 1 | BUILDING | 1,176 | 1,176 | 19.72 | Highly frequent | |
| 2 | LIVING ORGANISM | 1,093 | 2,269 | 38.06 | | |
| 3 | JOURNEY | 975 | 3,244 | 54.41 | Frequent | |
| 4 | PHYSICAL OBJECT | 940 | 4,184 | 70.18 | | |
| 5 | BUSINESS | 356 | 4,540 | 76.15 | | |
| 6 | WAR | 316 | 4,856 | 81.45 | | |
| 7 | SPORT | 300 | 5,156 | 86.48 | | |
| 8 | SPACE | 233 | 5,389 | 90.39 | Less frequent | |
| 9 | CONTAINER | 173 | 5,562 | 93.29 | | |
| 10 | WATER | 131 | 5,693 | 95.49 | | |
| 11 | SENSORY EXPERIENCE | 121 | 5,814 | 97.52 | | |
| 12 | FORCE | 61 | 5,875 | 98.54 | | |
| 13 | NATURAL PHENOMENON | 26 | 5,901 | 98.98 | | |
| 14 | FOOD | 19 | 5,920 | 99.30 | | |
| 15 | WORD | 13 | 5,933 | 99.51 | | |
| 16 | RELIGION | 9 | 5,942 | 99.66 | | |
| 17 | LEISURE ACTIVITY | 8 | 5,950 | 99.80 | | |
| 18 | EXPERIMENT | 6 | 5,956 | 99.90 | | |
| 19 | STATISTICS | 3 | 5,959 | 99.95 | | |
| 20 | SIGNAL | 2 | 5,961 | 99.98 | | |
| 21 | MUSIC | 1 | 5,962 | 100.00 | | |
| | Total | 5,962 | | | | |

The common source domains include both the highly frequent and frequent types. As shown in Table 3.4, there are two types of highly frequent source domains (BUILDING and LIVING ORGANISM) and five types of frequent source domains (JOURNEY, PHYSICAL OBJECT, BUSINESS, WAR and SPORT) found in the corpus. These two types amount to a total of 5,156 instances, covering more than 86% of the total 5,962 metaphorical instances. In response to RQ1, we found seven types of source domains - BUILDING, LIVING ORGANISM, JOURNEY, PHYSICAL OBJECT, BUSINESS, WAR, and SPORT that are frequently used in the public speeches by Hong Kong principal officials.

3.5.2 Five types of broad target domains

The second research question (RQ2) refers to what target issues are frequently addressed by using these common source domains. We identified the corresponding target domains for all of the metaphorical instances. All of the target domains were identified and subsumed into five

broad categories: SOCIAL ISSUES, ECONOMIC ISSUES, POLITICAL ISSUES, PERSONAL ISSUES, and MISCELLANEOUS ISSUES.⁸ Table 3.5 presents the frequencies of the five broad target domains across the seven types of common source domains.

Table 3.5 Frequencies of the five broad target domains for the seven common source domains

| Target domains | Common source domains | | | | | | | Total |
|----------------------|-----------------------|-----------------|---------|-----------------|----------|-----|-------|-------|
| | BUILDING | LIVING ORGANISM | JOURNEY | PHYSICAL OBJECT | BUSINESS | WAR | SPORT | |
| SOCIAL ISSUES | 209 | 183 | 154 | 179 | 128 | 96 | 44 | 993 |
| ECONOMIC ISSUES | 491 | 485 | 375 | 415 | 99 | 107 | 156 | 2,128 |
| POLITICAL ISSUES | 406 | 329 | 348 | 278 | 114 | 106 | 71 | 1,652 |
| PERSONAL ISSUES | 19 | 47 | 33 | 23 | 5 | 3 | 12 | 142 |
| MISCELLANEOUS ISSUES | 51 | 49 | 65 | 45 | 10 | 4 | 17 | 241 |
| In total | 1,176 | 1,093 | 975 | 940 | 356 | 316 | 300 | 5,156 |

The majority of the common source domains (4,773 cases, 92.6%) are found to be mapped to the target domains of SOCIAL ISSUES, ECONOMIC ISSUES and POLITICAL ISSUES, while only a few (383 cases, 7.4%) are mapped to the target domains of PERSONAL ISSUES and MISCELLANEOUS ISSUES. In other words, metaphors are primarily used in reasoning about issues related to social, economic and political aspects in post-colonial Hong Kong, three reasonably frequent topics in political discourse.

In order to find out what are the more frequent source-target pairings among all the pairings in Table 3.5, we conducted a chi-square test of the associations between the source

⁸ Lists of all the specific issues under the five broad target domains are presented in Appendix 3.1.

domains and target domains. Table 3.6 is the cross-tabulation of the two variables with the number of cell count, expected count and adjusted residuals reported.⁹

Table 3.6 Chi-square test of association between source domains and target domains

| Source domains * Target domains Crosstabulation | | | | | | | | |
|---|-----------------|---------------|----------------|-----------------|------------------|-----------------|----------------------|--------|
| | | | Target domains | | | | | Total |
| | | | Social issues | Economic issues | Political issues | Personal issues | Miscellaneous issues | |
| Source domains | Building | Count | 209 | 491 | 406 | 19 | 51 | 1176 |
| | | Exp. Count | 226.5 | 485.4 | 376.8 | 32.4 | 55.0 | 1176.0 |
| | | Adj. Residual | -1.5 | .4 | 2.1 | -2.7 | -.6 | |
| | Living organism | Count | 183 | 485 | 329 | 47 | 49 | 1093 |
| | | Exp. Count | 210.5 | 451.1 | 350.2 | 30.1 | 51.1 | 1093.0 |
| | | Adj. Residual | -2.4 | 2.3 | -1.5 | 3.5 | -.3 | |
| | Journey | Count | 154 | 375 | 348 | 33 | 65 | 975 |
| | | Exp. Count | 187.8 | 402.4 | 312.4 | 26.9 | 45.6 | 975.0 |
| | | Adj. Residual | -3.0 | -2.0 | 2.7 | 1.3 | 3.3 | |
| | Physical object | Count | 179 | 415 | 278 | 23 | 45 | 940 |
| | | Exp. Count | 181.0 | 388.0 | 301.2 | 25.9 | 43.9 | 940.0 |
| | | Adj. Residual | -.2 | 2.0 | -1.8 | -.6 | .2 | |
| | Business | Count | 128 | 99 | 114 | 5 | 10 | 356 |
| | | Exp. Count | 68.6 | 146.9 | 114.1 | 9.8 | 16.6 | 356.0 |
| | | Adj. Residual | 8.3 | -5.3 | .0 | -1.6 | -1.7 | |
| | War | Count | 96 | 107 | 106 | 3 | 4 | 316 |
| | | Exp. Count | 60.9 | 130.4 | 101.2 | 8.7 | 14.8 | 316.0 |
| | | Adj. Residual | 5.2 | -2.8 | .6 | -2.0 | -3.0 | |
| | Sport | Count | 44 | 156 | 71 | 12 | 17 | 300 |
| | | Exp. Count | 57.8 | 123.8 | 96.1 | 8.3 | 14.0 | 300.0 |
| | | Adj. Residual | -2.1 | 3.9 | -3.2 | 1.4 | .8 | |
| Total | Count | 993 | 2128 | 1652 | 142 | 241 | 5156 | |
| | Exp. Count | 993.0 | 2128.0 | 1652.0 | 142.0 | 241.0 | 5156.0 | |

Result: $X^2(24, N = 5,516) = 181.239, P = 0.000 < 0.05, \text{Cramer's } V = 0.094$

The chi-square result $X^2(24, N = 5,516) = 181.239, P = 0.000 < 0.05$ in Table 3.6 shows significant association between the source domains and the target domains. In other words, the distributions of the source domains are unequal across the target domains. Differences on the distributions are indicated in the values of the significant adjusted residuals which are

⁹ Adjusted residual equals to 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 allows us to assess the significance in each cell. Unlike the standardized residual, the adjusted residual takes into account the overall size of the sample so that a fairer indication of the significance of the differences between the observed count and the expected count can be ensured.

highlighted in yellow (residual $> +2$) for more frequent occurrences and green (residual < -2) for less frequent occurrences.¹⁰ The patterns of the more frequent occurrences indicate the frequent source-target pairings as summarised below:

- (1) SOCIAL ISSUES are discussed in terms of the source domains of BUSINESS and WAR more frequently than expected by chance.
- (2) ECONOMIC ISSUES are discussed in terms of the source domains of LIVING ORGANISM, PHYSICAL OBJECT and SPORT more frequently than expected by chance.
- (3) POLITICAL ISSUES are discussed in terms of the source domains of BUILDING and JOURNEY more frequently than expected by chance.
- (4) PERSONAL ISSUES are discussed in terms of the source domain of LIVING ORGANISM more frequently than expected by chance.
- (5) MISCELLANEOUS ISSUES are discussed in terms of the source domain of JOURNEY more frequently than expected by chance.

The above patterns are visualised in Table 3.7, showing the frequent source-target domain pairings. These patterns allows us to see what common source domains frequently map to in terms of target domains in the corpus, answering the second research question.

¹⁰ In a normal distribution, 95% of the adjusted residual values are roughly within the mean plus or minus 2 standard deviations. If the value of the adjusted residual more than +2 or lesser than -2, the probability that this value is by chance will be less than 5%, thus the residual is significant. A significant association is one where the observed frequency deviates far from the expected frequency.

Table 3.7 Frequent source-target domain pairings

| Source domains | Map to | Target domains |
|-----------------|--------|--|
| BUILDING | → | POLITICAL ISSUES |
| LIVING ORGANISM | → → | ECONOMIC ISSUES PERSONAL ISSUES |
| JOURNEY | → → | POLITICAL ISSUES MISCELLANEOUS ISSUES |
| PHYSICAL OBJECT | → | ECONOMIC ISSUES |
| BUSINESS | → | SOCIAL ISSUES |
| WAR | → | SOCIAL ISSUES |
| SPORT | → | ECONOMIC ISSUES |

From Table 3.7, we can see five of the seven source domains (BUILDING, PHYSICAL OBJECT, BUSINESS, WAR, and SPORT) frequently mapped to one single target domain respectively. For instance, the source domain of SPORT is used to talk about the target domain of ECONOMIC ISSUES as illustrated in examples (3) and (4).

(3) They know that every member of the community, whether expatriate or local, *plays on the same level field* for business. They know the *game* is not fixed. (Donald Tsang, FS, 14 May 2001)

(4) Hong Kong remains a leading international business and financial centre where local and international businessmen and professionals continue to *compete on a level playing field*. (Anson Chan, CSA, 27 November 1997)

Under the ECONOMIC ISSUES ARE SPORTS metaphors, people are referred to as athletes playing in sports competitions. In examples (3) and (4), the business or financial activities are

conceptualised as sports games played or competed by both the expatriate and local businessmen on an equal level playing field. The source domain of SPORT highlights the aspects of ‘the expatriate and local people’, ‘level playing field’, and ‘competitiveness’. The speakers use SPORT metaphor to emphasize that Hong Kong’s economic environment is competitive and attractive to both local and international people.

In addition, we found the source domains of LIVING ORGANISM and JOURNEY frequently mapped to more than one target domains. Table 3.7 shows that the source domain of LIVING ORGANISM is frequently used to address both the ECONOMIC ISSUES and PERSONAL ISSUES, and the source domain of JOURNEY is frequently used to discuss both the POLITICAL ISSUES and MISCELLANEOUS ISSUES. Examples (5)-(6) are illustrative for the use of LIVING ORGANISM metaphors in the conceptualisation of ECONOMIC ISSUES.

(5) However, the Mainland economy continues to operate within a socialist system, *rooted* to a large extent in central administrative control. (Donald Tsang, FS, 15 May 1999)

(6) World headlines proclaimed that Hong Kong had led a world-wide stock market *tumble*. Whatever the truth of that, it was certainly a tribute to Hong Kong that Wall Street *caught a cold* only when Hong Kong *sneezed*. (Anson Chan, CSA, 16 January 1998)

In the corpus, the LIVING ORGANISM metaphors include the sub-metaphors of PLANT and PERSON metaphors. Example (5) talks about the economy in Mainland China as a plant with roots. Example (6) addresses the stock market as a person who tumbled, and the stock market in Wall Street and Hong Kong as a person who caught a cold and sneezed.

Examples (7)-(8) are illustrative for the use the source domains of LIVING ORGANISM in the conceptualization of PERSONAL ISSUES.

(7) President Xiao has a tight schedule for his visit. We sincerely wish President Xiao and his colleagues a *fruitful* and enjoyable stay in Hong Kong. (Elsie Leung, SJ, 10 November 2004)

(8) So I am glad to say that these trips have all been very truly rewarding and *fruitful*. I wish you all a *prosperous* and *healthy* 2017, and of course, Merry Christmas (John Tsang, FS, 2 December 2016)

In Examples (7)-(8), the speakers use the LIVING ORGANISM metaphors to talk about issues related to personal lives, e.g., personal stay or trips are understood as plants which are fruitful, and the 2017 New Year is a person who is prosperous and healthy.

The above discussions show cases of politicians using a single source domain to address different topics from the corpus. However, whether these topics have been framed by this source domain along similar or different lines is still unclear. We thus segue into a more in-depth analysis of the Mapping Principles between one source domain and different target domains in order to examine this question further. In the following section, we select WAR metaphor as an example to see the Mapping Principles between the source domain of WAR and three different target domains (WAR-SOCIAL ISSUES, WAR-ECONOMIC ISSUES, and WAR-POLITICAL ISSUES). Based on the Mapping Principles for WAR metaphors, we show how to generalize specific frames and the underlying framing functions in the discourse.

3.5.3 Metaphorical framing analysis of WAR metaphors

A relatively equal distribution of WAR source domains across the target domains of SOCIAL ISSUES, ECONOMIC ISSUES and POLITICAL ISSUES can be seen in Table 3.5 above. In total, we obtained 96 instances of SOCIAL ISSUES ARE A WAR metaphors, 107 instances of ECONOMIC ISSUES ARE A WAR metaphors and 106 instances of POLITICAL ISSUES ARE A WAR metaphors

from the corpus. Apart from analysing the underlying Mapping Principles for the three types of WAR metaphor, we also evaluate the keywords of different WAR metaphors as having either positive, negative, or neutral connotations. The analyses in the following section include two parts:

- (1) Metaphorical framing analysis based on the Mapping Principles for WAR metaphors (*see section 3.5.3.1*)
- (2) Metaphorical framing analysis based on the polarity evaluation of WAR metaphors (*see section 3.6.3.2*)

3.5.3.1 Metaphorical framing analysis based on the Mapping Principles for WAR metaphors

Step 1. Identify the frequently occurring metaphorical keywords in the corpus

The first step we conduct is to identify the frequent occurring metaphorical keywords under WAR source domains in the corpus. Table 3.8 lists all the metaphorical keywords under the SOCIAL ISSUES ARE A WAR metaphors, along with their frequencies, percentages, cumulative frequencies, cumulative percentages, and frequency levels. The frequent keywords marked with asterisks are determined based on a cut-off of the cumulative percentage up to 50% (see also in Table 3.9-3.10). All the keywords are lemmatised, which means the lemmas of the keywords are all included, e.g., when calculating the frequency of the lexeme *protect*, the frequencies of *protect*, *protects*, *protected* and *protection* are all calculated.

Table 3.8 shows that the keywords *violence*, *offence*, and *victim* are found to be frequent keyword types. These words are the most frequently occurring lexical items when Hong Kong secretaries use WAR metaphors to reason about social issues.

Table 3.8 Frequencies of the metaphorical keywords (lemmatised) under SOCIAL ISSUES ARE

A WAR metaphors

| SOCIAL ISSUES ARE A WAR | | | | |
|--------------------------------|------------------|---------------------|-----------------------------|--------------------------------|
| Metaphorical keywords | Frequency | Percentage % | Cumulative frequency | Cumulative percentage % |
| <i>violence*</i> | 18 | 18.75 | 18 | 18.75 |
| <i>offence*</i> | 14 | 14.58 | 32 | 33.33 |
| <i>victim*</i> | 13 | 13.54 | 45 | 46.88 |
| <i>protect</i> | 11 | 11.46 | 56 | 58.33 |
| <i>strategy</i> | 5 | 5.21 | 61 | 63.54 |
| <i>combat</i> | 4 | 4.17 | 65 | 67.71 |
| <i>outbreak</i> | 2 | 2.08 | 67 | 69.79 |
| <i>rescue</i> | 2 | 2.08 | 69 | 71.88 |
| <i>safeguarded</i> | 2 | 2.08 | 71 | 73.96 |
| <i>secure</i> | 2 | 2.08 | 73 | 76.04 |
| <i>spearheading</i> | 2 | 2.08 | 75 | 78.13 |
| <i>threaten</i> | 2 | 2.08 | 77 | 80.21 |
| <i>vigilant</i> | 2 | 2.08 | 79 | 82.29 |
| <i>at bay</i> | 1 | 1.04 | 80 | 83.33 |
| <i>break down</i> | 1 | 1.04 | 81 | 84.38 |
| <i>conflicts</i> | 1 | 1.04 | 82 | 85.42 |
| <i>danger</i> | 1 | 1.04 | 83 | 86.46 |
| <i>defend</i> | 1 | 1.04 | 84 | 87.50 |
| <i>disseminate</i> | 1 | 1.04 | 85 | 88.54 |
| <i>equipped</i> | 1 | 1.04 | 86 | 89.58 |
| <i>eradicated</i> | 1 | 1.04 | 87 | 90.63 |
| <i>frontline</i> | 1 | 1.04 | 88 | 91.67 |
| <i>kick off</i> | 1 | 1.04 | 89 | 92.71 |
| <i>killer</i> | 1 | 1.04 | 90 | 93.75 |
| <i>overcome</i> | 1 | 1.04 | 91 | 94.79 |
| <i>stroke</i> | 1 | 1.04 | 92 | 95.83 |
| <i>survives</i> | 1 | 1.04 | 93 | 96.88 |
| <i>trapped</i> | 1 | 1.04 | 94 | 97.92 |
| <i>undermined</i> | 1 | 1.04 | 95 | 98.96 |
| <i>weapon</i> | 1 | 1.04 | 96 | 100.00 |
| Total | 96 | 100.00 | | |

Similarly, we obtained the frequent keywords under the second type of WAR metaphors.

ECONOMIC ISSUES ARE A WAR, which are *strategy*, *forefront*, and *turmoil* as shown in Table

3.9.

Table 3.9 Frequencies of the metaphorical keywords (lemmatised) under ECONOMIC ISSUES ARE A WAR metaphors

| ECONOMIC ISSUES ARE A WAR | | | | |
|----------------------------------|--------------|----------------|--------------------|----------------------|
| Metaphorical keywords | Freq. | Perc. % | Cumu. freq. | Cumu. perc. % |
| <i>strategy*</i> | 27 | 25.23 | 27 | 25.23 |
| <i>forefront*</i> | 13 | 12.15 | 40 | 37.38 |
| <i>turmoil*</i> | 9 | 8.41 | 49 | 45.79 |
| <i>attack</i> | 7 | 6.54 | 56 | 52.34 |
| <i>protection</i> | 4 | 3.74 | 60 | 56.07 |
| <i>damage</i> | 3 | 2.80 | 63 | 58.88 |
| <i>threat</i> | 3 | 2.80 | 66 | 61.68 |
| <i>fortify</i> | 2 | 1.87 | 68 | 63.55 |
| <i>secure</i> | 2 | 1.87 | 70 | 65.42 |
| <i>in violation of</i> | 2 | 1.87 | 72 | 67.29 |
| <i>beachhead</i> | 2 | 1.87 | 74 | 69.16 |
| <i>march</i> | 2 | 1.87 | 76 | 71.03 |
| <i>spearhead</i> | 2 | 1.87 | 78 | 72.90 |
| <i>triggering</i> | 2 | 1.87 | 80 | 74.77 |
| <i>aligned with</i> | 1 | 0.93 | 81 | 75.70 |
| <i>back up</i> | 1 | 0.93 | 82 | 76.64 |
| <i>be alert to</i> | 1 | 0.93 | 83 | 77.57 |
| <i>beat</i> | 1 | 0.93 | 84 | 78.50 |
| <i>fend off</i> | 1 | 0.93 | 85 | 79.44 |
| <i>fight</i> | 1 | 0.93 | 86 | 80.37 |
| <i>realignment</i> | 1 | 0.93 | 87 | 81.31 |
| <i>safeguard</i> | 1 | 0.93 | 88 | 82.24 |
| <i>shied away from</i> | 1 | 0.93 | 89 | 83.18 |
| <i>shot</i> | 1 | 0.93 | 90 | 84.11 |
| <i>targeting</i> | 1 | 0.93 | 91 | 85.05 |
| <i>unrivalled</i> | 1 | 0.93 | 92 | 85.98 |
| <i>wipe-out</i> | 1 | 0.93 | 93 | 86.92 |
| <i>against</i> | 1 | 0.93 | 94 | 87.85 |
| <i>burst</i> | 1 | 0.93 | 95 | 88.79 |
| <i>captive</i> | 1 | 0.93 | 96 | 89.72 |
| <i>capturing</i> | 1 | 0.93 | 97 | 90.65 |
| <i>deployed</i> | 1 | 0.93 | 98 | 91.59 |
| <i>havoc</i> | 1 | 0.93 | 99 | 92.52 |
| <i>incursion</i> | 1 | 0.93 | 100 | 93.46 |
| <i>post-war</i> | 1 | 0.93 | 101 | 94.39 |
| <i>ravages</i> | 1 | 0.93 | 102 | 95.33 |
| <i>rivalries</i> | 1 | 0.93 | 103 | 96.26 |
| <i>struggle</i> | 1 | 0.93 | 104 | 97.20 |
| <i>turbulence</i> | 1 | 0.93 | 105 | 98.13 |
| <i>under attack</i> | 1 | 0.93 | 106 | 99.07 |
| <i>footing</i> | 1 | 0.93 | 107 | 100.00 |
| In total | 107 | 100.00 | | |

For the third type of WAR metaphors – the POLITICAL ISSUES ARE A WAR metaphors, we can see from Table 3.10, the keywords of *protect*, *safeguard*, *defend*, and *strategy* are identified as the frequent keyword types.

Table 3.10 Frequencies of the metaphorical keywords (lemmatised) of POLITICAL ISSUES ARE A WAR metaphors

| POLITICAL ISSUES ARE A WAR | | | | |
|-----------------------------------|------------------|---------------------|-----------------------------|--------------------------------|
| Metaphorical keywords | Frequency | Percentage % | Cumulative frequency | Cumulative percentage % |
| <i>protect*</i> | 27 | 25.47 | 27 | 25.47 |
| <i>safeguard*</i> | 17 | 16.04 | 44 | 41.51 |
| <i>defend*</i> | 8 | 7.55 | 52 | 49.06 |
| <i>strategy*</i> | 8 | 7.55 | 60 | 56.60 |
| <i>front</i> | 7 | 6.60 | 67 | 63.21 |
| <i>secure</i> | 6 | 5.66 | 73 | 68.87 |
| <i>attack</i> | 5 | 4.72 | 78 | 73.58 |
| <i>strike</i> | 3 | 2.83 | 81 | 76.42 |
| <i>vigilant</i> | 3 | 2.83 | 84 | 79.25 |
| <i>fight</i> | 2 | 1.89 | 86 | 81.13 |
| <i>guard</i> | 2 | 1.89 | 88 | 83.02 |
| <i>offence</i> | 2 | 1.89 | 90 | 84.91 |
| <i>backdrop</i> | 1 | 0.94 | 91 | 85.85 |
| <i>battle</i> | 1 | 0.94 | 92 | 86.79 |
| <i>breach</i> | 1 | 0.94 | 93 | 87.74 |
| <i>campaign</i> | 1 | 0.94 | 94 | 88.68 |
| <i>combative</i> | 1 | 0.94 | 95 | 89.62 |
| <i>conflicts with</i> | 1 | 0.94 | 96 | 90.57 |
| <i>damage</i> | 1 | 0.94 | 97 | 91.51 |
| <i>destroyed</i> | 1 | 0.94 | 98 | 92.45 |
| <i>fierce</i> | 1 | 0.94 | 99 | 93.40 |
| <i>opponents</i> | 1 | 0.94 | 100 | 94.34 |
| <i>peace</i> | 1 | 0.94 | 101 | 95.28 |
| <i>posse</i> | 1 | 0.94 | 102 | 96.23 |
| <i>turbulent</i> | 1 | 0.94 | 103 | 97.17 |
| <i>undermine</i> | 1 | 0.94 | 104 | 98.11 |
| <i>unimpregnable</i> | 1 | 0.94 | 105 | 99.06 |
| <i>withstand</i> | 1 | 0.94 | 106 | 100.00 |
| Total | 106 | 100.00 | | |

We will further examine examples in which these keywords occur in the following Steps 2-3 in order to understand why the preference for these mappings exist.

Step 2: Analyze Mapping Principles based on the contexts involving the frequently occurring keywords

The next step is to analyze Mapping Principles based on the frequently occurring keywords found in Step 1 and the surrounding contexts of these keywords. The comparisons between the frequent keywords among the three types of WAR metaphors are visualised in Figure 3.1. We found the source domain of WAR frequently shares the same aspects of ‘violence’, ‘offence’, and ‘victim’ with the target domain of SOCIAL ISSUES; the source domain of WAR frequently shares the same aspects of ‘strategy’, ‘forefront’, and ‘turmoil’ with the target domain of ECONOMIC ISSUES; the source domain of WAR frequently share the same aspects of ‘protecting’, ‘safeguarding’, and ‘defending’ with the target domain of POLITICAL ISSUES.

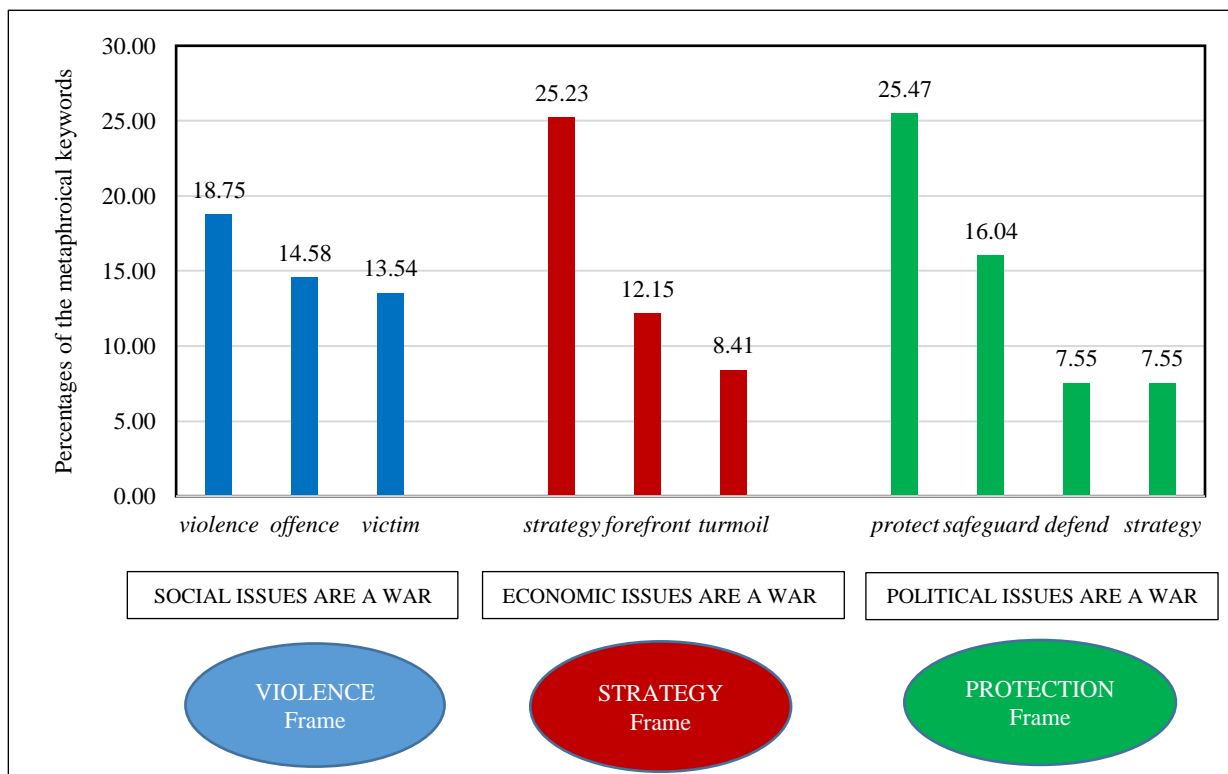


Figure 3.1 Comparisons on the frequent keywords (lemmatized) of WAR metaphors

To answer RQ3 concerning what are the Mapping Principles between the source-target domain pairing, we further look into the data involving the frequent metaphorical keywords

shown in Figure 3.1. Based on the contextual information and the empirical evidence from the corpus, we generate the Mapping Principle for the three types of WAR metaphors as follows.

The Mapping Principle for SOCIAL ISSUES ARE A WAR metaphors is: social issues are understood as a war, in that war harms civilians and social issues negatively affect members of a society. Example (9) - (10) is illustrative:

(9) I am sorry and regret that immediate *protection* for individual *victims* may not be possible at the time it is most needed, and this increases my awareness of the necessity to work even harder to strengthen education against sexual *violence* and to amend the law to provide better *protection* for people vulnerable to abuses. (Elsie Leung, SJ, 23 October 1999)

(10) During the 1998-99 session, the Administration introduced into the Legislative Council three bills to *combat* sexual *offences*. (Elsie Leung, SJ, 23 October 1999)

In example (9) –(10) , the social issue of ‘sexual violence’ is conceptualized as a war, in that war harms civilians who are the victims of the war, and sexual violence negatively affects Hong Kong people who are the victims of sexual violence.¹¹

The Mapping Principle for ECONOMIC ISSUES ARE A WAR metaphors is: economic issues are conceptualized as a war, in that (militaristic) strategizing is needed to win a war and (economic) strategizing is needed to advance an economic agenda. Example (11) is illustrative:

(11) Our main *strategies* include cooling the property market, preventing excessive credit growth, and pursuing a prudent fiscal policy. We shall monitor the situation closely and

¹¹ SEXUAL VIOLENCE IS A WAR metaphor was identified based the contextual evidence. In the surrounding contexts of ‘sexual violence’ as seen in examples (9) and (10), we found the occurrence of ‘combat’ and ‘protection’ which are typical metaphorical keywords under the WAR source domain. Just as a war harms civilians in a war scenario, sexual violence harms the residents in Hong Kong, but there is no actual war happening in Hong Kong. Thus, based on the surrounding contexts, sexual violence was conceptualized as a war happening to people in a non-war time period in Hong Kong.

implement appropriate measures, when necessary, to maintain macroeconomic and financial stability. (John Tsang, FS, 11 May 2011)

In example (11), the economic issue of ‘maintaining macroeconomic and financial stability’ is conceptualized as a war, in that specific (militaristic) strategy is needed to win a war and the strategy of ‘cooling the property market, preventing excessive credit growth, and pursuing a prudent fiscal policy’ is needed to maintain its economic and financial stability in Hong Kong.

The Mapping Principle for POLITICAL ISSUES ARE A WAR metaphors is: political issues are understood as war, in that civilians should be protected by the country during a war and the rights of citizens should be protected by the legal system of the government. Example (12) is illustrative:

(12) Human rights are therefore *protected* at the domestic, constitutional and international levels. Again, this is not merely theoretical *protection*. Here are some examples of court challenges concerning the *protection* of human rights made in the past seven years. (Wong Yan-lung, SJ, 18 November 2005)

In example (12), the political issue of ‘human rights protection’ is understood in terms of a war, in that civilians should be protected by the country during a war, and the human rights of Hong Kong citizens should be protected by the government at the domestic, constitutional and international levels.

The analysis in Step 3 below addresses RQ3 concerning how do patterns of Mapping Principles for WAR metaphors reflect the ways in which metaphors are used in the framing of different societal issues. Empirical examples from the corpus are provided for illustration. We will show that the ‘selection’ and ‘salience’ process of framing is related to the Mapping

Principles, which further reveal the framing functions of metaphor, i.e., ‘to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation’ (Entman, 1993, p. 53). Empirical examples from the corpus are also provided for illustration.

Step 3: Generate metaphorical frames and relevant framing functions based on patterns of Mapping Principles

In SOCIAL ISSUES ARE A WAR metaphors, the framing process of ‘selection’ refers to the specific use of the ‘violence’, ‘offence’, and ‘victim’ aspects of WAR source domain to talk about various social issues. The framing process of ‘salience’ refers to highlighting the shared aspects of violent, offensive, or victim-related attributes between the source-target pairing of WAR-SOCIAL ISSUES by frequently mentioning these keywords in the corpus. These predominant sharing aspects, which are also the reasons underlying the source-target domain mapping (Mapping Principles), shed light on the specific impact that the WAR metaphors exert in the framing of SOCIAL ISSUES. Based on the contextual information in the corpus, we generalize a VIOLENT frame which is highlighted in the mappings from WAR to SOCIAL ISSUES. The sharing attributes (i.e., ‘violence’, ‘offence’, and ‘victim’) from the VIOLENT frame are selected and emphasized by the politicians to reason about various social issues for particular purposes, such as to define a social problem, provide evaluations and solutions to solve the problems by legitimising relevant policies or agenda, all of which demonstrate the framing functions of SOCIAL ISSUES ARE A WAR metaphors in the public discourse. The specific ideology promulgated within each example will be discussed by looking at the specific context of the metaphor use.

In example (13), for example, the Hong Kong secretary uses WAR metaphors to address SEXUAL CRIME as one specific social issue in Hong Kong. She frequently mentions the keywords of ‘violence’, ‘offence’, and ‘victim’ to construct the VIOLENCE frame for the

conceptualisation of sexual crime. Within the VIOLENCE frame, the secretary defines SEXUAL CRIME as a violent and offensive issue with negative evaluations, so that to make sure the public can be fully aware of the harmfulness of the sexual crime which causes victims in Hong Kong. She instils the idea that ‘anti-sexual crime is anti-war’ and further introduces and promotes the anti-crime rules to the public.

(13) Crimes of sexual *violence* may be divided broadly into two categories, namely those committed by strangers and those committed by people known to the *victim*, such as family members, relatives or neighbours.....Corroboration rules used to be applicable to evidence given by children; co-defendants and *victims* of sexual *offences*. They are now only applicable to evidence given by sexual *offence victims*. (Elsie Leung, SJ, 23 October 1999)

In ECONOMIC ISSUES ARE A WAR metaphors, the framing process of ‘selection’ has to do with choosing the concepts of ‘strategy’, ‘forefront’, and ‘turmoil’ of WAR source domain to conceptualize different ECONOMIC ISSUES, and the framing process of ‘salience’ refers to highlighting the sharing aspects of strategy, forefront, or turmoil-related elements between the source-target pairing of WAR-ECONOMIC ISSUES by frequently utilizing the three keywords in the corpus. Based on the specific contextual information in the corpus, we generalise a STRATEGY frame, which is highlighted in the mapping from the source domain of WAR to the target domain of ECONOMIC ISSUES. STRATEGY frame has been frequently adopted by the political leaders to talk about Hong Kong’s economic issues. The sharing elements of ‘strategy’, ‘forefront’, and ‘turmoil’ are highlighted by the political leaders to define the financial crisis as a war and emphasize the importance of using economic strategies to overcome the financial turmoil at the forefront of the world economy.

For instance, when using WAR metaphors to frame economic issues, Hong Kong secretaries emphasize on the *strategies* for particular economic agenda, such as maintaining economic competitiveness in the global marketplace (see example 14), coping with the financial crisis, which was conceptualized as a *turmoil* that influences the Hong Kong economy (see example 15) at the *front line* of the world economy (see example 16).

(14) The companies behind them are putting more emphasis on smart design and advanced technology, with targeted branding and marketing *strategies* that are essential to staying competitive in the global marketplace. (John Tsang, FS, 20 April 2015)

(15) Hong Kong has undergone some severe economic setbacks since the Asian financial *turmoil*. (Antony Leung, FS, 26 November 2001)

(16) 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. (Anson Chan, CSA, 16 January 1998)

In terms of POLITICAL ISSUES ARE A WAR metaphors, the framing process of ‘selection’ refers to the frequent use of the ‘protect’, ‘safeguard’, ‘defend’, and ‘strategy’ aspects of the WAR source domain. The framing process of ‘salience’ refers to highlighting the shared aspects between the WAR-POLITICAL ISSUES by frequently mentioning these keywords in the speeches. Accordingly, based on relevant contextual information, we propose a PROTECTION frame for the conceptualisation of POLITICAL ISSUES with an emphasise on ‘protect’, ‘safeguard’, ‘defend’, and ‘strategy’. In examples (17) – (21), Hong Kong secretaries use the PROTECTION frame from the WAR metaphors to deliver a message that we need to protect the political system in Hong Kong strategically.

(17) Within Greater China I believe there is a growing consensus on what that purpose should be - to contribute to political stability and social order, and to *protect* the basic rights of the citizen. (Elsie Leung, SJ, 09 November 2004)

(18) In order to *safeguard* people's democracy, the legal system must be strengthened. (Elsie Leung, SJ, 9 November 2004)

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

(20) Whilst we need to have appropriate *strategic* planning and to balance competing demands for resources, the Administration is certainly prepared to consider constructive recommendations which can improve our legal aid system. (Rimsky Yuen, SJ, 14 January 2013)

(21) To rule the country in accordance with law has long been our country's basic *strategy* and is a crucial factor in securing long-term peace and stability. A system not governed by law can easily be distorted. (Elsie Leung, SJ, 10 November 2004)

The speakers implant the concept of 'protection' by frequently using the five keywords in their speeches, such as 'protect the basic rights of the citizen' in example (17), 'safeguard democracy' in example (18), 'defend the rights guaranteed to the HKSAR by the Basic Law' in example (19), the 'appropriate *strategic* planning to improve the legal aid system' in example (20) and the 'to rule Hong Kong in accordance with law as the basic *strategy*' in example (21). The salience of these keywords facilitates the political leaders to appeal to the public for protecting Hong Kong, just like soldiers safeguard their own countries during a war. Thus, using PROTECTION frame for the political issues is an effective way to legitimize the political agenda of maintaining the peace and stability of Hong Kong's legal system while propagating

the government's strategies or policies, e.g., rule the country in accordance with the Basic Law, as indicated in examples (19) and (21).

To summarise, this section analyzes the framing functions of WAR metaphors in the reasoning of different societal issues in Hong Kong. Based on the variations of the Mapping Principles we postulated between the WAR source domain and the three different target domains, we generalised three different metaphorical frames with different framing functions. We found that Hong Kong secretaries primarily use the VIOLENCE frame to construct various social issues in order to emphasize the seriousness of social crimes that negatively affect Hong Kong people. However, when discussing economic issues, they generally adopt the STRATEGY frame, with an emphasis on the importance of using economic strategies to advance particular economic agendas. Hong Kong secretaries employ the PROTECTION frame to refer to political issues in order to emphasize the rights of citizens should be protected by the legal system of the government. Overall, the framing functions of the three types of WAR metaphors were found to be used as a tool for legitimising political agendas and for advancing the propaganda of social, economic, and political policies.

The above analysis verifies the hypothesis that analysing the Mapping Principles of metaphors can assist with uncovering the framing processes of 'selection' and 'salience' and furthermore, facilitate investigating metaphorical framing effects in discourse.

3.5.3.2 Metaphorical framing analysis based on the polarity evaluation of WAR metaphors

This second level of analysis in this case study refers to the evaluations of the WAR metaphors in the corpus. A source domain may reflect both positive or negative connotations (Charteris-Black, 2004). For instance, the source domain of JOURNEY can reflect both the positive experiences of progressing or the negative ones, e.g., losing one's direction or meeting a dead

end. In this section, we move into examining whether more positive, negative, or neutral aspects of the WAR source domain have been selected in the framing of different target domains.

We evaluated the metaphorical keywords under the three types of WAR metaphors to generate patterns with implications for the metaphorical framing analysis. All of the keywords under WAR metaphors were evaluated as either positive, negative, or neutral, depending on their connotations in specific contexts. The two analysts conducted the evaluations on the 309 WAR metaphorical instances extracted from the corpus.¹² Examples (22)-(24) show WAR metaphors evaluated with positive, negative, and neutral connotations accordingly.

(22) But, as noted by the World Bank, economic integration has become a necessity for all regions to cope with the challenges of the world economy. And that is precisely the *strategy* Hong Kong is following. (Donald Tsang, 21 November 2003)

In example (22), the keyword *strategy* under the ECONOMIC ISSUES ARE A WAR metaphor has a positive connotation in the context as it refers to ‘economic integration’, which can help Hong Kong to cope with the economic challenges in the world.

(23) With turnovers becoming significantly thinner than last year, the market is vulnerable to manipulation and has recently shown signs of becoming one of the main reasons of speculators *attacking* the Hong Kong dollar. (Donald Tsang, FS, 14 August 1998)

¹² The inter-coder reliability results are ‘almost perfect’ for the evaluation of positive (Cohen’s K = .954) and negative (Cohen’s K = .964) metaphorical keywords, and ‘substantial’ for neutral (Cohen’s K = .757) metaphorical keywords.

The word *attacking* in example (23) is a metaphorical keyword under the ECONOMIC ISSUES ARE A WAR metaphor. *Attacking* is negatively evaluated in the context as it refers to the Hong Kong dollar being negatively influenced by the thin turnover and vulnerable market.

(24) To maintain Hong Kong's status as regional hub for international legal services and dispute resolution, efforts on both the domestic and international *fronts* would be necessary.

(Rimsky Yuen, SJ, 20 June 2013)

In example (24), the keyword *fronts* under the POLITICAL ISSUES ARE A WAR metaphor is evaluated with neutral connotation as the contextual information of domestic and international legal services could be either positive or negative.

The results of the evaluations on all of the keywords are presented in Table 3.11-3.13 below, along with their frequencies, percentages, and cumulative percentages. The frequent keywords marked with asterisks are determined based on a cut-off of the cumulative percentage up to 50%.

The evaluations of SOCIAL ISSUES ARE A WAR metaphors

Table 3.11 lists the evaluations for all of the metaphorical keywords under the SOCIAL ISSUES ARE A WAR metaphors. Overall, most of the keywords are positively or negatively evaluated, and only one keyword is neutrally evaluated. In total, we obtained 40 keywords with positive evaluations, 55 keywords with negative evaluations, and one keyword with a neutral evaluation. The frequent positive keywords are found to be *protect*, *strategy*, and *combat*; the frequent negative keyword is *violence*, and the frequent neutral keyword is *frontline*.

Table 3.11 Evaluations on the keywords (lemmatised) of SOCIAL ISSUES ARE A WAR metaphors

| SOCIAL ISSUES ARE A WAR | | | | | | | | | | | |
|-------------------------|-----------|------------|---------------|-------------------|-----------|------------|---------------|-------------------|----------|------------|---------------|
| Positive keywords | Freq. | Perc. % | Cumu. perc. % | Negative keywords | Freq. | Perc. % | Cumu. perc. % | Neutral keywords | Freq. | Perc. % | Cumu. perc. % |
| <i>protect*</i> | 11 | 27.5 | 27.5 | <i>violence*</i> | 18 | 32.7 | 32.7 | <i>frontline*</i> | 1 | 100 | 100 |
| <i>strategy*</i> | 5 | 12.5 | 40 | <i>offence</i> | 14 | 25.5 | 58.2 | Total | 1 | 100 | |
| <i>combat*</i> | 4 | 10 | 50 | <i>victim</i> | 13 | 23.6 | 81.8 | | | | |
| <i>rescue</i> | 2 | 5 | 55 | <i>outbreak</i> | 2 | 3.64 | 85.5 | | | | |
| <i>secure</i> | 2 | 5 | 60 | <i>threat</i> | 2 | 3.64 | 89.1 | | | | |
| <i>spearhead</i> | 2 | 5 | 65 | <i>break down</i> | 1 | 1.82 | 90.9 | | | | |
| <i>vigilant</i> | 2 | 5 | 70 | <i>conflicts</i> | 1 | 1.82 | 92.7 | | | | |
| <i>defend</i> | 1 | 2.5 | 72.5 | <i>danger</i> | 1 | 1.82 | 94.6 | | | | |
| <i>disseminate</i> | 1 | 2.5 | 75 | <i>killer</i> | 1 | 1.82 | 96.4 | | | | |
| <i>equip</i> | 1 | 2.5 | 77.5 | <i>trapped</i> | 1 | 1.82 | 98.2 | | | | |
| <i>eradicate</i> | 1 | 2.5 | 80 | <i>undermined</i> | 1 | 1.82 | 100 | | | | |
| <i>kick off</i> | 1 | 2.5 | 82.5 | Total | 55 | 100 | | | | | |
| <i>overcome</i> | 1 | 2.5 | 85 | | | | | | | | |
| <i>safe</i> | 1 | 2.5 | 87.5 | | | | | | | | |
| <i>safeguard</i> | 1 | 2.5 | 90 | | | | | | | | |
| <i>strike</i> | 1 | 2.5 | 92.5 | | | | | | | | |
| <i>survive</i> | 1 | 2.5 | 95 | | | | | | | | |
| <i>weapon</i> | 1 | 2.5 | 97.5 | | | | | | | | |
| <i>at bay</i> | 1 | 2.5 | 100 | | | | | | | | |
| Total | 40 | 100 | | | | | | | | | |

The evaluations of ECONOMIC ISSUES ARE A WAR metaphors

The evaluations on the keywords under ECONOMIC ISSUES ARE A WAR metaphors are presented in Table 3.12. Similar to the evaluations on SOCIAL ISSUES ARE A WAR metaphors, most of the keywords were uniformly positively or negatively evaluated, and only a few keywords have neutral evaluations. The results show that there are 58 positive keywords, 37 negative keywords, and 12 neutral keywords, among which the frequent positive keyword is *strategy*, the frequent negative keywords are *turmoil* and *attack*, and the frequent neutral keyword is *frontline*.

Table 3.12 Evaluations on the keywords (lemmatised) of ECONOMIC ISSUES ARE A WAR metaphors

| ECONOMIC ISSUES ARE A WAR | | | | | | | | | | | |
|---------------------------|-----------|---------------|---------------|------------------------|-----------|---------------|----------------|-------------------|-----------|---------------|---------------|
| Positive keywords | Freq. | Perc. % | Cumu. perc. % | Negative keywords | Freq. | Perc. % | Cummu. perc. % | Neutral keywords | Freq. | Perc. % | Cumu. perc. % |
| <i>strategy*</i> | 27 | 46.55 | 46.55 | <i>turmoil*</i> | 9 | 24.32 | 24.32 | <i>frontline*</i> | 10 | 83.33 | 83.33 |
| <i>protection</i> | 4 | 6.90 | 53.45 | <i>attack*</i> | 8 | 21.62 | 45.95 | <i>beachhead</i> | 2 | 16.67 | 100.00 |
| <i>frontline</i> | 3 | 5.17 | 58.62 | <i>damage</i> | 3 | 8.11 | 54.05 | Total | 12 | 100.00 | |
| <i>fortified</i> | 2 | 3.45 | 62.07 | <i>threat</i> | 3 | 8.11 | 62.16 | | | | |
| <i>march</i> | 2 | 3.45 | 65.52 | <i>beat</i> | 1 | 2.70 | 64.86 | | | | |
| <i>secure</i> | 2 | 3.45 | 68.97 | <i>burst</i> | 1 | 2.70 | 67.57 | | | | |
| <i>spearhead</i> | 2 | 3.45 | 72.41 | <i>deployed</i> | 1 | 2.70 | 70.27 | | | | |
| <i>safeguard</i> | 1 | 1.72 | 74.14 | <i>havoc</i> | 1 | 2.70 | 72.97 | | | | |
| <i>trigger</i> | 1 | 1.72 | 75.86 | <i>in violation of</i> | 1 | 2.70 | 75.68 | | | | |
| <i>shot</i> | 1 | 1.72 | 77.59 | <i>incursion</i> | 1 | 2.70 | 78.38 | | | | |
| <i>against</i> | 1 | 1.72 | 79.31 | <i>post-war</i> | 1 | 2.70 | 81.08 | | | | |
| <i>align with</i> | 1 | 1.72 | 81.03 | <i>ravages</i> | 1 | 2.70 | 83.78 | | | | |
| <i>back up</i> | 1 | 1.72 | 82.76 | <i>rivalries</i> | 1 | 2.70 | 86.49 | | | | |
| <i>be alert to</i> | 1 | 1.72 | 84.48 | <i>struggle</i> | 1 | 2.70 | 89.19 | | | | |
| <i>captive</i> | 1 | 1.72 | 86.21 | <i>triggering</i> | 1 | 2.70 | 91.89 | | | | |
| <i>capture</i> | 1 | 1.72 | 87.93 | <i>turbulence</i> | 1 | 2.70 | 94.59 | | | | |
| <i>fend off</i> | 1 | 1.72 | 89.66 | <i>violate</i> | 1 | 2.70 | 97.30 | | | | |
| <i>fight</i> | 1 | 1.72 | 91.38 | <i>wipe-out</i> | 1 | 2.70 | 100.00 | | | | |
| <i>footing</i> | 1 | 1.72 | 93.10 | Total | 37 | 100.00 | | | | | |
| <i>realignment</i> | 1 | 1.72 | 94.83 | | | | | | | | |
| <i>shied away from</i> | 1 | 1.72 | 96.55 | | | | | | | | |
| <i>target</i> | 1 | 1.72 | 98.28 | | | | | | | | |
| <i>unrivalled</i> | 1 | 1.72 | 100.00 | | | | | | | | |
| Total | 58 | 100.00 | | | | | | | | | |

The evaluations of POLITICAL ISSUES ARE A WAR metaphors

For the keywords under the POLITICAL ISSUES ARE A WAR metaphors, we can see from Table 3.13 that overall the majority keywords are positively evaluated. In total, 81 keywords have positive connotations, 15 keywords have negative connotations, and 10 keywords have neutral connotations. The frequent positive keyword is *protect*, the frequent negative keywords are *attack* and *offence*, and the frequent neutral keyword is *frontline*.

Table 3.13 Evaluations on the keywords (lemmatised) of POLITICAL ISSUES ARE A WAR metaphors

| POLITICAL ISSUES ARE A WAR | | | | | | | | | | | |
|----------------------------|-----------|---------------|---------------|-----------------------|-----------|---------------|---------------|-------------------|-----------|---------------|---------------|
| Positive keywords | Freq. | Perc. % | Cumu. perc. % | Negative keywords | Freq. | Perc. % | Cumu. perc. % | Neutral keywords | Freq. | Perc. % | Cumu. perc. % |
| <i>protect*</i> | 27 | 33.33 | 33.33 | <i>attack*</i> | 5 | 33.33 | 33.33 | <i>frontline*</i> | 5 | 50.00 | 50.00 |
| <i>safeguard</i> | 17 | 20.99 | 54.32 | <i>offence*</i> | 2 | 13.33 | 46.67 | <i>defence</i> | 2 | 20.00 | 70.00 |
| <i>strategy</i> | 8 | 9.88 | 64.20 | <i>defence</i> | 1 | 6.67 | 53.33 | <i>backdrop</i> | 1 | 10.00 | 80.00 |
| <i>secure</i> | 6 | 7.41 | 71.60 | <i>breach</i> | 1 | 6.67 | 60.00 | <i>battle</i> | 1 | 10.00 | 90.00 |
| <i>defend</i> | 5 | 6.17 | 77.78 | <i>campaign</i> | 1 | 6.67 | 66.67 | <i>opponent</i> | 1 | 10.00 | 100.00 |
| <i>strike</i> | 3 | 3.70 | 81.48 | <i>conflicts with</i> | 1 | 6.67 | 73.33 | Total | 10 | 100.00 | |
| <i>vigilant</i> | 3 | 3.70 | 85.19 | <i>damage</i> | 1 | 6.67 | 80.00 | | | | |
| <i>fight</i> | 2 | 2.47 | 87.65 | <i>destroy</i> | 1 | 6.67 | 86.67 | | | | |
| <i>forefront</i> | 2 | 2.47 | 90.12 | <i>turbulent</i> | 1 | 6.67 | 93.33 | | | | |
| <i>guard</i> | 2 | 2.47 | 92.59 | <i>undermine</i> | 1 | 6.67 | 100.00 | | | | |
| <i>combative</i> | 1 | 1.23 | 93.83 | Total | 15 | 100.00 | | | | | |
| <i>fierce</i> | 1 | 1.23 | 95.06 | | | | | | | | |
| <i>peace</i> | 1 | 1.23 | 96.30 | | | | | | | | |
| <i>posse</i> | 1 | 1.23 | 97.53 | | | | | | | | |
| <i>unimpregnable</i> | 1 | 1.23 | 98.77 | | | | | | | | |
| <i>withstood</i> | 1 | 1.23 | 100.00 | | | | | | | | |
| Total | 81 | 100.00 | | | | | | | | | |

Metaphorical framing analysis based on evaluations of WAR metaphors

The overall evaluations on WAR metaphors associated with SOCIAL ISSUES, ECONOMIC ISSUES, and POLITICAL ISSUES are compared and visualised in Figure 3.2. The research indicates that the majority of the keywords are evaluated with either positive or negative connotations with only a small percentage evaluated as neutral (1.04%, 11.21%, and 9.43% for each of the three types). More than half (57.29%) of the keywords related to SOCIAL ISSUES have negative connotations, while more than half of the keywords related to ECONOMIC ISSUES (54.21%) have positive connotations. The contrast is particularly obvious in the keywords related to POLITICAL ISSUES, in which 76.42% are positively evaluated, and 14.15% are negatively evaluated.

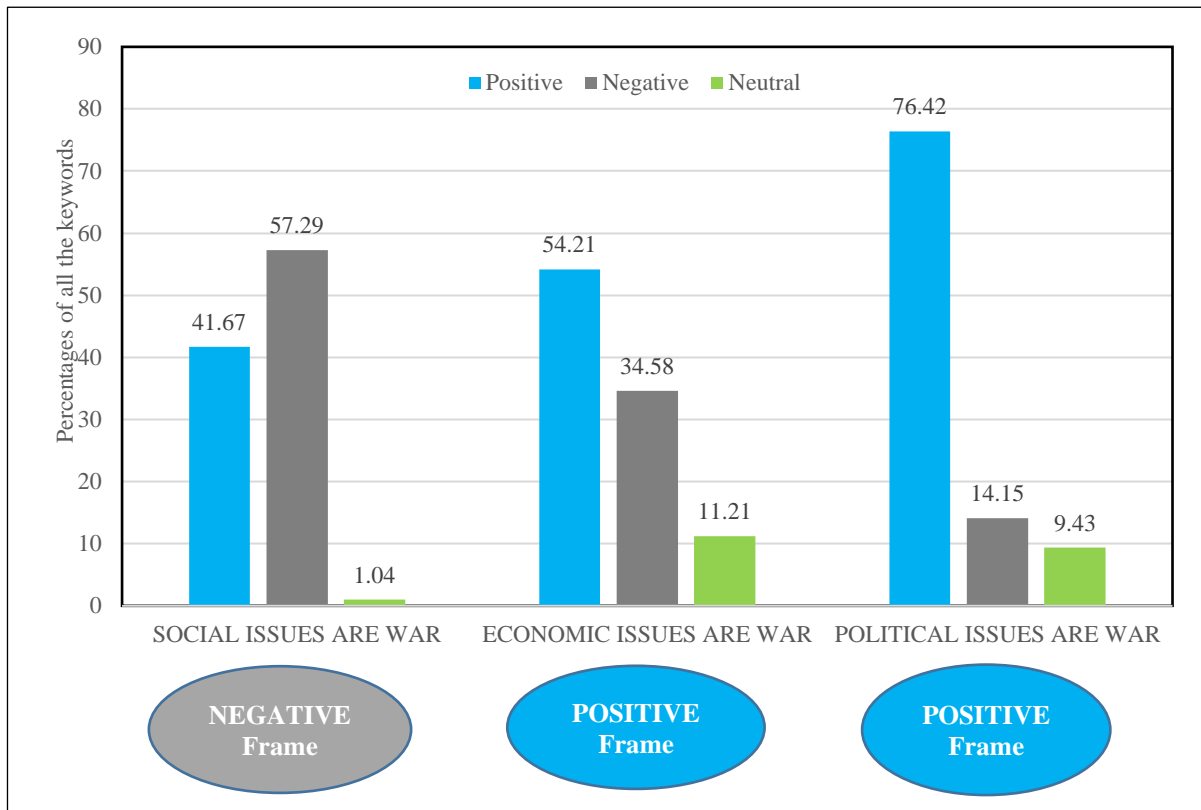


Figure 3.2 Comparison of the overall evaluations of WAR metaphors

The patterns demonstrate that overall, WAR metaphors have been used in more negative ways in the framing of social issues; however, they have been used in more positive ways in the framing of both economic and political issues. The varied evaluations demonstrate different framing effects exerted by WAR metaphor in the conceptualisation of social issues, economic issues, and political issues. Accordingly, we generalise a NEGATIVE frame used for reasoning about social issues, and POSITIVE frames for reasoning about economic and political issues. The variations and similarities of the positive, negative, and neutral frequent keywords show the specific aspects emphasized when using WAR metaphors to frame different target issues. These three different frames reveal Hong Kong politicians' selections of more positive, more negative, or more neutral aspects of WAR source domain in the framing of target issues, indicating their moral evaluations or attitudes towards particular societal issues.

3.6 Conclusion

The present study proposed that investigating the semantic meanings of the salient lexical choices under metaphor source domains and the underlying reasons for the source-target domain mappings (i.e., Mapping Principles) offers a more principled way to move to and provide support for metaphorical framing analysis in large corpora. Using the empirical data from a corpus of Hong Kong public speeches, we conducted a case analysis of WAR metaphors which verifies the hypothesis that analyzing the Mapping Principles of metaphors can assist with uncovering the framing processes of ‘selection’ and ‘salience’ and furthermore, facilitate investigating metaphorical framing effects in discourse.

In the case study of WAR metaphors, we examined the corpus data, identified the keywords that were mapped, and postulated Mapping Principles for three types of WAR metaphors. We found the predominant use of a VIOLENCE frame associated with SOCIAL ISSUES, a STRATEGY frame associated with ECONOMIC ISSUES, and a PROTECTION frame associated with POLITICAL ISSUES. Different metaphorical frame types reflect different framing functions in the corpus. Hong Kong secretaries primarily used the VIOLENCE frame to talk about the seriousness of social crimes that negatively affect Hong Kong people. They generally adopted the STRATEGY frame to emphasize the importance of using economic strategies for advancing particular economic agendas, and they primarily employed the PROTECTION frame to highlight the importance of protecting the rights of citizens by the legal system of the government. Overall, the WAR metaphorical frames were used for legitimizing political agendas and for advancing the propaganda of social, economic, and political policies.

In addition, we compared the evaluations of WAR metaphors by evaluating the keywords with positive, negative, and neutral connotations. Overall, SOCIAL ISSUES were found to be addressed in more negative ways, while ECONOMIC ISSUES and POLITICAL ISSUES were discussed in more positive ways. The evaluation analysis reveals politicians’ overall

moral evaluations and attitudes toward specific societal issues. This second level of analysis helps to reveal politicians' overall moral evaluations and attitudes toward different societal issues in Hong Kong. It complements the first level of analysis, which focuses on generating framing effects based on Mapping Principle patterns. Combining both levels of analyses would provide a more comprehensive investigation of the metaphorical framing functions in corpus-based studies.

The corpus evidence has shown that, based on the Mapping Principles, we can determine which specific aspects of the source domain have been selected and what the underlying reasons for the salience of the selected aspects are by looking at their frequency patterns in the corpus (Ahrens, 2010). These results correspond to the framing process of 'selection' and 'salience' (Entman, 1993), respectively. The keywords found in the corpus relate to the framing process of 'selection', and the frequency of the keywords underpins the source-target pairings, which, in turn, related to the framing process of 'salience'.

The keyword choices of the speakers reflect the concepts to be highlighted at the conceptual level. Specific keywords are highlighted from the frequent mappings between source-target domain pairings, which further reflect specific framing functions at the discourse. This leads to the generation of specific metaphorical frames and sheds light on the framing functions at the communicative level.

Thus, Mapping Principles show the rationale for metaphorical framing at a cognitive level (identification of conceptual mappings between source-target domain pairings) and a discourse-based level (corpus evidence of frequently occurring metaphorical keywords in these mappings). Metaphorical framing functions (e.g., defining issues, causal interpretations, evaluations, proposing solutions to issues), which are analyzed at a practice-based or communication-based level, derive their functionality from the analyses done at the lower levels. The analysis in this study explicitly links the concepts of selection and salience with

Mapping Principles and argues that it is advantageous to make this linkage explicit at the cognitive and discourse levels before moving into the higher-order analyses of framing. It also enriches the existing Critical Discourse Analysis based studies of metaphorical framing in public discourse and also identifies how notions of framing in communication science may align with conceptual metaphors in cognitive linguistics.

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Appendix 3.1 Lists of the five categories of the broad and specific target issues

| SOCIAL ISSUES | ECONOMIC ISSUES | POLITICAL ISSUES | PERSONAL ISSUES | MISCELLANEOUS ISSUES |
|----------------------|---------------------------|-------------------------|--------------------------|----------------------------------|
| (Social) Development | (Economic) Development | (Political) Development | (Personal) Development | (General) Development |
| Arts | Downturn issues | Constitution | Personal life experience | Cultural and creative industries |
| Civil service | E-commerce | Democracy | | Globalization and integration |
| Culture | Economic growth | Election | | |
| Crime | Economic stability | Governance | | |
| Education | Economic integration | Handover | | |
| Environmental issues | Economic recovery | Institution | | |
| Minorities | Economic reform | Judicial system | | |
| Family | Film industry | Legislation | | |
| Food issues | Finance | Political reform | | |
| Healthcare | Food supply | Universal suffrage | | |
| Housing | Free economy | | | |
| Human equality | Industrialization | | | |
| Immigration | Inflation | | | |
| Medical service | Intellectual property | | | |
| Natural disasters | Logistics development | | | |
| Population | Manufacturing industry | | | |
| Poverty | Real estate | | | |
| Safety issues | Technological development | | | |
| Sports | Telecommunication | | | |
| Transportation | Tourism | | | |
| Youth | Trade | | | |

Chapter 4

Applying Time Series Analysis in Public Discourse: A Case Study of Metaphor in Hong Kong Public Speeches (1997-2017)¹

Abstract

Previous research has demonstrated how metaphors are used in political discourse. However, how metaphor usage patterns are systematically structured across political discourse in time is only beginning to be explored. This study applies the Time Series Analysis to a corpus of public speeches as a case study to investigate metaphor source domain use across time in political discourse and the potential implications for the strategic use of metaphors in political communication. The ARIMA time series modelling procedures were explicitly presented and different types of TSA modelling results were discussed with detailed qualitative interpretations. TSA modelling on the frequently used source domains shows that there are no significant autocorrelations among the temporally ordered observations for the majority of the source domains use. This result reaffirms the claim that discourse phenomenon is messy in nature and less predictable by quantitative analysis using statistical methods. The study only found LIVING ORGANISM metaphors (its overall use & male politicians' use) demonstrate the clearest usage profile across time which can be attributable to the progressions of background events in the broad context based on qualitative interpretations of the corpus evidence. We conclude this study by emphasizing the Time Series Analysis as a complementary method offering structural insights to the qualitative study of metaphors in discourse over time.

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4.1 Introduction

One primary focus of discourse research is how particular linguistic or discourse features change over time. In diachronic corpus-assisted discourse studies, the most popular way to track changes of variables of interest is to compare their occurrence frequencies between corpora in different time frames for evidence of significant differences (Tay, 2019). Statistical tools for significance tests have usually been applied to measure the degree of associations between variables of interest and time. Recently, a few diachronic studies have noticed the factor of time series when analysing discourse over time (Burgers & Ahrens, 2020; Koplenig, 2017; Tay, 2017, 2019). These studies observed internal relationships within temporally ordered observations, known as autocorrelation, which means the occurrence frequency of one variable at time A influences its corresponding occurrence frequency at time B.² If we simply calculate the frequencies at time A and B and compare these frequencies using correlation test (e.g., Pearson correlation analysis) for evidence of significant differences, we would overlook the possible presence of the autocorrelation functions between consecutive observations of the temporal data. Findings of these studies thus questioned the conventional correlation tests which assume independent observations among temporally ordered data that leads to “incorrect statistical inference where potential effects are meaningless” (Koplenig, 2017, p. 166).

Tay (2019) specifically introduced a novel quantitative method - time series analysis (TSA) and its potential in discourse analysis research to address the limitations of the conventional correlation tests. A time series refers to “a chronological sequence of observations on a particular variable” (Box, Jenkins, Reinsel, and Ljung, 2015, p. 3). TSA is the analysis of a series of observations made across time using statistical techniques. Rather than assuming the independence of the data, TSA extracts components and internal structure (autocorrelation)

² “Autocorrelation is the correlation between values within the same series, separated by a given time interval.” (Tay, 2019, p. 26).

of the series with its modelling and forecasting features. Tay (2019) further presented case studies of applying TSA in three different discourse contexts of psychotherapy, university lectures, and news articles. He found clear autocorrelation effects within metaphor use across multiple psychotherapy sessions and the use of non-informational markers in weekly university lectures. In political discourse analysis, Burgers and Ahrens (2020) have attempted to apply TSA to double-check if the observations in the diachronic data were autocorrelated. They analyzed changes of TRADE metaphors in a corpus of political speeches focusing on US State of the Union (SOU) addresses over 225 years (1790-2014). After obtaining a positive association between time and TRADE IS A CONTAINER metaphor from the results of the standard correlation test (i.e., Pearson correlation coefficients), they followed up with TSA and detected the autocorrelation functions among frequencies of TRADE IS A CONTAINER metaphor at a 5-year interval within the 225-year time frame.

The above discourses under study have clearly-defined time structures. The US SOU addresses were delivered once per year (<https://www.presidency.ucsb.edu/node/324107/>). The discourses of psychotherapy and university lectures usually have regular sessions and the contents in previous sessions are expected to exert some impacts on future sessions (Tay, 2017). Unsurprisingly, discourses with fixed time structures are likely to be analyzed with a time series model to see if particular discourse features have constant structural changes in the series. Nevertheless, the application of TSA in discourse without regular or clear-cut time structures is still underexplored. It is thus not clear whether and what autocorrelation functions can be found in the discourse of this type. A study focusing on discourses with random chronologic structures can bring new insights to enrich the existing TSA in discourse research. As Tay (2019) has demonstrated that the contrasting nature of different discourses may invite different time series models offering various interpretations and implications, it is also

interesting to see what similarities or divergencies can arise when applying TSA in discourses with regular and irregular temporal structures.

To this end, this article extends the TSA method to political discourse without well-defined time frames with a case study of metaphor use in a corpus of Hong Kong public speeches. All the speeches were delivered by Hong Kong principal officials on a random time basis, spanning from 1 July 1997 to 31 December 2017, a critical timeframe for Hong Kong as the region has transformed from a British colony to a Special Administrative Region of China on 1 July 1997. Another reason for focusing on political discourse is that TSA allows the possibility of forecasting future values, which are of great usefulness to political discourse analysis in terms of predicting politicians' future language patterns and uncovering the underlying political communication strategies. The discourse context of this study at the same time also presents the data as a suitable case for an exploration of the rhetorical strategies used by Hong Kong politicians over the first two decades of the post-handover period, during which Hong Kong has been experiencing significant social, economic and political changes.

In what follows, we will first briefly review the previous diachronic studies of metaphor use in political discourse and then introduce the TSA method in detail. The TSA modelling results will be presented followed by qualitatively contextual-based interpretations, that is, how the quantitative TSA results might provide insights into qualitative discourse analysis from actual examples of metaphors used. We conclude this study by providing comparisons with previous literature, implications, and limitations of applying the TSA method in discourse.

4.2 Metaphor use in public discourse across time

In Conceptual Metaphor Theory, metaphors are considered as cross-domain mappings from a more concrete source domain (e.g., WAR) to a more abstract target domain (e.g., DEMOCRACY) (Lakoff, 1993; Lakoff & Johnson, 1980/2003). The existing studies of metaphor in public

discourse have primarily focused on analysing metaphorical framing functions from both theoretical (Burgers, Konijn, & Steen, 2016) and empirical aspects regarding how metaphors influence people's reasoning about various societal issues, e.g., taxation (Lakoff, 1996/2002), immigration (Charteris-Black, 2006), Euro trading (Charteris-Black & Musolff, 2003), and Brexit referendum (Musolff, 2017). Different metaphors can exert different effects on the way people conceptualize and react to policies. For instance, one set of experimental studies has shown that when the target domain of CRIME is conceptualized in terms of the source domain of VIRUS, participants opt for supporting preventative crime policies, while when CRIME is conceptualized as BEAST, participants alter to stronger support for harsh anti-crime policies (Thibodeau & Boroditsky, 2011, 2013, 2015). Also, some studies have explored how metaphor use associated with various linguistic and social factors, e.g., gender (Ahrens, 2009) or the combined factors of gender, speech section, and political role (Zeng, Tay, & Ahrens, 2020).

While there have been tremendous research efforts devoted to how metaphors are used, relatively fewer studies have explored the diachronic changes of metaphors in political discourse over time. Burgers (2016) suggests that modelling the ways metaphors change over time can provide insight into how conceptualizations of topics have changed. This is reflected in Burgers & Ahrens (2020) who compared the US presidents' use of TRADE metaphors in a corpus of US State of the Union Address (SOU) from 1790 to 2014. They calculated Pearson correlation coefficients for the associations between TRADE metaphors and time and found only the TRADE IS A CONTAINER metaphor increased in relation with time. In diachronic studies focusing on Asian politics, Ahrens and Zeng (2017) investigated Hong Kong political leaders' metaphor use when conceptualizing the issue of EDUCATION in a corpus of Hong Kong policy addresses before and after Hong Kong's handover from Britain to China in 1997. By comparing the relative frequencies of different source domains under EDUCATION metaphors in the policy addresses before and after 1997, they found considerable changes of EDUCATION metaphor use

between British Governors (1987-1996) and Hong Kong Chief Executives (1997-2014). Lu and Ahrens (2008) examined the overall percentages of the lexical items under the A COUNTRY IS A BUILDING metaphorical frame in a corpus of Taiwanese presidential speeches from 1954 to 2006. They identified two culture-specific metaphors (the retrospective BUILDING metaphors and the RECONSTRUCTION metaphors) as being more productive from 1954 to 1975 than the later period due to the transitional of the authoritative leaders. Another study tracked changes of metaphor use in the corpora of Chinese and American leaders' political speeches addressed to university students in three time periods, before 1900, from 1900 to 2010 and after 2010 (Sun & Chen, 2018). They compared the raw frequencies of different source domains between the two corpora and obtained the variation patterns with CIRCLE and ART metaphor clusters being unique to the Chinese data and RELIGION and DRAMA metaphor clusters only occurring in the American data. They also found a more stable use of metaphors in American data than the Chinese data after 2010. The study concluded that these differences may be caused by the diverse cultural backgrounds of the two countries.

These existing studies may notice that time indeed is a stronger predictor of metaphor variations which suggests that studying diachronic changes is pivotal in uncovering when particular metaphors may exert different influence in diachronic corpora. The existing diachronic studies have mainly adopted quantitative tests to see the significance of differences when tracking changes of variables of interest. However, the aspect of autocorrelation is seldom discussed in discourse analysis. Apart from Burgers & Ahrens (2020) which noted the autocorrelations among consecutive observations, the other studies tend to assume independence of the data. While there might be cases where the frequency of metaphor occurrence at time A influences the corresponding frequency at time B, it is necessary to check the possibility of the internal associations by using a statistical tool such as TSA.

4.3 Time Series Analysis in discourse

TSA method has been explicitly introduced in Box et al. (2015) and Tay (2019). Box et al. (2015) focused on explaining the underlying mathematical theories of TSA while Tay (2019) mainly presented TSA's basic logic and process and its application in different discourse domains. Considering the novelty of applying TSA in discourse, in this section, we will briefly summarize the main points about TSA in Tay (2019), highlighting its unique features in discourse analysis.

As previously mentioned, TSA is the analysis of a series of observations made across time using statistical techniques. It is a process that extracts components and internal structure (autocorrelation) of the series. TSA expresses the series value at any time t as an equation of some aspect of its past values. Its equation refers to a time series model, and the structural properties of time series models can be interpreted as discourse signatures. The components of the time series include 'raw series', 'trend', 'seasons and cycles', and 'irregular fluctuations'. 'Raw series' is a plot of consecutive measurements of the variable (y-axis) against time (x-axis), e.g., monthly sales figures over 20 years. 'Trend' is a gradual long-term increase or decrease, e.g., a stable background level of economic growth. 'Seasons and cycles' are short-term oscillations due to recurrent seasonal factors or long-term oscillations due to more variable factors, e.g., sales increase during the holiday season each year and business cycles every 5-7 years. 'Irregular fluctuations' is the remainder or residuals after the above components are filtered out. This is the unpredictable component of the series, e.g., unforeseen circumstances like natural disasters and war.

Regarding TSA of discourse, Tay (2019) conducted three case studies in three different discourse domains to demonstrate the feasibility of TSA for discourse analysis. In the first study, he analyzed the use of metaphors in psychotherapy sessions. The dataset includes 30 sessions from different dyads in a Chinese counselling centre. The TSA modelling found a

moving average (MA) model describing the use of metaphor at any interval is linearly correlated with residuals (i.e., over or underuse) two intervals prior. An essential part of TSA for discourse analysis is that the qualitative interpretation of the model itself, in other words, TSA models frequencies but the qualitative meanings of metaphors need to be manually examined. The qualitative interpretations of the results in this study are that ‘unexpected moments of metaphor-related insight have a quick but short-term impact on what happens in the immediate future’ (Tay, 2019, p. 62). In addition, the generally less fit of models for metaphor use indicates that metaphor use in psychotherapy discourse is less predictable.

The second study analyzed the non-informational marker (*You know, I mean, I guess, you see, sort of, let’s say, etc.*) in weekly university lectures. The dataset includes transcripts of three courses in social science, science, and humanities from Yale University’s Open Yale courses (<https://oyc.yale.edu/courses>). He found clear autoregressive (AR) model in the use of non-informational marks in social science lectures. The non-informational marks are linearly correlated with its use in one lecture prior (past use influences future use). The interpretations are that the progressive development of informational aspects is related to the continuity of the non-informational mark use in consecutive lectures.

The third study is TSA of three thematic keywords (*democracy, terrorism, and communism*) in newspaper discourse. The dataset includes 37-year relevant articles from the New York Times (1980-2017). The TSA modelling results show a mean model for ‘democracy’ which likely indicates the long-term ideological stability of democracy in the American media discourse. There are random walk models found in describing ‘terrorism’ and ‘communism,’ and the interpretation is that terrorism and communism are more likely to be discussed spontaneously rather than at a stable level.

These three case studies emphasized the potential of the TSA method to the study of language features of interest in different discourse domains. The quantitatively structural

information of discourse provides direction for subsequent qualitative interpretations. TSA is thus a good complement to the existing qualitatively-based discourse studies. In line with the above studies and to enrich the current less TSA of discourse research, this study extends TSA to political discourse data without regular chronological structures. We apply TSA to a corpus of political discourse randomly delivered by Hong Kong principal officials from 1 July 1997 to 31 December 2017. The present variable of interest is the number of frequent metaphor source domains structured in the time series spanning 21 years. Three research questions were addressed:

- (1) How are metaphor source domains structured in Hong Kong political discourse spanning from 1 July 1997 to 31 December 2017?
- (2) What are the potential implications of TSA for the strategic use of metaphors in political communication?
- (3) What are the similarities or differences of applying TSA in discourses with and without regular chronological structures?

4.4 Method

4.4.1 Data

The corpus utilized in this study was manually sampled from the public speeches by senior officials in Hong Kong available on the official website of the Hong Kong government (<http://www.info.gov.hk/isd/speech/sensp.htm>). We first collected all the speeches from 1 July 1997 to 31 December 2017, including 1,248 speeches by 11 principal officials in Hong Kong: the Chief Secretary for Administration (CSA), the Financial Secretary (FS), and the Secretary for Justice (SJ).³ These speeches were mostly delivered in response to various societal events,

³ For detailed information about the role of CSA, FS and SJ in Hong Kong, refer to the webpages at <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> accordingly.

such as business forums, university anniversary ceremonies or legislative council meetings, and thus, there were no regular time intervals for the delivery of these speeches. Secondly, we randomly selected 10% of the total speeches totalling 125 speeches with 159,519 words as the final corpus for analysis.⁴ The detailed information of the corpus can be found in Table 4.1.

Table 4.1 Corpus of public speeches by principal officials in Hong Kong (1997-2017)

| 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 | 01.07.1997-30.04.2001 | 16 (163) | 54,498 |
| | Donald Tsang Yam-kuen | Male | 01.05.2001-31.05.2005 | 10 (96) | |
| | Henry Tang Ying-yen | Male | 01.07.2007-30.09.2011 | 9 (93) | |
| | Carrie Lam Cheng Yuet-ngor | Female | 01.07.2012-16.01.2017 | 14 (144) | |
| | CSA Total | | | 49 (496) | |
| Financial Secretary (FS) | Donald Tsang Yam-kuen | Male | 01.07.1997-30.04.2001 | 16 (162) | 50,685 |
| | Antony Leung Kam-chung | Male | 01.05.2001-16.07.2003 | 7 (66) | |
| | Henry Tang Ying-yen | Male | 17.07.2003-30.06.2007 | 10 (95) | |
| | John Tsang Chun-wah | Male | 01.07.2007-16.01.2017 | 10 (104) | |
| | FS Total | | | 43 (427) | |
| Secretary for Justice (SJ) | Elsie Leung Oi-sie | Female | 01.07.1997-19.10.2005 | 10 (89) | 54,336 |
| | Wong Yan-lung | Male | 20.10.2005-30.06.2012 | 7 (72) | |
| | Rimsky Yuen Kwok-keung | Male | 01.07.2012-06.01.2018 | 16 (164) | |
| | SJ Total | | | 33 (325) | |
| In Total | | | | 125 (1,248) | 159,519 |

4.4.2 Metaphor and source domain identification

Metaphor identification

For metaphor identification, we adopted a bottom-up analysis approach to manually identify metaphors on a word-by-word basis in the entire corpus. Following the Metaphor Identification Procedures VU University Amsterdam (MIPVU) (Steen et al., 2010), two analysts with postgraduate degrees in linguistics, who are experienced in metaphor analysis, conducted the identifications. We determine if a keyword is metaphorical or literal based on if cross-domain

⁴ The RANDBETWEEN function in Excel was used to generate random numbers for the speech selection.

mappings exist between the basic meaning and the contextual meaning of the word. We checked all the word meanings in the dictionaries recommended in MIPVU: the “Macmillan Dictionary” (<http://www.macmillandictionary.com/>) as the first option, the “Longman Dictionary of Contemporary English” (<http://www.ldoceonline.com/>) as a second opinion and the “Oxford English Dictionary” (<http://www.oed.com/>) as a third opinion. Two additional databases were also taken as complementary resources for determining word meanings: Wordnet (<http://wordnetweb.princeton.edu/perl/webwn>) (Fellbaum, 2005) and SUMO (<http://www.adampease.org/OP/>) (Niles & Pease, 2001). In total, we obtained 5,962 metaphorical instances from the corpus.

Source domain identification

As previously mentioned, a metaphor source domain refers to a more concrete domain that is used to conceptualize a more abstract target domain (Lakoff, 1993; Lakoff & Johnson, 1980/2003), e.g., in ‘*defend* the human rights of Hong Kong people’, the abstract target domain HUMAN RIGHTS is understood in terms of the concrete source domain WAR. We adopted the source domain identification approaches proposed in previous studies (Ahrens & Jiang, 2020; Ahrens & Zeng, 2017; Zeng, Tay, & Ahrens, 2020) for determining specific source domains for each metaphorical word (see Table 4.2 for the main steps of the approach).⁵

⁵ In step 1, educated, fluent speakers’ judgement about potential source domains can be related to the notion of ‘unity of domains’ which refers to ‘a background assumption on the part of the listener that sentences (involving metaphor or metonymy) are semantically coherent’ (Croft, 2003, p. 195).

Table 4.2 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 et al., 2014) and the online Oxford Collocation Dictionary as a complementary method to the WordNet-SUMO method, e.g., to check if there are any frequent collocations of the keywords related to the proposed source domains. |

The 5,962 metaphorical instances were categorized into 20 types of different source domains. Table 4.4 shows the top 7 frequently occurred source domains: BUILDING, LIVING ORGANISM, JOURNEY, PHYSICAL OBJECT, BUSINESS, WAR, and SPORT.⁶

Table 4.3 Frequencies of the source domains in the corpus

| Source domains | Frequency | Cumulative percentages (%) |
|-------------------|--------------|----------------------------|
| BUILDING | 1,176 | 19.72 |
| LIVING ORGANISM | 1,093 | 38.06 |
| JOURNEY | 975 | 54.41 |
| PHYSICAL OBJECT | 940 | 70.18 |
| BUSINESS | 356 | 76.15 |
| WAR | 316 | 81.45 |
| SPORT | 300 | 86.48 |
| Others (13 types) | 806 | 100 |
| Total | 5,962 | |

⁶ The frequent source domain type is determined based on a cutoff cumulative percentages up to 90%.

4.4.3 The TSA procedure

The variable in this study is the number of the frequent metaphor source domains used in consecutive time intervals in the period from 1 July 1997 to 31 December 2017. The top seven frequent source domains (BUILDING, LIVING ORGANISM, JOURNEY, PHYSICAL OBJECT, BUSINESS, WAR, and SPORT) are included in the analysis. As the time frame of the corpus (1 July 1997 to 31 December 2017) includes 20 years and a half, we separated the time frame into 41 consecutive half-year intervals, which also fits the requirement of a minimal 30 observations for TSA. We aggregated the data on the half-year level, meaning every value represents the frequencies of the source domains for a half-year period (e.g., 1 July – 31 December 1997, 1 January – 30 June 1998, and 1 July – 31 December 1998). The statistical analysis of TSA follows the procedures of the Box-Jenkins TSA method (Box et al., 2015; Tay, 2019, p. 26):

- (1) inspect the raw series to see if data transformation is needed
- (2) calculate autocorrelations
- (3) identify candidate models based on autocorrelations
- (4) calculate parameter estimates and examine goodness of fit of the models
- (5) run diagnostics on residuals
- (6) forecast future values if model is acceptable

In what follows, we will demonstrate the TSA procedures in detail with a variable with adequate TSA model fit from the current corpus: the use of LIVING ORGANISM source domain in the 41 half-year intervals.

Step 1. Inspect series

The software we used for generating time series models is the XLStat implemented for Microsoft Excel. Figure 4.1 presents the raw plot (y_t) and correlograms (ACF and PACF) of

the LIVING ORGANISM over the 41 observations for the corpus.⁷ As TSA estimates series properties based on a limited set of data available, to validly model the series based on just one realization requires the key properties like the mean and variance of the observed values to be constant or stationary over time. We can see from the raw plot that the values do not appear to fluctuate around a midpoint along the y-axis, which seems to show the mean of the series is not constant, and the series is non-stationary. However, we still can't ascertain by visual observation whether the series is stationary or nonstationary. It requires more than visual inspection for making judgments. A detailed examination of the behaviors of the autocorrelation function (ACF) is needed. The ACF in Figure 4.1 decreases to nonsignificant levels abruptly taking two lags to do so, which is a sign of stationarity.⁸ No transformation procedures are required in this case.⁹

⁷ “Autocorrelation (ACF) is a measure of how successive values in a series are internally related to one another. The value of ACF at ‘lag 1’ is the correlation coefficient between pairs of metaphor frequencies at time x and time $x+1$. PACF is similar to ACF except that it measures partial correlations, that is, it controls for the values at shorter lags. For example, the PACF at lag 3 is the correlation between values at time x and time $x+3$, with the effects of time $x+1$ and $x+2$ removed” (Tay, 2017, p. 700).

⁸ “If the ACF of a series takes more than two lags to decrease to nonsignificant, the series is nonstationary. A slow decrease in ACF reflects a strong trend in the data because recent past observations are still influencing present observations in the same direction as time goes on” (Tay, 2019, p. 30).

⁹ “A series that meets these criteria is described as *stationary* and can proceed to Step 2 of calculating autocorrelations. If a series does not meet these criteria, it is *nonstationary*, and will require transformation into a stationary series before further analysis. In such cases where the mean of the series changes over time, we transform the data with a technique known as *differencing*. First-order differencing means to subtract the values of adjacent observations to derive a transformed series \mathbf{z}_t (i.e., $\mathbf{z}_t = \mathbf{y}_t - \mathbf{y}_{t-1}$). If necessary, further second-order differencing means to difference the first-differenced series one more time (i.e., $\mathbf{z}_t - \mathbf{z}_{t-1}$), and so on. Most nonstationary time series become stationary after at most two orders of differencing” (Tay, 2019, p. 31).

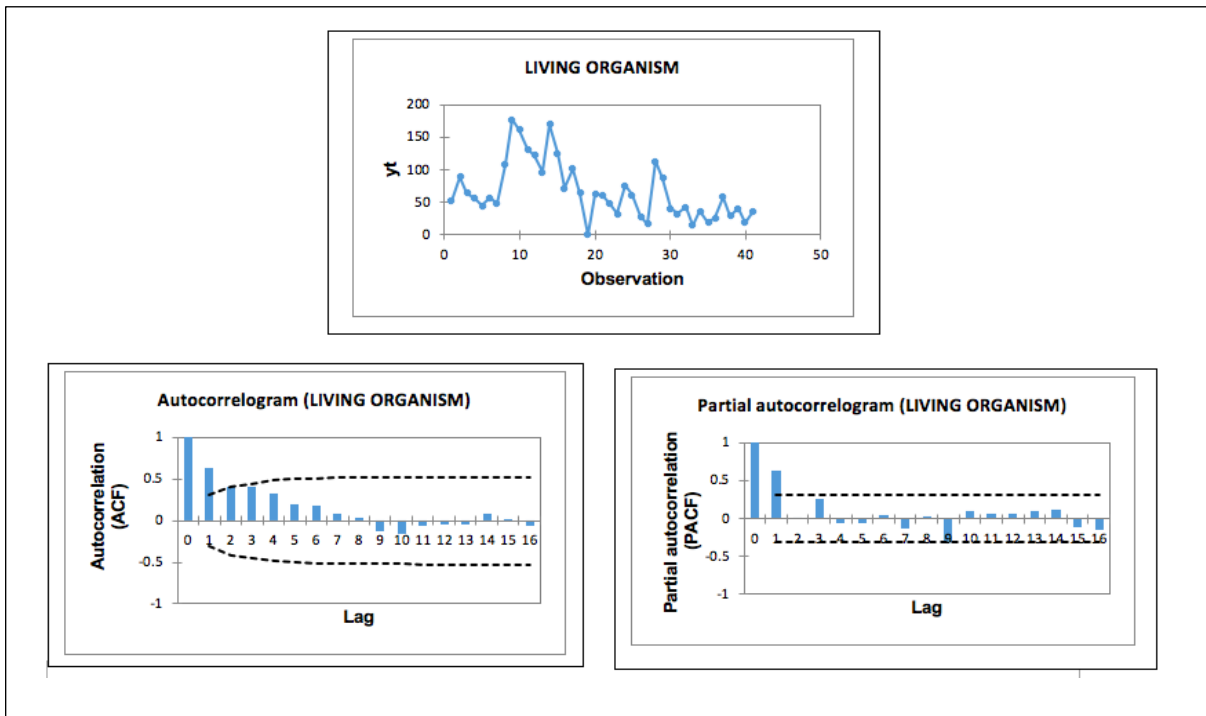


Figure 4.1 Plot and correlograms of LIVING ORGANISM source domain

Step 2: Calculate autocorrelations

After we inspect a series is stationary, we proceed to the next step of calculating ACF and PACF up to a specified number of lags. The calculations are automated, and it requires analysts' judgments. From the correlograms in Figure 4.1 we can see the ACF is significant up to lag 1 and it dies down gradually to nonsignificant levels from lag 1. The PACF is also significant up to lag 1 and cuts off abruptly into nonsignificant levels from lag 1. There are spikes (statistically significant autocorrelations) in both the ACF and PACF up to lag 1.

Step 3: Identify candidate models

According to the basic guidelines for model selection based on ACF and PACF behaviour (Tay, 2019, p. 34) in Figure 4.2, the behaviours of ACF and PACF show a clear autoregressive (AR) signature. Both ACF and PACF have spiked up to lag 1 and cuts off after lag 1. In addition, the

PACF cuts off more abruptly. We thus selected AR (1) model operator (Φ_1) at lag 1 as the most likely candidate model.¹⁰

| <i>Behavior pattern</i> | <i>Candidate model</i> |
|---|---|
| ACF has spikes up to lag k and cuts off after lag k . PACF dies down | MA model of order k , i.e. MA(k) model |
| ACF dies down. PACF has spikes up to lag k and cuts off after lag k . | AR model of order k , i.e. AR(k) model |
| Both ACF and PACF have spikes up to lag k and cuts off after lag k | If ACF cuts off more abruptly, use MA(k) model If PACF cuts off more abruptly, use AR(k) model If both appear to cut off equally abruptly, try both models to see which fits better |
| Both ACF and PACF die down | ARMA model of order k , i.e. both MA(k) and AR(k) model |
| Both ACF and PACF have no spikes at all lags | No suitable model since autocorrelations are absent |

Figure 4.2 Basic guidelines for model selection based on ACF and PACF behavior

Step 4: Estimate parameters and evaluate goodness of fit

We then evaluate its goodness of fit using the XLStat in Excel and the estimated parameters are shown in Figure 4.3.

¹⁰ “An autoregressive (AR) model describe the current value of the time series as a function of its prior values. A moving average (MA) model describes the current value as a function of irregular fluctuations in past intervals. a combination of both AR and MA models is called ARMA model. These major model types are collectively known as ARIMA (autoregressive integrated moving average) models” (Tay, 2019: 34)

| Summary statistics | | | | | | | |
|--------------------|--------------|------------------------|---------------------------|---------|---------|--------|----------------|
| Variable | Observations | Obs. with missing data | Obs. without missing data | Minimum | Maximum | Mean | Std. deviation |
| LIVING ORGANISM | 41 | 0 | 41 | 0.000 | 177.930 | 66.543 | 43.997 |

| Results of ARIMA modeling of the LIVING ORGANISM series | |
|---|-------------|
| Results after optimization (LIVING ORGANISM): | |
| Goodness of fit statistics: | |
| Observations | 41 |
| DF | 39 |
| SSE | 52728.062 |
| MSE | 1286.050293 |
| RMSE | 35.86154337 |
| WN Variance | 1286.050293 |
| MAPE(Diff) | 45.24728728 |
| MAPE | 45.24728728 |
| -2Log(Like.) | 411.3747493 |
| FPE | 1350.352807 |
| AIC | 415.3747493 |
| AICC | 415.6905388 |
| SBC | 418.8018934 |
| Iterations | 35 |

| Model parameters | | | | | | | |
|------------------|-------|------------------------|-------------------|-------------------|------------------------|-------------------|-------------------|
| Parameter | Value | Hessian standard error | Lower bound (95%) | Upper bound (95%) | | | |
| Constant | 0.000 | 42.518 | -83.334 | 83.334 | | | |
| Parameter | Value | Hessian standard error | Lower bound (95%) | Upper bound (95%) | Asympt. standard error | Lower bound (95%) | Upper bound (95%) |
| AR(1) | 0.880 | 0.066 | 0.751 | 1.009 | 0.074 | 0.735 | 1.025 |

Figure 4.3 Estimated parameters of AR (2) model for LIVING ORGANISM

The mathematical form of an AR (1) model is $y_t = (1 - \Phi_1)\mu + a_t + \Phi_1 y_{t-1}$, where y_t is the present value in the series, μ is the true or “population” mean of the whole series, a_t is the present value of the residual (i.e., observed – predicted value at time t), y_{t-1} is the value at time $t-1$, and Φ_1 is a coefficient also known as the AR (1) operator. The parameters to be estimated are thus μ and Φ_1 .

From the statistics in Figure 4.3, we can see the mean μ is 66.543 and Φ_1 is 0.880 with statistical significance at 95% confidence level. The length of the bars describes the size of the (partial) autocorrelation (-1.0 to +1.0) at that lag. The standard error estimate, AIC, SBC are

measures of goodness of fit with lower values preferred. The AR(1) model is thus $y_t = 7.99 + a_t + 0.88y_{t-1}$.

Step 5: Perform residual diagnostics

The next step is to perform residual diagnostics to ensure that all patterns in the series have been extracted by the AR (1) model, and such series is called ‘white noise’. In other words, we need to verify that there are no significant autocorrelations among the values in the residual series before using the model and parameter to forecast future values.¹¹ We verify it by checking if the residuals are independent and normally distributed (Figure 4.4).

¹¹ “Residuals are the difference between observed values and values predicted by the model at hand. Since each time interval has an observed and predicted value, and thus a residual, the residuals also end up constituting a time series. Therefore, if the residual series contains no more modellable information, there should be no significant interdependence within it.” (Tay, 2019, p. 37).

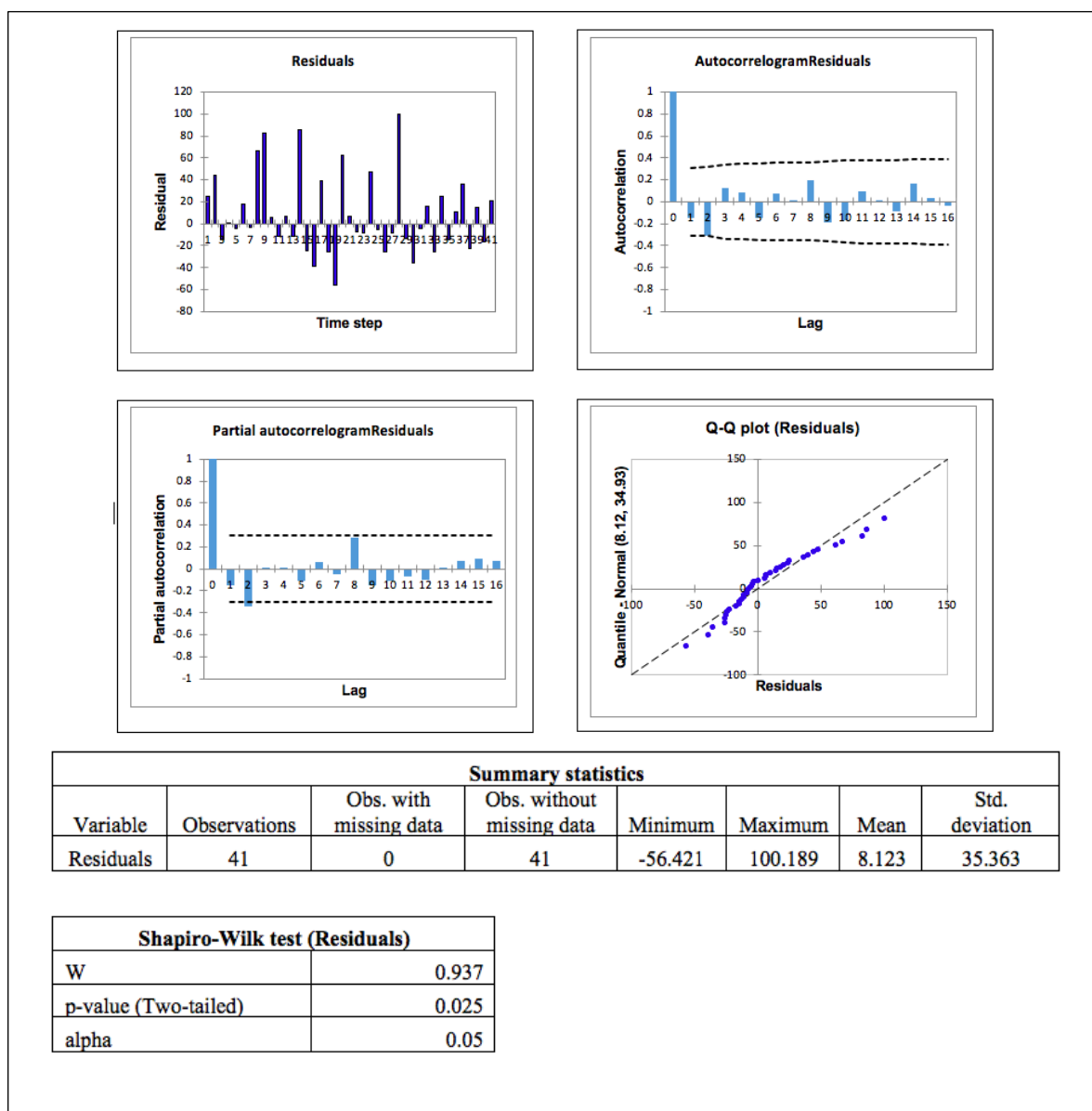


Figure 4.4 Residual correlation and normality diagnostics for LIVING ORGANISM

We can see that there are no spikes in both the ACF and PACF for any of the lags (except lag 2 is slightly significant), indicating no significant autocorrelations in the residual series. The normality of the residuals is shown in the QQ plot depicting a roughly straight line. The Shapiro-Wilk statistics ($W=0.937$, $P=0.025$) results are also indicative of normality in the residual series with P value of 0.01 as the statistical significance cut-off.¹² As the residual series

¹² “If autocorrelations were identified in the residual series, we would need to model (i.e., ‘filter’) the autocorrelated residual series again and combine the model of the residuals with the original model. Violation of

are normally distributed and independent, the model $y_t = 7.99 + a_t + 0.88y_{t-1}$ is ascertained acceptable and can be used to forecast future values.

Step 6: Forecasting

Figure 4.5 shows the actual versus predicted frequencies of the LIVING ORGANISM source domain over the 41 intervals, using $y_t = 7.99 + a_t + 0.88y_{t-1}$.

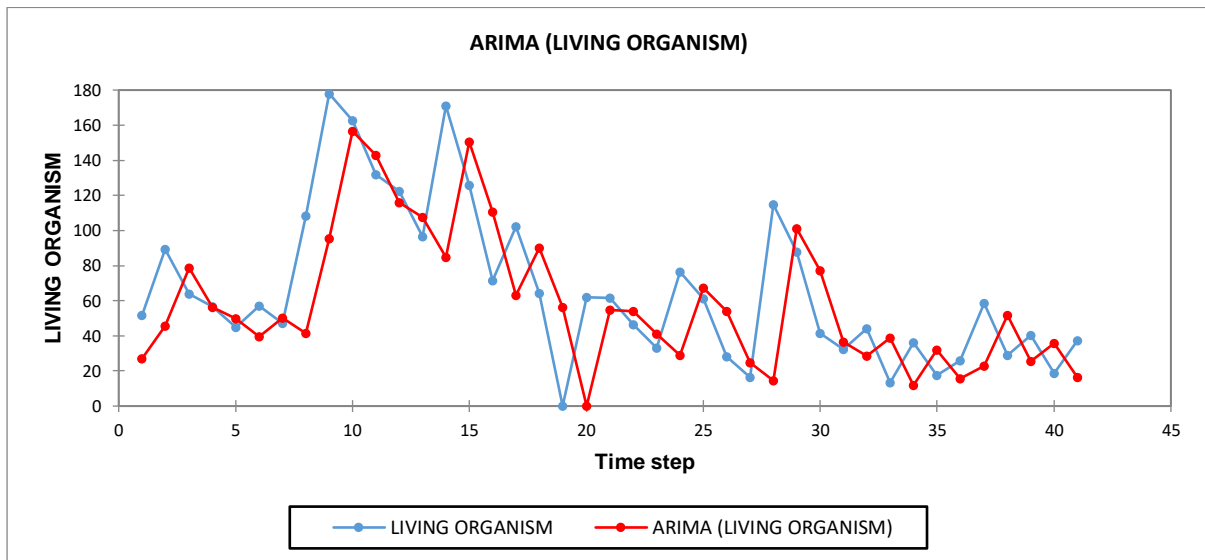


Figure 4.5 Predicted versus actual values of y_t

Visual inspection suggests that the fitted model has a reasonable level of accuracy and depicts the overall shape of the observed values. The sizes of the residuals vary but are small in most intervals. To forecast future values, e.g., the value at the 42nd interval, we therefore substitute the value of the residual at the 41st interval ($y_{41} = 17$) into the model: $y_{42} = 7.99 + a_{41} + 0.88 \cdot 17$.

the normality assumption is less serious but would affect the accuracy of forecasts, in which case an alternative model may be needed” (Tay, 2019, p. 37).

4.5 Results and discussion

4.5.1 Results

Following the above TSA procedures, we conducted ARIMA time series modelling on the overall use of the 7 source domains (BUILDING, LIVING ORGANISM, JOURNEY, PHYSICAL OBJECT, BUSINESS, WAR, and SPORT) in the corpus. Among the 7 cases modeled, we found:

- (1) one case with autocorrelations between time and source domain use and an ARIMA model can be fitted: the use of LIVING ORGANISM source domain over time (*see section 4.5.2.1*)
- (2) four cases with no autocorrelations between time and source domain use: the use of BUILDING, JOURNEY, WAR, and SPORT source domains over time (*see section 4.5.2.2*)
- (3) two cases with autocorrelations between time and source domain but the autocorrelation patterns do not fit statistically straightforward models: the use of PHYSICAL OBJECT and BUSINESS source domains over time (*see section 4.5.2.3*).

4.5.2 Discussion

In this section, we will interpret the three types of ARIMA modelling results by further looking at the specific context of the metaphor use at relevant junctures, e.g. the underlying reasons for the continuity in the series with ARIMA models, implications of the absence of models and complicated models. The emphasis of the discussion will be put on the qualitative meaning of the models and their implications for a better understanding of metaphor use in political discourse.

4.5.2.1 Cases with autocorrelations

The first type of ARIMA modelling result is the one case with autocorrelations between time and source domain use and an ARIMA model can be applied: the use of LIVING ORGANISM

source domain over time. As exemplified in Section 3.4.3, the profile of LIVING ORGANISM source domain demonstrates a clear usage profile across time and is adequately described by the AR(1) model $y_t = 7.99 + a_t + 0.88y_{t-1}$. We can see from the equation, in AR models, y_t is determined by y_{t-1} , meaning the present value as a function of its past values which is different from the MA models ($y_t = \mu + a_t - \theta_1 a_{t-1}$) where y_t is determined by a_{t-1} , describing that the present value is a function of irregular fluctuations in past intervals. AR models thus are more likely to show that the data have systematic continuity across time intervals.

In the corpus, the ‘autoregressive’ nature of AR model suggests that LIVING ORGANISM metaphors are used with a strong degree of continuity across consecutive half-year intervals, where high levels of use tend to be immediately followed by a comparably high level of use, and vice-versa (see Figure 4.5). The AR (1) model indicates that the past frequencies of LIVING ORGANISM exert the maximum influence from one interval away, with gradually declining effects thereafter.

Based on the observations in the data, we found that patterns of the continuity in LIVING ORGANISM source domain use are attributable to the progress of the background events in the broad contexts. The associations between the two are detected by the AR (1) model showing a degree of continuity over consecutive half-year intervals. It is feasible to hypothesize that the potential factors that influence source domain use can be the corresponding target domains or elements in the surrounding contexts. The qualitative interpretation will then look at LIVING ORGANISM source domain one half-year apart, focusing on the localized upward or downward movement in the same direction and their relationship with the progression of background events (e.g. social, economic or political event development) at critical junctures.

From the raw plot of the LIVING ORGANISM source domain in Figure 4.1, we can see that, overall, the first half of the series has a higher magnitude of rises and falls than the second half of the series. There is a sharp rise from 7 to 9 and a sharp fall from 9 to 13. It then rises

from 13 to 14 and then experiences a sharp fall from 14 to 19 with a slight rise from 16 to 17. In the second half of the series, there is a sharp rise from 27 to 28 followed by a sharp fall from 28 to 31. Due to space limitations, we select one period with a sharp rise for illustration: the rise from 7 to 9.

The rise from 7 to 9

Points 7, 8 and 9 correspond to the time intervals of 1 July – 31 December 2000, 1 January – 30 June 2001 and 1 July - 31 December 2001. The rise from 7 to 9 means there is a continually increasing use of the LIVING ORGANISM source domain from 1 July 2000 to 31 December 2001. To understand the underlying reasons for the continuity, we calculated the frequencies of the corresponding target domains and checked their surrounding contexts in each period.¹³ Table 4.5 shows that LIVING ORGANISM source domain occurs most frequently when conceptualizing the target domain of ECONOMIC ISSUES. We then select data instantiating ECONOMIC ISSUES ARE LIVING ORGANISM metaphors to illustrate how the progress of the background events in the surrounding contexts causes the increasing use of LIVING ORGANISM source domains in the three consecutive half-year intervals.

¹³ Criteria for target domain identification can be seen in Appendix 4.1.

Table 4.4 Frequencies of LIVING ORGANISM source domain in the three periods

| Target Domain | 1 July – 31 December 2000 | | 1 January – 30 June 2001 | | 1 July – 31 December 2001 | |
|----------------------|---------------------------|-----------------|--------------------------|-----------------|---------------------------|-----------------|
| | Raw frequency | NR (per 10,000) | Raw frequency | NR (per 10,000) | Raw frequency | NR (per 10,000) |
| SOCIAL ISSUES | 2 | 3.94 | 12 | 11.11 | 15 | 25.66 |
| ECONOMIC ISSUES | 20 | 39.42 | 65 | 60.19 | 40 | 68.43 |
| POLITICAL ISSUES | 1 | 1.97 | 27 | 25 | 44 | 75.28 |
| PERSONAL ISSUES | 1 | 1.97 | 6 | 5.56 | 2 | 3.42 |
| MISCELLANEOUS ISSUES | 0 | 0 | 7 | 6.48 | 3 | 5.13 |

The following extracts from the three consecutive half-year intervals are illustrative. Extract (1) is obtained from the speech in the first half-year interval (1 July - 31 December 2000). Extract (2) is from the second half-year interval (1 January – 30 June 2001) and extract (3) is from the third half-year interval (1 July – 31 December 2001). Metaphorical keywords of LIVING ORGANISM source domain are colored in blue. The background events are ed in yellow and signs indicating the progress of the background events are underlined.

Extract (1): July – December 2000

‘First, let me bring you up to date with how the economies of our region have been performing as we regain the ground lost through the impact of the Asian financial crisis. There's no doubt the recovery is taking hold. Barring any serious deterioration in the oil supply situation, forecasts indicate that the nine economies of East Asia, excluding Japan, will grow by an average of over 6 per cent this year and there's likely to be a similar growth rate in 2001. As the Mainland opens its doors wider to the world, the flow of foreign goods into China will increase. This will probably mean more goods passing through Hong Kong

and more business for the financial services sector such as banking, insurance, accounting, legal and other support services. It is estimated that our GDP will grow by up to one per cent a year as a result of China's entry to the WTO. (Donald Tsang, FS, 19 September 2000)

Extract (2): January – June 2001

‘The problems unearthed by the Asian financial crisis and the restructuring of our economy bring me to my second point, and that is the effect it has had on the psychology and confidence of our fellow citizens. Hong Kong cannot escape from that, although our China connection makes us less vulnerable than some of our neighbours as the Mainland economy remains in remarkably robust health. We have this marvellous new niche in the Mainland to help us grasp them. Our hinterland in the Pearl River Delta offers unlimited potential. China's accession to the WTO is another golden opportunity for us to grow, whatever the sceptics may claim. The whole of China is our backyard. Don't forget that Hong Kong is not just the largest external investor in the Mainland - it is the largest investor in every single province and region.’ (Donald Tsang, CSA, 21 June, 2001)

Extract (3): July – December 2001

‘The lessons of our history have stood us in good stead these last four years. Not simply in straddling the historic transition of 1997. That of itself is achievement enough. I refer more particularly to how Hong Kong has dealt with the enormous challenges thrown up in the wake of the Asian financial crisis and September 11. These challenges still reverberate in Hong Kong today. They have been exacerbated by the terrible events in the US, which accelerated a slowdown that was taking place in that economy anyway. In the short term, we are looking at leaner times. Our GDP growth is contracting more sharply than we had forecast following a strong 10.5 percent rebound last year. This is obviously disappointing

considering the difficulties our community endured during the tough years of 1998 and 1999 when we were caught in the wringer of the Asian financial crisis. At the moment, our economy is being squeezed between the rock of the worsening global economic climate and the hard place of significant restructuring of our domestic economy. China's robust economic growth over the past few years is a testament to the policies and determination of the leadership to modernize the Mainland economy. These policies have created the conditions for unparalleled prosperity and social upward mobility for China's diverse and enormous population. Its access to WTO last week will enhance the reforms and promise an even more open market. As part of the nation, we can be proud of these achievements and ambitions. We can also be proud of the contributions we have made to the realization of the country's dreams. Since Deng Xiaoping ushered in the Open Door Policy in 1978, Hong Kong has been the catalyst for the spectacular economic growth of Southern China, in particular the Pearl River Delta.' (*Donald Tsang, 19 November 2001*)

Among all the metaphorical keywords identified for the ECONOMIC ISSUES ARE LIVING ORGANISM metaphors, 'growth' is found to be the most frequent keyword. In extracts (1) - (3), the use of 'growth' and other keywords ('recovery', 'perform', 'vulnerable', 'robust' and 'health') are all associated with economy-related issues, e.g., GDP or economic 'growth', the 'recovery' from the impact of the Asian financial crisis and Mainland China's economy remains in 'robust health'.¹⁴ We thus categorize these metaphorical keywords under the ECONOMIC ISSUES ARE LIVING ORGANISM metaphors. From the surrounding contexts, we can see these keywords frequently co-occur with some particular background events (colored in yellow). The most frequently co-occurring event is the Asian financial crisis, and several

¹⁴ All the keywords mentioned are lemmatized.

historic events related to China also appear simultaneously, e.g., ‘the historical transition of 1997’, ‘China’s access to WTO’, and ‘China’s Open Door Policy’.

The reasons why LIVING ORGANISM source domains frequently co-occur with these particular background events will have to look at the history of post-colonial Hong Kong. The period July 2000 to December 2001 in question is the preliminary stage of post-colonial Hong Kong. Hong Kong has transited from a British colony to a Special Administrative Region of China since 1 July 1997, after which the region immediately suffered the 1997-1998 Asian financial crisis. It’s not surprising that during the first few years of the post-Asian financial crisis, the principal officials of Hong Kong talk more about the region’s economic issues in public speeches. When conceptualizing the ECONOMIC ISSUES as LIVING ORGANISM, the speakers frequently use the metaphorical keyword of ‘*growth*’ to emphasize the aspect of ‘Hong Kong’s economic growth’ during these critical junctures. We can also see in the contexts that the speakers ascribe Hong Kong’s economic growth to the influence of some historic events that happened in Mainland China, e.g., China’s access to WTO, the Open Door Policy and China’s open market. It thus explains why the keyword ‘*growth*’ under the LIVING ORGANISM source domain frequently co-occurs with these specific background events.

Another aspect to be discussed is the reasons for the continuity of the LIVING ORGANISM source domain in the three consecutive time intervals. Evidence in the data shows that the progress of the background events leads to this continuity. We will then discuss the development of the background events in extracts (1)-(3) to see how it reflects the continual use of LIVING ORGANISM source domain. As mentioned before, the most frequently mentioned event in the contexts is the Asian financial crisis (1997-1998), and its progress is explicitly indicated in the three extracts (the underlined sentences). In extract (1), the speaker mentioned the impact of the Asian financial crisis and the recovery of Hong Kong’s economy is taking hold. There are forecasts indicating the economic growth in East Asia. In extract (2), the

speaker talked about the problems unearthed by the Asian financial crisis, and Hong Kong's economy is in the progress of restructuring. In extract (3), the speaker starts to recall the history and the achievements Hong Kong has made for the last four years (1997-2001); Hong Kong's GDP growth is much greater than it was forecasted in 2000. He also refers to how Hong Kong has dealt with the influence and difficulties of the Asian financial crisis during the tough years of 1998 and 1999. From extracts (1)-(3), we can see the clear progress of Hong Kong's economic recovery and growth in the post-Asia financial crisis. The crisis was first mentioned in terms of its impact in the first half-year interval; the economic problems were unearthed in the second half-year interval; Hong Kong tackled the difficulties and made economic growth and achievements in the third half-year interval.

Other co-occurring background events are related to Mainland China, China's access to WTO in particular. Extract (1) talked about China is opening its doors wider to the world, and there are estimations indicating Hong Kong's GDP will grow as a result of China's entry to the WTO. In extract (2), the speaker said China's accession to the WTO is a golden opportunity for Hong Kong's economy to grow. Extract (3) mentioned China's access to WTO last week on 11 December 2001, and the economic achievements made in Hong Kong have contributed to the economic growth of Southern China. These descriptions indicate the progress of China's access to WTO, from mentioning China is opening doors wider to the world in the first half-year interval to China's official entry to WTO in the third half-year interval.

Along with it is the development of Hong Kong's economy. An obvious sign can be seen in extract (1) that the speaker talked about the economic forecasts in the sentence '*It is estimated that our GDP will grow by up to one per cent a year as a result of China's entry to the WTO.*', and in extract (3) the speaker refers back to extract (1) by addressing that '*Our GDP growth is contracting more sharply than we had forecast following a strong 10.5 percent rebound last year.*' These signs indicate the progression of Hong Kong's economic growth

which triggers a gradually increasing use of keywords such as ‘*growth*’ and ‘*recovery*’. This association is reflected in the sharp rises from point 7 to 9 in the raw plot. In the early stage of the AFC, the chances of mentioning the ‘*growth*’ of economic are small as the economy just starts to recover. In the late stage, the economy has been gradually recovered. Especially after China’s entry to WTO by the end of 2001 (the third half-year interval), Hong Kong’s economy has experienced great growth, correspondingly, the use of LIVING ORGANISM source domain is at the peak at point 9 in the raw plot. The TSA modelling thus contextualizes the sharp rise against a larger background of usage.

To summarize the discussion, the consecutive rises and falls in the AR pattern provide a quantitative basis to highlight how the connection between source domains use and background events manifests and evolves across time intervals. It provides a broad observation of source domain use by emphasizing the longer-term structure and a background level of discourse on topics reflected by the contextual events. The discussion supports the idea in Tay (2019) that TSA “cautions against prematurely generalizing discourses surrounding isolated events, or mapping different events onto different localized patterns of language use while overlooking longer-term usage trajectories” (p.96).

In addition, the increasing continuity of specific metaphors at critical time periods implies a strategical way of political communication. The frequent and continual use of ‘*growth*’ emphasizes Hong Kong’s economic achievements/developments in the post-Asian financial crisis period and thus frames the economy with positive connotations. It is a strategical way of using LIVING ORGANISM metaphors by Hong Kong politicians, indicating the government’s intention to boost public confidence in the economy.

4.5.2.2 Cases with no autocorrelations

The second type of ARIMA modelling result is the four cases with no autocorrelations between time and source domain use: the use of BUILDING, JOURNEY, WAR, and SPORT source domains over time. We presented the plots and correlograms of 4 cases in Figure 4.6-4.9 for the illustration of their time series behaviours. Figure 4.6 is presented for the case of BUILDING source domain use over time. Figure 4.7 is presented for the case of JOURNEY source domain use over time. Figure 4.8 is presented for the case of WAR source domain use over time, and Figure 4.9 is presented for the case of SPORT source domain use over time.

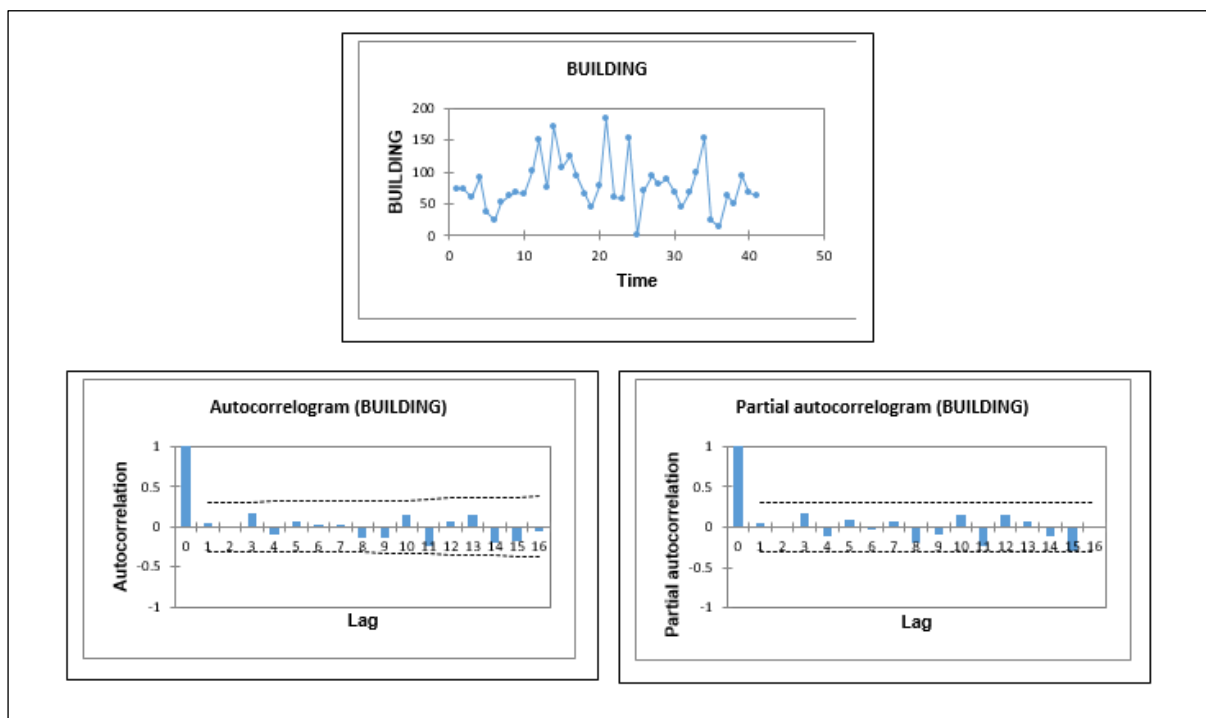


Figure 4.6 Plot and correlograms of BUILDING source domain use over time

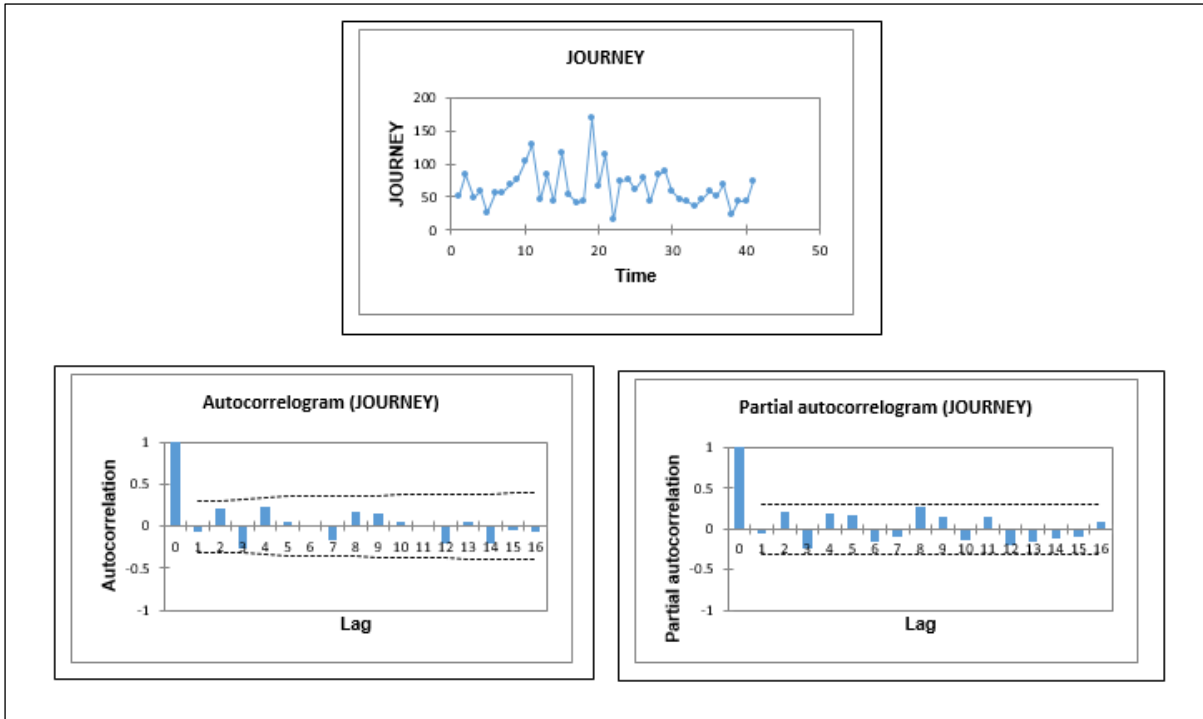


Figure 4.7 Plot and correlograms of JOURNEY source domain use over time

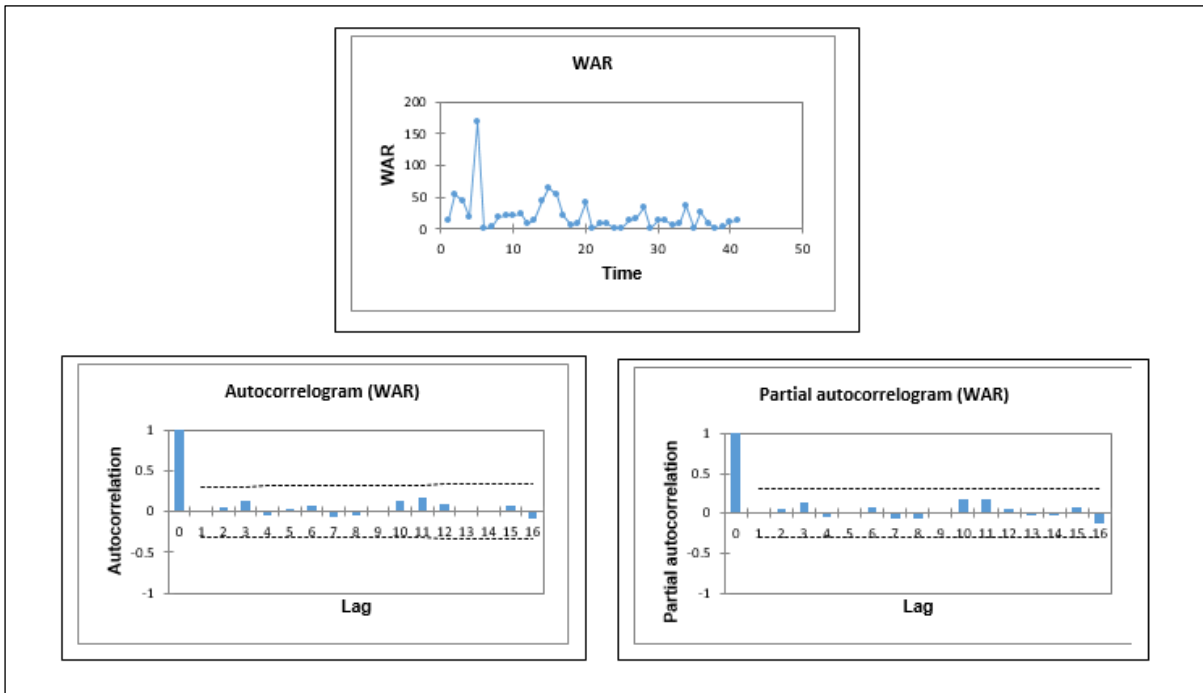


Figure 4.8 Plot and correlograms of WAR source domain use over time

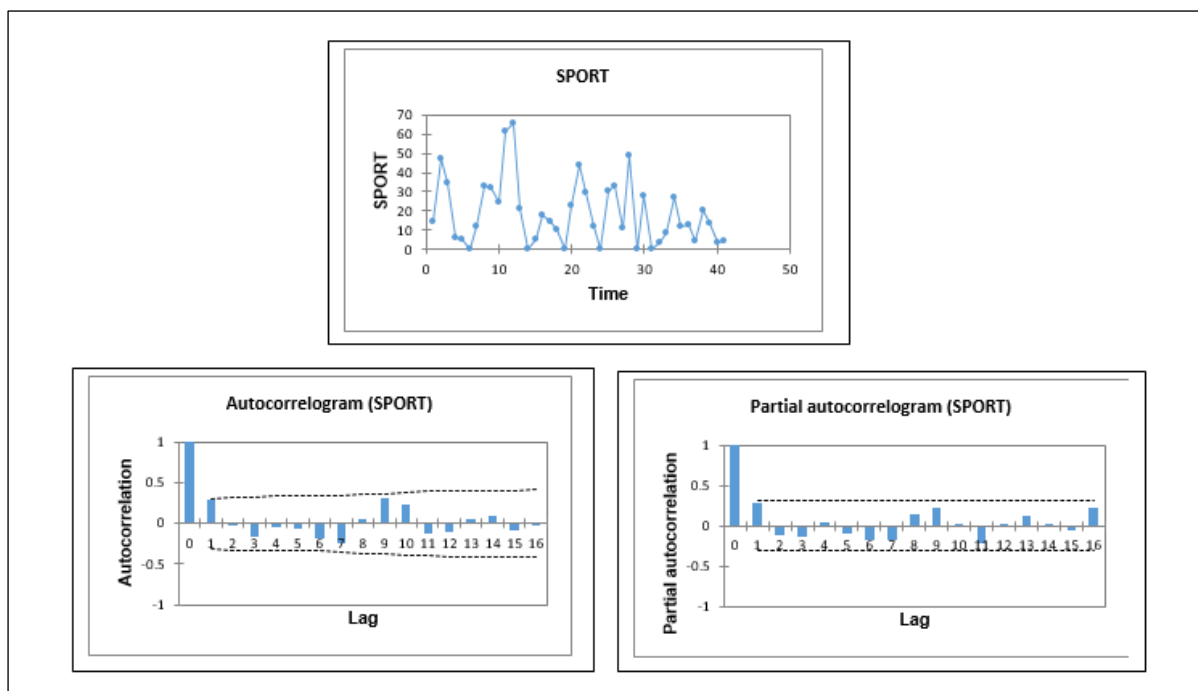


Figure 4.9 Plot and correlograms of SPORT source domain use over time

We can see there are no spikes across all lags in both ACF and PACF in Figures 4.6-4.9, suggesting that no time-based information can be extracted to describe the overall structural behaviour of the series. Thus, no time series models were appropriate and no further modelling is needed. The absence of modellable information implies these source domains didn't have significant structural patterns across time. However, it doesn't mean there are no background events progression or no associations between these source domain use and background events. The absence of significant autocorrelation indeed shows that these source domains are used less sensitive or less conditioned by their development across time compared to LIVING ORGANISM source domain.

For cases without adequate TSA models, we can not forecast their future usage patterns statistically/quantitatively in discourse. The fact that the majority of the cases are without significant autocorrelation reasserts the claim that discourse phenomenon is less predictable than other non-discourse data (e.g., typical financial data) by quantitative analysis using statistical methods. It would, in turn, have implications in terms of 'guarding against

overinterpretation where some narrative is forced upon discourse data in order to advance a theoretically promising idea' (Tay, 2019, p. 115).

4.5.2.3 Cases with irregular autocorrelations

The third type of ARIMA modelling result is the two cases with autocorrelations between time and source domain but the autocorrelation patterns do not fit statistically well-defined models: the use of PHYSICAL OBJECT and BUSINESS source domains over time. Their plots and correlograms are shown in Figure 4.10-4.11. Figure 4.10 is presented for the case of PHYSICAL OBJECT source domain use over time. Figure 4.11 is presented for the case of BUSINESS source domain use over time.

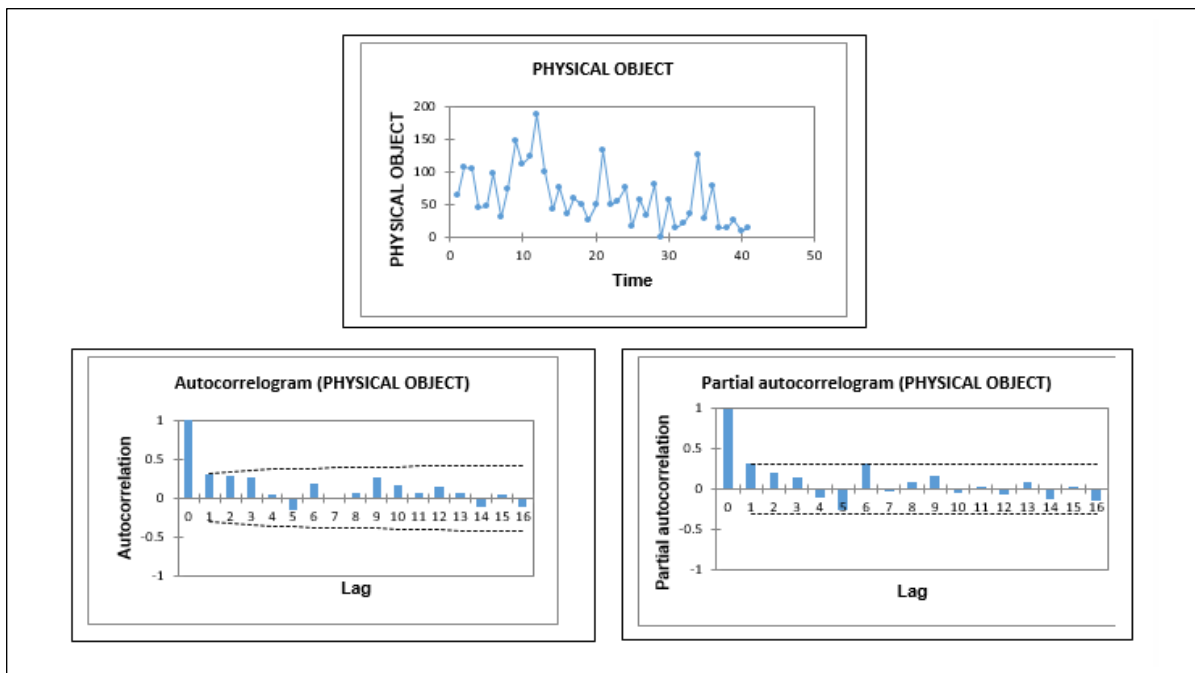


Figure 4.10 Plot and correlograms of PHYSICAL OBJECT source domain use over time

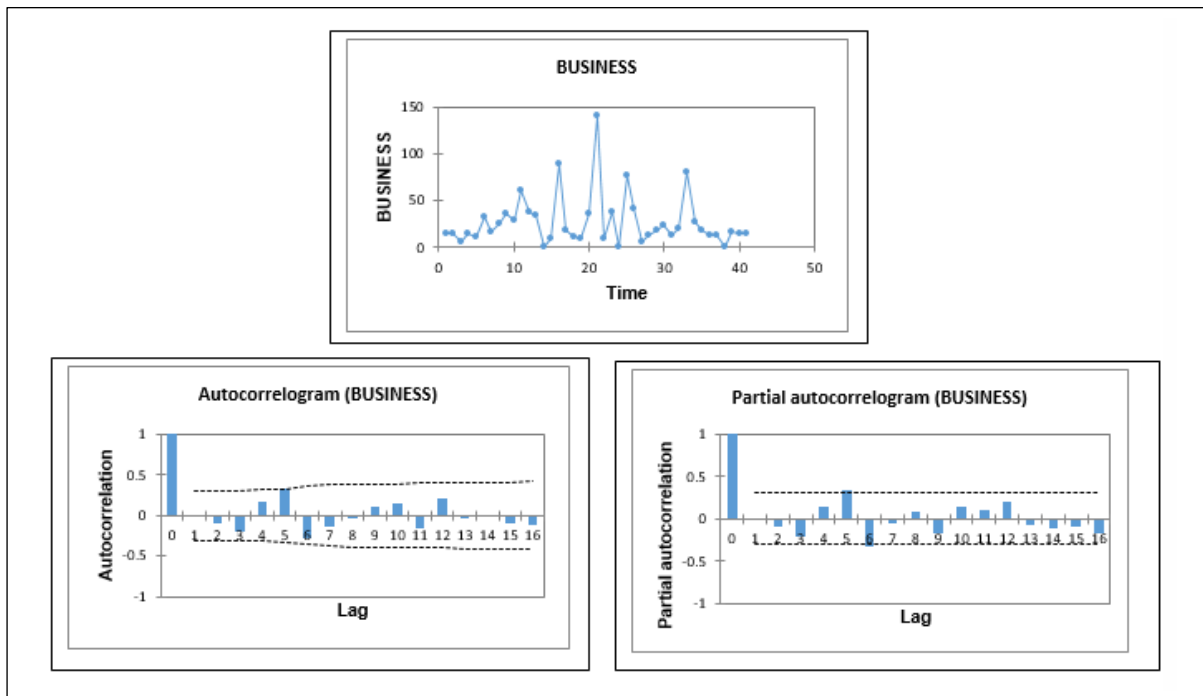


Figure 4.11 Plot and correlograms of BUSINESS source domain use over time

The criteria to identify irregular autocorrelations is to inspect the ACF. If the ACF takes more than two lags to decrease into nonsignificant, the series is considered nonstationary because a slow decrease in ACF reflects that recent past observations are still influencing present observations in the same direction as time goes on (Tay, 2019: 30). In Figure 4.10, the ACF has spikes at lag 1 (lag 1 reaches the significant line) and then die down. The PACF has two spikes at lag 1 and lag 6. In Figure 4.11, both the ACF and PACF have spikes at lag 5. The ACF dies down after lag 5, and the PACF dies down after lag 6. The two cases all have spikes in the later lags in ACF and/or PACF, indicating a complicated and unclear relationship between the source domain use and time. This complexity explains again about the messy and less predictable nature of real-life discourse. In this regard, TSA modelling is significant as a complementary way to understand the nature of discourse. It detects the quantitative structure of discourse, which can not achieved simply by the existing qualitative ways of discourse analysis.

4.6 Conclusion

This study emphasizes the potential of the TSA method to the study of metaphors in discourse. Two unique features of TSA are highlighted in the analysis: first, it assumes the presence of autocorrelation among temporally ordered observations; second, its ability to forecast future discourse behaviour is particularly useful in terms of predicting future discourse features. The study thus sheds new light on the diachronic changes of metaphors in political corpus and the potential implications for the strategic use of metaphors in political communication.

TSA modelling results reflect whether and how metaphor usage patterns are systematically structured across political discourse in time. The results in this study show that the majority of the cases are without significant autocorrelation or with complicated autocorrelation among the observations, which in turn reasserts the claim that discourse phenomenon is messy in nature and less predictable by quantitative analysis using statistical methods.

Although this study intends to address the limitations of univariate TSA in discourse (analysis on one discourse variable at a time) by conducting multiple univariate TSA within one same context, it still has some key limitations, e.g., in terms of forecasting and qualitative interpretation aspects. In reality, the time periods which are used to make predictions never form a random sample from the same population as the time periods to be predicted. There are always various unpredictable and influential factors, which are the ‘irregular fluctuations’ or ‘residuals’ of the series. These unforeseen circumstances make it difficult to generate or predicate precise values at any specific time intervals. Another obvious limitation is the uncertainties on the qualitative interpretations of the autocorrelation patterns. Corpus data may provide evidence for locating the reasons (e.g., the progression of the background events in this study) underlying the autocorrelations, while the interpretations may overlook other potential factors. However, TSA is able to connect temporal variables to discourse variables in a

systematic and replicable way. It is of great significance to offer complementary structural insights into the qualitative interpretations of how a discourse feature (e.g. metaphor source domain) changes across time.

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Appendix 4.1 Lists of the five categories of the broad and specific target issues

| SOCIAL ISSUES | ECONOMIC ISSUES | POLITICAL ISSUES | PERSONAL ISSUES | MISCELLANEOUS ISSUES |
|----------------------|---------------------------|-------------------------|--------------------------|----------------------------------|
| (Social) Development | (Economic) Development | (Political) Development | (Personal) Development | (General) Development |
| Arts | Downturn issues | Constitution | Personal life experience | Cultural and creative industries |
| Civil service | E-commerce | Democracy | | Globalization and integration |
| Culture | Economic growth | Election | | |
| Crime | Economic stability | Governance | | |
| Education | Economic integration | Handover | | |
| Environmental issues | Economic recovery | Institution | | |
| Minorities | Economic reform | Judicial system | | |
| Family | Film industry | Legislation | | |
| Food issues | Finance | Political reform | | |
| Healthcare | Food supply | Universal suffrage | | |
| Housing | Free economy | | | |
| Human equality | Industrialization | | | |
| Immigration | Inflation | | | |
| Medical service | Intellectual property | | | |
| Natural disasters | Logistics development | | | |
| Population | Manufacturing industry | | | |
| Poverty | Real estate | | | |
| Safety issues | Technological development | | | |
| Sports | Telecommunication | | | |
| Transportation | Tourism | | | |
| Youth | Trade | | | |

Chapter 5

Framing metaphor use over time: FREE ECONOMY metaphors in

Hong Kong public discourse (1997-2017)¹

Abstract

Diachronic studies on metaphor use in public discourse have primarily focused on Inner Circle English and European languages. However, the usage patterns of specific metaphorical frames over time is universal or cultural-specific remains underexplored. This article investigates the diachronic changes of economic metaphors focusing on the concept of FREE ECONOMY in a corpus of Hong Kong political discourse spanning two decades (1997-2017). We analyzed fundamental changes (transformations of source domains) and incremental changes (transformations of source-target mapping principles) in FREE ECONOMY metaphors. We found that FREE ECONOMY metaphors have slightly decreased over time. No fundamental changes were found in the use of the four frequently occurring source domains: JOURNEY, LIVING ORGANISM, SPORT, and BUILDING. The meanings of FREE ECONOMY metaphors either remained mostly constant (LIVING ORGANISM and SPORT metaphors) or underwent incremental changes (JOURNEY and BUILDING metaphors). We argue that the constancy and the incremental change were two rhetorical strategies political leaders used to frame their political agenda for achieving full economic liberalization in Hong Kong. Given the complex socio-historical background of Hong Kong, this study provides a distinct East-West perspective on diachronic economic metaphor use in an Outer Circle English context.

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5.1 Introduction

A core question in metaphor research is whether and how metaphorical frames of societal issues change with the passage of time (Burgers, 2016; Tay, 2019). Recent studies have shed light on the role of metaphor change in reflecting social changes from both theoretical (Burgers, 2016) and empirical perspectives (Burgers & Ahrens, 2020; De Landtsheer, 2015; Musolff, 2017; Nerghe, Hellsten, & Groenewegen, 2015). Burgers (2016) proposed a metaphor-based approach to modelling social change in communication and suggested that conceptualizations of change can be modelled in two ways: fundamental and incremental change. These two ways of change can be tracked from metaphor shifts in discourse over time, with fundamental changes referring to transformations of metaphor source domains and incremental changes referring to transformations of source-target mapping principles.

To date, most diachronic studies on metaphors have focused on Inner Circle English and European languages, e.g., the British Brexit referendum (Musolff, 2017), US trade (Burgers & Ahrens, 2020), the impact of the 2008 financial crisis in countries like the US and Spain (López & Llopis, 2010) or in the Netherlands and Belgium (De Landtsheer, 2015).² This is not surprising, given that, overall, political metaphor research has been primarily US-centric (Lakoff, 1996/2002) and Euro-centric (Ahrens, 2009; Charteris-Black, 2006; Musolff, 2004). Specifically, over 65% of recent experimental studies on metaphorical framing in political discourse have been conducted in the US alone, and the rest mostly in European countries (Brugman, Burgers, & Vis, 2019). So far, relatively few studies on political metaphors have been conducted in Outer Circle English contexts. It is thus not clear whether diachronic use of

² The current sociolinguistic profile of ‘World Englishes’ can be viewed in terms of three concentric circles: the Inner Circle, the Outer Circle, and the Expanding Circle (Kachru, 1985, 1992; Jenkins, 2009; Evans, 2010). The circles represent “the types of spread, the acquisition, and the functional allocation of English” in multi-cultural contexts (Kachru, 1992, p. 356). In the Inner Circle, English is the mother tongue, including users from the US, UK, Canada, Australia, and New Zealand. In the Outer Circle, English is not a mother tongue but an additional institutionalized and official language, including users from countries that have passed through extended periods of colonization, such as India, Malaysia, Philippines, Singapore, Hong Kong, etc. In the Expanding Circle, English is taken as a foreign language mainly applied on international occasions, including users from countries such as China, Japan, Korea, Taiwan, Indonesia, Thailand, etc.

specific metaphors is universal or culture dependent. Further empirical research using data from other cultures can bring different perspectives to enhance the awareness of the role of culture in metaphor-theory building (Boers, 2003; Deignan, 2003; Gibbs, 1999; Kövecses, 2005).

In this paper, we widen the focus of research on metaphor change over time to Asian politics by conducting a corpus-based case study in Hong Kong political discourse. One advantage of focusing on Hong Kong is its unique social-cultural environment, combining traditional Chinese culture with aspects of Western culture brought in during its time as a British colony.³ The majority of the local Chinese and the relatively small but significant number of expatriates (Holdsworth & Courtauld, 2002; Leonard, 2010) living in Hong Kong has created a cultural synthesis of both Eastern and Western traditions. This distinctive East-West cultural combination also characterizes Hong Kong's language use. Since the transfer of sovereignty in 1997, English and Chinese have been the two official languages of Hong Kong and the Hong Kong government has extensively promoted and provided educational support for Hong Kong as a 'trilingual' (English, Cantonese, and Putonghua) and 'biliterate' (English and Chinese) society (Evans, 2010; Poon, 2010; Huang et al., 2019).

We specifically focus on the English-language speeches used by government leaders to examine the diachronic changes in English metaphor use in Hong Kong political discourse in order to provide perspectives from an Outer Circle English context during a post-colonial period. Metaphors may vary between different languages and they may also vary within the same language (e.g., Charteris-Black, 2004b, Ahrens & Zeng, in press), as language and culture

³ Hong Kong was part of the Chinese empire since the Qin dynasty (221-206 BC). It was ceded to the Britain by the Qing dynasty of China in 1842 during the First Opium War. The British colonization of Hong Kong lasted more than 150 years. On 1 July 1997, the sovereignty over Hong Kong was transferred to the People's Republic of China (PRC), since which Hong Kong became an autonomous Special Administrative Region of the PRC (except in defence and foreign affairs). According to its constitutional document - the Basic Law, Hong Kong was granted autonomy under the governance of "One Country, Two Systems" principle for 50 years (Lam, Liu, & Wong, 2012).

are two potential factors influencing conceptual metaphor use (e.g., Kövecses, 2005; Bennardo, Beller, & Bender, 2010; Boroditsky, Fuhrman, & McCormick, 2011). Thus, if we compare Chinese to English, any differences we find may be due to either differences in culture or differences in language. By focusing on the comparative differences within a single language (in this case, English), we can focus on cultural aspects that underlie the variations found. In addition, focusing on the English data also allows us to compare our findings with previous diachronic studies of English metaphor use in Inner Circle English contexts (e.g., Burgers & Ahrens, 2020; Musolff, 2017) and exclude the possibility of language as a factor influencing metaphor use. Thus, unlike studies that examined both language and cultural differences (Chiu & Chiang, 2011; Lu & Ahrens, 2008; Fukuda, 2009), the current study only focuses on the single factor of culture in diachronic metaphor use.

Our corpus focuses on public speeches in between 1997 and 2017 by Hong Kong politicians who have served as leaders of the various service components of the government, instead of at the highest level as other studies have done (Ahrens, 2011; Charteris-Black, 2004a, 2005/2011, 2006).⁴ We analyzed the speeches of the three Secretaries of Departments who report directly to the Chief Executive of Hong Kong: the Chief Secretary for Administration, the Financial Secretary, and the Secretary for Justice (Lam et al., 2012).⁵ All speeches were delivered in English to address different political, economic, and social issues in Hong Kong during the first twenty-years of the post-handover period.

We particularly focused on the topic of free economy which has been an important societal issue in Hong Kong from 1997 to 2017. Hong Kong has been ranked as one of the

⁴ But see Ahrens and Lee (2009) for an analysis of metaphor use by United States Senators between 2000 and 2007.

⁵ The Chief Executive is the representative of the Hong Kong Special Administrative Region (HKSAR) and the head of the Hong Kong government, responsible for duties including the implementation of the Basic Law, signing bills, approving motions, and nominating and reporting to the Central People's Government (CPG) for the appointment of the principal officials of the HKSAR, e.g., the Secretaries of Departments were nominated by the Chief Executives and appointed by the CPG (Lam et al., 2012).

world's freest economies for the past twenty-five consecutive years (The Heritage Foundation, 2019).⁶ The government has touted free economy as the cornerstone and biggest strength of its economy over the past several decades (The Government of Hong Kong Special Administrative Region, 2019). Our study thus focuses on this societal issue to analyze whether and how metaphorical frames of the 'free economy' concept in Hong Kong public speeches by government leaders have changed in the period from 1997 to 2017. Situated in the changing context of social-economic-political dynamics after the 1997 handover to China from Great Britain, the study aims to bring new insights to enrich the current diachronic investigations of changes in metaphorical frame.

5.2 Changes of metaphorical frames in public discourse over time

Conceptual Metaphor Theory (Lakoff, 1993; Lakoff & Johnson, 1980/2003) considers metaphors as cross-domain mappings between a source (e.g., JOURNEY) and a target domain (e.g., FREE ECONOMY). Metaphorical frames have the ability to linguistically present (framing device) and conceptually reason about (reasoning device) societal issues (Burgers, Konijn, & Steen, 2016).⁷ For instance, when addressing the 'trade' issue in the USA's State of the Union addresses (SOUs) (Burgers & Ahrens, 2020, p. 7), President George Bush Sr. used the JOURNEY metaphor to frame the topic as in "We can help our partners [...] *move toward* a free

⁶ The Heritage Foundation is a conservative think tank founded in the US in 1973. It aims to formulate and advance conservative public policies based on "free economy, limited government, individual freedom, traditional American values, and a strong national defense" (The Heritage Foundation, 2020; Ryssdal, 2017). Whether or not an economy is considered 'free' is a decision made within a political-economic frame regarding governmental regulations and government involvement in the economy (Champlin & Knoedler, 2005; Van Hiel & Kossowska, 2007; Zumbrennen & Gangl, 2008).

⁷ In cognitive semantics, 'frame' has been defined as a conceptual knowledge structure in long-term memory that relates elements, entities, and events in human experience (Fillmore, 1982). Lakoff (1987), and Langacker (1987) defined 'frame' as a part of background knowledge and 'framing' refers to the process of highlighting the structural nature of the background knowledge. From a communication-science perspective, Entman (1993) further pointed out that framing essentially involves selection and salience, and stated that framing involves "select[ing] some aspects of a perceived reality and mak[ing] them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described." (Entman, 1993, p. 53).

trade zone throughout this entire hemisphere.” Here, TRADE was conceptualized as a JOURNEY where the US can help their partners to *move toward* the destination of the journey - a free trade zone. JOURNEY metaphors have been commonly used in political discourse to create emotions of solidarity (Charteris-Black, 2005/2011). The elements under the JOURNEY source domain (e.g., steps, guides, maps, companions, and goals) often imply the speakers are ‘guides’, and their policies are ‘maps’ to the public citizens who are the ‘companions’ of the speakers. The FREE TRADE IS A JOURNEY frame emphasized the positive aspects of ‘moving toward’, ‘steps’, and ‘goal-oriented’ and thus provided positive evaluations for the speakers.

Since metaphors can be used to frame various societal issues, examining patterns of metaphorical frame variation in discourse is an effective way to reflect how conceptualizations of societal issues change over time (Burgers, 2016). Burgers (2016) proposed a metaphor-based approach to tracking changes at two dimensions over time: 1) fundamental change in which extant metaphors are replaced over long time span or on account of specific events, and 2) incremental change, in which the meaning of metaphors changes over long time span or on account of specific events. Burgers and Ahrens (2020), for example, analyzed metaphorical framing of TRADE metaphors in SOUs in the United States over a period of 225 years (1790-2014), and found that the use and meaning of metaphors from the four predominant source domains in SOUs - PHYSICAL OBJECT, BUILDING, JOURNEY, and LIVING BEING - were mostly stable, indicating that the conceptualizations of TRADE issues by the US presidents in SOUs have remained relatively stable over the past two centuries.

Other diachronic studies in economic discourse have also analyzed metaphorical frame patterns to track changes in societal issues. De Landtsheer (2015) investigated changes in metaphor power in Flemish-Belgian news discourse from the 2006-2013 financial crisis. She found a more pronounced use of economic metaphors (more frequent, more innovative, and more emotionally powerful, e.g., VIOLENCE and DISASTER metaphors) during the financial

crisis compared to the pre/post-crisis periods. Nerghes et al. (2015) compared changes in the meanings of the TOXIC metaphor in the US and UK news discourse between 2007 and 2011. Their findings showed a shift in the meanings associated with TOXIC metaphor from more generic, image-creating concepts in the pre-crisis period toward a more specific concept, characterizing financial instruments, during the crisis.

López and Llopis (2010) also focused on the 2007-2008 financial crisis by comparing metaphor use in Spanish and English news discourse. They found that, overall, metaphors were used more negatively in English news discourse during a time when the financial crisis had already caused havoc in the world economy compared to the Spanish news discourse when the financial crisis notion was infrequently mentioned. In addition, metaphors were found to be used more positively prior to the crisis and more negatively during the crisis in Spanish news discourse. These studies demonstrate that economic metaphors occurred more often (De Landtsheer, 2015), and were more specific (Nerghes et al., 2015) and more negative (López & Llopis, 2010) during the crisis than the pre/post-crisis. These results suggest that patterns of change in economic metaphors reflect different phases of the financial crisis evolution. In line with the above studies, we focus on economic metaphor use in the framing of the societal topic of FREE ECONOMY through examining speeches by government leaders in Hong Kong as a case study.

One crucial point for applying a metaphor-based approach to social change analysis is to differentiate changes in metaphorical frames over time from changes in general attention to the topic (Burgers & Ahrens, 2020; Damstra & Vliegthart, 2018). A metaphorical frame may vary on account of variations in general attention to the topic itself (Hu & Liu, 2016). For instance, as mentioned above, economic metaphors occurred more often during the financial crisis period (De Landtsheer, 2015; Nerghes et al., 2015). It is quite possible that the topic of the financial crisis itself received more intense attention from the media during this period. For

instance, the Flemish-Belgian newspapers covered financial news more frequently during this period (De Landtsheer, 2015). This increased coverage would also lead to a higher number of specific metaphorical frames during that time. Thus, as examining the association between the general attention to ‘free economy’ and ‘metaphor use’ is a necessary step before delving into metaphor analysis, the first research question (RQ1) of this study is: *How does general attention to FREE ECONOMY topic in Hong Kong political discourse change over time?*

While most diachronic studies of metaphorical framing of various societal issues have been intensively investigated in Inner Circle English and European languages (Burgers & Ahrens, 2020; De Landtsheer, 2015; López & Llopis, 2010; Nerghes et al., 2015), relatively fewer studies have focused on the Chinese language (e.g., Jing-Schmidt, 2016; Ahrens & Zeng 2017). Data from Inner Circle English and European languages alone are insufficient for generalizing a universal pattern as empirical evidence from in Chinese shows that both fundamental and incremental change in metaphorical frames varies between cultures. For example, Ahrens and Zeng (2017) found differences in Hong Kong government leaders’ employing metaphorical frames of EDUCATION (in Chinese) in Hong Kong policy addresses before and after Hong Kong’s handover from Britain to China in 1997. British-appointed Governors’ (1984-1996) patterns of source domain usages (PRODUCT, BUILDING, OBJECT, BUSINESS, and SYSTEM) differed considerably from Hong Kong-appointed Chief Executives (1997-2014). However, in the US context, when Burgers and Ahrens (2020) compared American presidents’ use of metaphorical frames of TRADE over history (1790-2014), they found the use of the overall source domains (PHYSICAL OBJECT, BUILDING, JOURNEY, and LIVING BEING) were mostly stable. The contrastive pattern between English metaphors in the United States and the Chinese metaphors in Hong Kong contexts shows that fundamental change in metaphorical frames of one topic differs across contexts with different languages and cultures. Analysis of the fundamental change in metaphorical frames from Hong Kong data in

English in this study will enrich our understanding of the distinctive East-West cultural context that is found in Hong Kong and extend our understanding of the difference in metaphor use beyond a solely Western-cultural context. It thus leads to our second research question (RQ2): *To what extent do FREE ECONOMY metaphors experience fundamental change in Hong Kong political discourse over time?*

In terms of incremental changes of metaphorical frames over time, studies also found cross-cultural differences. Fukuda (2009) found variations on metaphoric terms in the monetary policy authorities assessments of the economic conditions between US and Japan for the period 1998 to 2006. Metaphors were used in keeping with different business cycle phases: the US business cycle phases consisted of ‘expansion’, ‘recession’, and ‘expansion’, whereas the Japanese business cycle phases consisted of ‘contraction’, ‘revival’, ‘contraction’, ‘revival’, and ‘expansion’. The patterns indicate that the meanings of the metaphorical frames of one same topic have changed over time and can also be diverse between the discourse of different cultures.

In addition, in US political discourse, Ahrens (2011) and Ohl et al. (2013) found no incremental changes of metaphorical frame use between parties in US politics. However, more variations on the meanings of one same metaphorical frame across topics were found in Taiwanese political discourse. Lu and Ahrens (2008) examined variations of the lexical items under the A COUNTRY IS A BUILDING metaphorical frame in Taiwanese presidential speeches from 1954 to 2006. They identified two culture-specific metaphors as being more productive during 1954 to 1975 than the later period due to the transitional of the authoritative leaders: the retrospective BUILDING metaphors including FORERUNNERS ARE BUILDERS and PAST HISTORY IS FOUNDATION sub-metaphors; the RECONSTRUCTION metaphors including COMMUNIST ARE DESTROYERS and THE COMMUNIST TAKEOVER IS DESTRUCTION sub-metaphors. In other

words, the source-target mappings under one same source domain (BUILDING) have changed, which indicates the incremental changes of the BUILDING metaphorical frames over the period.

Comparing the above US and Taiwan political discourse, we see the variations on the metaphor incremental changes, and thus, culture as a factor influencing metaphor use should not be overlooked. The patterns of metaphor incremental change from Hong Kong data provide perspectives from political discourse in Outer Circle English during a post-colonial period. We then raise the third research question (RQ3): *To what extent do FREE ECONOMY metaphors experience incremental change in Hong Kong political discourse over time?*

Answers to the above three questions will complement previous work in Inner Circle English and European languages and allow for a fuller picture of diachronic metaphor change across the globe.

5.3 Method

5.3.1 Corpus creation

The corpus was manually collected from the official website of the Hong Kong government (<http://www.info.gov.hk/isd/speech/sensp.htm>). Speeches were delivered by the Secretaries of Departments – four Chief Secretaries for Administration (CSA), four Financial Secretaries (FS), and three Secretaries for Justice (SJ) in Hong Kong after the handover of sovereignty from Britain to China on 1 July 1997. The list of the eleven speakers is shown in Table 5.1, along with their political roles, gender, time in office, the total number of speeches, and the number of words.

Table 5.1 Corpus of public speeches by principal officials in Hong Kong (1997-2017).⁸

| Political roles | Speakers | Gender | Time in office | No. of speeches | No. of words |
|--|----------------------------|--------|-----------------------|-----------------|--------------|
| Chief Secretary for Administration (CSA) | Anson Chan Fang On-sang | Female | 01.07.1997-30.04.2001 | 163 | 244,773 |
| | Donald Tsang Yam-kuen | Male | 01.05.2001-31.05.2005 | 96 | 144,105 |
| | Henry Tang Ying-yen | Male | 01.07.2007-30.09.2011 | 93 | 91,665 |
| | Carrie Lam Cheng Yuet-ngor | Female | 01.07.2012-16.01.2017 | 144 | 162,459 |
| | CSA Total | | | 496 | 643,002 |
| Financial Secretary (FS) | Donald Tsang Yam-kuen | Male | 01.07.1997-30.04.2001 | 162 | 268,009 |
| | Antony Leung Kam-chung | Male | 01.05.2001-16.07.2003 | 66 | 91,539 |
| | Henry Tang Ying-yen | Male | 17.07.2003-30.06.2007 | 95 | 89,357 |
| | John Tsang Chun-wah | Male | 01.07.2007-16.01.2017 | 104 | 138,637 |
| | FS Total | | | 427 | 587,542 |
| Secretary for Justice (SJ) | Elsie Leung Oi-sie | Female | 01.07.1997-19.10.2005 | 89 | 171,989 |
| | Wong Yan-lung | Male | 20.10.2005-30.06.2012 | 72 | 141,007 |
| | Rimsky Yuen Kwok-keung | Male | 01.07.2012-06.01.2018 | 164 | 250,071 |
| | SJ Total | | | 325 | 563,067 |
| | In Total | | | 1,248 | 1,793,611 |

In total, the corpus contained 1,248 public speeches spanning two decades from 1 July 1997 to 31 December 2017, with a total word count of 1,793,611, as calculated by the WordList function in WordSmith 6.0. Speeches were delivered at various ceremonial occasions, including ceremonial openings, receptions, anniversaries, annual luncheons, and gala dinners. Thus, the nature of the speeches is ceremonial speech or epideictic speech (Charteris-Black, 2013), with the primary rhetorical purpose being celebration of various social, economic, and political events in Hong Kong. Since the societal topic of FREE ECONOMY is commonly mentioned in these speeches, the corpus provides a good resource for the analysis of the concept of FREE ECONOMY in Hong Kong over the past two decades.

⁸ The time span of the public speeches in our corpus is from 3 July 1997 to 27 December 2017. The first speech was delivered on 3 July 1997 by the Financial Secretary - Donald Tsang Yam-kuen. The last speech was delivered on 27 December 2017 by the Secretary for Justice - Rimsky Yuen Kwok-keung.

5.3.2 Procedure

After compiling the corpus, we sought to extract relevant instances in the target domain of FREE ECONOMY. Following the Metaphor Pattern Analysis approach (Stefanowitsch, 2006), we determined a list of lexical items related to FREE ECONOMY to be searched in the corpus. We first extracted all instances in the target domain of ECONOMY by searching for lemmas of ‘economy’ and ‘trade’ in the corpus and obtaining their concordances. Lemmas searched for include *economy*, *economies*, *economic*, *economically*, *economics*, *trade*, *traded*, *trades*, *trading*, *trader*, *traders*, and *tradable*. We obtained 8,748 concordances related to the general ECONOMY target domain from the whole corpus.

Second, we manually identified FREE ECONOMY instances from the 8,748 ECONOMY instances. Apart from instances involving the phrase ‘free economy’, we also included other relevant instances based on specific contextual information and the definitions of the ‘free economy’ concept from the 2019 Index of Economic Freedom at <https://www.heritage.org/index/about>. For instance, “economic or trade liberalization”, “minimal government interference in the economy”, and “no tariffs or non-tariff barriers to imports and exports” were also counted as FREE ECONOMY instances. In total, we obtained 1,430 cases of FREE ECONOMY instances, occupying 16.3% of the total 8,748 ECONOMY instances.

Third, associated metaphors of FREE ECONOMY were identified following MIPVU (Steen et al., 2010). We also refer to WordNet (<https://wordnet.princeton.edu/>) (Fellbaum, 2005) and SUMO – Suggested Upper Merge Ontology (<http://www.adampease.org/OP/>) (Niles & Pease, 2001) as complementary resources for checking word meanings. From the 1,430 FREE ECONOMY instances, 695 were metaphorical (48.6%).

Fourth, the 695 metaphors were categorized into different source domains. 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 up free economy”, the abstract target domain FREE ECONOMY is described with the concrete source domain BUILDING. We applied previous approaches to source domain verification (Ahrens & Jiang, 2020; Zeng, Tay, & Ahrens, 2020; Ahrens & Zeng, 2017). Table 5.2 briefly presented the main procedures of the approaches.⁹

Table 5.2 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 et al., 2014) and the online Oxford Collocation Dictionary as a complementary method to the WordNet-SUMO method, e.g., to check if there are any frequent collocations of the keywords related to the proposed source domains. |

5.3.3 Inter-coder reliability

The identification of FREE ECONOMY instances, metaphorical FREE ECONOMY instances, and source domains were conducted by two coders with postgraduate linguistics degrees, who received pre-coding training before they analyzed the data independently. All ambiguous cases

⁹ In step 1, educated, fluent speakers' judgement about potential source domains can be related to the notion of 'unity of domains' which refers to 'a background assumption on the part of the listener that sentences (involving metaphor or metonymy) are semantically coherent' (Croft, 2003, p. 195).

were discussed and resolved after the reliability tests. We calculated the inter-coder reliability in a subset of the data. Following Wimmer and Dominick (2013, p. 175), the subset for each reliability analysis varied between 10% and 25% of the full dataset.

Among the 8,748 general ECONOMY instances, we randomly selected 900 cases (10.3% of all cases) for the reliability tests for coding FREE ECONOMY instances. The result shows the reliability is “substantial” (Cohen’s kappa = .710, qualification from Landis & Koch, 1977). Among the 1,430 FREE ECONOMY instances, we randomly selected 200 cases (14.0%) for testing the agreement of coding metaphors. The result shows the reliability is also “substantial” (Cohen’s kappa = .790).

In terms of the source domain verification coding, we randomly selected 150 metaphorical FREE ECONOMY instances (21.6%) from the total 695 metaphorical FREE ECONOMY instances for the tests. We tested the reliability for the top eight source domains. Results show reliability is “almost perfect” for coding the source domains of BUILDING (Cohen’s kappa = .88) and PRODUCT (Cohen’s kappa = .85), “substantial” for coding the source domains of JOURNEY (Cohen’s kappa = .81), LIVING ORGANISM (Cohen’s kappa = .80), PHYSICAL OBJECT (Cohen’s kappa = .74), WAR (Cohen’s kappa = .72), SPORT (Cohen’s kappa = .80), and WATER (Cohen’s kappa = .80). See all the data and analyses on the Open Science Framework at <https://edu.nl/y4qwn>.

5.4 Results

This section presents the results of the diachronic analyses of attention to FREE ECONOMY (RQ1), source domains for FREE ECONOMY metaphors (RQ2), and FREE ECONOMY metaphor meanings (RQ3).

5.4.1 Attention to the topic of FREE ECONOMY

In total, there are 1,430 FREE ECONOMY instances identified from the 8,748 ECONOMY instances in the corpus. We calculated the relative number of FREE ECONOMY instances per 10,000 words of the corpus. For the diachronic analysis, we aggregated the data on the one-year level. Thus, every data point reflects average scores for a specific year (e.g., 1997, 1998, etc.). The solid line in Figure 5.1 plots the standardized number of FREE ECONOMY instances per 10,000 words, in the time period between 1997 and 2017. The Figure thus shows the general attention to FREE ECONOMY over this period.

We used *IBM SPSS Statistics* (Version 24) to run the bivariate Pearson correlation analysis of the relation between ‘time’ and ‘attention to FREE ECONOMY’ (in line with e.g., Van Krieken & Sanders, 2016). The result reveals no significant association between time and FREE ECONOMY references ($r = -.35, p = .12$), indicating the changes (decreases or increases) in FREE ECONOMY references are not significantly correlated with time.

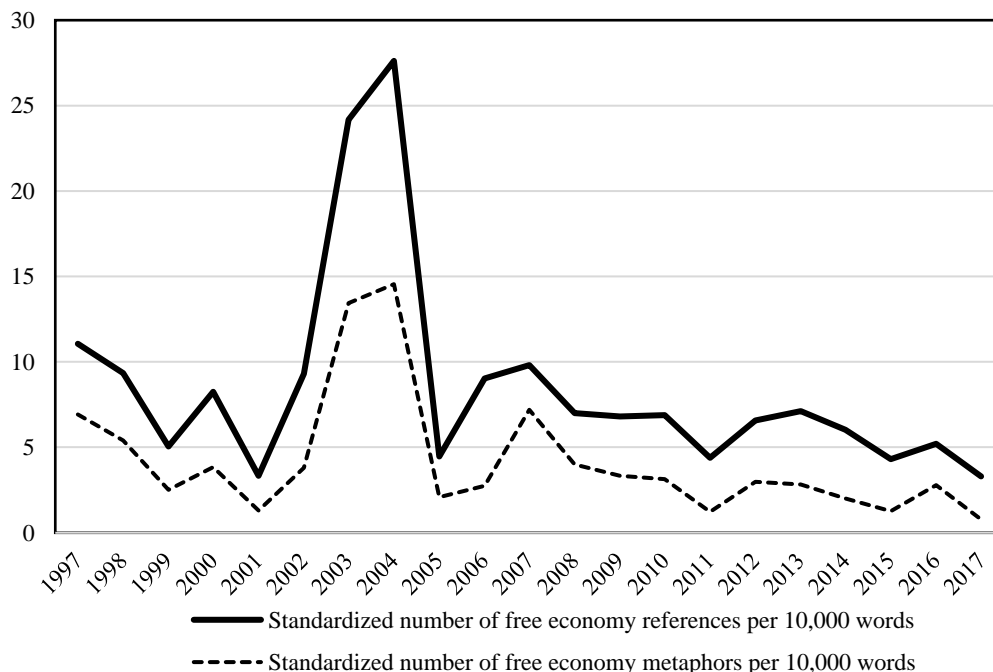


Figure 5.1 Standardized number of FREE ECONOMY references and metaphors per 10,000 words

In addition, a sharp rise between 2002 to 2004 can be seen in the solid line in Figure 5.1, showing increased attention to the topic of FREE ECONOMY during this period. By further checking the data, we found that, overall, the FREE ECONOMY topic was mainly focused on the economic relationship between Hong Kong and Mainland China. During the period from 2002 to 2004, specifically on 29 June 2003, Hong Kong and Mainland China signed the first free trade agreement, the Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA), which aimed to strengthen economic cooperation and achieve full liberalization of the economies in the two regions (Hong Kong Trade and Industry Department, 2012). This major event likely caused the more pronounced attention to the topic of FREE ECONOMY in the speeches.

5.4.2 Metaphors of FREE ECONOMY over time

5.4.2.1 Association between 'time' and 'FREE ECONOMY metaphors'

Among the 1,430 FREE ECONOMY instances, 695 instances were identified as metaphorical instances. Following Burgers & Ahrens (2020), we look into two indicators: 1) the standardized number of FREE ECONOMY metaphors and 2) the relative percentage of FREE ECONOMY instances that are metaphorical.

For indicator 1, the dotted line in Figure 5.1 plots the relative number of FREE ECONOMY metaphors per 10,000 words of the corpus. Pearson's Correlation analysis shows a marginally significant negative association between 'time' and 'relevant frequency of FREE ECONOMY metaphors' ($r = -.40, p = .07$). This indicates that the relative frequency of FREE ECONOMY metaphors decreased over time. For indicator 2, we calculated the percentage of FREE ECONOMY metaphors by dividing the number of FREE ECONOMY metaphors by the total number of FREE ECONOMY instances. Indicator 2 thus controls for change in relation to the total number of FREE ECONOMY instances. Pearson's Correlation analysis again reveals a

significantly negative association between ‘time’ and ‘percentage of FREE ECONOMY metaphors’ ($r = -.49$, $p = .02$), which suggests that the percentage of metaphors in all FREE ECONOMY instances decreased over time.¹⁰

5.4.2.2 Association between ‘time’ and ‘source domains for FREE ECONOMY metaphors’

Next, for the relation between time and source domains for FREE ECONOMY metaphors, we calculated the percentage of FREE ECONOMY metaphors from different source domains. Our analysis focuses on the top four source domains – JOURNEY (191 cases), LIVING ORGANISM (166 cases), BUILDING (162 cases), and SPORT (105 cases) – which comprise 624 out of the total of 790 source domains (79.0%) in the corpus.¹¹ Figure 5.2 plots the percentages of FREE ECONOMY metaphors from the four source domains.

¹⁰ Various authors (e.g., Koplenig, 2017; Tay, 2019) have proposed that time-series analyses (TSA) are a more appropriate method of analysis to model changes over time as Pearson’s correlation coefficients assume that observations are independent. However, in diachronic change this may not be the case because observations over time may be autocorrelated. We checked whether this was the case but found that autocorrelations were non-significant for both indicators. This means that a TSA model would be a poor fit for these data, and we do not report on it further. See all the analyses on OSF at <https://edu.nl/y4qwn>.

¹¹ Due to their low frequencies, we excluded the remaining thirteen source domains from these analyses: PHYSICAL OBJECT (43 cases), WAR (43 cases), PRODUCT (29 cases) WATER (27 cases), CONTAINER (15 cases), CATALYST (2 cases), FOOD (1 case), AIR (1 case), NATURAL DISASTER (1 case), MACHINE (1 case), TEST (1 case), BOOK (1 case) and RELIGION (1 case).

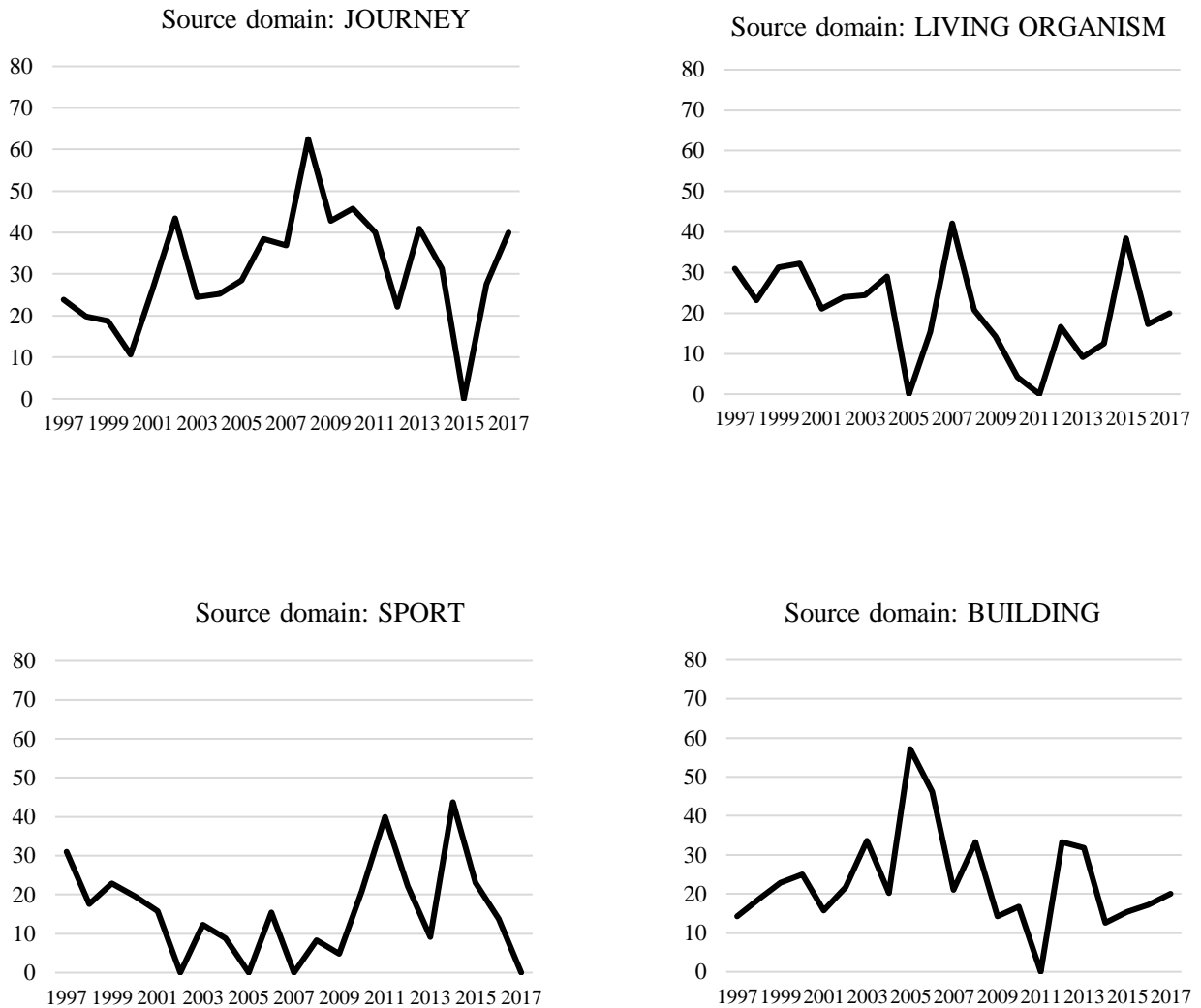


Figure 5.2 Percentages of FREE ECONOMY metaphors from the source domains of JOURNEY, LIVING ORGANISM, BUILDING and SPORT

Pearson's Correlation analysis shows no significant association between time and the domains of JOURNEY ($r = .23, p = .33$), LIVING ORGANISM ($r = -.34, p = .13$), BUILDING ($r = -.13, p = .59$), and SPORT ($r = .03, p = .90$), indicating that the changes (decreases or increases) in the use of the four source domains are not significantly correlated with time.

5.4.3 Differences in meanings of FREE ECONOMY metaphors

The third research question looks at incremental changes in the meaning of FREE ECONOMY metaphors. We analyzed the semantic changes of the four frequent source domains before and after the signing of the Closer Economic Partnership Arrangement (CEPA) on 29 June 2003 which likely caused an increasing attention to the FREE ECONOMY topic and metaphor use (see findings in section 4.1). We focused on comparing the frequently occurring metaphorical keyword usage patterns, i.e., mapping principles between source-target domain pairings (Ahrens, 2010). The mapping principle of a metaphor can be formulated by examining corpus evidence for the most frequently occurring lexical item as central to the underlying mappings between the source and target domains (Ahrens, 2010, p. 30). Examining patterns of metaphor mapping principles provides a way to quantify the incremental changes of metaphor meanings over time. Our analysis demonstrates that the FREE ECONOMY metaphor meanings either remained mostly constant (Section 4.3.1) or underwent clear incremental changes (Section 4.3.2).

5.4.3.1 Domains remaining mostly constant: LIVING ORGANISM and SPORT

In the data, similar frequently occurring metaphorical keywords under the LIVING ORGANISM and SPORT source domains were used before and after the CEPA agreement in 2003 (see Table 5.3). We used a cutoff cumulative percentage up to 60% as the criteria for determining the ‘frequently occurring keywords’ in order to include the top keywords occupying more than half of the total observations.¹² The full list of the metaphorical keywords under the four source domains of LIVING ORGANISM, SPORT, JOURNEY, and BUILDING can be found in Appendices 5.1-5.4.

¹² Cumulative percentage is a measure of frequency distribution. In our data, the cumulative percentage of a keyword is calculated by dividing the cumulative frequency of this keyword by the total number of the keywords under the same source domain and then multiplying it by 100 (the last value will always be equal to 100%).

Table 5.3 Frequent metaphorical keywords (cumulative percentage up to 60%) under LIVING ORGANISM, SPORT, JOURNEY, and BUILDING source domains

| Source Domains | Before 29 June 2003 | | | After 29 June 2003 | | |
|-----------------|------------------------------------|--------|-----------------------|------------------------------------|--------|-----------------------|
| | Metaphorical keywords (lemmatized) | Tokens | Cumulative percentage | Metaphorical keywords (lemmatized) | Tokens | Cumulative percentage |
| LIVING ORGANISM | <i>growth</i> | 22 | 26.19 | <i>growth</i> | 21 | 23.08 |
| | <i>commitment</i> | 14 | 42.86 | <i>foster</i> | 9 | 32.97 |
| | <i>evolve</i> | 4 | 47.62 | <i>commitment</i> | 7 | 40.66 |
| | <i>thrive</i> | 4 | 52.38 | <i>recovery</i> | 7 | 48.35 |
| | <i>flourish</i> | 3 | 55.95 | <i>open up</i> | 6 | 54.95 |
| | <i>foster</i> | 3 | 59.52 | <i>thrive</i> | 4 | 59.34 |
| | <i>suffer</i> | 3 | 63.10 | | | |
| SPORT | <i>competitive</i> | 23 | 38.33 | <i>competitive</i> | 18 | 33.33 |
| | <i>run</i> | 8 | 51.67 | <i>play (a role)</i> | 14 | 59.26 |
| JOURNEY | <i>(remove) barrier</i> | 14 | 17.95 | <i>(remove) barriers</i> | 26 | 20.80 |
| | <i>step</i> | 8 | 28.21 | <i>enter into</i> | 16 | 33.60 |
| | <i>lead to</i> | 6 | 35.90 | <i>launch</i> | 14 | 44.80 |
| | <i>explore</i> | 5 | 42.31 | <i>achieve</i> | 8 | 51.20 |
| | <i>embark upon</i> | 3 | 46.15 | <i>ahead of</i> | 6 | 56.00 |
| | <i>enter to</i> | 3 | 50.00 | | | |
| | <i>follow</i> | 3 | 53.85 | | | |
| | <i>launch</i> | 3 | 57.69 | | | |
| | <i>track</i> | 3 | 61.54 | | | |
| BUILDING | <i>underpin</i> | 16 | 23.88 | <i>landmark</i> | 23 | 20.54 |
| | <i>(re)structure</i> | 9 | 37.31 | <i>build</i> | 10 | 29.46 |
| | <i>bastion</i> | 7 | 47.76 | <i>strengthen</i> | 10 | 38.39 |
| | <i>build</i> | 7 | 58.21 | <i>cornerstone</i> | 7 | 44.64 |
| | | | | <i>enhance</i> | 7 | 50.89 |
| | | | | <i>strong</i> | 7 | 57.14 |
| | | | | <i>underpin</i> | 7 | 63.39 |

LIVING ORGANISM

Comparing the frequent metaphorical keywords under the LIVING ORGANISM source domain before and after CEPA, we found the semantic meanings of LIVING ORGANISM metaphors

consistently referred to the economic growth brought about by a free economy. Hong Kong secretaries used the keyword of ‘growth’ to emphasize ‘the economic growth in Hong Kong or Mainland China brought by a free economy’ both before 29 June 2003 (see example 1) and after 29 June 2003 (see example 2).¹³

(1) Trade and foreign investment have proven to be the major forces of global economic *growth*. Economies such as Hong Kong that have adopted an **open market and free trade policies** have enjoyed significant *growth*. (Donald Tsang, FS, 07 July 2000)

(2) **CEPA** offers a win-win situation: Hong Kong lawyers can take advantage of the continuing economic *growth* in the Mainland and, at the same time, they can help to develop international trade and financial expertise there. (Elsie Leung, SJ, 12 January 2004)

Examples (1) and (2) conceptualize ECONOMY as A LIVING ORGANISM that can grow. Before and after the signing of CEPA in 2003, the secretaries discussed the benefits from a free economy, emphasizing the economic growth in Hong Kong and Mainland and consistently mentioning the positive aspect of ‘growth’ under the LIVING ORGANISM source domain. Such consistency shows the Hong Kong government’s positive evaluations of the free economy policy over the whole period. Overall, the constant meanings of LIVING ORGANISM metaphors in the corpus suggest that continued economic growth and commitment to free economy remain political goals throughout the timeframe from 1997 to 2017.

¹³ Words related to the topic of FREE ECONOMY were shown in bold and metaphorical keywords were italicised and underlined in all the examples.

SPORT

We also found the semantic meanings of SPORT metaphors remain mostly unchanged with an emphasis on the aspect of ‘competition’ when talking about FREE ECONOMY before and after 29 June 2003. The keywords usage patterns for the whole period show that the secretaries mainly applied the keyword of ‘competition’ to frame ‘free economy as Hong Kong’s biggest competitiveness’. Example (3) is illustrative for the case before 29 June 2003, and example (4) is illustrative for the case after 29 June 2003.

(3) Research institutes also accord high ratings to our open trade policy characterized by a very low level of protectionism... An environment that offers a high degree of **economic freedom** tends to attract business, promote *competitiveness* and foster economic development. (Anson Chan, CSA, 04 December 1997)

(4) Our biggest advantage over other *competitors* in Asia is a landmark **free trade pact** with the mainland of China, which was launched in 2004. It is called the Closer Economic Partnership Arrangement, or CEPA for short. (Henry Tang, FS, 09 May 2008)

In examples (3)-(4), FREE ECONOMY ENVIRONEMNT is understood in terms of A SPORT, which is competitive. Hong Kong, which has been described as having the world’s freest economy environment, is postulated to have competitive advantages over other countries or regions similar to the competition that occurs between sports teams.

The consistent emphasis of Hong Kong’s competitiveness over time indicates the government’s intention or a strategy to boost the morale of Hong Kong-based businesses and, at the same time, provide a strategy for self-promotion and advertisement of Hong Kong’s business environment to the world.

5.4.3.2 Domains with incremental changes: JOURNEY and BUILDING

For the source domains of JOURNEY and BUILDING, we found the metaphorical keyword usage patterns experienced fluctuations over time with incremental changes in the meanings of the FREE ECONOMY IS A JOURNEY and FREE ECONOMY IS A BUILDING metaphorical frames (see Table 5.3)

JOURNEY

The semantic meanings of JOURNEY source domains varied before and after the signing of the CEPA on 29 June 2003. Although both the two periods emphasized the ‘barriers’ on the journey to achieve free economy, JOURNEY metaphors were mostly used to talk about ‘the ongoing process of achieving free economy’ before CEPA was ratified, and after CEPA was ratified, Hong Kong secretaries put more emphases on ‘the advantages of CEPA’ and ‘the goal of full economic liberalization’. In examples (5) – (6) from the data before 29 June 2003, Hong Kong secretaries used expressions such as ‘explore’, and ‘step’ to emphasize the initial progress toward the goal of achieving free economy.

(5) Nevertheless, we have taken some significant *steps* to further **liberalise our economy** - look at interest rates and our telecommunications sector, for example. (Donald Tsang, CSA, 29 November 2001)

(6) And we are doing more to link the Mainland with the world by making even better use of our excellent transportation facilities and the high productivity in the Pearl River Delta... Taking this a *step* further, we are *exploring* a **Closer Economic Partnership Arrangement** with the Mainland. (Antony Leung, FS, 01 February 2002)

The secretary applied the word ‘steps’ and the expression ‘further liberalise’ in example (5) to show that Hong Kong has been working on pushing economy liberalisation, which had not yet been accomplished at the time of speaking. Example (6) used the phrases ‘taking a step further’ and the word ‘exploring’ to indicate the initial phases of creating a free economy agreement (CEPA) with China, meaning the goal of free economy is still ongoing.

Nevertheless, after the ratification of the CEPA, the secretaries focused more on ‘the launch of CEPA’ and ‘achieving the goal of full economic liberalization’. Metaphorical keywords such as ‘launch’, and ‘achieve’ were more frequently used, as in examples (7) – (8):

(7) Our biggest advantage over our rivals in Asia is a landmark **free trade pact** with the mainland of China, which was *launched* in 2004. (Henry Tang, FS, 07 May 2008)

(8) Our *goal* is to *achieve* **full liberalisation of goods and services trade** between the Mainland and Hong Kong by the end of 2015. (John Tsang, FS, 23 April 2012)

Example (7) conceptualized FREE ECONOMY as A JOURNEY, and the signing of the free trade pact was a travel tool (e.g., a ship) that has been ‘launched’ on the journey. Example (8) mentioned the future goal of ‘achieving full liberalization’ corresponding to the final goal of a journey. By focusing on the final phase of a journey, the secretaries mapped out the direction for the Hong Kong government regarding proceeding in the journey of achieving a full free economy. In addition, the significance of a free economy was also addressed in example (8), e.g., the free trade pact – CEPA was taken as Hong Kong’s ‘biggest advantage’ over Asia rivals. Showing the benefits from a free economy in public speeches serve as a justification for the free economy policies currently implemented and helps the secretaries to appeal for public support for the Hong Kong government’s promotion of future economic policies and goals. We also noticed ‘barriers’ occurred most frequently in both periods, suggesting ‘breaking down

barriers’ on the journey to free economy is a consistent and ongoing commitment through the whole period, as indicated in example (9):

(9) **CEPA** is a unique **free trade pact** that was launched in 2004 and has been expanded each year since then. It is an *ongoing* commitment to *break down barriers* to trade, services and investment between Hong Kong (Carrie Lam, CSA, 21 May 2014)

Overall, the ratifying of CEPA was seen as a milestone in Hong Kong’s journey to FREE ECONOMY, serving as an explanation for the changes in JOURNEY metaphor use. The shift from the initial ‘ongoing’ stage to the final ‘goal’ in a JOURNEY scenario creates positive evaluations for the politicians, i.e., progressing toward a long-term social goal, and at the same time, appeals to solidarity from the public (Charteris-Black, 2005/2011).

BUILDING

We found the meanings of the BUILDING source domains also shifted before and after the ratifying of CEPA on 29 June 2003. Hong Kong secretaries were more likely to talk about FREE ECONOMY as ‘a building in construction’ before 29 June 2003, while they changed to emphasize free economy as ‘a completed building’ after 29 June 2003. Before CEPA was signed, the metaphorical keywords mainly relate to the process of construction or specific parts of a building. For instance, the secretaries mentioned ‘bastion’, ‘underpin’, and ‘building blocks’ (see example 10-11) in the speeches before 29 June 2003.

(10) This imaginative concept, the brainchild of the Chinese leader Deng Xiaoping, has enabled Hong Kong to flourish as a *bastion* of **free market economics**, *underpinned* by the rule of law and the institutions of civil society. (Donald Tsang, CSA, 23 May 2002)

(11) First, if **free trade** is one of the *building blocks* of global prosperity, that principle applies as much to trade in services as it does to goods. (Elsie Leung, SJ, 07 November 1997)

In example (10), the secretary discussed ‘free market economics’ in terms of ‘a building’ with emphasis on a specific element of ‘bastion’ and the construction processes of ‘underpinning’. In example (11), ‘free trade’ was conceptualized as ‘a building block’ which is one necessary part when constructing a building. These detailed descriptions of building construction link to the Hong Kong government’s specific measures (e.g., ‘transparent regulation’) for developing a free economy. An unfinished building also indicates the goal of achieving free economy is still not completed.

However, after 29 June 2003, the meanings of the BUILDING source domain changed from the status of ‘under construction’ to ‘completion’. For instance, we found the metaphorical keyword ‘landmark’ only occurred after CEPA was signed, as in example (12):

(12) To reinforce the basic note of revitalizing our economy, we have recently reached a *landmark* agreement with the Mainland on **the Closer Economic Partnership Arrangement**, commonly known as **CEPA**, that will open enormous business opportunities for the international and local business community present in Hong Kong. (Antony Leung, FS, 04 July 2003)

‘Landmark’ is usually a completed construction marking a unique or important historical change of course, which correspond to the signed CEPA on 29 June 2003, marking an important stage in the process of building a free economy in Hong Kong.

In addition, the secretaries tend to mention more about the achievements brought by the free economy after the ratifying of CEPA, indicated by the frequent keywords ‘strengthen’ and ‘cornerstone’ as in examples (13) - (14):

(13) **CEPA** has *strengthened* the close economic ties between Hong Kong and the Mainland. (John Tsang, FS, 12 September 2007)

(14) **Economic freedom** has long been the *cornerstone* of Hong Kong's stability, our growth as well as our prosperity. (John Tsang, FS, 17 October 2013)

In example (13), the secretary talked about CEPA as a building material that can ‘strengthen’ the economic ties between Hong Kong and the Mainland. In example (14), ‘economic freedom’ was considered as the ‘cornerstone’ of Hong Kong’s general development. We thus can see after the CEPA started in 2003, the focus has been on the significance of the free economy to Hong Kong or Mainland China.

Similar to the source domain of JOURNEY, the source domain of BUILDING also possesses positive connotations in the expressions of ‘building’ or ‘progressing toward the goals for completion’. The incremental changes in the meaning of FREE ECONOMY IS A BUILDING metaphor feature a ‘building construction and completion’ scenario, indicating that Hong Kong politicians emphasized the idea of ‘constructing a free economy’ before 29 June 2003 and then shifted the focus of the BUILDING metaphor to the idea of ‘completing a free economy’ after the CEPA was issued.

5.5 Discussion and Conclusion

Our study provides an overview of changes in metaphorical framing of FREE ECONOMY in a corpus of Hong Kong public speeches over the past two decades (1997-2017). Among the

8,748 ECONOMY instances extracted from the corpus, we identified 1,430 FREE ECONOMY instances, of which 695 instances were metaphorical, indicating that this topic is frequently metaphorized. In addition, the top four source domains were JOURNEY (191 cases), LIVING ORGANISM (166 cases), BUILDING (162 cases), and SPORT (105 cases), in line with previous literature on Inner Circle English proposing that BUILDING and JOURNEY source domains were commonly used in political discourse (Charteris-Black, 2005/2011).

In reply to RQ1 regarding the diachronic changes of attention to the FREE ECONOMY topic, we conducted a quantitative test of the relation between time and the standardized number of the FREE ECONOMY instances (relative frequency per 10,000 words of the corpus). We found no significant association between the two, suggesting the overall attention to the FREE ECONOMY topic in political speeches by Hong Kong politicians has been relatively stable over time. The fact that Hong Kong has been ranked as the freest economy for the past twenty-five consecutive years (The Heritage Foundation, 2019) may explain the frequency of the FREE ECONOMY topic within the general topic of economics (16.3%). The continuous attention to this topic suggests that FREE ECONOMY is an important societal issue in Hong Kong over the past two decades. In addition, we found increased attention to the topic of FREE ECONOMY between 2002 to 2004, which seems to be related to the signing of the free trade agreement, CEPA, on 29 June 2003.

In reply to RQ2 regarding the fundamental changes of FREE ECONOMY metaphors, we conducted quantitative tests in two distinct ways: 1) the relation between time and the number of FREE ECONOMY metaphors, 2) the relation between time and different source domains for FREE ECONOMY metaphors. We found a marginally significant negative association between time and the standardized number of FREE ECONOMY metaphors per 10,000 words of the corpus, and a significantly negative association between time and the relative percentage of FREE ECONOMY that are metaphorical, suggesting FREE ECONOMY metaphors have experienced

decreasing trends in the period from 1997 to 2017. Given that the construct of free economy has been in use over this long period of time in Hong Kong, government leaders may use more literal language to describe this issue in public speeches.

Furthermore, results also show no significant association between time and the domains of LIVING ORGANISM, SPORT, JOURNEY, and BUILDING. Thus, we found relatively little fundamental changes of FREE ECONOMY metaphors which are in line with the previous findings from data in Inner Circle English and European languages in which the metaphor types used in the discussion of economic subjects have remained relatively stable (Burgers & Ahrens, 2020; Negro, 2016; Arrese & Vara-Miguel, 2016).

In reply to RQ3 focusing on the incremental changes of FREE ECONOMY metaphor meanings, we examined the metaphorical keywords patterns and source-target mapping principles before and after the critical time point – the signing of the Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA) on 29 June 2003. Our findings suggest that FREE ECONOMY metaphors have either remained mostly constant (i.e., LIVING ORGANISM metaphors and SPORT metaphors) or undergone incremental changes (i.e., JOURNEY metaphors and BUILDING metaphors) as evidenced by terms of keyword use before and after 2003.

First, the meanings of the LIVING ORGANISM metaphors and SPORT metaphors remain mostly constant before and after 29 June 2003. The results are surprising as both the LIVING ORGANISM and SPORT domains are theoretically possible to entail diachronic meaning changes. LIVING ORGANISM source domain contains the cyclical nature of living things, such as ‘birth’, ‘growth’, and ‘death’. SPORT source domain contains the process of learning and development components of sports training. Both of the two domains contain sequential elements related to time. However, our data did not show many differences in the semantic meanings of these two source domains over time. LIVING ORGANISM metaphors mainly referred to the ‘economic

growth brought by free economy’, while SPORT metaphors primarily emphasized ‘Hong Kong’s competitiveness as the world’s freest economy’.

The consistent use of metaphorical frames may be considered as a rhetorical strategy by Hong Kong secretaries to deliver the message that the government’s goal of economic liberalization remains unchanged from 1997 to 2017. By emphasizing the achievements or positive aspects brought by FREE ECONOMY, government leaders were able to promote Hong Kong-based businesses and Hong Kong’s economy to the world. For instance, Hong Kong has attracted international partners in the Indo-Pacific region, Australia, and the US who particularly sees Hong Kong as “a highly valued partner precisely because of Hong Kong’s free economy principles” (US Consulate General Hong Kong & Macau, 2019). This strategy, in turn, helped to justify the government’s agenda that continued economic growth and commitment to the FREE ECONOMY should remain as political goals throughout this period.¹⁴

Second, the JOURNEY metaphors and BUILDING metaphors underwent incremental changes over time. The incremental changes of the JOURNEY metaphor meanings feature the ‘Source-Path-Goal’ schema (Lakoff, 1993) or scenario (Musolff, 2006, 2017), which includes elements such as starting points, path, guides, companions, progress, goal, and ending points. Before the signing of CEPA on 29 June 2003, Hong Kong secretaries emphasized the initial ‘ongoing phase’ of a journey in expressions such as ‘explore’ and ‘step’. However, after CEPA was issued, they focused instead on the final goal of a journey in expressions such as ‘achieving the goal of a full economic liberalization’. The meaning of BUILDING source domains also changed with more emphasis placed on ‘free economy as a building in construction’ in the early phase, and more emphasis placed on ‘free economy as a completed building’ in the later phase.

¹⁴ The government’s agenda can be found in yearly policy addresses, which can be accessed in the Corpus of Hong Kong Policy Addresses by Hong Kong Chief Executives (Ahrens, 2015).

The shifting meanings of the JOURNEY and BUILDING metaphors between the early and later periods suggest the way Hong Kong secretaries applied metaphors in the framing of FREE ECONOMY issues have changed. They applied the same source domains while emphasizing different perspectives in order to achieve particular political goals, e.g., construct a positive self-image, appeal to support from the public to issue the free economy agreement, and achieve the final goal of full economic liberalization in Hong Kong. This is evidence that politicians successfully re-negotiated specific metaphorical frames in public discourse, aligning with those patterns in Inner Circle English (Burgers, Jong Tjien Fa, & de Graaf, 2019). The evidence found herein also supports Conceptual Metaphor Theory's position that metaphors are essential devices in reasoning about societal issues (Lakoff, 1993, 1996/2002; Burgers, Konijn, & Steen, 2016).

One interesting finding that is in line with previous research on linguistic data of Inner Circle English and European languages (Arrese & Vara-Miguel, 2016; Burgers & Ahrens, 2020; Negro, 2016), incremental change is more prevalent than fundamental change suggests that source-target domain pairings are fixed over time, which is beneficial in terms of knowledge transmission and comprehension. It also suggests that fundamental change, when it occurs, may be aligned with large structural changes in society, such as those that occur due to societal innovation or disruption. Additionally, we showed that examining metaphor mapping principles by focusing on the frequently referenced lexical items in metaphor source-target domain mappings can reveal to what extent metaphor meanings have changed, which provides a practical way to quantify the incremental changes of metaphorical frames and thus, reflect social changes over time.

Of course, this study is limited to one specific economic topic in Hong Kong political discourse, focusing on the use of Outer Circle English in a post-colonial context. Future studies may examine how other salient issues in different cultural contexts, including social

issues such as housing or education, or political issues such as political reform or corruption, also involve metaphorical frame change over time or across different political parties. In short, we argue that analyzing social changes via fundamental and incremental changes in metaphorical frames offers a promising direction for further research on diachronic change analysis in discourse.

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Appendix 5.1 Frequencies of metaphorical keywords under LIVING ORGANISM source

domain

| Before 29 June 2003 | | | After 29 June 2003 | | |
|------------------------------------|--------|------------------------|------------------------------------|--------|------------------------|
| Metaphorical keywords (lemmatized) | Tokens | Cumulative percentages | Metaphorical keywords (lemmatized) | Tokens | Cumulative percentages |
| <i>growth</i> | 22 | 26.19 | <i>growth</i> | 21 | 23.08 |
| <i>commitment</i> | 14 | 42.86 | <i>foster</i> | 9 | 32.97 |
| <i>evolve</i> | 4 | 47.62 | <i>commitment</i> | 7 | 40.66 |
| <i>thrive</i> | 4 | 52.38 | <i>recovery</i> | 7 | 48.35 |
| <i>flourish</i> | 3 | 55.95 | <i>open up</i> | 6 | 54.95 |
| <i>foster</i> | 3 | 59.52 | <i>thrive</i> | 4 | 59.34 |
| <i>suffer</i> | 3 | 63.10 | <i>allow</i> | 3 | 62.64 |
| <i>bring</i> | 2 | 65.48 | <i>boost</i> | 3 | 65.93 |
| <i>contributor</i> | 2 | 67.86 | <i>give preferential</i> | 3 | 69.23 |
| <i>enjoy</i> | 2 | 70.24 | <i>promise</i> | 3 | 72.53 |
| <i>frustrate</i> | 2 | 72.62 | <i>create</i> | 2 | 74.73 |
| <i>hurt</i> | 2 | 75.00 | <i>treatment</i> | 2 | 76.92 |
| <i>perform surgery on</i> | 2 | 77.38 | <i>enable</i> | 1 | 78.02 |
| <i>relieve</i> | 2 | 79.76 | <i>revitalize</i> | 1 | 79.12 |
| <i>revival</i> | 2 | 82.14 | <i>accompany</i> | 1 | 80.22 |
| <i>save</i> | 2 | 84.52 | <i>await</i> | 1 | 81.32 |
| <i>vulnerable</i> | 2 | 86.90 | <i>bear fruit</i> | 1 | 82.42 |
| <i>allow</i> | 1 | 88.10 | <i>bring</i> | 1 | 83.52 |
| <i>embrace</i> | 1 | 89.29 | <i>budding</i> | 3 | 86.81 |
| <i>enable</i> | 1 | 90.48 | <i>destine to</i> | 1 | 87.91 |
| <i>give</i> | 1 | 91.67 | <i>encourage</i> | 1 | 89.01 |
| <i>gives real strengthen to</i> | 1 | 92.86 | <i>evolve</i> | 1 | 90.11 |
| <i>healthy</i> | 1 | 94.05 | <i>give</i> | 1 | 91.21 |
| <i>ingrain</i> | 1 | 95.24 | <i>immune</i> | 1 | 92.31 |
| <i>recovery</i> | 1 | 96.43 | <i>made possible</i> | 1 | 93.41 |
| <i>rely on the integrity</i> | 1 | 97.62 | <i>offer</i> | 1 | 94.51 |
| <i>root</i> | 1 | 98.81 | <i>participate</i> | 1 | 95.60 |
| <i>woe</i> | 1 | 100.00 | <i>permit for</i> | 1 | 96.70 |
| | | | <i>practitioner</i> | 1 | 97.80 |
| | | | <i>prosper</i> | 1 | 98.90 |
| | | | <i>rest on</i> | 1 | 100.00 |
| Total | 84 | | | 91 | |

Appendix 5.2 Frequencies of metaphorical keywords under SPORT source domain

| Before 29 June 2003 | | | After 29 June 2003 | | |
|------------------------------------|--------|------------------------|------------------------------------|--------|------------------------|
| Metaphorical keywords (lemmatized) | Tokens | Cumulative percentages | Metaphorical keywords (lemmatized) | Tokens | Cumulative percentages |
| <i>competitive</i> | 23 | 38.33 | <i>competitive</i> | 18 | 33.33 |
| <i>run</i> | 8 | 51.67 | <i>play (a role)</i> | 14 | 59.26 |
| <i>play (a role)</i> | 7 | 63.33 | <i>playing field</i> | 5 | 68.52 |
| <i>playing field</i> | 6 | 73.33 | <i>position</i> | 5 | 77.78 |
| <i>top scores</i> | 5 | 81.67 | <i>role</i> | 5 | 87.04 |
| <i>scoreboard</i> | 3 | 86.67 | <i>score</i> | 2 | 90.74 |
| <i>player</i> | 2 | 90.00 | <i>drive</i> | 1 | 92.59 |
| <i>position</i> | 2 | 93.33 | <i>perform</i> | 1 | 94.44 |
| <i>performance</i> | 1 | 95.00 | <i>ranking</i> | 1 | 96.30 |
| <i>sporting heroes</i> | 1 | 96.67 | <i>run</i> | 1 | 98.15 |
| <i>springboard</i> | 1 | 98.33 | <i>underscore</i> | 1 | 100.00 |
| <i>underscore</i> | 1 | 100.00 | | | |
| Total | 60 | | | 54 | |

Appendix 5.3 Frequencies of metaphorical keywords under JOURNEY source domain

| Before 29 June 2003 | | | After 29 June 2003 | | |
|------------------------------------|--------|------------------------|------------------------------------|--------|------------------------|
| Metaphorical keywords (lemmatized) | Tokens | Cumulative percentages | Metaphorical keywords (lemmatized) | Tokens | Cumulative percentages |
| <i>(remove) barrier</i> | 14 | 17.95 | <i>(remove) barriers</i> | 26 | 20.80 |
| <i>step</i> | 8 | 28.21 | <i>enter into</i> | 16 | 33.60 |
| <i>lead to</i> | 6 | 35.90 | <i>launch</i> | 14 | 44.80 |
| <i>explore</i> | 5 | 42.31 | <i>achieve</i> | 8 | 51.20 |
| <i>embark upon</i> | 3 | 46.15 | <i>ahead of</i> | 6 | 56.00 |
| <i>enter into</i> | 3 | 50.00 | <i>explore</i> | 5 | 60.00 |
| <i>follow</i> | 3 | 53.85 | <i>unimpeded</i> | 5 | 64.00 |
| <i>launch</i> | 3 | 57.69 | <i>way</i> | 5 | 68.00 |
| <i>track</i> | 3 | 61.54 | <i>progress</i> | 4 | 71.20 |
| <i>come a long way</i> | 2 | 64.10 | <i>lead</i> | 3 | 73.60 |
| <i>direction</i> | 2 | 66.67 | <i>pace</i> | 3 | 76.00 |
| <i>drive forward/into</i> | 2 | 69.23 | <i>turn the corner</i> | 3 | 78.40 |
| <i>goal</i> | 2 | 71.79 | <i>accelerate</i> | 2 | 80.00 |
| <i>go through</i> | 2 | 74.36 | <i>embark on</i> | 2 | 81.60 |
| <i>highly-g geared</i> | 2 | 76.92 | <i>gateway</i> | 2 | 83.20 |
| <i>keep pace with</i> | 2 | 79.49 | <i>move toward</i> | 2 | 84.80 |
| <i>move away</i> | 2 | 82.05 | <i>phase</i> | 2 | 86.40 |
| <i>access</i> | 1 | 83.33 | <i>route</i> | 2 | 88.00 |
| <i>achieve</i> | 1 | 84.62 | <i>the advent of</i> | 2 | 89.60 |
| <i>doorstep</i> | 1 | 85.90 | <i>agenda</i> | 1 | 90.40 |
| <i>gateway</i> | 1 | 87.18 | <i>breakthrough</i> | 1 | 91.20 |
| <i>make a good start</i> | 1 | 88.46 | <i>crossroad</i> | 1 | 92.00 |
| <i>milestone</i> | 1 | 89.74 | <i>drive toward</i> | 1 | 92.80 |
| <i>progress</i> | 1 | 91.03 | <i>goal</i> | 1 | 93.60 |
| <i>ride on</i> | 1 | 92.31 | <i>landscape</i> | 1 | 94.40 |
| <i>route</i> | 1 | 93.59 | <i>leap forward</i> | 1 | 95.20 |
| <i>speed up</i> | 1 | 94.87 | <i>pursue</i> | 1 | 96.00 |
| <i>steer</i> | 1 | 96.15 | <i>reach</i> | 1 | 96.80 |
| <i>target</i> | 1 | 97.44 | <i>speed up</i> | 1 | 97.60 |
| <i>turn around</i> | 1 | 98.72 | <i>strive for</i> | 1 | 98.40 |
| <i>ups and downs</i> | 1 | 100.00 | <i>track</i> | 1 | 99.20 |
| | | | <i>vehicle</i> | 1 | 100.00 |
| Total | 78 | | | 125 | |

Appendix 5.4 Frequencies of metaphorical keywords under BUILDING source domain

| Before 29 June 2003 | | | After 29 June 2003 | | |
|------------------------------------|--------|------------------------|------------------------------------|--------|------------------------|
| Metaphorical keywords (lemmatized) | Tokens | Cumulative percentages | Metaphorical keywords (lemmatized) | Tokens | Cumulative percentages |
| <i>underpin</i> | 16 | 23.88 | <i>landmark</i> | 23 | 20.54 |
| <i>(re)structure</i> | 9 | 37.31 | <i>strengthen</i> | 10 | 29.46 |
| <i>bastion</i> | 7 | 47.76 | <i>build</i> | 10 | 38.39 |
| <i>build</i> | 7 | 58.21 | <i>cornerstone</i> | 7 | 44.64 |
| <i>enhance</i> | 5 | 65.67 | <i>enhance</i> | 7 | 50.89 |
| <i>adjust</i> | 4 | 71.64 | <i>strong</i> | 7 | 57.14 |
| <i>establish</i> | 3 | 76.12 | <i>underpin</i> | 7 | 63.39 |
| <i>bolster</i> | 2 | 79.10 | <i>support</i> | 6 | 68.75 |
| <i>fabric</i> | 2 | 82.09 | <i>foundation</i> | 5 | 73.21 |
| <i>foundation</i> | 2 | 85.07 | <i>expand</i> | 4 | 76.79 |
| <i>strengthen</i> | 2 | 88.06 | <i>framework</i> | 4 | 80.36 |
| <i>bedrock</i> | 1 | 89.55 | <i>pillar</i> | 4 | 83.93 |
| <i>buttress</i> | 1 | 91.04 | <i>bastion</i> | 3 | 86.61 |
| <i>door</i> | 1 | 92.54 | <i>buttress</i> | 3 | 89.29 |
| <i>framework</i> | 1 | 94.03 | <i>establish</i> | 3 | 91.96 |
| <i>set up</i> | 1 | 95.52 | <i>restructure</i> | 3 | 94.64 |
| <i>stability</i> | 1 | 97.01 | <i>bolster</i> | 1 | 95.54 |
| <i>strong</i> | 1 | 98.51 | <i>erosion</i> | 1 | 96.43 |
| <i>uphold</i> | 1 | 100.00 | <i>fundamental</i> | 1 | 97.32 |
| | | | <i>reinforce</i> | 1 | 98.21 |
| | | | <i>room</i> | 1 | 99.11 |
| | | | <i>stability</i> | 1 | 100.00 |
| Total | 67 | | | 112 | |

Chapter 6

Metaphorical framing of ELECTION over time: The road to universal suffrage in Hong Kong (1997-2017)¹

Abstract

Missing from previous political metaphor research is a detailed investigation of how politicians' choice of metaphors changes over time. This study examines the diachronic changes in ELECTION metaphors in a corpus of Hong Kong political speeches spanning two decades (1997-2017). We analysed the fundamental changes (changes in metaphor source domains) and incremental changes (changes in source-target Mapping Principles) in ELECTION metaphors. We found that the changes (decreases or increases) in ELECTION metaphors have no significant correlation with time. Hong Kong political leaders predominantly adopted the JOURNEY source domain in the framing of ELECTION issue over the period. Patterns of the frequent metaphorical keywords under ELECTION IS A JOURNEY metaphor show that the meaning of JOURNEY metaphors were either unchanged or underwent incremental changes in the corpus between the first decade (1997-2017) and the second decade (2008-2017). Based on the contextual information, we identified specific source-target Mapping Principles and source scenarios under the ELECTION IS A JOURENY metaphors, which further shed light on particular framing functions of JOURENY metaphors (e.g., political persuasive purposes) in different phases of the democratic development process in Hong Kong.

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6.1 Introduction

The democratic development of Hong Kong has been a highly charged issue since the transfer of sovereignty over Hong Kong from Britain to China in 1997. As a Special Administrative Region of the People's Republic of China (PRC), governed under the "One Country, Two Systems" principle, Hong Kong was granted a high level of political autonomy and its electoral system was promised to move towards full universal suffrage (The Basic Law Art 45, 1997). The past two decades, since the 1997 handover, have witnessed increasing attention to the election issue and escalating demands for universal suffrage from the Hong Kong citizens. For instance, in the 2019 Hong Kong District Council Election, 2,943,842 out of the 4,132,977 registered electors casted votes, setting the highest voter turnout rate (71.23%) since the first District Council election in 1999.² Furthermore, in the most recent 2019-2020 Hong Kong protests, triggered by an anti-extradition bill movement, one of the five demands of the protesters was 'double universal suffrage for the election of the Chief Executive and the Legislative Council'.³

In this study, we examine the diachronic patterns of metaphors in the framing of the controversial issue of the Hong Kong election from a corpus of public speeches that were given by principal officials in post-colonial Hong Kong between 1 July 1997 to 31 December 2017. In the literature on Conceptual Metaphor Theory, metaphor is "a cross-domain mapping in the conceptual system" (Lakoff, 1993, p. 203) where a more abstract target domain (e.g., ELECTION) was conceptualized in terms of a more concrete source domain (e.g., JOURNEY). Metaphor has been widely exploited by politicians in public discourse to frame different societal issues

² More information about the 2019 Hong Kong District Council Election can be found at <https://www.elections.gov.hk/dc2019/eng/index.html>

³ The five demands of the 2019-2020 Hong Kong protests are: 1) a complete withdrawal of the extradition bill from the legislative process, 2) retraction of the 'riot' label for protests, 3) release and exoneration of arrested protesters, 4) establishment of an independent commission of inquiry into police conduct and use of force during the protest, and 5) double universal suffrage for the election of the Chief Executive and the Legislative Council. See section 6.2 for more detailed information about the anti-extradition bill movement.

(Charteris-Black, 2005/2011; Lakoff & Johnson, 1980/2003; Musolff, 2016). This study particularly focuses on the diachronic changes in the source domains of ELECTION metaphors (fundamental changes) and the source-target domain mapping principles (incremental changes) over the period. We elaborate on what metaphorical frames are used by Hong Kong political leaders in the framing of the ELECTION issues, what the changes in these metaphorical frames are over time, and how these changes can potentially facilitate political persuasion. This study demonstrates how metaphors are deployed by politicians as a rhetorical strategy for achieving particular political agendas in different phases of the democratic development process in Hong Kong.

The present paper starts with a review of the theoretical framework in Section 6.2. Section 6.3 provides a brief overview of the history of Hong Kong and its democratic development since the 1997 handover. Section 6.4 introduces the data and method. Section 6.5 presents and discusses the results in response to the three research questions. Finally, we conclude the findings of this study with implications, which are provided in Section 6.6.

6.2 Diachronic analysis of metaphorical framing in public discourse

6.2.1 Metaphorical framing in public discourse

In political framing, it is widely acknowledged that metaphor is an effective rhetorical tool for persuasion and evaluation (Charteris-Black, 2005/2011; Deignan, 2010; Lakoff & Johnson, 1980/2003; Musolff, 2016). Metaphor works as a framing device by serving as a linguistic packaging cue and as a reasoning device by containing important conceptual content (Burgers, Konijn, & Steen, 2016, p. 2). Activated by the linguistic metaphors, metaphors often imply a story, a scenario (Musolff, 2006), and/or an event sequence (Lakoff & Johnson, 1999), which enable metaphors to frame and reason about a target issue. For instance, one typical example of metaphorical frames in politics is the POLITICS IS A GAME frame that dominated in election

news in practically every country (Strömbäck & Kaid, 2008). Aspects in the source domain of GAME such as ‘players’, ‘winning and losing’, and ‘competitiveness’ can be highlighted via linguistic instantiations to frame the target domain of POLITICS as a competitive activity in which politicians need strategies or tactics to win their positions or achieve political purposes.

Different metaphorical frames can exert different effects on the way people reason about the same issues and react to policies. Apart from recent studies adopting the experimental approach to metaphor analysis under a controlled environment (e.g., Gibbs & Steen, 1999; Reijnerse, Burgers, Krennmayr, & Steen, 2015; Steen, Reijnerse, & Burgers, 2014), there is another trend using a discourse-based approach to metaphor analysis in real-life contexts. These studies also found evidence that metaphorical frames are effective in influencing people’s reasoning about societal issues (Charteris-Black, 2006; Charteris-Black & Musolff, 2003; Lakoff, 1996/2002; Quinsaat, 2014). For instance, the typical Moral Politics Theory proposed in Lakoff (1996/2002) claims that people reason about national politics in terms of the NATION AS FAMILY metaphor, which presents their expectation for ideal governance in terms of ideal parenting. It argues that issue framings in terms of different cognitive models, the Strict Father and Nurturant Parents, would result in different framing effects. Strict Father framings lead the public to have a more conservative stances, whereas Nurturant Parent framings lead people to hold more liberal attitudes.

Our study is in line with the discourse-based approach to analysing metaphorical framing effects. We draw on the recent developments in the field of metaphorical framings, which claim that metaphor conveys its framing implications via scenario (e.g., Deignan, 2010; Semino, Demjén, & Demmen, 2016). Deignan (2010) stated that it is necessary to identify a scenario in more detail in order to determine the evaluative force of the metaphor. Semino et al. (2016) proposed that framing implications of metaphors in discourse can be adequately explained by analysing elements in sub-domains or scenarios and the actual data in discourse.

The notion of scenario refers to a “specific sub-domain category” (Musolff, 2006, p. 24).

Musolff (2006) propounded the definition of ‘scenario’ as:

a set of assumptions made by competent members of a discourse community about ‘typical’ aspects of a source-situation, for example, its participants and their roles, the ‘dramatic’ storylines and outcomes, and conventional evaluations of whether they count as successful or unsuccessful, normal or abnormal, permissible or illegitimate, etc. (p. 28).

This definition of ‘scenario’ is consistent with the claim that metaphor is evaluative and persuasive (Lakoff & Johnson, 1980/2003), and offers practical ways to incorporate framing analysis in discourse. Metaphor scenarios organize source concepts into mini-narratives, which appear frequently in public discourse and “help to shape the course of public debates and conceptualizations of political target topics by framing the attitudinal and evaluative preferences in the respective discourse communities” (Musolff, 2006, p. 28). In other words, by analyzing the scenarios evoked in the linguistic metaphors, we are able to deepen the analysis of metaphor source domains with a detailed account of linguistic evidence from the context and probe into the evaluative, persuasive, or ideological aspects from the mini-narratives realized in the scenarios.

6.2.2 Diachronic approach to metaphorical framing analysis in public discourse over time

Despite the previous extensive studies of metaphorical framing in public discourse, previous research lacks a detailed and systematic investigation of how politicians’ choice of metaphor changes over time. Our study thus shifts the focus from the synchronic analysis to a diachronic analysis of metaphorical framing in a corpus of political speeches. This study has adopted the approach proposed in Burgers (2016) in which he suggests that modelling the ways metaphors change over time can provide insight into how conceptualizations of topics have changed. He

proposed two types of changes that can reflect such social changes: 1) fundamental change in which extant metaphors are replaced over a long time span or on account of specific events, and, 2) incremental change, in which the meaning of metaphors changes over a long time span or on account of specific events. Fundamental change refers to changes in metaphor source domains and incremental change refers to changes in metaphor meanings reflected in source-target domain mappings. Burgers & Ahrens (2020), for example, analyzed the fundamental and incremental changes in the metaphorical framing of TRADE issue in State of the Union addresses (SOUs) in the United States over a period of 225 years (1790-2014). They found that the use and meaning of metaphors from the four predominant source domains in SOUs – PHYSICAL OBJECT, BUILDING, JOURNEY, and LIVING BEING – were mostly stable, indicating that the conceptualizations of TRADE issues by the US presidents in SOUs have remained relatively stable over the past two centuries.

Zeng, Burgers, & Ahrens (2021), also Chapter 5 of this thesis, adopted the same approach in Burgers (2016) to examine the fundamental and incremental changes in the metaphorical framing of FREE ECONOMY issue in a corpus of Hong Kong public speeches spanning two decades from 1997 to 2017. The study reflected similar findings with Burgers & Ahrens (2020) that no fundamental changes were found in the use of the four frequent source domains: JOURNEY, LIVING ORGANISM, SPORT, and BUILDING. The findings in Zeng, Burgers, & Ahrens (2021) also showed the meanings of FREE ECONOMY metaphors either remained mostly constant (LIVING ORGANISM and SPORT metaphors) or underwent incremental changes (JOURNEY and BUILDING metaphors) which were considered as two rhetorical strategies used by Hong Kong political leaders to frame their political agenda for achieving full economic liberalization in Hong Kong.

Drawing on the approach for corpus-based metaphorical framing analysis as developed in Chapter 3 of this thesis, we propose to examine variations of the Mapping Principles between

source-target domain pairings (Ahrens, 2010) when analysing the incremental changes in metaphor meanings over time. The Mapping Principles can be formulated by examining the linguistic evidence (i.e., the entities, qualities, and functions that map between the source and target) or the corpus evidence for the frequency of mapping (Ahrens, 2010, p. 30).⁴ In corpus-based metaphor analysis, the most frequently occurring lexical item in a source-target domain pairing is postulated to correspond to the Mapping Principle. The validity of Mapping Principle has been tested in psycholinguistic experiments (Ahrens, 2010, p. 13), and also verified on the grounds of evidence from frequency-based data in large-scale corpora (Ahrens, Chung, & Huang, 2004; Chung, Ahrens, & Huang, 2004a, b). Analyzing Mapping Principles offers a practical way to count the linguistic metaphors under a particular source domain. The predominant source-target mappings in a corpus are central to reflecting relevant metaphorical framing effects.

We also discussed relevant source scenarios that are reflected in patterns of the frequent metaphorical keywords in the corpus. The discussion of scenarios will complement with Mapping Principle analysis by organizing source concepts into mini-narratives, events or stories, which help to probe into the persuasive or evaluative aspects of metaphorical framing analysis. It is hoped that the combination of the above-mentioned ‘fundamental & incremental changes’, ‘Mapping Principle’, and ‘source scenario’ approaches may provide a synergetic way forward for a diachronic corpus-based metaphorical framing analysis. The approach allows metaphor researchers to systematically analyze the changes in metaphorical framing in public discourse over time, focusing on relevant political issues of interest, e.g., the development of the election processes in Hong Kong.

⁴ For example, in IDEA IS BUILDING metaphor, it is found that the expressions relating to the concepts of ‘foundation’, ‘stability’ and ‘construction’ were mapped, while concepts relating to other aspects, e.g., ‘the position of the building’, ‘internal wiring’ and ‘plumbing’, ‘the exterior of the buildings’, ‘windows’, and ‘doors’ were not mapped, so the target domain of IDEA uses the source domain of BUILDING to emphasize the concept of ‘structure’. The Mapping Principle for IDEA IS A BUILDING metaphor is that IDEA is understood as a BUILDING because buildings have a (physical) structure while ideas have an (abstract) structure (Ahrens, 2010, p. 10).

6.3 A brief history of Hong Kong and its democratic development in post-1997

Historically, Hong Kong has been part of the Chinese empire since the Qin dynasty (221-206 BC). Located at the south-eastern tip of China, Hong Kong covers an area of 1,106.66 square kilometres consisting of Hong Kong Island, the Kowloon Peninsula, Lantau Island, and the New Territories (including 262 outlying islands).⁵ In 1842, Hong Kong Island was ceded to Britain in perpetuity by the Qing dynasty of China (1616-1911) under the Treaty of Nanking, ending the First Opium War (1839-1842). In 1860, the Kowloon Peninsula was ceded to Britain under the Convention of Peking, ending the Second Opium War (1856-1860). Later in 1898, the New Territories, including approximately 230 outlying islands were leased to Britain for ninety-nine years under the Second Convention of Peking. Except for the three years and eight months (25 December 1941 to 30 August 1945) of Japanese occupation during World War II (1939-1945), the British colonization of Hong Kong lasted until 1 July 1997 when the lease on the New Territories expired, and the entire region was transferred back to China. The 1997 reversion of Hong Kong to Chinese sovereignty marked the termination of more than 150 years of colonial rule by Britain.

The political reform and democratic development of Hong Kong have been an ongoing and highly controversial issues since 1997. Early in 1984, Britain and China signed the Sino-British Joint Declaration, which states that Hong Kong would be transferred back to China on 1 July 1997 as a Special Administrative Region (SAR) of China under the “One Country, Two Systems” principle. In the 1984 declaration the idea was that Hong Kong would enjoy a high degree of autonomy (except in defence and foreign affairs) for 50 years after the transfer of sovereignty, e.g., retaining executive, legislative, and independent judicial power, a capitalist economic system, and a partially democratic political system. In 1990, China ratified the mini-

⁵ By 2019, there are a total population of approximately 7.52 million people in Hong Kong. More introduction about Hong Kong can be found at <https://www.gov.hk/en/about/abouthk/facts.htm>.

constitution of Hong Kong, the Basic Law, which came into effect after 1 July 1997. The Basic Law provides ‘universal suffrage’ for both the selections of the Chief Executive and the Legislative Council of Hong Kong.⁶ Article 45 of the Basic Law stipulates that:

(1) The Chief Executive of the Hong Kong Special Administrative Region shall be selected by election or through consultations held locally and be appointed by the Central People’s Government.

(2) The method for selecting the Chief Executive shall be specified in the light of the actual situation in the Hong Kong Special Administrative Region and in accordance with the principle of gradual and orderly progress. The ultimate aim is the selection of the Chief Executive by universal suffrage upon nomination by a broadly representative nominating committee in accordance with democratic procedures.

Article 68 of the Basic Law stipulates that:

(1) The Legislative Council of the Hong Kong Special Administrative Region

⁶ Before 1997 when Hong Kong was colonized by Britain, the Governors of Hong Kong were appointed by the British Government. After 1997 when Hong Kong was an Special Administrative Region of China, the office of the Chief Executive began to be filled by Chinese citizens who are permanent residents of the HKSAR. The Chief Executive election has been held every five years starting from the first term, which was from 1997 to 2002. The Legislative Council election has been held every four years, except for the first term being two years from 1998 to 2000.

By 2017, elections had been held for five terms of the Chief Executive (1997, 2002, 2007, 2012, and 2017). The first term CE was nominated and elected by a Selection Committee, and for the second to fifth terms, the CE was nominated and elected by the Election Committee (EC). The size of the Selection Committee and the EC has gradually expanded from 400 members in 1996, to 800 in 2002 and 1,200 in 2012. (Source: <https://www.eac.hk/en/chief/cee.htm>)

The 1,200 members of the Election Committee are from 4 main sectors (38 subsectors): 1) 300 members from the industrial, commercial, and financial sectors, 2) 300 members from the professions, 3) 300 members from the labour, social services, religious, and other sectors, 4) 300 members from Hong Kong deputies to the National People’s Congress, members of the Legislative Council, Hong Kong members of the National Committee of the Chinese People’s Political Consultative Conference, representatives of the Heung Yee Kuk, and elected members of the District Councils. (Source: <https://www.eac.hk/en/ecse/function.htm>)

By 2017, elections had been held for six terms of the Legislative Council (1998, 2000, 2004, 2008, 2012 and 2016). The first term was composed of 30 members returned by the functional constituencies (FCs), 20 by the geographical constituencies (GCs), and 10 by the Election Committee (EC). The second term was composed of 30 FC members, 24 GC members, and 6 EC members. Since the third term LegCo, no seats were returned by the EC, and members returned by FCs and GCs each account for 30 seats in the LegCo. The fifth term consisted of 35 FC and 35 GC. The 5 new FC seats created in 2012 returned members through election, on the basis of one-person-one-vote, by all registered voters who previously did not have a vote in the traditional FCs. (Source: <https://www.eac.hk/en/legco/lce.htm>)

Currently there are five geographical constituencies in Hong Kong: Hong Kong Island, Kowloon West, Kowloon East, New Territories West, and New Territories East. Functional Constituencies comprise 28 various professional or special interest groups, e.g., the educational sector, the legal sector, the labour sector, the commercial sector, and the industrial sector. (Source: https://www.eac.hk/en/legco/2020lc_guide.htm)

shall be constituted by election.

(2) The method for forming the Legislative Council shall be specified in the light of the actual situation in the Hong Kong Special Administrative Region and in accordance with the principle of gradual and orderly progress. The ultimate aim is the election of all the members of the Legislative Council by universal suffrage.

However, the Basic Law did not set a precise time frame or a specific road map for achieving this ‘ultimate aim’ of universal suffrage.⁷ The meaning of ‘gradual and orderly progress’ is ambiguous, and democratic procedures are not clearly defined (Wong, 2015). In addition, the Chief Executive needs to be appointed by the Central People’s Government of the PRC (CPG), which means that China has the right to make the final decision on the Chief Executive selection.

The period from 1997 to 2004 was a stage featuring ‘the end of colonialism and democratic uncertainty’ (Ortmann, 2016) in the political development of Hong Kong.⁸ There was no real ‘bargaining’ between the Hong Kong government and the pan-democratic camp who advocated thorough and immediate democratization.⁹ On 1 July 2004, the pan-democratic camp organized massive rallies to call for full universal suffrage for the election of the Chief Executive and all members of the Legislative Council in 2007 and 2008 respectively, which were ruled out in the decision on 26 April 2004 made by the Standing Committee of the National People’s Congress of the PRC (NPCSC). Three years later, on 29 December 2007,

⁷ The full text of the Basic Law can be accessed at <https://www.basiclaw.gov.hk/en/index/index.html>.

⁸ Drawing upon Ma’s (2011) conceptualization of key stages in the political development of Hong Kong, Ortmann (2016) summarized four main stages with the first stage (1982-1989) featuring ‘democratic optimism’, the second stage (1989-2003) featuring ‘the end of colonialism and democratic uncertainty’, the third stage (2003-2012) featuring ‘protests and incremental reforms’, and the fourth stage (2012 to present) featuring ‘the umbrella generation and the democratic setback’.

⁹ Hong Kong has two major political parties: pro-establishment and pro-democracy (Wong, 2015; Ma, 2012). The pro-establishment camp, also known as pro-government/pro-Beijing camp, holds a more conservative attitude towards democratisation, advocating a gradual and incremental political reform. The pro-democracy camp, by contrast, adopts a more progressive attitude towards democratisation, supporting a thorough and immediate reform of elections (Oksanen, 2011).

the NPCSC adopted a decision which again ruled out the possibility of universal suffrage for the 2012 election. The decision stated that universal suffrage would not be implemented in 2012, and appropriate amendments consistent with the principle of gradual and orderly progress may be made to the methods for electing the Chief Executive and the Legislative Council. The decision also proposed a timetable for attaining universal suffrage by saying that the fifth Chief Executive election in 2017 and the Legislative Council election in 2020 may be elected by universal suffrage. However, the nature of ‘universal suffrage’ was still not defined.¹⁰

On 31 August 2014, the NPCSC adopted a decision setting limits for the 2017 Chief Executive election and 2016 Legislative Council election. The decision stated that the Chief Executive in 2017 would be elected by one-person-one-vote, but only by a ‘broadly representative nominating committee’, which mirrored the 1,200-member Electing Committee that nominates a shortlist of two or three candidates, each of whom has the support of at least half of the nominating committee.¹¹ After the direct election of one of the nominated candidates,

¹⁰ The method for electing the first HKSAR government (1997-2002) was specified in ‘Decision of the National People’s Congress on the Method for the Formation of the First Government and the First Legislative Council of the Hong Kong Special Administrative Region’ (adopted at the Third Session of the Seventh National People’s Congress on 4 April 1990, which can be accessed at https://www.basiclaw.gov.hk/en/basiclawtext/images/basiclawtext_doc13.pdf).

The method for electing the second HKSAR government (2002-2007) was established according to the Basic Law Annex I: Method for the Selection of the Chief Executive of the Hong Kong Special Administrative Region, and Annex II: Method for the Formation of the Legislative Council of the Hong Kong Special Administrative Region and Its Voting Procedures. Hong Kong enacted the Chief Executive Election Ordinance, No. 21 of 2001 (accessed at <https://www.legco.gov.hk/yr00-01/english/ord/ord021-01-e.pdf>), to provide for the finer details of the election process.

The method for electing the third HKSAR government (2007-2012) was specified in ‘Decision of the Standing Committee of the National People’s Congress on Issues Relating to the Methods for Selecting the Chief Executive of the Hong Kong Special Administrative Region in the Year 2007 and for Forming the Legislative Council of the Hong Kong Special Administrative Region in the Year 2008’ (adopted by the Standing Committee of the Tenth National People’s Congress at its Ninth Session on 26 April 2004), which can be accessed at https://www.legco.gov.hk/general/english/procedur/companion/appendices/appendix_2-a-e.pdf.

The method for electing the fourth HKSAR government (2012-2017) was specified in ‘Decision of the Standing Committee of the National People’s Congress on Issues Relating to the Methods for Selecting the Chief Executive of the Hong Kong Special Administrative Region and for Forming the Legislative Council of the Hong Kong Special Administrative Region in the Year 2012 and on Issues Relating to Universal Suffrage’ (adopted by the Standing Committee of the Tenth National People’s Congress at its Thirty-first Session on 29 December 2007), which can be accessed at <https://www.legco.gov.hk/yr07-08/english/panels/ca/papers/ca0121-ppr071229-e.pdf>.

¹¹ Decision regarding the Standing Committee of the National People’s Congress on Issues Relating to the Selection of the Chief Executive of the Hong Kong Special Administrative Region by Universal Suffrage and on

the CPG has the power to grant final approval on the selected candidate. The 2016 Legislative Council election followed the new procedure of the Chief Executive election as well. Moreover, further reform for universal suffrage would require development and approval by the CPG. As the majority of the members of the nominating committee are pro-Beijing, the Chinese government is provided with adequate insurance that the elected Chief Executive will be approved by NPCSC (Martin, 2011). In other words, the Chinese government would only allow candidates approved by Beijing to be elected. This effectively ruled out full universal suffrage for Hong Kong in 2017.

The ‘August 31 decision’ triggered a rise of protests, with the most notably being the 79-day Occupy Central Protest or the Umbrella Revolution from 28 September to 15 December in 2014, which aimed for ‘genuine universal suffrage’. The movement failed to force the Hong Kong government to respond to the protesters’ democracy demands. The 2017 Chief Executive election followed the previous election process by which the Chief Executive was elected by the Electing Committee consisting of 1,200 members. For the 2016 Legislative Council election, 35 seats returned from the geographical constituencies (GCs) and five seats returned from the functional constituencies (FCs) were elected through universal suffrage. The rest of the 30 seats returned from the FCs were elected by 28 traditional functional constituencies (see Fn. 5).

On 12 June 2019 protests began against an extradition bill, which would allow the extradition of criminal suspects to China under certain circumstances. These protests further broadened to become a call for democracy in Hong Kong. Pro-democracy protesters participated in a city-wide political strike on 5 August, to pressure the government to accept the protesters’ five demands (see Fn. 3). The extradition bill was formally withdrawn on 4

the Method for Forming the Legislative Council of the Hong Kong Special Administrative Region in the Year 2016 (Adopted at the Tenth Session of the Standing Committee of the Twelfth National People’s Congress on 31 August 2014) can be accessed at <http://www.2017.gov.hk/filemanager/template/en/doc/20140831b.pdf>.

September 2019, while the other four demands, including double universal suffrage, were not addressed.

As discussed above, Hong Kong has been “standing at a critical juncture in the struggle for universal suffrage toward realizing full democracy” (Kan, 2013, p. 73). In view of the political changes since 1997, this study focuses on the changes in politicians’ language use, specifically metaphor use, when addressing the issues related to ELECTION in public speeches over the past two decades. Adopting the diachronic approach proposed in Section 6.2.2, we hope to present a more comprehensive picture of the diachronic changes in metaphorical framing of ELECTION issues and the underlying ideological implications. The following three research questions are addressed:

- (1) How does general attention to ELECTION topic in Hong Kong political discourse change over the past two decades (1997-2017)?
- (2) What are the fundamental changes found in ELECTION metaphors in Hong Kong political discourse over the past two decades (1997-2017)?
- (3) What are the incremental changes found in ELECTION metaphor meanings in Hong Kong political discourse over the past two decades (1997-2017)?

6.4 Method

6.4.1 Corpus creation

We have manually compiled the corpus from the online archive of ‘Speeches by Senior Officials’ on the official website of the Government of Hong Kong SAR (<http://www.info.gov.hk/isd/speech/sensp.htm>). We collected 1,248 public speeches by the principal officials serving at the second-level of Hong Kong SAR government - the Secretaries of Departments, including four Chief Secretaries for Administration (CSA), four Financial

Secretaries (FS), and three Secretaries for Justice (SJ).¹² The time span of the corpus covers two decades ranging from 1 July 1997, the day when Hong Kong transferred sovereignty from Britain to China, to 31 December 2017. Thus, we are able to see whether, and how, Hong Kong principal officials' choice of metaphors in the framing of the ELECTION issue changed over the past two decades since the 1997 handover. Table 6.1 presents the list of the speakers involved, along with their political roles, gender, time in office, number of speeches, and number of words.

Table 6.1 Corpus of public speeches by principal officials in Hong Kong (1997-2017)

| Political roles | Speakers | Gender | Time in office | No. of speeches | No. of words |
|--|----------------------------|--------|-----------------------|-----------------|--------------|
| Chief Secretary for Administration (CSA) | Anson Chan Fang On-sang | Female | 01.07.1997-30.04.2001 | 163 | 244,773 |
| | Donald Tsang Yam-kuen | Male | 01.05.2001-31.05.2005 | 96 | 144,105 |
| | Henry Tang Ying-yen | Male | 01.07.2007-30.09.2011 | 93 | 91,665 |
| | Carrie Lam Cheng Yuet-ngor | Female | 01.07.2012-16.01.2017 | 144 | 162,459 |
| | CSA Total | | | 496 | 643,002 |
| Financial Secretary (FS) | Donald Tsang Yam-kuen | Male | 01.07.1997-30.04.2001 | 162 | 268,009 |
| | Antony Leung Kam-chung | Male | 01.05.2001-16.07.2003 | 66 | 91,539 |
| | Henry Tang Ying-yen | Male | 17.07.2003-30.06.2007 | 95 | 89,357 |
| | John Tsang Chun-wah | Male | 01.07.2007-16.01.2017 | 104 | 138,637 |
| | FS Total | | | 427 | 587,542 |
| Secretary for Justice (SJ) | Elsie Leung Oi-sie | Female | 01.07.1997-19.10.2005 | 89 | 171,989 |
| | Wong Yan-lung | Male | 20.10.2005-30.06.2012 | 72 | 141,007 |
| | Rimsky Yuen Kwok-keung | Male | 01.07.2012-06.01.2018 | 164 | 250,071 |
| | SJ Total | | | 325 | 563,067 |
| | In Total | | | 1,248 | 1,793,611 |

The size of the corpus is 1,793,611 words, as calculated by the WordList function in WordSmith 6.0. The speeches were mostly delivered at different ceremonial occasions in Hong

¹² The highest level of Hong Kong government is the Chief Executive. Information about the government structure and the principal officials of Hong Kong SAR can be found at <https://www.gov.hk/en/about/govdirectory/govchart/index.htm> and <https://www.gov.hk/en/about/govdirectory/po/index.htm>.

Kong, of which the primary rhetoric purpose refers to the celebration of various social, economic, and political events. As ELECTION is one of the major events in Hong Kong, it is reasonable to assume that ELECTION is a consistently addressed topic by Hong Kong political leaders to the public. Therefore our diachronic corpus of public speeches would serve as a suitable database for researching ELECTION metaphor use over time.

6.4.2 Procedure

The first step of this study after building the corpus was to obtain ELECTION instances from the corpus. We adopted the Metaphor Pattern Analysis approach (Stefanowitsch, 2006) to determine keywords under the target domain of ELECTION and extracted cases involving these keywords. Based on the observation of the data, we determined eight keywords that are most relevant to ELECTION: ‘ballot’, ‘campaign’, ‘democracy’, ‘elect’, ‘poll’, ‘referendum’, ‘suffrage’, and ‘vote’. All lemmas of the eight keywords (see Table 6.2) were searched in the corpus by using the Concord function in WordSmith 6.0 to obtain concordances.

Table 6.2 List of keywords and lemmas searched for the target domain of ELECTION

| Keywords | Lemmas | | | | | | Frequencies |
|------------|-------------------------|--------------------|---------------------|-----------------------|----------------------|------------------------|-------------|
| ballot | <i>ballot</i> | <i>ballots</i> | | | | | 6 |
| campaign | <i>campaign</i> | <i>campaigns</i> | <i>campaigned</i> | <i>campaigning</i> | <i>campaigner</i> | <i>campaigners</i> | 111 |
| democracy | <i>democracy</i> | <i>democracies</i> | <i>democratize</i> | <i>democratised</i> | <i>democratising</i> | <i>democratisation</i> | 205 |
| | <i>democratisations</i> | <i>democratic</i> | <i>democratical</i> | <i>democratically</i> | <i>democrat</i> | <i>democrats</i> | |
| elect | <i>elect</i> | <i>elects</i> | <i>elected</i> | <i>electing</i> | <i>election</i> | <i>elections</i> | 635 |
| | <i>electoral</i> | <i>electorate</i> | <i>elector</i> | <i>electors</i> | <i>electee</i> | <i>electees</i> | |
| poll | <i>poll</i> | <i>polls</i> | <i>polled</i> | <i>polling</i> | | | 32 |
| referendum | <i>referendum</i> | <i>referendums</i> | | | | | 6 |
| suffrage | <i>suffrage</i> | <i>suffrages</i> | | | | | 202 |
| vote | <i>vote</i> | <i>votes</i> | <i>voted</i> | <i>voting</i> | <i>Voter</i> | <i>voters</i> | 207 |
| In total | | | | | | | 1,404 |

We obtained 1,404 concordances related to the target domain of ELECTION. As this study focuses on the political election issues in Hong Kong, we excluded 257 instances, either referring to the election issues in non-Hong Kong areas (e.g., UK Brexit *vote*) or non-political elections (e.g., anti-drug *campaign*). We also excluded 69 instances when the words related to ELECTION were used as proper nouns, such as titles of agreements or policies (e.g., The Chief Executive Election Ordinance) and government agencies (e.g., Hong Kong Democratic Foundation or Election Committee). Thus, in total, we have 1,078 ELECTION instances out of the 1,404 instances (76.8%) for further analysis.

We then identified metaphorical ELECTION instances and their associated source domains. We adopted the Metaphor Identification Procedure VU University Amsterdam - MIPVU (Steen et al., 2010) for coding metaphors.¹³ In total, there were 349 metaphorical ELECTION instances out of the 1,078 ELECTION instances (32.4%) and 729 literal instances (67.6%). Following the source domain verification approach (Ahrens & Jiang, 2020; Ahrens & Zeng, 2017; Zeng, Tay, & Ahrens, 2020), we identified nine types of source domains for the 349 metaphors, including JOURNEY, PRODUCT, BUILDING, LIVING ORGANISM, PHYSICAL OBJECT, SPORT, WAR, CONTAINER, and RECIPE. Table 6.3 presents the three main steps of the source domain identification procedures.¹⁴

¹³ Apart from the dictionaries recommended in MIPVU (Steen et al., 2010), we also refer to WordNet (<https://wordnet.princeton.edu/>) (Fellbaum, 2005) and SUMO – Suggested Upper Merge Ontology (<http://www.adampease.org/OP/>) (Niles & Pease, 2001) as complementary resource for checking word meanings.

¹⁴ In step 1, educated, fluent speakers' judgement about potential source domains can be related to the notion of 'unity of domains' which refers to 'a background assumption on the part of the listener that sentences (involving metaphor or metonymy) are semantically coherent' (Croft, 2003, p. 195).

Table 6.3 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 et al., 2014) and the online Oxford Collocation Dictionary as a complementary method to the WordNet-SUMO method, e.g., to check if there are any frequent collocations of the keywords related to the proposed source domains. |

6.4.3 Inter-coder reliability

The reliability of metaphor and source domain identification was measured by calculating Cohen's Kappa coefficients between the two coders who conducted all of the data analyses in this study. A subset of at least 10%-25% of the data (Wimmer & Dominick, 2013, p. 175) was selected for the reliability tests. Among the 1,078 ELECTION instances, we randomly selected 200 cases (18.6%) for testing the reliability of metaphor coding, and the result shows the reliability is 'substantial' (Cohen's kappa = .779). For the source domain coding, we randomly selected 150 instances from the total 349 metaphorical ELECTION instances (43.0%) for the tests. We also tested the reliability in coding for the top seven source domains. The results show the reliability is 'perfect' for coding JOURNEY (Cohen's kappa = .902), PRODUCT (Cohen's kappa = .908), BUILDING (Cohen's kappa = .915), and WAR (Cohen's kappa = .949), and 'substantial' for coding LIVING ORGANISM (Cohen's kappa = .748), SPORT (Cohen's kappa

= .696), and PHYSICAL OBJECT (Cohen's kappa = .670). See all the data and analyses on the Open Science Framework at https://osf.io/dwav6/?view_only=eae6abd133ae420fb8068ed06f6e7c6e

6.5 Results and discussion

Following previous approaches to analysing the relation between 'time' and 'variables of interest' (Burgers & Ahrens, 2020; Damstra & Vliegenthart, 2018), we calculated bivariate Pearson correlation coefficients in SPSS (IBM SPSS statistics, version 24). The results of the relation between 'time' and 'attention to ELECTION' were presented in section 6.5.1, which answered RQ1 regarding the diachronic changes of ELECTION references. The results of the relation between 'time' and 'ELECTION metaphors' were presented in section 6.5.2, which answers RQ2 regarding the fundamental changes of ELECTION metaphors. In section 6.5.3, we respond to RQ3 regarding the incremental meaning changes in ELECTION metaphors by analysing patterns of mapping principles between the source-target domains, reflecting changes in the meaning of ELECTION metaphors.

6.5.1 Attention to the topic of ELECTION over time

In our data, we identified 1,078 Hong Kong ELECTION instances from the 1,404 general ELECTION instances. We added up the data on the one-year level, meaning each value reflects average scores for a specific year. The solid line in Figure 6.1 shows the attention to the ELECTION topic from 1997 to 2017 by presenting the relative number of the ELECTION instances per 10,000 words of the corpus (standardized number) from 1997 to 2017. Pearson's Correlation analysis reveals no significant association between 'time' and 'attention to ELECTION' ($r = .086$, $p = .710$), indicating the changes (increases or decreases) in ELECTION references are not significantly correlated with time.

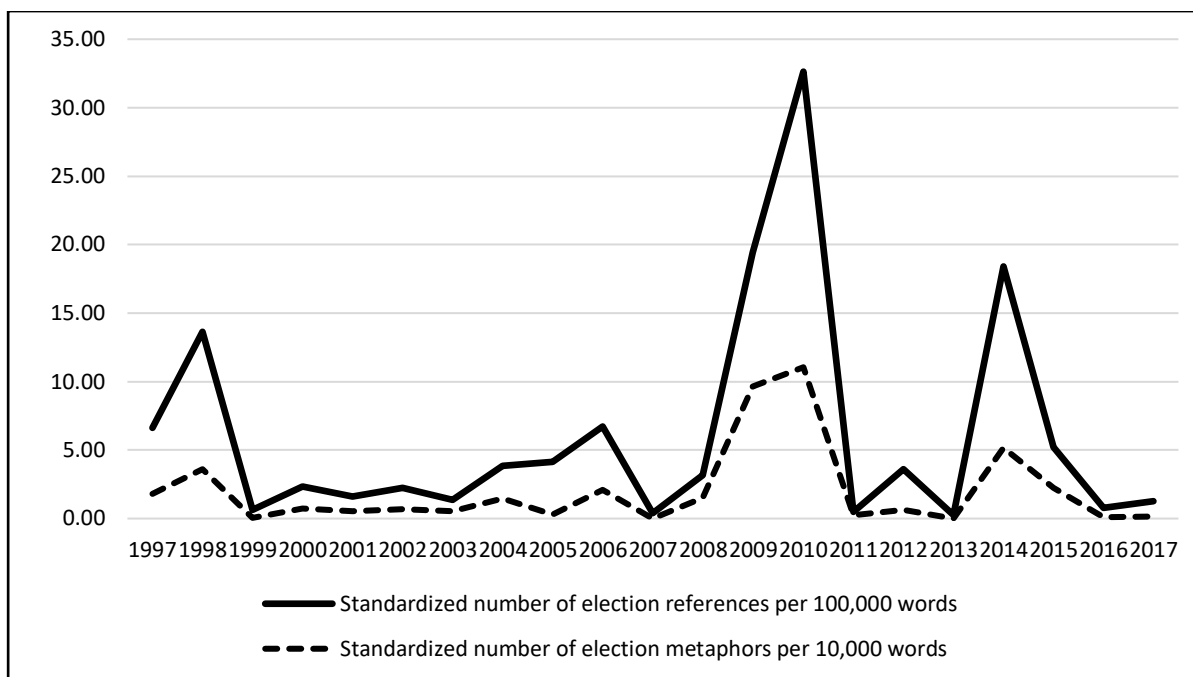


Figure 6.1 Standardized number of ELECTION references and metaphors per 10,000 words

We further observed in Figure 6.1 that ELECTION references in the second decade (2008-2017) experienced more variations than in the first decade (1997-2007). There were two sharp rises in the solid line between 2008 to 2010 and between 2013 to 2014, showing a remarkable escalation of attention paid to ELECTION issues in these two periods. The rise between 2008 to 2010 may be attributed to the initiation of NPCSC’s decision on 29 December 2007, which ruled out universal suffrage in 2012 and instead proposed a timetable for universal suffrage in the 2017 Chief Executive election and the 2020 Legislative Council election. The rise between 2013 and 2014 may be due to the ‘31 August Decision’ made by the NPCSC in 2014, which again ruled out the possibility of universal suffrage for the 2017 Chief Executive election. The following Occupy Central Protest from September to December 2014 for ‘genuine universal suffrage’ may have also triggered the rise of attention to ELECTION. It is not surprising to find that the more frequent occurrence of ELECTION issues addressed in public speeches by Hong Kong political leaders as a reaction to the increasing demands for universal suffrage among the public in Hong Kong.

6.5.2 Metaphors of ELECTION over time

6.5.2.1 Association between 'time' and 'ELECTION metaphors'

As shown in section 6.4.2, we obtained 349 metaphorical ELECTION instances from the 1,078 Hong Kong ELECTION instances. Following Burgers and Ahrens (2020), we analyzed two indicators: 1) the standardized number of ELECTION metaphors and 2) the relative percentage of ELECTION instances that are metaphorical.

For indicator 1, the dotted line in Figure 6.1 plots the relative number of ELECTION metaphors per 10,000 words of the corpus. Pearson's Correlation analysis shows no significant association between time and relevant frequency of ELECTION metaphors ($r = .112$, $p = .630$). For indicator 2, we calculated the percentage of ELECTION metaphors by dividing the number of ELECTION metaphors by the total number of ELECTION instances. Indicator 2 thus controls for change in relation to the total number of ELECTION instances. Pearson's Correlation analysis reveals no significant association between time and percentage of ELECTION metaphors ($r = -.084$, $p = .717$). Thus, we found the changes (either decreases or increases) in ELECTION metaphors are not significantly correlated with time.

6.5.2.2 Association between 'time' and 'source domains of ELECTION metaphors'

Among the 349 metaphorical ELECTION instances, we identified 9 types of source domains: JOURNEY (211 cases), PRODUCT (55 cases), BUILDING (52 cases), LIVING ORGANISM (23 cases), PHYSICAL OBJECT (15 cases), SPORT (10 cases), WAR (10 cases), CONTAINER (4 cases), and RECIPE (3 cases). We found ELECTION has been primarily conceptualized in terms of the JOURNEY source domain in the corpus. The following analysis only focuses on changes in the JOURNEY source domain, which comprises 211 out of the total of 383 source domains (55.1%). The remaining eight source domains were excluded from further analysis because of their low

frequencies. Figure 6.2 plots the percentages of ELECTION metaphors from the source domains of JOURNEY.

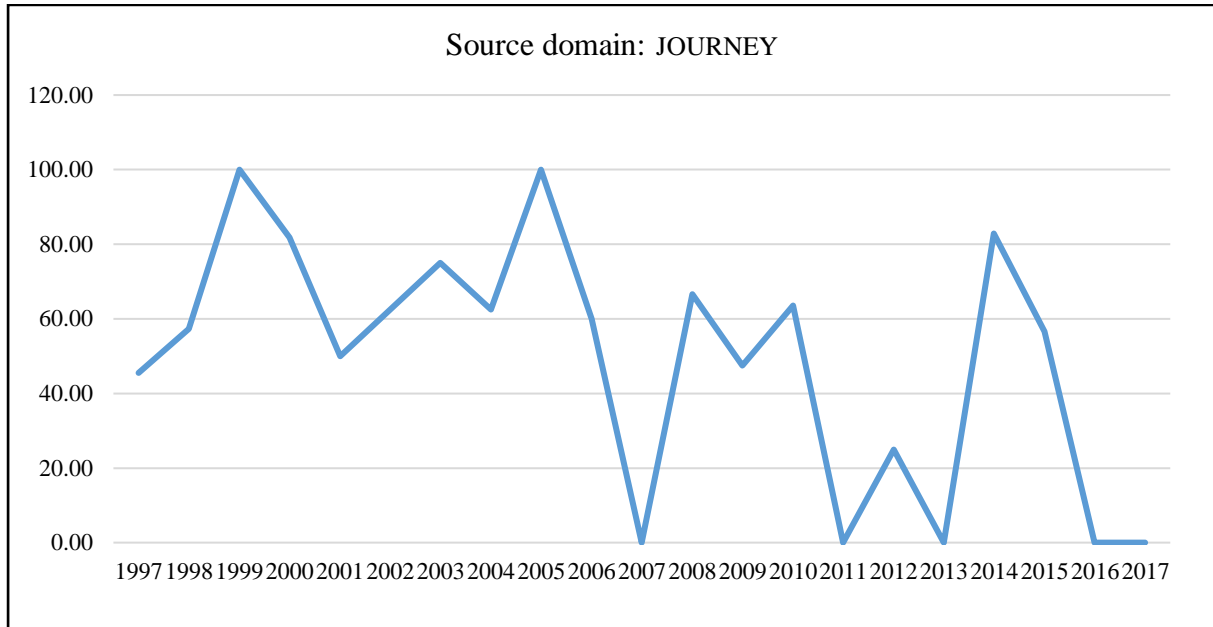


Figure 6.2 Percentage of ELECTION metaphors from the source domain of JOURNEY

Pearson’s Correlation analysis shows a significant negative association between ‘time’ and the ‘percentage of JOURNEY source domain’ ($r = -.535$, $p = .012$), indicating that the percentage of source domains related to JOURNEY decreased over time.

As Pearson’s correlation coefficient presumes independence among the observations, it overlooks the possibility that consecutive values in time may be autocorrelated (Koplenig, 2017; Tay, 2019). In other words, there might be cases where the frequency of one variable at time A is likely to influence the corresponding frequency at time B. Thus, for significant correlation coefficients, we performed a time series analysis (TSA) to determine if the observations were independent by checking the autocorrelation function (ACF) and partial autocorrelation function (PACF) of the percentage of the JOURNEY source domain.¹⁵ The ACF

¹⁵ Time series analysis is the analysis of a series of observations made across time using statistical techniques. It has recently been applied in discourse studies to see whether the use of some discourse features in a context is systematically structured across a well-defined time period (e.g., Burgers & Ahrens, 2020; Tay, 2019). For an

and PACF results show no autocorrelation for the relative percentage of the JOURNEY source domain at a one-year interval. All statistical analyses can be found on OSF at <https://osf.io/dwav6/>.

Thus, we find evidence of a negative relation between the use of ELECTION IS A JOURNEY metaphor and time, suggesting the use of JOURNEY metaphors in the framing of ELECTION issues decreased in Hong Kong political speeches between 1997 and 2017.

6.5.3 Differences in meanings of ELECTION IS A JOURNEY metaphor

In terms of the incremental meaning changes in ELECTION IS A JOURNEY metaphors, we focused on the changes between the first decade (1 July 1997 – 31 December 2007) and the second decade (1 January 2008 – 31 December 2017), based on the noticeable contrast of ELECTION metaphor use between the two periods as depicted in the dotted line in Figure 6.1.

We first identified the frequently occurring metaphorical keywords under the JOURNEY source domain (see Table 6.4).¹⁶ The full list of the metaphorical keywords under JOURNEY source domain can be seen in Appendix 6.1.

explicit introduction to ACF, PACF, and TSA method, see Box, Jenkins, Reinsel, and Ljung (2015) and Tay (2019).

¹⁶ A cut-off cumulative percentage up to 60% of the total metaphorical keywords was taken as the criteria for determining ‘the frequently occurring keywords’.

Table 6.4 Frequent metaphorical keywords (cumulative percentage up to 60%) under JOURNEY source domains

| First decade (1 July 1997 - 31 December 2007) | | | Second decade (1 January 2008 - 31 December 2017) | | |
|--|--------|-----------------------|---|--------|-----------------------|
| Metaphorical keywords (lemmatized) | Tokens | Cumulative percentage | Metaphorical keywords (lemmatized) | Tokens | Cumulative percentage |
| <i>(ultimate) aim/destination/goal/objective</i> | 27 | 26.73 | <i>step toward/forward</i> | 28 | 16.37 |
| <i>go/move</i> | 7 | 33.66 | <i>(gradual and orderly) progress</i> | 25 | 30.99 |
| <i>step toward/forward</i> | 7 | 40.59 | <i>attain</i> | 15 | 39.77 |
| <i>road map</i> | 6 | 46.53 | <i>timetable</i> | 14 | 47.95 |
| <i>achieve/reach</i> | 5 | 51.49 | <i>(ultimate) aim/goal/objective</i> | 13 | 55.56 |
| <i>road/way</i> | 5 | 56.44 | | | |
| <i>timetable</i> | 5 | 61.39 | | | |

Table 6.4 shows that both of the two periods frequently mentioned the aspects of ‘(ultimate) aim/goal/objective’, ‘stepping toward/forward’, ‘timetable’, and the same motion of ‘achieving/reaching’ in the first decade and ‘attaining’ in the second decade. The differences are that the first decade emphasized the aspects of ‘going/moving’, ‘road map’, and ‘road/way’ while the second decade emphasized the aspects of ‘(gradual and orderly) progress’. In other words, part of the ELECTION metaphor meanings remained constant, and part of the ELECTION metaphor meanings underwent incremental changes.

Next, we followed the metaphorical framing analysis approach proposed in Chapter 3 to analyze the framing functions of ELECTION IS A JOURNEY metaphors based on the source-target Mapping Principles. The three main steps are: 1) identify the frequently occurring metaphorical keywords in the corpus, 2) analyze Mapping Principles based on the contexts involving the frequently occurring metaphorical keywords, and 3) generate metaphorical frames and relevant framing functions based on patterns of Mapping Principles.

Based on the diachronic change patterns in JOURNEY metaphor meanings, relevant contextual information and corpus evidence, we found both similar and different Mapping Principles for ELECTION IS A JOURNEY metaphors in the corpus between the first and second decades:

(a). Common Mapping Principle for JOURNEY metaphors in the first and second decades

ELECTION ISSUES are conceptualized as A JOURNEY, in that the guide sets out timetables for travelers to step toward the destination of a journey and the Hong Kong government makes schedules for Hong Kong people to attain the goal of universal suffrage.

(b). Different Mapping Principles for JOURNEY metaphors in the first and second decades

(1) Mapping Principle for JOURNEY metaphors in the first decade: ELECTION ISSUES are conceptualized as A JOURNEY, in that the guide provides roadmaps for guiding travelers on the road to the destination of a journey and the Hong Kong government provides policies for guiding Hong Kong people in the process of attaining universal suffrage.

(2) Mapping Principle for JOURNEY metaphors in the second decade: ELECTION ISSUES are conceptualized as A JOURNEY, in that the guide is arriving at the destination of a journey with a gradual and orderly speed following specific traveling rules and Hong Kong government is attaining universal suffrage in a gradual and orderly progress following the Basic Law of Hong Kong.

The following discussion on the relevant JOURNEY scenarios, indexed by patterns of the frequently occurring keywords, will complement the above Mapping Principles analysis

for a more detailed interpretations of framing functions of JOURNEY metaphors in the framing of ELECTION ISSUES.

At a higher level of conceptualisation, JOURNEY metaphor is denoted by the EVENT STRUCTURE metaphorical scenario.¹⁷ We found the keywords in Table 6.4 are mainly part of the four sub-mappings of the LOCATION EVENT STRUCTURE metaphors:

- (1) Actions Are Self-propelled Movements: *go/move, step toward/forward*
- (2) Purposes Are Destinations: *(ultimate) aim/destination/goal/objective*
- (3) Means Are Paths (to destinations): *road map, road/way, timetable*
- (4) Difficulties Are Impediments to Motion: *(gradual and orderly) progress*
- (5) Long-Term, Purposeful Activities Are Journey: *go/move, step, (ultimate) aim/destination/goal/objective, road map, road/way, timetable, (gradual and orderly) progress, achieve/reach/attain*

The JOURNEY scenarios over the two periods also align with the notion of SOURCE-PATH-GOAL image schema. As stated in Kövecses (2006), “complex events are also commonly viewed involving an initial state (SOURCE), intermediate stages (PATHS), and a final state (GOAL).” (p. 211).

Overall, we found ELECTION is addressed in terms of the scenario of ‘Hong Kong people are travelers on a journey towards the destination of universal suffrage’. There are incremental changes of ELECTION IS A JOURNEY metaphor meanings which reflects different

¹⁷ The Event-Structure Metaphor is mappings between the source domain of MOTION, SPACE, and FORCE and the target domain of EVENT. It provides the common understanding of the internal structure of events, including aspects such as “states, changes, processes, actions, causes, purposes, and means” (Lakoff, 1993: 220). The Location Event-Structure metaphors include eleven main sub-mappings: 1) States Are Locations (interiors of bounded regions in space), 2) Changes Are Movements (into or out of bounded regions), 3) Causes Are Forces, 4) Causation Is Forced Movement (from one location to another), 5) Actions Are Self-propelled Movements, 6) Purposes Are Destinations, 7) Means Are Paths (to destinations), 8) Difficulties Are Impediments to Motion, 9) Freedom of Action Is The Lack of Impediments to Motion, 10) External Events Are Large, Moving Objects (that exert force), and 11) Long-Term, Purposeful Activities Are Journey (Lakoff & Johnson, 1999, p.179).

metaphor scenarios over time. In the following two sections, we have illustrated this with examples from the corpus; the similar ELECTION IS A JOURNEY metaphor scenarios over the entire period (Section 6.5.3.1) and the ELECTION IS A JOURNEY metaphor scenarios with incremental changes between the first and the second decades (Section 6.5.3.2).

6.5.3.1 ELECTION IS A JOURNEY metaphor scenario remaining mostly constant

Based on the patterns of the frequently occurring linguistic expressions of ‘(ultimate) goal’, ‘step toward/forward’, ‘timetable’ and the motion of ‘achieving/reaching/attaining’, we generated three JOURNEY scenarios that have been constantly applied by Hong Kong political leaders in public speeches in both the first and the second decades.

Constant JOURNEY scenario (1): Attaining the ultimate aim of universal suffrage for the elections in Hong Kong

In both the first and second decades, Hong Kong secretaries frequently emphasized ‘achieving/reaching/attaining the ultimate aim of universal suffrage for the elections in Hong Kong’, which shows the government’s steadfast awareness of the importance of the goal of universal suffrage. Examples (1)-(2) are illustrative for the first decade, and examples (3-5) are illustrative for the second decade.¹⁸

(1) By the year 2007, the Basic Law provides us with the opportunity of deciding on a legislature elected wholly through **universal suffrage**, this being the *ultimate aim* of our constitution. (Anson Chan, CSA, 23 January 1998)

(2) Whilst we have not *reached* the *ultimate aim* of **universal suffrage** prescribed in the Basic Law, we are not an autocracy. (Donald Tsang, CSA, 17 May 2002)

¹⁸ The metaphorical keywords are italicized and underlined, and the keywords in the target domain of ELECTION are in bold type for all of the examples provided.

(3) Both the Central Government and the Hong Kong Government are fully committed to *attaining* the *ultimate aim* of **universal suffrage** to **elect** the Chief Executive and to form the Legislative Council in accordance with the Basic Law. (Henry Tang, CSA, 14 May 2008)

(4) We have been debating the issue of constitutional development for many years. The *ultimate goal* of **universal suffrage** is now in sight... We would like to *achieve the ultimate goal* of **universal suffrage** by the years 2017 and 2020. (Henry Tang, CSA, 02 February 2010)

(5) Besides, it is crystal clear that both the people of the Hong Kong SAR and the CPG share the common aspiration to *attain* **universal suffrage** for the selection of CE in 2017. (Rimsky Yuen, SJ, 03 December 2014)

In examples (1)-(2), the secretaries introduce that universal suffrage is the ‘ultimate aim’ of Hong Kong’s constitution, as prescribed by the Basic Law, and has not been ‘reached’ yet until the 2007 elections. Example (3)-(5) emphasize the concept of ‘attaining the ultimate aim of universal suffrage’ for the most recent 2017 Chief Executive election and the 2020 Legislative Council election. The linguistic expression ‘attain ultimate aim/goal’ belong to the sub-mapping of Purposes Are Destinations EVENT STRUCTURE metaphor (Lakoff, 1993). These linguistic metaphors present the metaphor scenario of Hong Kong people being travelers on a journey committed to attaining universal suffrage. Hong Kong political leaders’ consistent emphasis on the final state of a journey – GOAL (Kövecses, 2006, p. 211) shows that the government’s determination to attain universal suffrage has not waived throughout the democratic development in Hong Kong from 1997 to 2017. It also brings reassurance to the general public who have been pressing for full universal suffrage since 1997. Given the increasing pro-democracy protests and the rising trend in social unrest over the period, the deployment of JOURNEY scenario here may serve as a strategy for indicating to people that this

goal is still important to the government and thus, serve to help maintain social stability in Hong Kong.

Constant JOURNEY scenario (2): Setting out the timetable for achieving universal suffrage for the elections in Hong Kong

We also found the same metaphor scenario of ‘setting out the timetable for achieving universal suffrage’ in both the first decade (see examples 6-7) and the second decade (see examples 8-9).

(6) The Basic Law *sets out a timetable* for **electoral** development in Hong Kong that will see the number of directly elected seats steadily increased to 50% of the total by 2007. (Anson Chan, CSA, 14 January 1998)

(7) While there is a long way to go to match the system you have here in America, our constitution *sets out the timetable* for the progressive development of our **democratic** processes. (Donald Tsang, FS, 16 June 2000)

(8) First, in 2007 we secured a *timetable* for **universal suffrage**... The NPCSC decision has made clear the **universal suffrage timetable**: universal suffrage may be implemented for the CE in 2017 and for the LegCo in 2020. (Henry Tang, CSA, 18 November 2009)

(9) The universal suffrage *timetable* lays a solid foundation and provides the authoritative direction and basis for our pursuit of **democracy**. (Henry Tang, CSA, 14 April 2010)

Examples (6)-(7) mention the timetable set out in the Basic Law for democratic development in the first decade. Examples (8)-(9) talk about the timetable for universal suffrage in the second decade. They also emphasize the significance of the timetable – ‘lay a solid foundation’ and ‘providing the authoritative direction and basis’ for the people of Hong

Kong's pursuit of democracy. The metaphorical keyword 'timetable' is a sub-mapping of Means Are Paths (to destinations) EVENT STRUCTURE metaphor, reflecting the intermediate stage of a journey – PATH. A timetable is one of the means that help travelers to determine how fast they should progress toward their destination. It indicates that the Hong Kong government has a pre-arranged schedule for arriving at the goal of universal suffrage. The government is in control of the pace of the journey, e.g., to speed up or slow down the progress of the democratic development in Hong Kong. By continuously presenting the 'timetable' scenario to the general public, the political leaders positively portray the government as being prepared and serious about the time when Hong Kong attains full universal suffrage, and thus, persuading the public to follow with the schedule designated by the government.

Constant JOURNEY scenario (3): Stepping towards the universal suffrage for the elections in Hong Kong

In addition, the secretaries also frequently mentioned the scenario of 'stepping towards the universal suffrage for the elections in Hong Kong in both the first decade (see example 9-10) and the second decade (see example 11-12).

(9) Although there has been some criticism levelled at the pace of democratic reform, the polls were the first *step towards* the *ultimate goal* of **election** of all LegCo members by full **universal suffrage** as envisaged in the Basic Law. (Anson Chan, CSA, 14 August 1998)

(10) The Hong Kong SAR Government considered the proposals could have significantly enhanced the "democratic representation" in the two electoral methods, and would be a significant *step towards* the *ultimate aim* of **universal suffrage** that is provided for in the Basic Law. (Wong Yan-lung, 09 June 2006)

(11) Viewed from any angle, the **election** of CE by ‘one person one vote’ will necessarily be a significant *step forward*, and will certainly be a system more **democratic** than the current system of **election** of CE by the Election Committee. (Rimsky Yuen, SJ, 03 December 2014)

(12) But it is up to us, the Hong Kong people, to come together to take a giant *step forward* towards **universal suffrage** in the 2017 election of the next Chief Executive of Hong Kong. (John Tsang, FS, 31 October 2014)

Examples (9)-(10) from the first decade and examples (11)-(12) from the second decade talk about the ‘step’ Hong Kong was taking towards universal suffrage. ‘Step’ is a metaphorical keyword that can be categorized under the sub-mapping of Actions Are Self-propelled Movements EVENT STRUCTURE metaphor, relating to the intermediate stages of a journey – PATH. The ‘stepping towards/forward’ scenario is positively evaluated by constructing a forward movement scenario. The secretaries frequently mentioned this scenario in public speeches as an attempt to show that the Hong Kong government had been taking actual measures (e.g., issuing electoral system reform proposals) to reach the goal of universal suffrage over the previous two decades. For instance, the NPCSC adopted the decision on 29 December 2007, which sets a timetable for attaining universal suffrage for the fifth Chief Executive election in 2017 and the Legislative Council election in 2020. It is also a strategy to create a sense of solidarity from the general public to follow the government’s action on the journey to universal suffrage, as stated in example (12).

The consistent use of the same JOURNEY metaphor scenarios serves the rhetorical aims of creating similar political framing effects. The three constant metaphor scenarios of ‘attaining the ultimate aim of universal suffrage’, ‘providing timetable’, and ‘stepping toward/forward’ imply that the Hong Kong government’s intentions are to stabilize the social unrest, show an

effort on the part of the government, and persuade the public to follow a pre-arranged schedule. These scenarios are regularly invoked in public speeches throughout Hong Kong's electoral development process of the past two decades.

6.5.3.2 ELECTION IS A JOURNEY metaphor scenarios with incremental changes

As shown in Table 6.4, Hong Kong secretaries in the first decade primarily emphasized 'going/moving', 'road map', and 'road/way' under the JOURNEY source domain. By contrast, in the second decade, they emphasized '(gradual and orderly) progress'. Accordingly, we hypothesize different JOURNEY scenarios between the two periods.

JOURNEY scenario (1) in the first decade: 'Going/moving forward on the road/way to universal suffrage for the elections in Hong Kong'

In the first decade from 1997 to 2007, we found that Hong Kong secretaries frequently used relevant keywords under the JOURNEY source domain to present the scenario of 'going/moving on the road/way to universal suffrage for the elections in Hong Kong. Examples (13)-(16) are illustrative.

(13) Beyond 2007, the people of Hong Kong can decide on their own how quickly to *move towards universal suffrage* which is the *ultimate aim* of the Basic Law. (Donald Tsang, FS, 16 June 2000)

(14) I heard the Constitutional Development Task Force, which is collecting people's views on how they would like to see our **electoral** process *go forward*. (Donald Tsang, CSA, 08 September 2004)

(15) That may well be the time to begin the debate *on the way forward* for **democratic** development; to properly address some of the complex questions we will, as a community,

need to answer as we approach the Basic Law trigger point of 2007 when the opportunity of a consensus - or otherwise - on universal suffrage presents itself. (Anson Chan, CSA, 05 July 2000)

(16) But, as we head down the *road* to our ultimate goal of **electing** all Legco members by **universal suffrage**, then functional constituencies will have to evolve with this process. (Donald Tsang, CSA, 16 June 2004)

In example (13), Hong Kong people were promised the right to decide how fast to ‘move towards’ the journey to universal suffrage. Example (14) mentions that the authorities are collecting people’s views on how the electoral process should ‘go forward’. Examples (15)-(16) discusses the ‘way’ forward for democratic development and the ‘road’ to the ultimate goal of universal suffrage. The keywords ‘go/move’ describe the movement of Hong Kong, which are the sub-mappings of Actions Are Self-propelled Movement EVENT STRUCTURE metaphor. The keywords ‘road/way’ describe the path to the destination, belonging to the sub-mappings of Means Are Paths EVENT STRUCTURE metaphor. These keywords all related to the intermediate stage of a journey – PATH. Similar to the ‘stepping forward’ scenario, ‘going/moving forward’ scenarios also entail positive evaluations with a ‘forward movement’ implication. In addition, as stated in examples (13)-(14), the government showed respect to the public by valuing Hong Kong people’s rights to decide the pace of democracy and opinions about the electoral process. The secretaries also pointed out the road and way as paths to the destination in the examples (17) and (18). The combined use of these keywords enable Hong Kong secretaries to create a scenario that Hong Kong is moving on the path toward universal suffrage and therefore, appeal to support and solidarity from the general public who are viewed as wanting to work together with the government.

JOURNEY scenario (2) in the first decade: ‘Providing a road map for attaining universal suffrage for the elections in Hong Kong’

The first decade also frequently mentioned the keyword ‘road map’, reflecting the scenario of ‘providing a road map for attaining universal suffrage for the elections in Hong Kong’ (see examples (16)-(17)).

(16) The Basic Law provides a very clear *road map* for the development of our **democratic** institutions. (Anson Chan, CSA, 05 June 1998)

(17) In November last year, the Chief Executive initiated the discussion on formulating a *road map* for **universal suffrage** through the Commission on Strategic Development. (Wong Yan-lung, SJ, 09 June 2006)

In example (16), the Hong Kong secretary emphasizes the road map provided by the Basic Law for universal suffrage since 1997. Example (17) mentions the discussion of formulating a road map for universal suffrage by the authority. The metaphorical expression ‘road map’ is part of the sub-mapping of Means Are Paths EVENT STRUCTURE metaphor, which refers to the intermediate stage of a journey – PATH. Similar to the implications of the keyword ‘timetable’, ‘road map’ indicates the Hong Kong government has pre-arranged plans or solutions for achieving universal suffrage. A road map usually precisely defines the direction, the route, and the steps necessary to arrive at the final destination of a journey. It prevents travelers from taking wrong directions or making a detour and helps them to make the right decisions. The ‘road map’ scenario is thus positively evaluated. It justifies the political agenda of the Hong Kong government and implies that what Hong Kong people need to do is to follow the road signs or instructions (election policies) provided by the government in order to arrive at the final destination (universal suffrage).

JOURNEY scenario in the second decade: ‘Maintaining gradual and orderly progress towards universal suffrage’

During the second decade from 2008 to 2017, Hong Kong secretaries frequently used the expression ‘gradual and orderly progress’ to present and emphasize the metaphorical scenario of ‘maintaining a gradual and orderly progress toward universal suffrage’. Examples (18)-(20) are illustrative.

(18) It is the common aspiration of the HKSAR Government and the community to further democratise Hong Kong's electoral system. Articles 45 and 68 of the Basic Law stipulate clearly that Hong Kong shall *attain the ultimate aim* of selecting the Chief Executive (CE) and forming the Legislative Council (LegCo) by **universal suffrage** in the light of actual situation and in accordance with the principle of *gradual and orderly progress*. (Henry Tang, 18 November 2009)

(19) The Government will continue to work, *in an orderly manner*, towards **universal suffrage** for the Chief Executive elections in 2017 and for the Legislative Council elections in 2020. In the meantime, we will *make steady progress* in making the **election** process more **democratic** for the CE and LegCo **elections** in 2012. (John Tsang, FS, 29 May 2010)

(20) The new DCFC (District Council Functional Constituency) election is consistent with the Basic Law and the 2007 NPCSC decision. It provides a useful means to effect *gradual and orderly progress* towards **universal suffrage**. (Wong Yan-lung, SJ, 21 June 2010)

The metaphorical keyword ‘progress’ is a positively evaluated scenario, meaning the fulfilment of plans, in this case, referring to the accomplishments or moves that the Hong Kong government has made in the process of attaining democracy. However, the expression of ‘gradual and orderly progress’ delivers the message to the pan-democratic camp, who advocate

thorough and immediate democratization, that they should not expect instant results from the government. There are no shortcuts or fast ways to reach universal suffrage. On the given political situation, Hong Kong people may need to endure hardship and suffer from some impediments to achieve the desired goal. As stated explicitly in the Basic Law, the pace of attaining universal suffrage should be in light of the actual situation in Hong Kong (see example 18). The expression ‘gradual and orderly progress’ thus relates to the sub-mapping of Difficulties Are Impediments to Motion EVENT STRUCTURE metaphor and the intermediate stage of a journey – PATH. The emphasis of the ‘maintaining gradual and orderly progress’ JOURNEY scenario serves the rhetorical aim of influencing the pace of the public’s call for democracy and alerting the public to follow the pace prescribed in the Basic Law.

Our findings suggest that in the first decade, Hong Kong secretaries primarily talked about the intermediate stage of the journey (PATH) to universal suffrage via emphasizing the scenarios of ‘going/moving forward on the road/way’ and ‘providing road maps’ to Hong Kong people as the travelers on a journey to universal suffrage. In the second decade, they also discussed the PATH while at the same time emphasizing the impediments on the JOURNEY to universal suffrage in the ‘gradual and orderly progress’ scenario. The government strategically turned the public’s attention to a gradual, steady, and slow political reform. The secretaries adopted the same type of metaphor realized by different source scenarios, each of which presented particular rhetorical aims for different persuasion purposes during the early (the first decade) and later (the second decade) phases of the democratic development in Hong Kong.

6.6 Conclusion

This study examines the diachronic changes in metaphorical framing of ELECTION in a corpus of public speeches in Hong Kong over the past two decades (1997-2017). We adopted a corpus-based diachronic approach to the analysis of metaphor changes in discourse over time by

tracking the fundamental changes (changes in metaphor source domains) and incremental changes (changes in source-target Mapping Principles) in ELECTION metaphors. In particular, this study offers a practical way to quantify the incremental changes in metaphorical frames. We showed that examining changes in metaphor Mapping Principles and the relevant metaphor scenarios can reveal changes in metaphorical framing effects over time.

We first extracted 1,404 ELECTION instances from the corpus and found 1,078 instances referring to the Hong Kong election. Among the 1,078 instances, 349 were metaphorical (32.4%). Next, nine types of source domains from the 349 ELECTION metaphors were identified: JOURNEY (211 cases), PRODUCT (55 cases), BUILDING (52 cases), LIVING ORGANISM (23 cases), PHYSICAL OBJECT (15 cases), SPORT (10 cases), WAR (10 cases), CONTAINER (four cases), and RECIPE (three cases). Thus, we found Hong Kong political leaders predominantly adopted JOURNEY metaphors in the framing of the ELECTION issues.

For RQ1 regarding the diachronic changes of attention to the ELECTION topic, we conducted a quantitative test of the relation between time and the standardized number of the ELECTION topic (relative frequency per 10,000 words of the corpus). We found no significant association between the two, suggesting that the overall attention paid to the ELECTION topic has been relatively stable over time. The continuous attention to this topic suggests that ELECTION is one of the most important societal issues in Hong Kong over the past two decades. In addition, we found increased attention to the topic of ELECTION between the periods of 2008-2010 and 2013-2014, which may have been related to the NPCSC's decision on 29 December 2007 and the '31 August Decision' in 2014, respectively. These decisions ruled out the possibility of universal suffrage for the Chief Executive and Legislative Council elections in Hong Kong. The 2014 Occupy Central Protest for 'genuine universal suffrage' may also relate to the increasing attention to ELECTION between 2013-2014.

For RQ2 concerning the fundamental changes of ELECTION metaphors, we conducted quantitative tests in two distinct ways: 1) the relation between time and the number of ELECTION metaphors, 2) the relation between time and the source domain of ELECTION metaphor and JOURNEY source domain in particular. We found no significant association between time and ELECTION metaphors, indicating the changes (increases or decreases) in ELECTION metaphors are not significantly correlated with time. We obtained a significantly negative association between time and the source domain of JOURNEY, suggesting the use of JOURNEY metaphors in the framing of ELECTION issues experienced a decreasing trend in Hong Kong political speeches over the period from 1997 to 2017.

For RQ3 focusing on the incremental changes of ELECTION IS A JOURNEY metaphor meanings, we first examined the Mapping Principles between the first and second decades. Based on the diachronic change patterns in JOURNEY metaphor meanings, relevant contextual information and corpus evidence, we found both similar and different Mapping Principles for ELECTION IS A JOURENY metaphors in the corpus between the first and second decades. The common Mapping Principle in the two periods is: ELECTION ISSUES are conceptualized as A JOURNEY, in that the guide sets out timetables for travelers to step toward the destination of a journey and the Hong Kong government makes schedules for Hong Kong people to attain the goal of universal suffrage.

Variations on Mapping Principles in the first and second decades were also found. The Mapping Principle in the first decade is: ELECTION ISSUES are conceptualized as A JOURNEY, in that the guide provides roadmaps for guiding travelers on the road to the destination of a journey and the Hong Kong government provides policies for guiding Hong Kong people in the process of attaining universal suffrage. The Mapping Principle in the second decade is: ELECTION ISSUES are conceptualized as A JOURNEY, in that the guide is arriving at the destination of a journey with a gradual and orderly speed following specific traveling rules and

Hong Kong government is attaining universal suffrage in a gradual and orderly progress following the Basic Law of Hong Kong.

Second, we included the analysis of the JOURNEY source scenarios which are indexed by the frequently occurring metaphorical keywords between the two periods. As any source-target mapping can generate unlimited numbers of scenarios, each of which can entail various evaluations (Musolff, 2006), we compared the changes in metaphor scenarios between the first decade (1997-2007) and the second decade (2008-2017) to see the metaphorical framing effects. Our findings suggest that ELECTION IS JOURNEY metaphor scenarios have either remained mostly constant or undergone incremental changes.

In terms of scenarios that remained constant, three types of JOURNEY metaphor scenarios have occurred continuously in both the first and the second decades: 1) Attaining the ultimate aim of universal suffrage - GOAL, 2) Setting out a timetable for achieving universal suffrage - PATH, and 3) Stepping towards the universal suffrage - PATH. In light of the increasing call for democracy from the general public, the consistent use of these JOURNEY scenarios over time may imply that the Hong Kong government's continuous efforts in comforting the public's emotions and easing the tension between the government and the public are aimed at maintaining social and political stability.

We also found incremental changes in JOURNEY scenarios between the first and the second decades. The first decade frequently presented two scenarios: 1) Going/moving forward on the road/way to universal suffrage - PATH, and 2) Providing a road map for attaining universal suffrage - PATH. By contrast, the second decade emphasized the scenario of 'maintaining gradual and orderly progress toward universal suffrage - PATH', implying potential barriers and difficulties on the journey. Hong Kong secretaries shifted the public's attention from 'the movements and means on the journey' in the first decade to 'the impediments or hardship on the journey' in the second decade. The changes in JOURNEY

scenarios serve the rhetorical aims of reminding the public not to expect fast policies for immediate democratization from the government and that attaining universal suffrage for the election in Hong Kong is a long-term goal that needs great patience and endurance. We thus found that the secretaries used the same type of metaphor source domain with different source scenarios to achieve particular persuasion effects during the early and later phases of the democratic development in Hong Kong.

Overall, the ELECTION IS A JOURNEY scenarios define the final destination of the elections in Hong Kong (universal suffrage), a travel road map (electoral policies), the travelers (Hong Kong people), and the speed of the traveler (gradual and orderly progress) to move toward the destination at a pre-arranged time (timetable). Most of the JOURNEY scenarios in the two periods emphasized the intermediate stage of a journey - PATH, indicating that universal suffrage is ongoing. The government is still working on measures on the path, e.g., setting timetables, making policies, and adjusting the pace of the journey. JOURNEY metaphor contributes to a positive evaluation of the measures politicians have carried out. It also justifies the current 'gradual and orderly' speed of democratic development in Hong Kong by implying there are always 'burdens and other forms of suffering to bear' (Charteris-Black, 2004, p. 76) on the journey.

In short, we argue that analyzing fundamental and incremental changes in metaphorical frames over time can reflect social changes. The combination of 'fundamental & incremental changes', 'Mapping Principles', and 'source scenarios' approaches offers a practical approach for diachronic corpus-based metaphorical framing analysis. This diachronic approach is replicable for metaphor researchers focusing on corpus-based metaphorical framing analysis in public discourse over time.

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Appendix 6.1 Frequencies of metaphorical keywords under JOURNEY source domain

| First decade (1 July 1997 - 31 December 2007) | | | Second decade (1 January 2008 - 31 December 2017) | | |
|--|------------|-----------------------|---|------------|-----------------------|
| Metaphorical keywords (lemmatized) | Tokens | Cumulative percentage | Metaphorical keywords (lemmatized) | Tokens | Cumulative percentage |
| <i>(ultimate) goal/aim/destination/objective</i> | 27 | 26.73 | <i>step forward</i> | 28 | 16.37 |
| <i>go/move (forward/towards)</i> | 7 | 33.66 | <i>(gradual and orderly) progress</i> | 25 | 30.99 |
| <i>(first) step (towards)</i> | 7 | 40.59 | <i>attain</i> | 15 | 39.77 |
| <i>road map</i> | 6 | 46.53 | <i>timetable</i> | 14 | 47.95 |
| <i>achieve/reach</i> | 5 | 51.49 | <i>(ultimate) aim/goal/objective</i> | 13 | 55.56 |
| <i>road/way</i> | 5 | 56.44 | <i>pave the way (in a steady manner)</i> | 10 | 61.40 |
| <i>(sets out) timetable</i> | 5 | 61.39 | <i>path/passage/way</i> | 8 | 66.08 |
| <i>pace</i> | 4 | 65.35 | <i>pursue</i> | 8 | 70.76 |
| <i>(gradual and orderly) progress</i> | 4 | 69.31 | <i>road map</i> | 7 | 74.85 |
| <i>take forward</i> | 4 | 73.27 | <i>direction</i> | 5 | 77.78 |
| <i>chart</i> | 3 | 76.24 | <i>achieve/reach</i> | 4 | 80.12 |
| <i>proceed to</i> | 3 | 79.21 | <i>move towards</i> | 4 | 82.46 |
| <i>stepping stone</i> | 3 | 82.18 | <i>pace</i> | 4 | 84.80 |
| <i>direction</i> | 2 | 84.16 | <i>take forward</i> | 4 | 87.13 |
| <i>guide</i> | 2 | 86.14 | <i>roll forward</i> | 3 | 88.89 |
| <i>head down</i> | 2 | 88.12 | <i>unchartered territory</i> | 3 | 90.64 |
| <i>blueprint</i> | 1 | 89.11 | <i>(steadily) go/move down</i> | 2 | 91.81 |
| <i>gear up</i> | 1 | 90.10 | <i>picture</i> | 2 | 92.98 |
| <i>in the right direction</i> | 1 | 91.09 | <i>(steady) transition</i> | 2 | 94.15 |
| <i>move fast</i> | 1 | 92.08 | <i>ahead of</i> | 1 | 94.74 |
| <i>retrograde</i> | 1 | 93.07 | <i>get stuck</i> | 1 | 95.32 |
| <i>scenario</i> | 1 | 94.06 | <i>in sight</i> | 1 | 95.91 |
| <i>seek</i> | 1 | 95.05 | <i>milestone</i> | 1 | 96.49 |
| <i>set back</i> | 1 | 96.04 | <i>navigate</i> | 1 | 97.08 |
| <i>slow down</i> | 1 | 97.03 | <i>press ahead</i> | 1 | 97.66 |
| <i>strive for</i> | 1 | 98.02 | <i>proceed</i> | 1 | 98.25 |
| <i>transitions</i> | 1 | 99.01 | <i>speed</i> | 1 | 98.83 |
| <i>watershed</i> | 1 | 100.00 | <i>strive for</i> | 1 | 99.42 |
| | | | <i>vista</i> | 1 | 100.00 |
| Total | 101 | | | 171 | |

Chapter 7

Conclusion

7.1 Introduction

In this thesis, I conducted a discourse-based analysis of metaphorical frames in a corpus of public speeches in post-colonial Hong Kong (1997-2017). The thesis includes seven chapters. In addition to Chapter 1 (Introduction) and the current Chapter 7 (Conclusion), Chapters 2-6 include five studies, which constitute the main body of the thesis, divided into three major parts: 1) the overall distribution patterns of metaphors across multiple linguistic and social factors, 2) the improvement of approaches to corpus-based metaphorical framing analysis, and 3) the diachronic changes in metaphorical framing of specific societal issues in the corpus.

This final chapter will first restate the research questions and objectives of this thesis in Section 7.1. The main findings of the five studies will be summarized in Section 7.2 in response to the corresponding research questions and objectives. Section 7.3 will then discuss the implications of this thesis from the methodological, theoretical, and practical perspectives. Finally, Section 7.4 will reflect on specific limitations of the studies presented in this thesis, and at the same time, point out directions for future research.

As outlined in sections 1.1-1.2 of Chapter 1, the five studies in Chapters 2-6 can be divided into three parts, each of which focuses on one of the three key research questions and aims to fulfill specific research objectives as below:

Part I - Chapter 2

RQ1: What metaphorical frames have been used, and how were they distributed in public speeches in post-colonial Hong Kong (1997-2017)?

Objective 1: To present the overall distribution patterns of the frequently used metaphors in the corpus through a multivariate analysis (i.e., log-linear analysis) of the interaction between metaphor source domains and multiple linguistic and social factors.

Part II - Chapters 3 & 4

RQ2: What improvements can be made to the current approaches to corpus-based metaphorical framing analysis?

Objective 2: To offer an operational approach for generating metaphorical framing functions in corpora by exploring the role of Mapping Principles in corpus-based metaphorical framing analysis.

Objective 3: To address the limitations of the current statistic method for diachronic analysis of metaphorical frames in discourse by exploring the potential of Time Series Analysis of metaphor use in public discourse over time.

Part III - Chapters 5 & 6

RQ3: To what extent does metaphorical framing of specific societal issues undergo change in public speeches in post-colonial Hong Kong (1997-2017)?

Objective 4: To examine patterns of diachronic changes in metaphorical framing of specific societal issues in a distinct context of Hong Kong public discourse, and provide insight from a unique Outer Circle English context during a post-colonial period in Hong Kong.

7.2 Overview of the main findings

Part I - Chapter 2

The first part of the main body of this thesis concerns what metaphorical frames have been used, and how are they distributed in public speeches in post-colonial Hong Kong (1997-2017). To find out the specific metaphorical frames used in the corpus, Chapter 2 first conducted a bottom-up analysis of metaphors and source domains in 10% of the corpus. The findings show that the top six frequently used source domains are BUILDING, LIVING ORGANISM, JOURNEY, PHYSICAL OBJECT, GAME, and BUSINESS. In other words, these six types of metaphors have been frequently applied by Hong Kong political leaders to frame different topics in public speeches in post-colonial Hong Kong.

Second, to see the overall distributions of the frequent metaphors in the corpus, the study in Chapter 2 conducted a multivariate analysis (i.e., log-linear analysis) of metaphor distributions across the linguistic factor of ‘speech section’ and the social factors of the speakers’ ‘political role’ and ‘gender’. Specifically, the study tested the associations between the six types of frequently used metaphor source domains and gender (male and female), and their variability across four speech sections (prologue, narrative, proof, and epilogue) and three political roles (CSA, FS, and SJ). Results reveal the effects of multiple factors on metaphor use in the corpus with a focus on patterns of gendered influence.

Overall, metaphors were found to be distributed differently between male and female politicians. Hong Kong male politicians and female politicians showed 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 characteristics than expected by chance. They also had distinct preferences for metaphor use across different speech sections and different political roles.

The findings present the distribution patterns of gendered metaphors in the four speech sections. In the prologue, both male and female politicians were more likely to adopt self-presentation strategies for identity construction, with men using more masculine metaphors and women using less masculine metaphors than expected. In the narrative, they switched metaphor styles with men using more feminine metaphors for elaborating points more explicitly, and women using more masculine metaphors to enhance strength, power, and leadership. In the proof, women continued with more masculine metaphors use, while men changed to use more neutral metaphors to create objectiveness and persuasiveness. In the epilogue, men shifted to a more feminine style to get closer to the audience, while women used more neutral metaphors as they called for solidarity.

Regarding the distribution patterns of gendered metaphors in the three political roles, the study found that in CSA speeches, male CSAs were more likely to use feminine metaphors for creating rapport. In contrast, 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 findings show the overall distribution patterns of metaphors across gender, speech sections, and political roles in the corpus. The multifactorial analysis presented in Chapter 3, thus, has provided a more comprehensive picture of metaphor use across multiple factors in public discourse. Patterns of the source domain variations reflect those found in Western politics (e.g., Charteris-Black, 2009; Tenorio, 2009). The findings also 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, 2019; Dodson, 2006; Gertzog, 1995; Jones, 2016; Karpowitz & Mendelberg, 2014).

Part II - Chapters 3 & 4

Chapter 3 and Chapter 4 comprises the second part of the main body of this thesis. Each of the two chapters improves specific approaches or methods for corpus-based metaphorical framing analysis. The study in Chapter 3 explores the role of Mapping Principles in corpus-based metaphorical framing analysis, which develops a practical approach for analysing metaphorical framing functions in corpora. The study in Chapter 4 explores the potential of Time Series Analysis of metaphor use in public discourse over time, which addresses the limitations of the current statistic method for the diachronic analysis of metaphor use in discourse.

Findings of Chapter 3

Findings reported in Chapter 3 show that analysing Mapping Principles between metaphor source-target domain pairings allows for a principled way to support for a metaphorical framing analysis. Three main steps are proposed for metaphorical framing analysis in corpora based on Mapping Principles: (1) identify the frequently occurring metaphorical keywords in the corpus, (2) analyze Mapping Principles based on the contexts involving the frequently occurring metaphorical keywords, and (3) generate metaphorical frames and relevant framing functions based on patterns of Mapping Principles.

A case study of WAR metaphors in the framing of different societal issues in the corpus was conducted in Chapter 3. The study first examined the Mapping Principles for the three types of WAR metaphors (SOCIAL ISSUES ARE A WAR, ECONOMIC ISSUES ARE A WAR, and POLITICAL ISSUES ARE A WAR) identified in the corpus. Secondly, based on the contextual information and the empirical evidence from the corpus, the study found the Mapping Principle

for the three types of WAR metaphors. Namely, the Mapping Principle for SOCIAL ISSUES ARE A WAR metaphors is that social issues are understood as a war, in that war harms civilians and social issues negatively affect members of a society. The Mapping Principle for ECONOMIC ISSUES ARE A WAR metaphors is that economic issues are conceptualized as a war, in that (militaristic) strategizing is needed to win a war and (economic) strategizing is needed to advance an economic agenda. The Mapping Principle for POLITICAL ISSUES ARE A WAR metaphors is that political issues are understood as a war, in that civilians should be protected by the country during a war, and the rights of citizens should be protected by the legal system of the government.

Thirdly, specific metaphorical frames are highlighted from patterns of the obtained Mapping Principles, which further reflect specific framing functions in the discourse. Based on the variations of the Mapping Principles between the WAR source domain and the three target domains, the study generalised three different metaphorical frames with different framing functions: the predominant use of a VIOLENT frame associated with SOCIAL ISSUES, a STRATEGY frame associated with ECONOMIC ISSUES, and a PROTECT frame associated with POLITICAL ISSUES. Hong Kong secretaries primarily use the VIOLENCE frame to construct various social issues in order to emphasize the seriousness of social crimes that negatively affect Hong Kong people. However, when discussing economic issues, they generally adopt the STRATEGY frame, with an emphasis on the importance of using economic strategies to advance particular economic agendas. Hong Kong secretaries employ the PROTECTION frame to refer to political issues in order to emphasize the rights of citizens should be protected by the legal system of the government.

In addition, Chapter 3 conducted the second level of metaphorical framing analysis by looking at the evaluations of metaphors. In the case study of WAR metaphors, the most frequently metaphorical keywords were evaluated with either positive, negative, or neutral

connotations. The findings show that SOCIAL ISSUES were found to be addressed in more negative ways, while ECONOMIC ISSUES and POLITICAL ISSUES were discussed in more positive ways in the public speeches. These results reveal politicians' overall moral evaluations and attitudes toward specific societal issues in Hong Kong.

Overall, the framing functions of the three types of WAR metaphors were found to be used as a tool for legitimising political agendas and for advancing the propaganda of social, economic, and political policies. Chapter 3 thereby shows the feasibility of generating metaphorical framing functions from patterns of Mapping Principles between metaphor source-target domain pairings, thus offering an operational approach for corpus-based metaphorical framing analysis. Combining the second level of evaluation analysis with the Mapping Principle analysis of metaphorical frames offers a more comprehensive way to investigate metaphorical framing functions in discourse.

Findings of Chapter 4

The study in Chapter 4 applies a novel quantitative method - Time Series Analysis (TSA) to the diachronic investigations of metaphors in the corpus. One primary feature of TSA is highlighted in the study: the analysis of the autocorrelation functions among temporally ordered observations. When testing the association between time and discourse variables (e.g., the use of metaphor source domain over time), TSA assumes the presence of autocorrelations among the variables. This feature addresses the limitations of the conventional quantitative methods (e.g., Pearson Correlation Test), which consider variables are independent with each other across time.

The case study in Chapter 4 conducted ARIMA time series modeling on the use of seven frequently occurring metaphor source domains (BUILDING, LIVING ORGANISM, JOURNEY, PHYSICAL OBJECT, BUSINESS, WAR, and SPORT) in 41 consecutive half-year intervals in the

period from 1 July 1997 to 31 December 2017. Among the seven cases modeled, the study found:

- (1) one case with autocorrelations between time and source domain use and an ARIMA model can be fitted: the use of LIVING ORGANISM source domain over time
- (2) four cases with no autocorrelations between time and source domain use: the use of BUILDING, JOURNEY, WAR, and SPORT source domains over time
- (3) two cases with autocorrelations between time and source domain but the autocorrelation patterns do not fit statistically straightforward models: the use of PHYSICAL OBJECT and BUSINESS source domains over time

The findings show that the majority of the cases are without significant autocorrelation (four cases) or with complicated autocorrelation (two cases) among the observations. Only the case of the LIVING ORGANISM source domain is found to have autocorrelations among the consecutive observations, and an ARIMA model can be applied. The absence of significant autocorrelation shows that these source domains are used less sensitive or less conditioned by their development across time compared to the use of the LIVING ORGANISM source domain. The complicated autocorrelation explains again about the messy and less predictable nature of real-life discourse. These patterns affirm the claim that discourse phenomenon is messy in nature and less predictable than other non-discourse data (e.g., typical financial data) by quantitative analysis using statistical methods (Tay, 2019).

For the source domain of LIVING ORGANISM, its profile demonstrates a clear usage pattern across time and is adequately described by the AR(1) model $y_t = 7.99 + a_t + 0.88y_{t-1}$. In AR models, y_t is determined by y_{t-1} , meaning the present value as a function of its past values. AR models thus are more likely to show that the data have systematic continuity across time intervals. In the corpus, the 'autoregressive' nature of AR model suggests that LIVING

ORGANISM metaphors are used with a strong degree of continuity across consecutive half-year intervals, where high levels of use tend to be immediately followed by a comparably high level of use, and vice-versa. The AR (1) model indicates that the past frequencies of LIVING ORGANISM exert the maximum influence from one interval away, with gradually declining effects thereafter.

Further qualitative interpretations based on the contextual information show that the continuity in the use of LIVING ORGANISM source domain can be attributable to the progressions of background events in the broad context of the corpus. The discussions on the example of ECONOMIC ISSUES ARE LIVING ORGANISM metaphors show that the progression of Hong Kong's economic growth triggers a gradually increasing use of the metaphorical keywords under the LIVING ORGANISM source domain, e.g., '*growth*' and '*recovery*'. This association is reflected in the sharp rises in the raw plot of the LIVING ORGANISM source domain over time. The TSA modelling thus contextualizes the sharp rise against a broader background of usage. It provides a quantitative basis to highlight how the connection between source domains use and background events manifests and evolves across time intervals. The TSA results present a broad observation of source domain use by emphasizing the longer-term structure and a background level of discourse on topics reflected by the contextual events.

In addition, the discussion demonstrates that the increasing continuity of specific metaphors at critical periods implies a strategical way of political communication. For example, the continual use of the keyword '*growth*' emphasizes Hong Kong's economic developments during the post-Asian financial crisis period. The LIVING ORGANISM metaphors thus frame the economy with positive connotations, showing the government's intention to boost public confidence in the economy.

Chapter 4 thus show the potential of Time Series Analysis method for diachronic studies of metaphor use in a corpus of public discourse over time. TSA improves the current

statistic method by checking if autocorrelations exist among consecutive temporal data. It detects the quantitative structure of discourse by connecting temporal variables to discourse variables in a systematic and replicable way, which is hard to be achieved simply by the existing qualitative ways of discourse analysis. In this regard, TSA is of great significance to offer complementary structural insights into the qualitative interpretations of how a discourse feature (e.g., metaphor source domain) changes across time.

Part III - Chapters 5 & 6

Chapter 5 and Chapter 6 constitute the third part of the main body of this thesis. Drawing on the approaches proposed in Chapter 3 and 4, Part III examines the diachronic changes in the metaphorical framing of two specific societal issues in the corpus of public speeches in post-colonial Hong Kong from 1997 to 2017. The study in Chapter 5 examines the fundamental and incremental changes in the metaphorical framing of FREE ECONOMY issue over time. The study in Chapter 6 investigates the fundamental and incremental changes in the metaphorical framing of ELECTION issue over time.

Findings of Chapter 5

The study in Chapter 5 examines the diachronic changes in FREE ECONOMY metaphors in the corpus. It focuses on the investigations of the fundamental changes (transformations of source domains) and the incremental changes (transformations of source-target domain Mapping Principles) in FREE ECONOMY metaphors over time.

Among the 8,748 ECONOMY instances extracted from the corpus, the study obtained 1,430 FREE ECONOMY instances, of which 695 instances were metaphorical, indicating that this topic is frequently metaphorized. In addition, the top four source domains were JOURNEY (191 cases), LIVING ORGANISM (166 cases), BUILDING (162 cases), and SPORT (105 cases), in

line with previous literature on Inner Circle English proposing that BUILDING and JOURNEY source domains were commonly used in political discourse (Charteris-Black, 2005/2011).

The study first examined the diachronic changes in the attention to the FREE ECONOMY topic in the corpus. The findings show stable and continuous attention to the FREE ECONOMY topic over time, suggesting that FREE ECONOMY is one of the important social issues that have been constantly addressed in the public speeches in Hong Kong over the past two decades. This may be attributable to the fact that Hong Kong has been ranked as the freest economy for the past twenty-five consecutive years (The Heritage Foundation, 2019). In addition, there is increased attention to the topic of FREE ECONOMY between 2002 to 2004, which seems to be related to the signing of the free trade agreement – CEPA on 29 June 2003.

Next, the findings reported in Chapter 5 shows that the overall use of FREE ECONOMY metaphors has experienced decreasing trends from 1997 to 2017. Given that the construct of the free economy had been in use over a longer period of time in Hong Kong, Hong Kong political leaders may use more literal language to describe this issue in public speeches.

In terms of the fundamental changes in FREE ECONOMY metaphors, results show no significant association between time and the four frequently occurring source domains of LIVING ORGANISM, SPORT, JOURNEY, and BUILDING. Thus, relatively little fundamental changes of FREE ECONOMY metaphors have been found, which are in line with the previous findings from Western data that the metaphor types used in the discussion of economic subjects have remained relatively stable (Arrese & Vara-Miguel, 2016; Burgers & Ahrens, 2020; Negro, 2016).

Regarding the incremental changes of FREE ECONOMY metaphor meanings, the study examined the metaphorical keywords patterns and source-target mapping principles before and after the critical time point – the signing of the Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA) on 29 June 2003. The findings suggest that FREE ECONOMY

metaphors have either remained mostly constant (i.e., LIVING ORGANISM metaphors and SPORT metaphors) or undergone incremental changes (i.e., JOURNEY metaphors and BUILDING metaphors) as evidenced by terms of keyword use before and after 2003.

First, the meanings of the LIVING ORGANISM metaphors and SPORT metaphors remain mostly constant before and after 29 June 2003. LIVING ORGANISM metaphors mainly referred to the ‘economic growth brought by free economy’. SPORT metaphors primarily emphasized ‘Hong Kong’s competitiveness as the world’s freest economy’. The consistent use of metaphorical frames may be considered as a rhetorical strategy by Hong Kong political leaders to deliver the message that the government’s goal of economic liberalization has remained unchanged from 1997 to 2017. By emphasizing the achievements or positive aspects brought by FREE ECONOMY, politicians were able to promote Hong Kong-based businesses and Hong Kong’s economy to the world. This strategy, in turn, helped to justify the government’s agenda that continued economic growth and commitment to the FREE ECONOMY should continue as political goals throughout this period.

Second, JOURNEY metaphors and BUILDING metaphors underwent incremental changes over time. The incremental changes of the JOURNEY metaphor meanings feature the ‘Source-Path-Goal’ schema (Lakoff, 1993) or scenario (Musolff, 2006, 2017), which includes elements such as starting points, path, guides, companions, progress, goal, and ending points. Before the signing of CEPA on 29 June 2003, Hong Kong political leaders emphasized the initial ‘ongoing phase’ of a journey in expressions such as ‘explore’ and ‘step’. However, after CEPA was issued, they focused instead on the final goal of a journey in expressions such as ‘achieving the goal of a full economic liberalization’. The meaning of BUILDING source domains also changed with more emphasis placed on ‘free economy as a building in construction’ in the early phase, and more emphasis placed on ‘free economy as a completed building’ in the later phase. The shifting meanings of the JOURNEY and BUILDING metaphors between the early and later periods

suggest the way Hong Kong political leaders applied metaphors in the framing of FREE ECONOMY issues have changed. They applied the same source domains while emphasizing different perspectives in order to achieve particular political goals, e.g., construct a positive self-image, appeal to support from the public to issue the free economy agreement, and achieve the final goal of full economic liberalization in Hong Kong. This is evidence that politicians successfully re-negotiated specific metaphorical frames in public discourse, aligning with those patterns in Western data (Burgers, Jong Tjien Fa, & de Graaf, 2019). The evidence found herein also supports Conceptual Metaphor Theory's position that metaphors are essential devices in reasoning about societal issues (Burgers, Konijn, & Steen, 2016; Lakoff, 1993, 1996/2002).

The above findings are in line with previous findings in Western research (Arrese & Vara-Miguel, 2016; Burgers & Ahrens, 2020; Negro, 2016) that incremental change is more prevalent than fundamental change suggests that source-target domain pairings are fixed over time, which is beneficial in terms of knowledge transmission and comprehension. It also suggests that fundamental change, when it occurs, may be aligned with large structural changes in society, such as those that occur due to societal innovation or disruption.

Findings of Chapter 6

Chapter 6 examines the diachronic changes in the metaphorical framing of ELECTION issue in the corpus. Following the analysis procedures in Chapter 5, Chapter 6 also focuses on patterns of the fundamental changes (changes in metaphor source domains) and incremental changes (changes in source-target mapping principles) in ELECTION metaphors over time.

In total, 1,404 ELECTION instances were extracted from the corpus, among which 1,078 instances refer to the Hong Kong election. Of these 1,078 instances, 349 were metaphorical (32.4%). In total, nine types of source domains were identified from the 349 ELECTION metaphors: JOURNEY (211 cases), PRODUCT (55 cases), BUILDING (52 cases), LIVING

ORGANISM (23 cases), PHYSICAL OBJECT (15 cases), SPORT (10 cases), WAR (10 cases), CONTAINER (4 cases), and RECIPE (3 cases). The results show that Hong Kong political leaders predominantly adopted JOURNEY metaphors in the framing of the ELECTION issues.

Regarding the diachronic changes of attention to the ELECTION topic, the study found the overall attention to the ELECTION topic has been relatively stable over time. The continuous attention to this topic suggests that ELECTION is one of the important societal issues in post-colonial Hong Kong from 1997 to 2017. Increased attention to the ELECTION issues were found in the periods of 2008-2010 and 2013-2014, which might have been triggered by the NPCSC's decision on 29 December 2007 and the '31 August Decision' in 2014, respectively. These decisions ruled out the possibility of universal suffrage for the Chief Executive and Legislative Council elections in Hong Kong. The 2014 Occupy Central Protest for 'genuine universal suffrage' may also relate to the increasing attention to ELECTION issues in the public speeches between 2013 and 2014.

In terms of the overall use of ELECTION metaphors in the corpus, the findings reported in Chapter 6 show no significant association between time and ELECTION metaphors, indicating the changes (decreases or increases) in ELECTION metaphors are not significantly correlated with time.

For the fundamental changes in ELECTION metaphors, the findings show a significantly negative association between time and the source domain of JOURNEY, suggesting the use of JOURNEY metaphors in the framing of ELECTION issues experienced a decreasing trend in Hong Kong political speeches over the period from 1997 to 2017.

Regarding the incremental changes in ELECTION IS A JOURNEY metaphor meanings, the study in Chapter 6 examined patterns of the Mapping Principles and the source scenarios generated from the source-target domain pairings of ELECTION IS A JOURNEY metaphors in the corpus between the first and second decades. The findings reveal both similarity and difference

in the Mapping Principles and the JOURNEY scenarios between the first and second decades. The common Mapping Principle in the two periods is: ELECTION ISSUES are conceptualized as A JOURNEY, in that the guide sets out timetables for travelers to step toward the destination of a journey and the Hong Kong government makes schedules for Hong Kong people to attain the goal of universal suffrage. Variations on Mapping Principles in the first and second decades were also found. The Mapping Principle in the first decade is: ELECTION ISSUES are conceptualized as A JOURNEY, in that the guide provides roadmaps for guiding travelers on the road to the destination of a journey and the Hong Kong government provides policies for guiding Hong Kong people in the process of attaining universal suffrage. The Mapping Principle in the second decade is: ELECTION ISSUES are conceptualized as A JOURNEY, in that the guide is arriving at the destination of a journey with a gradual and orderly speed following specific traveling rules and Hong Kong government is attaining universal suffrage in a gradual and orderly progress following the Basic Law of Hong Kong.

The findings of the ELECTION IS JOURNEY metaphor scenarios demonstrate that the JOURNEY scenarios have either remained mostly constant or undergone incremental changes. Three types of JOURNEY scenarios have occurred continuously in both the first and second decades: 1) Attaining the ultimate aim of universal suffrage - GOAL, 2) Setting out a timetable for achieving universal suffrage - PATH, and 3) Stepping towards the universal suffrage - PATH. In light of the increasing call for democracy from the general public, the consistent use of these JOURNEY scenarios over time may imply Hong Kong government's continuous efforts in comforting the public's emotions and easing the tension between the government and the public so as to maintain the social and political stability in Hong Kong.

Variations on JOURNEY scenarios between the first and the second decades were also found. The first decade frequently presented two scenarios: 1) Going/moving forward on the road/way to universal suffrage - PATH, and 2) Providing a road map for attaining universal

suffrage - PATH. By contrast, the second decade emphasized the scenario of ‘maintaining gradual and orderly progress toward universal suffrage – PATH’, implying potential barriers and difficulties on the journey. Hong Kong political leaders shifted the public’s attention from ‘the movements and means on the journey’ in the first decade to ‘the impediments or hardship on the journey’ in the second decade. The changes in JOURNEY scenarios serve the rhetorical aims of reminding the public not to expect fast policies for immediate democratization from the government and that attaining universal suffrage for the election in Hong Kong is a long-term goal that needs great patience and endurance.

Overall, the ELECTION IS A JOURNEY scenarios define the final destination of the elections in Hong Kong (universal suffrage), a travel road map (electoral policies), the travelers (Hong Kong people), and the speed of the traveler (gradual and orderly progress) to move toward the destination at a pre-arranged time (timetable). Most of the JOURNEY scenarios in the two periods emphasized the intermediate stage of a journey - PATH, indicating universal suffrage is still ongoing. The government is still working on measures on the path, e.g., setting timetables, making policies, and adjusting the pace of the journey. JOURNEY metaphor contributes to a positive evaluation of the approaches politicians have taken. They also aid in justifying the current ‘gradual and orderly’ speed of democratic development in Hong Kong by implying there are always ‘burdens and other forms of suffering to bear’ (Charteris-Black, 2004, p. 76) on the journey.

These findings reported in Chapter 6 demonstrate that analyzing fundamental and incremental changes in metaphorical frames over time can reflect social changes. The combination of ‘fundamental & incremental changes’, ‘Mapping Principle’, and ‘source scenario’ approaches offers a practical approach for diachronic corpus-based metaphorical framing analysis. This diachronic approach is replicable for metaphor researchers focusing on corpus-based metaphorical framing analysis in public discourse over time.

7.3 Implications of the studies

The findings of the five studies in Chapter 2-6 have implications in terms of theoretical, methodological, and empirical contributions to research in corpus-based metaphorical framing analysis.

7.3.1 Methodological implications

The establishment of an operational approach for corpus-based metaphorical framing analysis has important methodological implications for research into metaphorical frames. Previous studies have emphasized the effects of metaphorical frames in discourse without providing systematic procedures to generate specific metaphorical frames from corpora-based data. Based on empirical examples, this thesis verified the hypothesis that by examining the prominent linguistic mappings in a particular metaphor source-target domain pairing and evaluating the underlying reason for the salience of this conceptual mapping, i.e., Mapping Principles (Ahrens, 2010), we can move to generate specific metaphorical frames and explain their functions in the discourse.

The proposed approach in this thesis is specified with three main steps: (1) identifying the frequently occurring metaphorical keywords in corpora, (2) analyzing Mapping Principles based on the contexts involving these frequently occurring metaphorical keywords, and (3) generating metaphorical frames and relevant framing functions based on patterns of Mapping Principles. This approach allows for a principled way to first quantify the metaphorical frame patterns in corpora and second move to the qualitative interpretations of the framing functions in specific contexts from corpora. It thus provides operational support for metaphorical framing analysis in large sets of data.

The approach also extends the existing methods of Critical Discourse Analysis of metaphors. For example, it extends the current widely adopted Critical Metaphor Analysis

methodology (Charteris-Black, 2004, 2005/2011, 2013) by not only focusing on source domains and metaphorical keyword patterns in corpora but also examining the corresponding target domains and the underlying reasons for source-target domain mapping. Furthermore, the combination of metaphor analysis at a cognitive level and a discourse-based level (i.e., Mapping Principle analysis) with framing analysis at a practiced-based or communication-based level enriches studies proposing a three-dimensional approach to metaphorical framing analysis (e.g., Semino, Demjén, & Demmen, 2018).

In addition to the newly proposed approach for analyzing metaphorical framing functions in corpora, this thesis serves as a useful foundation for furthering a mixed-method approach combining both quantitative and qualitative analyses to metaphors in discourse. Previous discourse-based metaphor studies have predominantly focused on the qualitative description of metaphor use without support from quantitative data validation. This thesis showed the potential of two novel quantitative methods in corpus-based metaphor studies.

One quantitative method applied in the present study is the multifactorial analysis (i.e., log-linear analysis) of metaphor use across multiple linguistic and social factors. The log-linear analysis explores the potential combined effects of multiple-way associations between ‘metaphor’ and other linguistic and social factors. This feature addresses the limitations of the qualitatively oriented analysis, which mainly focuses on describing the two-way effects between ‘metaphor’ and a single factor, e.g., the effects of gender on metaphor use (Ahrens, 2009). This multifactorial analysis method is exploratory in nature, providing directions for qualitative interpretations of the data.

The other quantitative method presented in the present study is the Time Series Analysis of discourse method (Tay, 2019) for diachronic studies of metaphors in discourse. TSA method can detect the autocorrelation functions among consecutive temporal observations. This feature solves the issue in the conventional correlation tests (e.g., Pearson Correlation test), which

assumes independence among temporal observations that could lead to incorrect statistical inference (Koplenig, 2017, p. 166). Results from TSA method thus can reveal how discourse variables (e.g., metaphor source domain) are systematically structured in discourse over time. This thesis, therefore, presents the application of a more refined statistical method for a corpus-based diachronic analysis of metaphors.

The abovementioned combined effects of multiple factors and the structural patterns of metaphor use over time cannot be attained by relying solely on qualitative approaches. However, quantitative statistic methods can reveal these patterns, and in turn, offer complementary insights, e.g., a full picture of the frequencies, distributions patterns, and diachronic patterns of metaphor use, into the qualitative interpretations of metaphor use in corpora. A mixed-method approach combining both quantitative and qualitative analyses to metaphors in discourse is therefore of great significance to corpus-based metaphor analysis.

7.3.2 Theoretical implications

The analysis of metaphorical framing functions via patterns of Mapping Principles between metaphor source-target domain pairings (Ahrens, 2010) links cognitive and discourse-level studies of metaphor with communication-level aspects of metaphorical framing (Burgers, 2016; Entman, 1993). Mapping Principles show the rationale for metaphorical framing at a cognitive level (identification of conceptual mappings between source-target domain pairings) and a discourse-based level (corpus evidence of frequently occurring metaphorical keywords in these mappings). Metaphorical framing functions (e.g., defining issues, causal interpretations, evaluations, proposing solutions to issues), which are analyzed at a practice-based or communication-based level, derive their functionality from the analyses done at the lower levels. Thus, this analysis explicitly links the concepts of selection and salience with Mapping

Principles and argues that it is advantageous to make this linkage explicit at the cognitive and discourse levels before moving into the higher-order analyses of framing.

Approaching metaphorical framing at the three levels of cognitive (cross-domain mappings), discourse (corpus evidence), and communication (framing functions) aligns with the three-dimensional model of metaphor proposed in Deliberate Metaphor Theory (DMT), which emphasizes metaphor analysis at the levels of thought, language, and communication (Steen, 2008, 2011a, b, c, 2015a, b, 2017). This three-dimensional model extends the two-dimensional view of metaphor as claimed in Conceptual Metaphor Theory (CMT) (Lakoff & Johnson, 1980/2003). CMT primarily focuses on metaphor analysis at the levels of thought (cross-domain mappings) and language (linguistic forms). In this thesis, the analysis of framing functions of metaphors in corpora concerns with the communicative level of analysis. Thus, the present study contributes to the development of the three-dimensional model of metaphor by presenting empirical support for metaphor analysis at the communicative dimension.

This thesis also contributes to the cross-culture comparisons in metaphor use by providing empirical evidence from a distinct East-West perspective on metaphorical frame use in Outer Circle English context during a post-colonial period of Hong Kong. The current metaphorical framing analysis has primarily focused on Inner Circle English and European languages. So far, relatively few studies on political metaphors have been conducted in Outer Circle English contexts leading to questions as to whether specific metaphors are universal or culture-dependent.

The present study brings different perspectives to enhance the awareness of the role of culture in metaphor-theory building (Boers, 2003; Deignan, 2003; Gibbs, 1999; Kövecses, 2005). The empirical results have shown evidence for universal claims of metaphor use. For example, JOURNEY and BUILDING metaphors are both commonly found in both the Inner Circle

and Outer Circle English contexts and the source domains used in economic metaphors are stable over time in both the Inner Circle and Outer Circle English contexts.

7.3.3 Empirical implications

The five studies in this thesis carried out extensive quantitative and qualitative analyses of the corpus. Both a bottom-up approach for the identifications of metaphors, source domains and target domains and a top-down approach for the investigations of metaphors in the framing of specific topics were adopted in the present studies. The analyses yielded abundant empirical results that provided empirical insights for research on the practical use of metaphorical frames in public discourse.

First, the findings of the frequently occurring metaphor source domains and their distributions across gender, speech sections, and speakers' political roles revealed the common metaphor types used by Hong Kong political leaders as framing devices in the public speeches. The patterns of gendered metaphor use in the corpus provide empirical support for previous studies 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, 2019; Dodson, 2006; Gertzog, 1995; Jones, 2016; Karpowitz & Mendelberg, 2014). For instance, it is found in the corpus that, overall, male politicians used more metaphors associated with feminine traits than expected by chance. In comparison, female politicians used more metaphors associated with masculine characteristics than expected by chance.

The focus on multiple factors on metaphor use provides a comprehensive view of the way politicians deploy metaphors in public. The findings of the present study not only show metaphor use between male politicians and female politicians as previous studies have done, but also further reveal male and female politicians' distinct preferences for metaphors across

different speech sections and different political roles. For instance, as presented in Chapter 2 and summarized in section 7.2 of this chapter, in the prologue section, both male and female politicians adopted self-presentation strategies to highlight personal identities, with men using more masculine metaphors while women using less masculine metaphors. In the narrative section, however, they both switched their communication styles. Men used more feminine metaphors to address political points explicitly, and women adopted more masculine metaphors to present their political points with more force.

In terms of gendered metaphor use across different political roles, for instance, the thesis reveals that in CSA speeches, male CSAs were more likely to address issues with feminine metaphors that convey senses of familiarity, closeness, and care. By contrast, female CSAs showed preferences for neutral metaphor use to create positive self-images and appeal to cooperation from the 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. These patterns were inferred from the multiple-way interactions obtained from a multifactorial analysis of metaphor use in the discourse, which has been overlooked in previous studies. Therefore, the empirical findings in this thesis offer a fuller picture of how metaphors were used by political leaders in a corpus of public discourse.

Second, the findings of the top three broad target domains (SOCIAL ISSUES, ECONOMIC ISSUES, POLITICAL ISSUES) show the three commonly addressed topics by Hong Kong political leaders in the public speeches over the past two decades. The analysis of the WAR metaphors in the framing of SOCIAL ISSUES, ECONOMIC ISSUES, and POLITICAL ISSUES via patterns of frequently occurring metaphorical keywords under source-target domain pairings (i.e., Mapping Principles) offers empirical support for metaphorical framing analysis at the cognitive, discourse, and communicative levels. As presented in Chapter 3 and summarized in section 7.2

of this chapter, the results show Hong Kong secretaries primarily use the VIOLENCE frame to construct various social issues in order to emphasize the seriousness of social crimes that negatively affect Hong Kong people. However, when discussing economic issues, they generally adopt the STRATEGY frame, with an emphasis on the importance of using economic strategies to advance particular economic agendas. Hong Kong secretaries employ the PROTECTION frame to refer to political issues in order to emphasize the rights of citizens should be protected by the legal system of the government. Overall, the framing functions of the three types of WAR metaphors were found to be used as a tool for legitimising political agendas and for advancing the propaganda of social, economic, and political policies.

Furthermore, the analysis of the evaluations of the metaphorical keywords under the WAR metaphors also provides empirical support for metaphorical framing analysis at the evaluation level. The results reveal politicians' overall moral evaluations and attitudes toward specific societal issues: SOCIAL ISSUES were found to be addressed in more negative ways while ECONOMIC ISSUES and POLITICAL ISSUES were discussed in more positive ways in the public speeches.

Third, the results of Time Series modelling on the top seven frequent source domains (BUILDING, LIVING ORGANISM, JOURNEY, PHYSICAL OBJECT, BUSINESS, WAR, and SPORT) offers corpus evidence that discourse phenomenon is messy in nature and less predictable than other non-discourse data (e.g., typical financial data) by quantitative analysis using statistical methods (Tay, 2019). As presented in Chapter 4 and summarized in section 7.2 of this chapter, it is found in the corpus that the majority of the source domains have no significant autocorrelations (four cases) or have complicated autocorrelations (two cases) among the temporally ordered observations use in the corpus except the source domain of LIVING ORGANISM which has clear usage patterns over time. Further qualitative illustrations with abundant examples showed the empirical evidence that the continuity in the use of LIVING

ORGANISM over the two decades (i.e., autocorrelation functions) might be attributable to the progressions of background events in the broad context.

In spite of the fact that real-life discourse data is messy in nature and it seems rare to find the case that the occurrence frequency of one discourse variable at time A would influence its corresponding occurrence frequency at time B (i.e., autocorrelations), the findings in the present study have shown the existence of the autocorrelation functions among the use of LIVING ORGANISM metaphors over time. These findings, in turn, offer empirical evidence for previous studies questioning the conventional correlation tests, which assume independent observations among temporally ordered data that leads to “incorrect statistical inference where potential effects are meaningless” (e.g., Kopleinig, 2017, p.166). Thus, it is still necessary to check if temporal data are independent with each other before any statistical inferences can be made about the associations between discourse variables and time.

Lastly, the findings of the diachronic variations on the metaphorical frames of FREE ECONOMY and ELECTION issues present empirical results of to what extent does Hong Kong political leaders’ metaphorical frames of specific economic and political issues change in the public speeches in post-colonial Hong Kong from 1997 to 2017. The results show that both the FREE ECONOMY metaphors and ELECTION metaphor haven’t undergone fundamental changes (source domain types), which offers empirical support from an Outer Circle English perspective for the similar findings in previous studies in Inner Circle English and European languages (Arrese & Vara-Miguel, 2016; Burgers & Ahrens, 2020; Negro, 2016).

By contrast, the findings show that both FREE ECONOMY metaphors and ELECTION metaphors had undergone incremental changes in metaphor meanings (i.e., source-target mappings) over time. As presented in Chapter 5 and summarized in section 7.2 of this chapter, the shifting meanings of the JOURNEY and BUILDING metaphors between the early and later periods suggest the way Hong Kong secretaries applied metaphors in the framing of FREE

ECONOMY issues have changed. They applied the same source domains while emphasizing different perspectives in order to achieve particular political goals, e.g., construct a positive self-image, appeal to support from the public to issue the free economy agreement, and achieve the final goal of full economic liberalization in Hong Kong. This is the empirical evidence that politicians successfully re-negotiated specific metaphorical frames in public discourse, aligning with those patterns in Inner Circle English (Burgers et al., 2019).

For the incremental changes in ELECTION metaphor meanings, as presented in Chapter 6 and summarized in section 7.2 of this chapter, the findings also show changes in ELECTION IS A JOURNEY metaphor meanings between the first decade (1997-2007) and the second decade (2008-2017). The first decade frequently presented two scenarios: 1) Going/moving forward on the road/way to universal suffrage - PATH, and 2) Providing a road map for attaining universal suffrage - PATH. However, the second decade emphasized the scenario of ‘maintaining gradual and orderly progress toward universal suffrage – PATH’, implying potential barriers and difficulties on the journey. Hong Kong secretaries shifted the public’s attention from ‘the movements and means on the journey’ in the first decade to ‘the impediments or hardship on the journey’ in the second decade. The changes in JOURNEY scenarios serve the rhetorical aims of reminding the public not to expect fast policies for immediate democratization from the government and that attaining universal suffrage for the election in Hong Kong is a long-term goal that needs great patience and endurance.

The above findings reveal that Hong Kong political leaders applied the same metaphor source domains while emphasizing different perspectives to achieve particular framing functions (e.g., political persuasion) during different periods of the post-colonial era. These findings also have the practical implications for supporting the Conceptual Metaphor Theory’s position that metaphors are essential devices in reasoning about societal issues (Lakoff, 1993, 1996/2002; Burgers et al., 2016).

7.4 Limitations and recommendations for future research

This thesis has yielded abundant results with many implications, as discussed in section 7.3, yet there are several limitations in the present studies. It is hoped that future research can address these limitations by expanding and refining the insights that have been achieved in this thesis.

The first limitation concerns the sampling issue. The corpus used in this thesis includes speeches delivered at different kinds of ceremonial occasions, e.g., receptions, anniversaries, and ceremonial openings. Ceremonial speeches are also called epideictic speeches, which have different characteristics with other types of public speeches. For instance, the rhetorical purposes in ceremonial speeches differ from the rhetorical purposes found in deliberate and forensic speeches (Charteris-Black, 2013). Therefore, the generalizability of some findings of this thesis may be limited to the nature of the speeches. Future research can expand the corpus by focusing on other types of speeches or other discourse genres, e.g., media, advertising, or academic discourse.

The second limitation is related to data analysis. For the identification of metaphor, source domain, target domain, speech section, and the evaluations of metaphorical keywords, a number of decisions were made between the two coders, including the decision not to include highly conventional metaphors in the analysis (e.g., TIME IS SPACE metaphors, such as ‘in September’). It is quite possible that different coders may have come up with different results. In addition, most of the metaphors identified in the thesis are conventional metaphors. As the present study focuses on corpus-based discourse analysis of metaphors, it does not test audience reaction by measuring the effects of metaphors on shaping political opinions. Thus, questions regarding the degree of metaphor conventionality or novelty and how does different degrees of conventionality or novelty may influence an audience’s perception of a speech can be further explored in future studies.

However, this thesis has followed specific approaches for metaphor identification (Steen et al., 2010) and source domain identification (Ahrens & Jiang, 2020). Inter-coder reliability tests were also conducted between the two coders to make sure all the analyses were reliable. Furthermore, all the relevant data and analysis files involved in the five studies were uploaded on Open Science Framework with links provided in each study for open access. Future metaphor research can follow the detailed procedures for reliability tests presented in this thesis and use Open Science Framework as an effective method to compare this research with future work.

The third limitation refers to the Time Series Analysis of discourse approach, which has been critiqued in terms of forecasting and qualitative interpretation aspects. In reality, the time periods which are used to make predictions never form a random sample from the same population as the time periods to be predicted. There are always various unpredictable and influential factors, which are the ‘irregular fluctuations’ or ‘residuals’ of the series. These unforeseen circumstances make it difficult to generate or predicate precise values at any specific time intervals. The other issue is the uncertainties surrounding the qualitative interpretations of the autocorrelation patterns. Corpus data may provide evidence for locating the reasons (e.g., the progression of the background events in this study) underlying the autocorrelations, while the interpretations may overlook other potential factors. However, the main objective of the present TSA study is to emphasize its feature of autocorrelation detection and its potential in providing complementary insights into qualitative interpretations of the data. Future diachronic metaphor studies can take advantage of these strengths of TSA to examine how metaphor usage patterns are systematically structured across discourse in time. Yet, a closer inspection of the data and more cautious interpretations are needed for illustrating TSA’s ability to forecast future discourse behaviour.

Finally, this thesis is limited to the analysis of metaphorical framing of two societal issues in an Outer Circle English context during a post-colonial period in Hong Kong: the FREE ECONOMY issue as representative of the economic issue and the ELECTION issue as representative of the political issue. Future studies may examine how other salient issues in different cultural contexts, including social issues such as housing or education in Expanding Circle English context or across different political parties.

To sum up, the main contributions of this thesis are the output of an operational approach for analyzing corpus-based metaphorical framing in a principled way, the presentation of two novel quantitative methods for metaphor analysis (the log-linear analysis for a multifactorial analysis and the TSA analysis for diachronic metaphor analysis), and the diachronic analysis of the fundamental and incremental changes in metaphorical frames over time, which offers a promising direction for further research on diachronic change analysis in discourse.

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