RESPONSE MARKERS IN MANDARIN CHINESE CONVERSATION: A CORPUS-BASED CASE STUDY OF SHI, DUI, XING, HAO AND THE VARIANTS OF SHI

by

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The following individuals certify that they have read, and recommend to the Faculty of Graduate and Postdoctoral Studies for acceptance, a thesis entitled:

Response markers in Mandarin Chinese conversation: A corpus-based case study of *shi*, *dui*, *xing*, *hao* and the variants of *shi*

submitted by Yifang Yuan in partial fulfillment of the requirements for the degree of Master of Arts in Linguistics

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Supervisory Committee Member
Abstract

The aim of this thesis is to provide a comprehensive and data-supported analysis of the four most common positive simplex response markers (RMs) in Mandarin Chinese conversation: *shi* (‘yes’), *dui* (‘yes’), *xing* (‘okay’), *hao* (‘okay’) and the modified forms of *shi* (‘yes’) such as *shi-de* (‘yes-SFP’) and *shi-ma* (‘yes-SFP’). Previous studies on RMs generally focus on morphologically simplex RMs and use data from introspection or fiction, which are not able to represent the diversity of the forms nor the distribution of RMs in real-life conversations. By utilizing the targeted construction storyboard (Burton & Matthewson, 2015) introspective analysis as well as quantitative and qualitative corpus analyses, this thesis investigates not only morphologically simplex RMs but also complex RMs in natural Mandarin conversations. This thesis describes the system of RMs in Mandarin Chinese, and analyzes the semantic properties, syntactic structures, and essential functions of Mandarin positive simplex RMs following the existing approaches to RMs in previous studies. Guided by Wiltschko et al.’s (2018) approach to multi-functionality, this study systematically examines all the potentially relevant contextual factors and identifies the specific ones that Mandarin RMs are sensitive to by using the data from storyboard introspective judgments. By utilizing a corpus-based approach, this study tests the effects of the identified contextual factors on Mandarin RMs with real-life data, identifies all the modified forms of *shi* in the corpus, and discusses how the modification of simplex RMs relates to contextual factors and affects the essential functions of the simplex RMs. With the data from the storyboard introspection and the corpus study, this thesis provides an overview of the use and distribution of Mandarin RMs in real-life conversation, and demonstrates that the forms and discourse functions of Mandarin RMs are contextually dependent. Mandarin RMs generally only
have agreement and acknowledgement functions. Some of the previously established discourse functions of Mandarin complex RMs are derived from the combination of the essential functions of Mandarin RMs and contextual factors.
Lay Summary

The simplest conversation comprises two turns: an initiating move made by the initiator, and a response move made by the responder. Responses in natural conversations are sometimes marked by sentence-initial response markers (RMs) such as English yes and no or Mandarin Chinese shi and bu-shi. RMs are pervasive and play a significant role in daily life conversation across languages. By using the storyboard introspective judgments and a corpus-based approach, this thesis provides the first comprehensive account of both the simplex and complex Mandarin RMs by using data from real-life conversations. The precise characterization of the complex RM shi in this study has implications for future work on other complex RMs in Mandarin Chinese. The systematic analytical procedure for the analysis of Mandarin RMs established in this study has implications for cross-linguistic research on RMs, which will eventually contribute to a better understanding of the structure of conversation and human communication.
Preface

This thesis is original, unpublished, independent work by the author, Y. Yuan.
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<th>Meaning</th>
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<tbody>
<tr>
<td>1SG</td>
<td>first-person singular</td>
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<tr>
<td>2SG</td>
<td>second-person singular</td>
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<td>A</td>
<td>addressee</td>
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<td>Act</td>
<td>speech act</td>
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<td>ASP</td>
<td>aspect</td>
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<td>assertion</td>
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<tr>
<td>CL</td>
<td>classifier</td>
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<tr>
<td>CoA</td>
<td>call on addressee</td>
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<td>COP</td>
<td>copula</td>
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<tr>
<td>CP</td>
<td>complementizer phrase</td>
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<td>MCRM</td>
<td>Mandarin Chinese response marker</td>
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<td>speech act</td>
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<td>SFP</td>
<td>sentence-final particle</td>
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<td>T</td>
<td>tense</td>
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致我敬爱的父母和亲爱的弟弟

以感激他们对我无条件的爱与支持

To my precious parents and brother

for their unconditional love and support
Chapter 1: Introduction

The simplest conversation comprises two turns: an initiating move made by the initiator, and a response move made by the responder. In natural conversations, responses are sometimes marked by sentence-initial response markers (RMs) such as English yes and no, German ja and nein, or Mandarin Chinese shi and bu-shi, as illustrated in (1).

(1) Mary: Yuehan jintian zaoshang chidao le. John today morning late SFP
‘John was late this morning.’

       Peter: Shì. Yuehan jintian zaoshang chidao le. Ta bìng le. yes John today morning late SFP 3SG sick SFP
‘Yes. John was late this morning. He is sick.’

By utilizing the targeted construction storyboard (Burton & Matthewson, 2015) introspective analysis as well as quantitative and qualitative corpus analyses, this thesis aims to provide a comprehensive and data-supported analysis of the four most common positive simplex RMs in Mandarin Chinese conversation: shi (‘yes’), dui (‘yes’), xing (‘okay’), hao (‘okay’) and the modified forms of shi such as shi-de (‘yes-SFP’) and shi-ma (‘yes-SFP’). Existing studies on RMs are primarily concerned with the discourse functions of RMs, the distinction among different RMs (Lv, 1992; Shao & Zhu, 2005; Zhao, 2006), and the use of RMs in response to polar questions and assertions (Farkas & Roelofsen, 2012; Guo, 2000; Hockey, Rossen-Knill, Spejewski, Stone, & Isard, 1997; Holmberg, 2016; Kramer & Rawlins, 2009, 2010; Krifka, 2013; Roelofsen & Farkas, 2015). The data used in previous studies generally come from the intuition of the authors or from dialogues in novels and screenplays. However, by focusing on morphologically simplex RMs such as yes and no, and data from introspection or fiction, the previous studies are not able to represent the diversity of the forms nor the distribution of RMs in real-life conversations.
To address these limitations, the present study examines not only morphologically simplex RMs but also complex RMs in natural Mandarin conversation by using the data from storyboard introspection and the corpus. Note that this study only focuses on positive Mandarin RMs. Negative RMs such as bu-shi (NEG-yes), bu-hao (NEG-okay), and bu (NEG) will not be discussed in this study. The goal of this study is to test the hypotheses that the forms and discourse functions of Mandarin RMs are contextually dependent, and that Mandarin RMs only have two essential functions: the agreement function and the acknowledgement function. Some of the previously established discourse functions of Mandarin complex RMs are derived from the combination of the essential functions of Mandarin RMs and contextual factors, rather than comprising only the lexically encoded functions of the RMs.

In order to test these hypotheses, the main task is to determine which RMs are used in which contexts and what their discourse functions are. To achieve this goal, the present study investigates: (i) the form of the RM; (ii) the context in which the RM is used; (iii) the discourse function(s) of the RM; and how these three factors relate to each other by utilizing the data from both storyboard introspective judgments and the corpus. Specifically, this research is conducted in two phases. In Phase I, guided by Wiltschko et al.’s (2018) analysis of multi-functionality, this study gathers the prototypical Mandarin trigger-RM adjacency pairs from the targeted construction storyboard introspection, in order to identify the specific contextual factors which are relevant to the use of Mandarin RMs. In Phase II, in order to get a general overview of the distribution of Mandarin RMs in natural conversation and to test the hypotheses generated in Phase I against real-life data, this study examines the most common simplex positive RMs that have been discussed in the literature, which are shi (‘yes’), dui (‘yes’), xing (‘okay’), and hao (‘okay’), and the modified forms of the RM shi (‘yes’) by using the data from the GALE Phase 4
Chinese Broadcast Conversation corpus. Due to time and space limitations, the modified forms of other simplex RMs will not be discussed in this study.

The thesis is organized as follows. Chapter 2 focuses on providing a descriptive overview of the systems for short responses to polar questions (§2.1), the system of RMs in Mandarin Chinese (§2.2), and previous studies on Mandarin RMs (§2.3). Chapter 3 provides an analysis of the semantic properties (§3.1), syntactic structures, and essential discourse functions (§3.2) of Mandarin RMs following the existing approaches to RMs in previous studies, definitions of terminology used in this study (§3.3), an introduction to Wiltschko et al.’s (2018) approach to multi-functionality which provides the theoretical basis for designing the storyboards used in Phase II (§3.4), and an introduction to Wiltschko’s (2016) approach to the interaction of RMs and expressive structures (§3.5). Chapter 4 describes the methods used for the storyboard introspection (§4.1), presents the prototypical Mandarin trigger-RM adjacency pairs obtained (§4.2), identifies the major coding categories, and generates concrete hypotheses to be tested in the subsequent corpus study (§4.3). Chapter 5 first introduces the method (§5.1) and the data (§5.2) which were used in the corpus study, then provides a full description of the criteria used for categorizing and coding the Mandarin RMs and triggers in this study (§5.3). Chapter 6 first presents and discusses the quantitative results of the corpus analysis (§6.1), and then provides a qualitative analysis of the corpus data (§6.2). Chapter 7 concludes the thesis and suggests directions for future research. The examples in Chapter 5 and Chapter 6 are taken from the corpus data. Otherwise, the example is based on the author’s introspection if the source is not specified.
Chapter 2: Response Markers in Mandarin Chinese

2.1 Systems for short responses to polar questions

Languages differ in their systems for short responses to polar questions. Generally, there are three patterns: the echo system, the positive/negative system, and the agree/disagree system. The echo system does not use any dedicated RMs to respond to polar questions but instead repeats the verb or auxiliary in the trigger. The positive/negative system simply uses RMs to mark the polarity of responses, that is, positive RMs are used to assert positive propositions while negative RMs are used to assert negative propositions. In contrast, the agree/disagree system uses RMs to signal whether the responses agree or disagree with their triggers, and thus the polarity of RMs is not necessarily the same as the polarity of the responses. When the triggers are negative assertions or negative polar questions, positive RMs are used to indicate agreement with initiators and to mark responses as being negative, while negative RMs are used to indicate disagreement with initiators and to mark responses as being positive (Holmberg, 2016; Pope, 1972; Roelofsen & Farkas, 2015; Sadock & Zwicky, 1985). Based on this distinction between the latter two systems, Pope (1972) and Roelofsen & Farkas (2015) suggest that RMs across languages function as the morphological realization of two sets of polarity features: (i) absolute features ([+] and [−]), indicating whether a response is positive or negative, and (ii) relative features: [AGREE] and [REVERSE], marking whether a response agrees with or reverses its trigger.

It is generally believed that English has a positive/negative system (Sadock & Zwicky, 1985), however, recent research has demonstrated that the English RMs yes and no are interchangeable in response to negative polar questions, as shown in (3), but not in response to positive questions, as illustrated in (2). (2) and (3) are adapted from Krifka (2013: 2). Following
Roelofsen & Farkas’s (2015) terminology, in English, [agree,+] can only be realized by yes; [reverse,–] can only be realized by no; however, [agree,–] and [reverse,+] can be realized by either yes or no, illustrating that English has both the positive/negative and the agree/disagree systems (Goodhue & Wagner, 2015; Guntly, 2019; Holmberg, 2012; Kramer & Rawlins, 2009; Krifka, 2013; Roelofsen & Farkas, 2015).

(2) A: You stole the cookie. /Did you steal the cookie?
B: Yes. /*No. (I stole the cookie.) [agree] [+]
No. /*Yes. (I didn’t steal the cookie) [reverse] [–]

(3) A: You did not steal the cookie. /Did you not steal the cookie?
B: Yes. I did. [reverse] [+]  
Yes. I didn’t. [agree] [–]  
No. I did. [reverse] [+]  
No. I didn’t. [agree] [–]

2.2 Mandarin Chinese response markers

Like English, Mandarin also combines two systems: the echo system, as exemplified in (4), and the agree/disagree response system, as shown in (5)–(8).

(4) John: Ni xì-bu-xihuan gou?  
2SG like-NEG-like dog  ‘Do you like dogs?’
Mary: Xihuan. /Bu-xihuan. /*Shi. /*Dui. /*Bu-shi. /*Bu-dui.  
like/NEG-like/yes/yes/NEG-yes/NEG-yes  ‘Yes. (I like dogs.)’

(5) John: Ni xihuan gou. / Ni xihuan gou ba?  
2SG like dog 2SG like dog SFP  ‘You like dogs. /You like dogs, don’t you?’

a. Mary: Shi. /Dui. /*Bu-shi. /*Bu-dui. (Wo xihuan gou.) [agree]  
yes/yes/NEG-yes/NEG-yes 1SG like dog  ‘Yes. (I like dogs.)’

b. Mary: *Shi. /*Dui. /Bu-shi. /Bu-dui. (Wo bu xihuan gou.) [reverse]
The determinants of whether a Mandarin question should be responded to with a RM or a repetition of the verb or auxiliary of the question will be discussed in detail in Section 5.3.2.2.

Roughly, Mandarin A-Not-A questions are typically responded to by repeating their verbs or
auxiliaries, as shown in (4). The trigger in (4) is an A-Not-A question, which is formulated by juxtaposing the positive and negative forms of the predicate verb or adjective of a sentence.

According to Zhao (2006: 48–9), the RMs shi/dui (‘yes’) and xing/hao (‘okay’) are generally in complementary distribution: (i) the RMs shi and dui are typically used to respond to assertions, polar questions, as shown in (5) and (6), and certain wh-questions, tag questions, and exclamations; (ii) the RMs xing and hao are generally used in response to imperatives and interrogatives which have the force of directives, as shown in (7) and (8). This study only focuses on positive Mandarin Chinese RMs. The negative RMs are provided in the above examples for clarity, but will not be discussed in detail in this study. Following Roelofsen & Farkas’s (2015) terminology, this study argues that RMs in Mandarin Chinese only function as the morphological realization of the relative features, but not the absolute features. In other words, the positive RMs shi /dui (‘yes’) and xing /hao (‘okay’) can only be used to realize the feature of [agree] but not [+], while the negative RMs bu-shi /bu-dui (‘NEG-yes’) and bu-xing /bu-hao (‘NEG-okay’) can only be used to realize the feature of [reverse] but not [–].

To sum up, examples (4)–(8) demonstrate that Mandarin combines the echo and agree/disagree response systems: (4) exemplifies that certain Mandarin A-Not-A questions can only be responded to by repeating the verb of the question, while (5)–(8) illustrate that the choice of Mandarin RMs is entirely dependent on the relationship between responses and their triggers rather than the polarity of responses.

2.3 Previous studies on Mandarin response markers

In this section, I will review some previous studies on Mandarin RMs. Zhao (2006) examines and compares the discourse functions of both the simplex RMs shi (‘yes’), dui (‘yes’), xing (‘okay’), and hao (‘okay’), and their modified forms. He summarizes that the Mandarin RMs
have thirteen different kinds of discourse functions and classifies these functions into three categories: positive responses, negative responses, and neutral responses. Under the category positive responses, the discourse functions of Mandarin RMs include agreement, appreciation, answering, backchanneling, acknowledgement, and acceptance; under the category of negative responses, RMs can be used to express politeness, make concessions, dissuade and satirize the interlocutor; while the discourse functions which fall into the category of neutral responses include expressing strong feelings, taking a turn, and making the discourse cohesive. Zhao (2006) concludes that these four RMs share two functions: agreement and making discourse cohesive, and therefore these are the basic functions of Mandarin RMs.

Furthermore, Zhao (2006) proposes that sentence-final particles (SFPs) can be used to distinguish the discourse functions of Mandarin RMs: (i) the SFP de can be used to distinguish between the positive and negative responding shi (‘yes’) and hao (‘okay’). Shi-de (‘yes-SFP’) and hao-de (‘okay-SFP’) only have positive responding functions, which are agreement, appreciation, answering, backchanneling, acknowledgement, and acceptance; (ii) the SFPs ba and a can be used to distinguish among positive responding functions. Shi-a/dui-a (‘yes-SFP’) have the discourse functions of answering, agreement, and backchanneling, while shi-ba/dui-ba (‘yes-SFP’) do not have the functions of agreement and backchanneling; xing-a/hao-a (‘okay-SFP’) can be used to indicate appreciation and agreement, while xing-ba/hao-ba (‘okay-SFP’) cannot indicate appreciation; (iii) the SFPs ba and la can be used to distinguish among negative responding functions, which are expressing politeness, making concessions, dissuading and satirizing the interlocutors. Xing-ba/hao-ba (‘okay-SFP’) can be used to express politeness and make concessions, but not to satirize the interlocutor; xing-la/hao-la (‘okay-SFP’) can be used to make concessions, but not to satirize the interlocutor; when serving negative responding
functions, the RM *shi* (‘yes’) tends to be used alone without any SFPs; *dui* (‘yes’) can only express positive responding functions; (iv) when expressing strong feelings, the RM *hao* (‘okay’) is either used alone or with the SFP *ma*; when used to take a turn, the RMs *shi* (‘yes’) and *dui* (‘yes’) can only be modified by the SFP *a*; (v) the reduplicated *shi* (‘yes’) does not have the function of acceptance; the reduplicated *hao* (‘okay’) does not have the functions of appreciation, acknowledgement, expressing strong feelings or politeness, or making the discourse cohesive; the reduplicated *xing* (‘okay’) does not have the functions of appreciation, expressing politeness or making the discourse cohesive.

Some previous studies discuss the correlation between Mandarin RMs and the contexts in which they occur. According to Wu (1990), the determinant of whether a Mandarin polar question can be responded to with RMs is whether or not the question is biased. Building on Wu (1990), Guo (2000) investigates the credibility degree of *ma*-questions and their responses, and classifies Mandarin *ma*-questions into four categories: *ma*-questions (i) with a high degree of credibility, indicating that the speaker has expectation for a positive answer; (ii) with a medial degree of credibility, used when the speaker has no expectation about the answer; (iii) with a low degree of credibility, suggesting that the speaker has expectation for a negative answer; and (iv) with zero degree of credibility, i.e., rhetorical questions, used when the speaker is certain about a negative answer. Based on this classification, Guo (2000) proposes that the RM *dui* (‘yes’) can be used to respond to *ma*-questions with a high degree of credibility but not to *ma*-questions with a medial degree of credibility; some *ma*-questions with a low degree of credibility can be responded to with *dui* (‘yes’) whereas others cannot.

In addition to the trigger, some scholars pay attention to the social relation between the initiator and the responder. Yan (2005) investigates positive responses to Mandarin
interrogatives and imperatives, and classifies the responses into three registers: $S < A$, $S > A$, and $S = A$, depending on the relative status of the interlocutors. Yan (2005) claims that: (i) the RM *shi* (‘yes’) is not commonly used as a positive response to interrogatives in Mandarin. It is generally used in response to commands or prohibitions when the social status of the responder is lower than the initiator ($S < A$). It is not felicitous to use the RM *shi* (‘yes’) when the social status of the responder is higher than the initiator ($S > A$) or equivalent to the initiator ($S = A$); and (ii) the RM *hao* (‘yes’) can be used to respond to polar questions when the social status of the responder is higher than the initiator ($S > A$) or equivalent to the initiator ($S = A$), and in either case, the interrogatives which are responded to with *hao* (‘yes’) are generally endowed with an indirect force of entreaties or requests.

Above we reviewed three different types of analyses of Mandarin RMs. Zhao (2006) summarizes that the Mandarin RMs have thirteen different kinds of discourse functions. Inspired by Zhao’s (2006) proposals that the modifiers of RMs can be used to distinguish the discourse functions of Mandarin RMs, this study uses the data from storyboard introspection and the corpus to examine both simplex and complex RMs in natural Mandarin conversation. Wu (1990) points out that the use of Mandarin RMs is sensitive to the speaker’s bias towards the triggers. Guo’s (2000) classification of Mandarin *ma*-questions according to their degrees of bias is also inspiring. Wu (1990) and Guo (2000) provide one dimension along which we can categorize and code other types of triggers of RMs in this study. Yan’s (2005) proposal that the use of Mandarin positive RMs is sensitive to the social relation between the interlocutors provides another aspect of the context that we will look at in the present study.
Chapter 3: Theoretical Background

3.1 Semantic approaches to response markers

In this section, I will review the existing semantic approaches to RMs and analyze the semantic properties of Mandarin RMs by using Krifka’s (2013) approach. Existing semantic analyses of RMs generally consider polarity RMs such as yes and no as a window onto the interpretation of assertions and polarity questions which trigger the RMs (Farkas & Bruce, 2010; Farkas & Roelofsen, 2012; Krifka, 2013; Roelofsen & Farkas, 2015). The inquisitive semantic framework assumes that assertions introduce one proposition (p or ¬p), while polar questions introduce two propositions (p and ¬p). The function of polarity RMs is to pick out one of the polar values of the proposition from their triggers. Wh-questions, on the other hand, denote a set of alternative propositions (p₁, p₂, p₃…), and therefore most of the existing semantic analyses of RMs claim that polarity RMs are not acceptable in response to wh-questions.

Different from the inquisitive semantic approach, Krifka (2013) argues that polarity RMs are anaphors picking up propositional discourse referents which are introduced by the triggers of RMs. Following Krifka’s (2013) approach, the functions of the Mandarin positive RMs shi/dui (‘yes’) and negative RMs bu-shi/bu-dui (NEG-yes) are illustrated in (9a) and (9b), respectively.

(9) John: \[\text{ActP (d}_{\text{speech act}} \text{) QUEST \[\text{TP (d}_{\text{proposition}} \text{) Ni xihuan gou ba]? 2SG like dog SFP ‘You like dogs, don’t you?’}\]

a. Mary: \[\text{ActP (d}_{\text{sa}} \text{) ASSERT (d}_{\text{prop}} \text{) Shi/Duī]. yes/yes ‘Yes.’}\]
\[\text{ActP (d}_{\text{sa}} \text{) ASSERT \[\text{TP (d}_{\text{prop}} \text{) Wo xihuan gou]]. 1SG like dog ‘I like dogs.’}\]

b. Mary: \[\text{ActP (d}_{\text{sa}} \text{) ASSERT (¬d}_{\text{prop}} \text{) Bu-shi/Bu-duī]. NEG-yes/NEG-yes}\]
‘No.’ [ActP (dSa) ASSERT [NegP (¬dprop) Wo bu [TP (dprop) xihuan gou]].

The ba-question in (9) contains two clausal discourse referents: \(d_{speech\ act}\) and \(d_{proposition}\), introduced by two layers ActP and TP, respectively. The ActP layer determines the type of speech act performed by the utterance. For example, the ActP in (9) determines that the speech act performed by the trigger is a question, and the ActPs in (9a) and (9b) determine that the speech acts performed by the RM and their hosting clauses are all assertions. Note that the RMs and their hosting clauses are not related to each other but form two parallel speech acts. The function of the positive RMs shi (‘yes’) and dui (‘yes’) is to pick up and assert the \(d_{proposition}\), while the function of no is to pick up and assert \(¬d_{proposition}\).

### 3.2 Syntactic approaches to response markers

In this section, I will review Holmberg’s (2016) ellipsis-based approach and Wiltschko’s (2017) neo-performative approach to RMs with the examples of Mandarin positive RMs shi/dui (‘yes’) and negative RMs bu-shi/bu-dui (‘NEG-yes’). The core idea of the ellipsis-based hypothesis (Holmberg, 2016; Kramer & Rawlins, 2009) is that RMs are derived by ellipsis of the constituent following the RMs, namely, the PolP. The function of RMs is to assign a value to the unvalued polarity feature \([±Pol]\) in the PolP copied from the polar question. Following Holmberg’s (2016) approach, the syntactic structures of sentences containing the Mandarin positive RMs shi/dui (‘yes’) and negative RMs bu-shi/bu-dui (‘NEG-yes’) in (9a) and (9b) are illustrated in Figure 3.1.
Figure 3.1 The syntactic structures of the Mandarin positive RMs \textit{shi}/\textit{dui} (left) and negative RMs \textit{bu-shi}/\textit{bu-dui} (right)

Above we reviewed Krifka’s (2013) anaphora-based approach and Holmberg’s (2016) ellipsis-based approach to RMs, both of which are primarily concerned with the RMs which respond to polar questions and assertions. However, RMs are used not only in response to polar questions or assertions, but also as responses to other clause types such as imperatives and exclamatives, as illustrated in (10).

(10) Major: \textit{Mingling cheliang xihuo, renyuan jihe.}\newline‘Command the vehicles to stall and the personnel to muster.’

Soldier: \textit{Shi.}\newline‘Yes.’

To develop a systematic typology for the analysis of RMs, Wiltschko (2017) proposes the neo-performative hypothesis which suggests that the multi-functionality of RMs is syntactically conditioned and derived from an articulated speech act structure, as illustrated in Figure 3.2.
The speech act structure is proposed for the reason that speech acts are characterized not only by the speaker’s commitment towards the proposition (commitment) but also by the speaker’s request for the addressee to reply (call on addressee). Thus, the speech act structure is assumed to contain two layers: (i) the grounding layer (GroundP), which is responsible for encoding the speaker’s commitment to the trigger; and (ii) the response layer (RespP), which is responsible for encoding the speaker’s call on addressee (CoA). Polarity RMs are hypothesized to come in different guises depending on where they associate with the spine as schematized in Figure 3.2.

The RMs which serve the answering function associate with the propositional layer (CP) and value the unvalued polarity feature [±Pol] in the PolP copied from the polar question trigger, as illustrated in Figure 3.1. However, when the triggers are not polar questions, but other clause types such as imperatives and exclamatives, there are no polarity features in the triggers. Hence the function of RMs in these cases is not to assign value to the polarity feature, but to value the open coincidence feature [ucoin] in the speech act structure. The RMs which possess the (dis)agreement function associate with the GroundP and value the coincidence feature in the Ground, indicating whether or not their triggers are in the responder’s ground (i.e., whether the responder agrees or disagree with the initiator). The GroundP takes an abstract argument.

Figure 3.2 A fully articulated speech act structure (adapted from Wiltschko, 2017: 269)
referring to the speaker’s ground \((\text{Ground-S})\) as its specifier and the CP as its complement, as shown in Figure 3.3 (left). The RMs which have the acknowledgement function associate with the RespP and value the coincidence feature in the Resp, indicating whether or not the GroundP is in the responder’s response set, that is, whether or not the host clause of the RM is marked as response to the trigger. The RespP takes an abstract argument referring to the speaker’s response set as its specifier and the GroundP as its complement, as shown in Figure 3.3 (right).

![Figure 3.3 RMs serving the (dis)agreement function (left) and the acknowledgement function (right)](image)

Following the articulated speech act structure model (Wiltschko, 2017), this study tentatively proposes a set of response tests to distinguish the three functions of positive RMs: (i) RMs serving the answering function cannot be followed by the host clause \(\text{wo tongyi}\) (‘I agree’); (ii) RMs serving the agreement function cannot be followed by the host clause \(\text{wo bu tongyi}\) (‘I don’t agree’); (iii) RMs serving the acknowledgement function can be followed by the host clause \(\text{danshi wo bu tongyi}\) (‘but I don’t agree’). Compare examples (10), (11), and (12).

(11) Context: Mark is a TV reporter and is trying to find some natives on the street to do an interview. A random guy passes him, and Mark asks him if he is native.

Mark: \(\text{Ni shi-bu-shi bendi ren?}\) ‘Are you native?’

Passerby: \(\text{Shi.}\) yes
‘Yes. (I’m native.)’

(12) Zhao: *Wo feichang zenghen zhezhong ren.*
‘I hate this kind of people so much.’

Xiao: *Hao, xiexie ni fabiaode guandian.*
‘Okay, thank you for your opinion.’

(VOA_ISSUESANDOPINIONS_CMN_20080410_210500)

The positive simplex RM *shi* (‘yes’) in (11) serves the answering function, providing an affirmative answer to the neutral A-Not-A question trigger *Ni shi-bu-shi bendi ren?* (‘Are you native?’). The RM *shi* (‘yes’) in (11) cannot be followed by the host clause *wo tongyi* (‘I agree’) since the context makes it clear that the initiator’s epistemic state is neutral with respect to whether the passerby is native or not. The positive simplex RM *shi* (‘yes’) in (10) serves the agreement function, indicating that the trigger *Mingling cheliang xihu, renyuan jihe* (‘Command the vehicles to stall and the personnel to muster’), i.e., the speech act of commanding, is in the responder’s ground, and the responder agrees with the validity of the command. The RM *shi* (‘yes’) in (10) cannot be followed by the host clause *wo bu tongyi* (‘I don’t agree’) since it contradict the function of the RM. The positive simplex RM *hao* (‘okay’) in (12) serves the acknowledgement function, indicating that the host clause of the RM coincides with the responder’s response set and marking the RM and its host clause as a response to the trigger. The host clause of the RM in (12) indicates that the responder is not committed to the trigger. The RM *shi* (‘yes’) in (12) can be followed by the host clause *danshi wo bu tongyi* (‘but I don’t agree’) since it does not contradict the function of the RM. The example in (12) is selected from the GALE Phase 4 Chinese Broadcast Conversation corpus. The present study argues that Mandarin positive simplex RMs possess only two functions: the agreement function and the
acknowledgement function, and uses the above diagnostic tests to distinguish the functions of Mandarin RMs in the corpus study.

3.3 Concepts and terminology

This section focuses on defining some key concepts and terms related to the analysis of Mandarin RMs in the study. First, I will lay out some basic assumptions about the model of context structure and define the components which are relevant to the present study. The model of context structure consists of two essential components: the common ground and the discourse commitments. According to Stalnaker (1978, 2002), the common ground is a set of propositions which are mutually known to be believed by the participants in a conversation. Gunlogson (2001) proposes that each participant in the conversation is associated with a set of discourse commitments, and the common ground is the intersection of the sets of participants’ public discourse commitments. Following Gunlogson (2001) and Farkas & Bruce (2010), this study assume that the discourse commitment set for each participant in a conversation contains the propositions that the participant has publicly committed to, and the common ground stores the propositions that have been agreed upon by all the participants in the conversation along with the propositions representing the shared background knowledge of the participants.

According to Farkas & Roelofsen (2012: 3), the proposition expressed by a sentence represents a set of possibilities and each possibility represents a set of possible worlds. In uttering assertions (e.g., Amy left) or polar questions (e.g., Did Amy leave?), the initiator both commits to the actual world being contained in at least one of the possibilities indicated by the proposition and requests the responder to provide enough information to locate the actual world in a specific possibility. The initiator’s commitment is non-trivial in the case of assertions and the conversation is steered towards a state where the responder commits to the possibility (i.e.,
Amy left) as well, but the initiator’s commitment is *trivial* in the case of polar questions and the conversation is steered towards a state where the responder can commit to either the possibility that Amy left or the possibility that Amy did not leave. Furthermore, Gunlogson (2008) proposes a general principle requiring that discourse commitments have recognized *sources*. More specifically, a participant is a source for a particular discourse commitment if (s)he has evidence for it and his/her evidence is independent of the other participant’s commitment. In contrast, a participant is *dependent* relative to a particular discourse commitment if his/her commitment depends on the other participant’s prior commitment as source. Thus, non-default assertions, such as rising declaratives (e.g., *Amy left?*), and non-default polar questions, such as tag questions (e.g., *Amy left, didn’t she?*), require the initiator and responder to be *co-sources*, but the initiator’s commitment is contingent on the responder’s ratification. English RMs reveal the nature of the evidence that the speaker has. The RMs *yes* and *no* register the responder as source or co-source; the RMs *aha* and *oh* register the responder as dependent and the initiator as source (Farkas & Roelofsen, 2012: 5–6).

### 3.4 The multi-functional approach to response markers

In this section, I will introduce Wiltschko et al.’s (2018) approach to multi-functionality, which provides the theoretical basis for designing the targeted construction storyboards used in the introspective analysis. Recall from the introductory section that the two general hypotheses to be tested in this study are: (i) the forms and the discourse functions of Mandarin RMs are contextually dependent; and (ii) Mandarin RMs only have two essential functions: the agreement function and the acknowledgement function. Some of the previously established discourse functions of Mandarin complex RMs are derived from the combination of the essential functions of Mandarin RMs and contextual factors. To test these hypotheses, this study will follow
Wiltschko et al.’s (2018) analysis of multi-functionality, which suggests that units of language acquire their functions within specific syntactic, prosodic, discourse and social contexts, and will analyze the context of RMs by taking the following factors into consideration:

(i) syntactic factors such as the grammatical form of the initiating move which triggers the RM;
(ii) prosodic factors such as the intonation of the trigger;
(iii) discourse factors such as the speech act type of the trigger, the nature of the evidence that the speaker has to support his/her beliefs, and the speaker’s discourse commitment encoded in the utterance;
(iv) social factors including politeness, the degree of formality of the situation, and the relation between the participants of the conversation.

### 3.5 The interaction of response markers and expressive structure

In addition to the contextual factors listed in the preceding section, RMs are frequently modified in natural conversations to express different emotive content. According to Wiltschko (2016), RMs differ along the following expressive dimensions: (i) the responder’s epistemic attitude towards the trigger, which can be analyzed by using the two sets of polarity features proposed by Pope (1972) and Roelofsen & Farkas (2015); (ii) the intensity of the responder’s emotive attitude towards the trigger; and (iii) the degree of the responder’s expectation about the trigger. Along these three dimensions, Wiltschko (2016) summarizes the interaction of the English RMs, which are used in response to positive assertions and polar questions, and the system of emotions, as shown in Table 3.1. The dialogue in (13) exemplifies the positive English RMs in Table 3.1.

<table>
<thead>
<tr>
<th>epistemic attitude [+/-/AGREE/REVERSE]</th>
<th>yeah</th>
<th>nah</th>
<th>yep</th>
<th>nope</th>
<th>yessss</th>
<th>nooooo</th>
<th>oh yes</th>
<th>oh no</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>
Table 3.1 The emotive response paradigm (adapted from Wiltschko, 2016: 6)

<table>
<thead>
<tr>
<th></th>
<th>yeah</th>
<th>nah</th>
<th>yep</th>
<th>nope</th>
<th>yessss</th>
<th>nooooo</th>
<th>oh yes</th>
<th>oh no</th>
</tr>
</thead>
<tbody>
<tr>
<td>emotive attitude [high/low]</td>
<td>low</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td></td>
<td>low</td>
<td></td>
<td></td>
</tr>
<tr>
<td>expectation [high/low]</td>
<td>high</td>
<td>high</td>
<td>low</td>
<td>low</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(13) Context: Mary knows that John started his homework hours ago and thinks that he must have already finished it. But she is still struggling with her own homework and does not really care whether John has finished his or not.

John: I have finished my homework.

Mary: Yeah. /#Yep. /#Yessss. /#Oh yes.

As shown in (13), Mary has previous evidence and therefore expects that John has finished his homework, but she does not care whether John has finished it or not. Yeah is felicitous in this context because it allows the responder to convey a low degree of intensity of the emotive attitude (the responder does not care about the informative content of the trigger) but a high degree of expectation (the responder expects that the initiator has finished his homework), while other RMs such as yep, yessss and oh yes are infelicitous because at least one of their emotive properties does not correspond to the context.

To sum up, this section analyzed the semantic properties, syntactic structures, and essential discourse functions of Mandarin RMs following the existing approaches to RMs, introduced the terminology and approaches used in the analysis of RMs in this study. In the next section, I will describe the methods used for the storyboard introspection and present the prototypical Mandarin trigger-RM adjacency pairs obtained.
Chapter 4: The Targeted Construction Storyboard Introspection

4.1 Eh-lab conversation boards

This section will focus on the description of the methods which are used in the targeted construction storyboard introspection in this study (Burton & Matthewson, 2015). Before collecting the data from the corpus, it is crucial to determine the major coding categories that are necessary for this study. In order to identify the specific contextual factors which are relevant to the use of Mandarin RMs, this study starts by gathering the prototypical Mandarin trigger-RM adjacency pairs from the author’s introspective judgments by using the Eh-lab conversation boards (available at https://syntaxofspeechacts.linguistics.ubc.ca/). The conversation boards which are used in this study are provided in appendix A. The author is a native speaker of Mandarin Chinese, born and raised in Hubei Province which is located in central Mainland China. Conversation board is preferred by the Eh-lab over the more familiar term storyboard to indicate that the Eh-lab conversation boards are designed specifically to elicit confirmationals (e.g., Canadian English eh) in dialogues and to explore interactional language rather than storytelling monologues. Following the multi-functional approach (Wiltschko et al. 2018), the Eh-lab conversation boards are comprised of minimal pairs of conversation boards which are distinguished only by one of the contextual factors mentioned in Section 3.4. The primary advantage of using the Eh-lab conversation boards for introspective analysis is that it allows the present study to systematically examine all potentially relevant contextual factors from both the initiator and the responder’s perspectives, however, since the Eh-lab conversation boards were originally designed to elicit confirmationals, some of the contextual factors which are only associated with responses lack corresponding conversation boards. In these cases, this study
switches to use additional text-only contexts which were developed by the author based on existing Eh-lab conversation boards.

4.2 Prototypical trigger-response marker adjacency pairs

In this section, I will present and analyze the prototypical Mandarin trigger-RM adjacency pairs gathered from the targeted construction storyboard introspection. The design of the storyboards is guided by Wiltschko et al.’s (2018) approach to multi-functionality, which allows us to systematically examine the contexts of RMs from syntactic, prosodic, discourse, and social perspectives. In addition, following Wiltschko’s (2017) analysis of the interaction of English RMs and the expressive dimension, our introspective data include two more storyboards targeting the intensity of the responder’s emotive attitude towards the trigger and the degree of the responder’s expectation about the trigger. Contexts that target each of the contextual factors that are relevant to the use of Mandarin RMs are exemplified in (14)–(24).

Examples (14) and (15) illustrate that the use of Mandarin RMs is influenced by the type of speech act of the trigger. The triggers in (14) and (15) are both A-Not-A interrogatives, which are formulated by juxtaposing the positive and negative forms of the predicate verb or adjective of the sentence.

(14) Context: Mark is a TV reporter and is trying to find some dog owners on the street to do an interview. A random guy passes him, and Mark asks him if he has a dog. The guy replies.

Mark: Qing wen nin you-meiyou yang gou?
please ask 2SG have-NEG-have raise dog
‘Do you have a dog?’

Passerby: Shi. / Dui. / Xing. / Hao. / You.
yes/yes/okay/okay/have
‘Yes.’
As shown in (14), the context makes it clear that the initiator’s epistemic state is neutral with respect to whether the passerby owns a dog or not, and hence he is not biased towards either of the two propositions expressed by the trigger, and ready to commit to either possibility as dependent once the responder commits to it as source. In this context, the trigger cannot be responded to with any of the Mandarin RMs. The only acceptable response to (14) is the positive form of the verb you (‘have’) in the trigger. Now consider the example in (15).

(15) Context: Mary is sitting outside a coffee shop. She notices that the guy who is sitting next to her has a lovely dog. She wants to touch the dog, so she asks him if she can touch his dog. The guy replies.

Mary:  
Wo neng-bu-neng mo nide gou?  
2SG can-NEG-can touch 2SG.POSS dog  
‘Could I touch your dog?’

Dog owner:  
#Shi. /#Dui. /Xing. /Hao. /#Neng.  
yes/yes/okay/okay/can  
‘Okay.’

As with (14), the trigger in (15) is also an A-Not-A interrogative which contains a modal verb neng (‘can’). In this context, only the RMs xing (‘okay’) and hao (‘okay’) can be used to respond, whereas shi (‘yes’) or dui (‘yes’) cannot be, nor the positive form of the modal verb neng (‘can’) in the trigger. The difference between the triggers in (14) and (15) is that the latter is a request asking for action, while the former is a neutral question asking for information. The comparison between (14) and (15) illustrates that, when the grammatical structure is the same, the type of speech act alone can affect the use of Mandarin RMs.

In addition to the type of the speech act of the trigger, the choice of Mandarin RMs is sensitive to the initiator’s bias encoded in the trigger, but is not correlated with the degree of the initiator’s commitment, as exemplified by (14), (16), and (17).
Context: Mary has often heard barks from somewhere very close to her house and guessed that her neighbor John probably got a new dog. One day, Mary runs into John on the street. She wants to confirm her guess and asks John if he got a new dog. John replies.

Mary: *Ni xin yang le tiao gou ba?* 
2SG new raise ASP CL dog SFP
‘You’ve gotten a new dog, haven’t you?’

John: *Shi. /Dui. /#Xing. /#Hao. /#Yangle.* 
yes/yes/okay/okay/raiseASP
‘Yes.’

The trigger in (16) is a particle question which is formulated by adding a sentence-final question marker to an ordinary declarative. In this context, from the perspective of the initiator, Mary has indirect evidence, that is, the barks from a close-by place, for the proposition that her neighbor John got a dog. However, the responder John has epistemic authority over the information and is thus the *source* of the information. Although Mary is biased towards and partly committed to the proposition due to the indirect evidence, she would be willing to go against her bias if John were to disagree with it. Furthermore, from the perspective of the responder, John is immediately aware of Mary’s bias through the grammatical form of the trigger. The trigger in (16) is a ba-question, which is typically used as a biased question to seek for confirmation rather than information in Mandarin Chinese. In this case, the trigger can be responded to with the RMs

(17) Context: Peter, Mary and Greg are good friends with John. Peter meets Mary in the hallway and tells her that John got a new dog. One day, Mary runs into Greg on the street. Greg tells Mary that John got a new dog. Mary replies.

Greg: *Yuehan xin yang le tiao gou.* 
John new raise ASP CL dog
‘John has gotten a new dog.’

Mary: *Shi. /Dui. /#Xing. /#Hao. /#Yangle.* 
yes/yes/okay/okay/raiseASP
‘Yes.’
shi/dui (‘yes’), in contrast with (14), in which the trigger is a neutral A-Not-A question and cannot be responded to with any Mandarin RMs. Examples (14) and (16) illustrate that the use of Mandarin RMs is sensitive to the grammatical form of the trigger and the bias of the initiator, and provide supporting evidence for Wu’s (1990) observation that the determinant of whether a Mandarin polar question can be responded to with RMs is whether or not the question is biased.

Furthermore, our introspective data show that the degree of the initiator’s commitment to the trigger does not affect the form of RMs, as exemplified by (17). The response in (17) is the same as in (16) even though the trigger in (17) is a declarative and a statement, and the initiator simply intends to share his knowledge with the responder and is thus fully committed to the proposition as a source. By responding with shi/dui (‘yes’), the responder both registers herself as a co-source for the statement and agrees to update the common ground.

Now compare examples (16) and (18), which show that the use of Mandarin RMs is correlated with not only the grammatical form of the trigger but also the nature of evidence supporting the initiator’s belief.

(18) Context: Mary runs into John on the street. John has a dog on a leash. Mary thinks that it must be John’s dog. Mary wants to confirm what she thinks and asks John if it is his dog. John replies.

Mary: \textit{Ni xin yang le tiao gou (y)a?}  
\textit{2SG new raise asp CL dog SFP}  
‘You’ve gotten a new dog, haven’t you?’

John: \textit{#Shi. /#Dui. /#Xing. /#Hao. /Shi-(y)a. /Dui-(y)a.}  
\textit{yes/yes/okay/okay/yes-SFP/yes-SFP}  
‘Yes.’

Although the triggers in (16) and (18) are both biased particle questions which ask for confirmation rather than information, and the initiator’s bias in (16) and (18) is identical, i.e., John has gotten a new dog, they cannot be responded to in the same way. In contrast to the
trigger in (16) which can be responded to with the simplex RMs shi/dui (‘yes’), only the modified RMs shi-(y)dui-(y) (‘yes-SFP’) are considered felicitous responses to the trigger in (18). (16) differs from (18) in terms of the SFP included in the trigger and the nature of the evidence that the initiator has to support her belief. In the context in (16), the initiator has indirect evidence, that is, the barks from a close-by place, to support her belief that her neighbor John got a dog. In the context in (18), the initiator has contextual evidence, that is, she sees that John is walking a dog, to support her belief that John got a dog. The comparison between (16) and (18) suggests that Mandarin RMs are sensitive to both the nature of the evidence that supports the belief of the initiator and the grammatical form of the trigger.

Lastly, our introspective data demonstrate that the use of Mandarin Chinese RMs is influenced by the formality of the situation and the social relation between the interlocutors, as shown in (19) and (20) respectively.

(19) Context: John is the host of a formal TV talk show, and Mary is his guest. John asks Mary to introduce herself. Mary replies.

John: Xian ziwo jieshao yixia.
first self introduce once
‘First, briefly introduce yourself.’

Mary: #Shi./#Dui./#Xing. /Hao.
yes/yes/okay/okay
‘Okay.’

The triggers in (15) and (19) are both requests, however, the dialogue in (19) occurs in a formal broadcast interview on TV, while in (15) the conversation occurs in an informal and casual situation. In terms of the response, the trigger in (15) can be responded to with either of the RMs xing (‘okay’) and hao (‘okay’), whereas the trigger in (19) can only be responded to with hao (‘okay’), but not xing (‘okay’). The difference between the responses to (15) and (19) indicates
that the RM *xing* (‘okay’) is infelicitous in formal contexts, in contrast to the RM *hao* (‘okay’) which is felicitous in both formal and informal contexts.

In addition to the degree of formality of the situation, the use of Mandarin RMs is also influenced by the social relation between the interlocutors, as exemplified by (20), where the trigger is an imperative and a command.

(20) Context: The new recruits just started their training at the military camp. The soldiers stand at attention and salute. The major orders them to march. The soldiers reply and begin to march.

Major: *Xiang qian san bu zou!*

towards front three step walk
‘Three steps forward march!’

Soldiers: *Shi. #Dui. #Xing. #Hao.*

‘Yes.’

In Mandarin daily conversations, directives such as commands, requests, and suggestions are generally responded to with the RMs *hao/xing* (‘okay’), however, the trigger in (20) can only be responded to with the RM *shi* (‘yes’), but not with *xing* (‘okay’) or *hao* (‘okay’). Recall from Section 2.3 that Yan (2005) claims that: (i) the RM *shi* (‘yes’) is not commonly used as a positive response to interrogatives in Mandarin; (ii) *shi* (‘yes’) is generally used in response to commands or prohibitions when the social status of the responder is lower than the initiator (S < A). The conversation in (20) occurs between a major and his soldiers in the army, which accords with Yan’s (2005) second observation, however, the distribution of the RM *shi* (‘yes’) used in response to interrogatives in Mandarin still needs to be tested with the corpus data.

In addition to the contextual factors above, recall from Section 3.5 that RMs are frequently modified in natural conversations to indicate: (i) the intensity of the responder’s emotive attitude towards the trigger; and (ii) the degree of the responder’s expectation about the
trigger (Wiltschko, 2016). The following four contexts in (21)–(24) are designed to target these two expressive factors.

(21) Context: Peter and John are classmates. Peter knows that John failed the exam twice and finds that he finally passed the exam this time. He talks about this news with John. John already knew his grade and wants to exclaim that it is not easy for him, so he replies.

Peter: \textit{Ni zhongyu kao guo le.} 2SG finally exam pass SFP ‘You finally passed the exam.’

John: \#Shi. /#Dui. /#Xing. /#Hao. /\textit{Shi-(y)a.} /\textit{Dui-(y)a.} /#Xing-(y)a. /#Hao-(y)a. yes/yes/okay/okay/yes-SFP/yes-SFP/okay-SFP/okay-SFP ‘Yes! (It’s too hard for me!)’

Example (21) shows that the form of the Mandarin RM is sensitive to the intensity of the responder’s emotive attitude towards the trigger. Only the modified RMs \textit{shi-(y)a/dui-(y)a} (‘yes-SFP’), can be used to indicate the responder’s agreement with the initiator as well as his strong emotion towards the trigger utterance. Neither the simplex RMs \textit{shi/dui} (‘yes’) nor \textit{xing/hao} (‘okay’) are acceptable in this context.

Finally, examples (22)–(24) show that the form of Mandarin RMs is correlated with not only the responder’s commitment to the response but also the degree of the responder’s expectation about the trigger.

(22) Context: Peter, Mary and Greg are good friends with John. Peter meets Mary in the hallway and tells her that John has started working out. One day, Mary runs into Greg on the street. Greg tells Mary that John has been working out lately. Mary replies.

Greg: \textit{Yuehan zuijin zai jianshen.} John lately PRES work out. ‘John has been working out lately.’

Mary: \textit{Shi.} /\textit{Dui.} /#Xing. /#Hao. yes/yes/okay/okay ‘Yes.’
(23) Context: John, Mary, and Greg are friends. John tells Mary that he hates working out. One day, Mary runs into Greg on the street. Greg tells Mary that John has been working out lately. Mary replies.

Greg: Yuehan zuijin zai jianshen. John lately PRES work out. ‘John has been working out lately.’

Mary: #Shi. /#Dui. /#Xing. /#Hao. /Shi-ma. /#Dui-ma. yes/yes/okay/okay/yes-SFP/yes-SFP ‘Oh yeah?’

(24) Context: John, Mary, and Greg are friends. John tells Mary that he wants to start working out. One day, Mary runs into Greg on the street. Greg tells Mary that John has been working out lately. But Mary does not want to continue talking about John, so she replies.

Greg: Yuehan zuijin zai jianshen. John lately PRES work out. ‘John has been working out lately.’

Mary: #Shi. /#Dui. /#Xing. /#Hao. /Shi-ba. /#Dui-ba. yes/yes/okay/okay/yes-SFP ‘Oh yeah?’

On the one hand, the context in (22) makes it clear that the responder knows that John has started working out. By responding with the simplex RMs shi/dui (‘yes’), the responder not only indicates that she is fully committed to the asserted proposition and agrees to update the common ground, but also registers herself as a co-source for the information conveyed in the trigger. In contrast, the contexts in (23) and (24) both explicitly indicate that the responders are unable to commit to the trigger for some reason. In both cases, only the modified forms of shi (‘yes’) are considered felicitous responses, but not any simplex RMs, nor the modified forms of dui (‘yes’). The modified RMs shi-ma (‘yes-SFP’) and shi-ba (‘yes-SFP’) in (23) and (24) both allow the responders to indicate that, although they do not disagree with the initiator, they are currently reluctant to commit to the proposition and thus the common ground cannot be updated. The
function of the complex RMs in (23) and (24) is not to agree with the initiator’s belief that John has been working out lately, but merely to acknowledge the trigger utterance (see Guntly, 2019). The comparison between (22), (23), and (24) demonstrates that the form of Mandarin RMs is influenced by the responders’ discourse commitments to the trigger.

On the other hand, the contexts in (23) and (24) are the same except that the trigger in (23) is unexpected because the responder has counter-evidence and an epistemic bias against the trigger, whereas the trigger in (24) is expected because the responder has epistemic evidence for the trigger. In terms of the response, the RM shi (‘yes’) in (23) is modified by the SFP ma, while in (24) it is modified by the SFP ba. The difference in the modification of the RMs in (23) and (24) suggests that the form of Mandarin RMs is influenced by the degree of the responder’s expectation about the trigger.

4.3 Hypotheses

In this section, I will summarize the findings of the storyboard introspection in the preceding section and present the hypotheses which are generated from them as well as from the findings of the previous studies on Mandarin RMs. To sum up, following Wiltschko et al.’s (2018) terminology, our introspective data demonstrate that the contextual factors which have the potential to influence the use of Mandarin RMs fall into four major categories:

(i) syntactic factors including the grammatical form of the trigger;

(ii) discourse factors associated with:

   a. the type of the speech act of the trigger;

   b. the initiator’s bias towards the trigger;
c. the nature of the evidence that supports the initiator’s belief;

d. the responder’s discourse commitment to the trigger;

(iii) social factors including:

a. the degree of formality of the situation;

b. the social relation between the interlocutors;

(iv) expressive factors, including:

a. the intensity of the responder’s emotive attitude towards the trigger;

b. the degree of the responder’s expectation about the trigger.

In order to provide a comprehensive investigation of the conditions for the use of Mandarin Chinese RMs, our main task in the rest of the thesis is to examine all of the factors above and how they relate to the forms and discourse functions of Mandarin RMs by using the corpus data. Thus, theoretically, the context of each RM occurring in our corpus should be coded in terms of all the factors listed above. However, given that some of the factors interact and influence each other, we will only code our corpus data in terms of the form, host clause, and discourse function of the RM, the grammatical form and type of the speech act of the trigger, the initiator’s bias towards the trigger, the nature of the evidence that supports the initiator’s belief, and the epistemic attitude of the responder, i.e., whether the response agrees or disagrees with the trigger. In addition, in order to analyze the relevant discourse, social, and expressive factors, the conversational turns preceding the trigger, following the RM or its host clause, and

_________________________

1 The nature of the evidence that supports the initiator’s belief specifically refer to certain SFPs in particle question triggers or complex RMs, which can reflect the nature of the evidence that the initiator has to support his/her belief. This finding is based on the comparison between (16) and (18).
sociolinguistic information about the interlocutors such as name and gender are also coded. Due to the lack of proper measurement criteria, the expressive factors will be examined only in the qualitative analysis, not in the quantitative corpus analysis.

Since the objective of investigating the interplay of the forms, discourse functions, and contexts of Mandarin RM is very general and abstract, in the rest of this section, we will tailor the findings of the storyboard introspective analysis and the previous studies on Mandarin RMs into a series of concrete hypotheses which can be tested against the corpus data.

**Hypothesis 1:**

The RMs *shi/dui* (‘yes’) and *xing/hao* (‘okay’) are in complementary distribution conditioned by the speech act type of the trigger:

(i) the RMs *shi/dui* (‘yes’) are used to respond to statements, questions, and exclamations;
(ii) the RMs *xing/hao* (‘okay’) are used in response to directives.

**Hypothesis 2:**

As responses to questions, the RMs *shi/dui* (‘yes’) are restricted to biased questions:

(i) the RMs *shi/dui* (‘yes’) are only used to respond to particle questions;
(ii) the RMs *shi/dui* (‘yes’) cannot respond to A-Not-A questions.

**Hypothesis 3:**

As responses to directives:

(i) the RM *hao* (‘okay’) can be used in both formal and informal contexts;
(ii) the RM *xing* (‘okay’) cannot be used in formal contexts;
(iii) the RM *shi* (‘yes’) is used only when the social status of the responder is lower than the initiator.
Hypothesis 4:

Mandarin positive simplex RMs only have the agreement and acknowledgement functions, but not the answering function.

Hypothesis 5:

(i) Mandarin simplex RMs are modified to indicate: the responder’s commitment to the trigger, the nature of the evidence for the trigger\(^2\), the intensity of the responder’s emotive attitude, or the degree of the responder’s expectation about the trigger.

(ii) Some previously established functions of Mandarin complex RMs like making concessions, expressing politeness, expressing strong feelings, and so on, are derived from the combination of the agreement function or acknowledgement function and contextual factors.

\(^2\) The nature of the evidence for the trigger specifically refers to the nature of the evidence which is encoded in the SFP in particle question triggers and supports the initiator’s belief. For example, the SFPs \(\text{y}a\) in (21) are used to modify the simplex RM \(\text{shi}\) (‘yes’) when there is contextual evidence available to both participants, i.e., the visual evidence that John is walking a dog.
Chapter 5: The Corpus Study

5.1 Methods

Following the storyboard introspection, the next step is to test the hypotheses listed in the preceding section against the corpus data. By utilizing a corpus-based approach, this study examines not only the simplex RMs shi/dui (‘yes’) and xing/hao (‘okay’), but also the complex RM shi (‘yes’) in the corpus. The primary reasons for utilizing both the storyboard introspective judgments and the corpus data in this study are as follows. The main objective of the storyboard introspective analysis is to identify the specific contextual factors which are relevant to the use of Mandarin RMs and thus to determine the coding categories which are necessary in the subsequent corpus study, while the goal of the corpus study is to test the hypotheses generated from the storyboard introspection against real-life data.

On the one hand, the design of our storyboard introspection requires the author to play a dual role and to provide both appropriate forms of triggers distinguished by the controlled contextual factors as initiator, and grammatical and felicitous RMs as responder at the same time. However, according to Clark & Bangerter (2003), dialogue both originates from and serves to coordinate joint activities, which must be planned and executed by the participants jointly, and our introspective data is not ideally representative of interactional language in natural dialogues on this aspect. Furthermore, Clark & Bangerter (2003: 222) found that people differ in their use of RMs and suggest it “reflects differences in how people conceptualize the actions they are performing”. Similarly, the interpretation of triggers and context factors such as the speaker’s bias and the nature of the evidence that the speaker has to support his/her belief, is dependent on the interlocutors’ mental states and varies from person to person too. On the other hand, like most other corpus studies, the limitations of the corpus analyses in this study primarily result
from the nature of corpus data. Corpus data generally do not contain enough information to draw reliable inferences about the state of minds of the interlocutors. The process involved in coding the contextual factors and discourse functions of the RMs in the present corpus study is inevitably dependent on textual clues and the judgments of the author. To avoid these limitations, this study uses a spoken corpus as both the validation database to verify the findings from the storyboard introspective judgments, and a supplementary data source in case any contextual factors correlated with Mandarin RMs are not included in the previous storyboard introspection.

5.2 The data

5.2.1 GALE Phase 4 Chinese Broadcast Conversation corpus

The data material used for the corpus analyses of this study comes from the GALE Phase 4 Chinese Broadcast Conversation corpus (LDC2016S03 & LDC2016T12) of the Linguistic Data Consortium (LDC) database. The GALE Phase 4 Chinese Broadcast Conversation corpus (CBCC) contains approximately 155 hours of Mandarin Chinese broadcast conversational speech collected in 2008 by LDC and Hong Kong University of Science and Technology (HKUST), and its corresponding transcribed data totals to 2,259,952 Chinese characters (tokens). The broadcast conversational recordings comprise interviews, call-in programs and roundtable discussions focusing primarily on current affairs from the following five sources: (i) China Central TV, a national and international broadcaster in Mainland China; (ii) Beijing TV, a national television station in Mainland China; (iii) Hubei TV, a regional television station in Hubei Province, located in central Mainland China; (iv) Phoenix TV, a Hong Kong-based satellite television station; (v) and Voice of America (VOA), a U.S. government-funded broadcast programmer. The files in the Phase 4 CBCC are named in the following format: SOURCE + PROGRAM + DATE
+ TIME. SOURCE and PROGRAM encode the source of the recording. DATE and TIME represent the date and the time of the recording.

### 5.2.2 Mandarin Chinese response marker dataset

All the text files from the Phase 4 CBCC corpus are processed by utilizing Antconc (version 8.5.15), a freeware corpus analysis toolkit for concordancing and text analysis (Anthony, 2014). With the help of Antconc, this study selected and extracted the transcripts of the portions of conversation which contain the targeted RMs from the Phase 4 CBCC corpus, and then constructed a self-compiled and specialized dataset named Mandarin Chinese Response Marker (MCRM) dataset which is tailored for the present study. This dataset contains one text file in CSV (Comma Separated Value) format with utf-8 encoding. All the transcripts and annotation in the MCRM dataset are stored in CSV format with 17 fields, as listed Table 5.1.

<table>
<thead>
<tr>
<th>Field</th>
<th>Field type</th>
</tr>
</thead>
<tbody>
<tr>
<td>form</td>
<td>RM form</td>
</tr>
<tr>
<td>textcode</td>
<td>file name or id</td>
</tr>
<tr>
<td>start</td>
<td>start time</td>
</tr>
<tr>
<td>end</td>
<td>end time</td>
</tr>
<tr>
<td>clause type</td>
<td>clause type of the trigger</td>
</tr>
<tr>
<td>speech act type</td>
<td>speech act type of the trigger</td>
</tr>
<tr>
<td>background</td>
<td>responder’s utterance preceding the trigger</td>
</tr>
<tr>
<td>initiator</td>
<td>speaker of the trigger</td>
</tr>
<tr>
<td>initiator gender</td>
<td>gender of the initiator</td>
</tr>
<tr>
<td>trigger</td>
<td>transcript of the trigger</td>
</tr>
<tr>
<td>responder</td>
<td>speaker of the RM</td>
</tr>
<tr>
<td>responder gender</td>
<td>gender of the responder</td>
</tr>
<tr>
<td>response marker</td>
<td>transcript of the RM</td>
</tr>
<tr>
<td>function</td>
<td>function of the RM (answering/agreement/acknowledgement)</td>
</tr>
<tr>
<td>host clause</td>
<td>transcript of the host clause of the RM</td>
</tr>
<tr>
<td>follow up</td>
<td>initiator’s utterance following the RM</td>
</tr>
<tr>
<td>agreement</td>
<td>the relation between the trigger and the RM (agreement/disagreement)</td>
</tr>
</tbody>
</table>

Table 5.1 CSV format for the MCRM dataset
The “form” field encodes the form of the RM in each entry. The “textcode” field encodes the source, program, date and time of the recordings of texts. The “start” and “end” fields indicate the start time and end time of the conversational turn which contains the RM and its host clause. The “clause type” and “speech act type” fields store the grammatical form and speech act type of the trigger. The “initiator”, “initiator gender” and “trigger” fields encode the name/ID and gender of the initiator, and the transcript of the trigger. Corresponding to the initiator, the fields of “responder”, “responder gender”, “response marker”, “function”, and “host clause” store the name/ID and gender of the responder, the transcripts of the RM and its host clause, and the function of the RM. To better reproduce the context of the conversation, the conversational turn which is taken by the responder preceding the trigger, and the conversational turn which is taken by the initiator following the RM or it host clause, are stored in the fields “background” and “follow up”, respectively. Table 5.2 presents an example entry from the MCRM dataset.

As shown in Table 5.2, the value in the “background” field shows that the responder (Ma_Xiang) has hearsay evidence that the initiator (Yao_Fu_Shan) is good at performing clapper talk. Although the initiator denies the background sentence due to modesty, the responder is still certain about his knowledge and not willing to commit to the trigger, and thus the function of the complex RM *shi-ba* (‘yes-SFP’) in this example is not to agree with the initiator’s belief, but merely to acknowledge the trigger utterance.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>form</td>
<td><em>shi-ba</em> (‘yes-SFP’)</td>
</tr>
<tr>
<td>text code</td>
<td>BEIJING_TWOWAYLANES_CMN_20080412_130002</td>
</tr>
<tr>
<td>start</td>
<td>176.566</td>
</tr>
<tr>
<td>end</td>
<td>177.754</td>
</tr>
<tr>
<td>clause type</td>
<td>declarative</td>
</tr>
<tr>
<td>speech act type</td>
<td>statement</td>
</tr>
</tbody>
</table>
Table 5.2 CSV format for the MCRM dataset: Example

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>initiator</td>
<td>Yao Fu Shan</td>
</tr>
<tr>
<td>initiator gender</td>
<td>male</td>
</tr>
<tr>
<td>responder</td>
<td>Ma Xiang</td>
</tr>
<tr>
<td>responder gender</td>
<td>male</td>
</tr>
<tr>
<td>background</td>
<td>Ma Xiang: you are good at performing comic dialog, yeah, (I) heard that (you) are good at performing clapper talk</td>
</tr>
<tr>
<td>trigger</td>
<td>Yao Fu Shan: not too bad</td>
</tr>
<tr>
<td>response marker</td>
<td>Ma Xiang: shi-ba ('yes-SFP')</td>
</tr>
<tr>
<td>follow up</td>
<td>Yao Fu Shan: not too bad</td>
</tr>
<tr>
<td>host clause</td>
<td>NA</td>
</tr>
<tr>
<td>function</td>
<td>acknowledgement</td>
</tr>
<tr>
<td>notes</td>
<td>NA</td>
</tr>
<tr>
<td>agreement</td>
<td>NA^3</td>
</tr>
</tbody>
</table>

5.3 The coding schemes

5.3.1 Response markers

This section discusses the coding scheme for the form of Mandarin RMs in the corpus study. The present study categorizes Mandarin RMs by type and form. The type of a RM is determined by the bare form of the RM. Simplex RMs are defined as RMs that are used alone without any following SFPs, while complex RMs are the RMs which are used in combination with SFPs or other RMs, and therefore complex RMs are sometimes referred to modified forms of RMs in this

^3 The value for the “agreement” field is “NA” because the function of the complex RM shi-ba (‘yes-SFP’) in this example is neither to agree nor to disagree with the initiator, even though the responder certainly disagrees with the responder in his mind due to the hearsay evidence. However, the initiator has absolute epistemic authority over the information in the trigger, and the social status of the initiator is higher than the responder, and thus it is infelicitous and impolite for the responder to refute the initiator’s trigger in this context.
study. For example, the RMs *shi* (‘yes’) and *dui* (‘yes’) are both simplex RMs, whereas the RMs *shi-de* (‘yes-SFP’), *dui-de* (‘yes-SFP’), and *shi-ma* (‘yes-SFP’) are all complex RMs or modified forms of RMs. *Shi-de* (‘yes-SFP’) and *shi-ma* (‘yes-SFP’) are different forms of the same type of RM, while *shi-de* (‘yes-SFP’) and *dui-de* (‘yes-SFP’) are different types of RMs even though they both contain the same SFP *de*. In the following section, I will present the coding scheme and classification criteria for the triggers of RMs in this study.

### 5.3.2 Triggers

In order to test Hypotheses 1 and 2 in Section 4.3 with real-life data, all the RMs occurring in the MCRM dataset will be coded in terms of the grammatical forms and the speech act types of their triggers in the corpus study. This section presents the coding scheme used in the corpus study for coding the grammatical forms and speech act types of the triggers. Hypotheses 1 and 2 are repeated here for convenience.

**Hypothesis 1:**

The RMs *shi/dui* (‘yes’) and *xing/hao* (‘okay’) are in complementary distribution conditioned by the speech act type of the trigger:

(i) the RMs *shi/dui* (‘yes’) are used to respond to statements, questions, and exclamations;

(ii) the RMs *xing/hao* (‘okay’) are used in response to directives.

**Hypothesis 2:**

As responses to questions, the RMs *shi/dui* (‘yes’) are restricted to biased questions:

(i) the RMs *shi/dui* (‘yes’) is only used to respond to particle questions;

(ii) the RMs *shi/dui* (‘yes’) cannot respond to A-Not-A questions.

Hypothesis 1 is formulated based on Zhao’s (2006) claim that the RMs *shi/dui* (‘yes’) are typically used to respond to statements, polar questions, *wh*-questions, tag questions, and
exclamations, while the RMs xing/hao (‘okay’) are generally used in response to imperatives and interrogatives which have the force of directives. Hypothesis 2 is generated based on Wu’s (1990) observation that the determinant of whether a Mandarin question can be responded to with RMs is whether or not the question is biased as well as the comparison between examples (14) and (16) obtained from the storyboard introspection. The trigger in (14) Qing wen nin you-mei-you yang gou? (‘Do you have a dog?’) is an A-Not-A question and the trigger in (16) Nin xin yang le tiao gou ba? (‘You’ve gotten a new dog, haven’t you?’) is ba-question. We observe that there is a one-to-one correspondence between A-Not-A questions and neutral questions, and a one-to-one correspondence between ba-questions and biased questions, and thus we decompose Hypothesis 2 into two sub-hypotheses (i) and (ii).

In addition to the bias of the initiator, we observe that other contextual factors which are relevant to the use of Mandarin RMs, including the nature of the evidence that supports the initiator’s belief, and the responder’s discourse commitment to the trigger, can both be encoded in the grammatical forms of the triggers and RMs. For example, the trigger in (16) Nin xin yang le tiao gou ba? (‘You’ve gotten a new dog, haven’t you?’) is a ba-interrogative when the initiator has indirect evidence, i.e., the barks from a close-by place, to support her belief that her neighbor John got a dog, while the trigger in (18) Ni xin yangle tiao gou (y)a? (‘You’ve gotten a new dog, haven’t you?’) is a (y)a-interrogative when the initiator has contextual evidence, i.e., she sees that John is walking a dog, to support her belief that John got a dog.  

Based on examples (16) and (18) alone, it is impossible to determine whether the use of Mandarin RMs is sensitive to the nature of the evidence that supports the initiator’s belief or the SFP in the trigger. But there are examples from the corpus data showing that, even though the trigger is not particle question, the responder still uses the complex
nature of the evidence, (23) and (24) show that the modification of simplex RMs with the SFPs *ba* and *ma* reflects the degrees of the responder’s discourse commitment to and expectation about the trigger.

For the reasons discussed above, the rest of this section will discuss the coding schemes for the grammatical forms and speech act types of the triggers in this study. The main goal of the discussion is to identify the correspondences between the grammatical forms and the speech acts of clauses and how the grammatical forms of clauses relate to the contextual factors such as the bias of and the nature of the evidence for their speakers. In order to test Hypothesis 1, on the dimension of the grammatical form, clauses are classified into four clause types: declarative, interrogative, imperative, and exclamatives. Following Sadock & Zwicky (1985), this study defines *clause type* as the technical term referring to the pairing of a certain syntactic form and a given conventional use or *sentential force* which constitutes the semantic content of that clause type. The mapping between the clause types and the sentential force is summarized in Table 5.3.

<table>
<thead>
<tr>
<th>Clause type</th>
<th>Sentential force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declarative</td>
<td>Statement</td>
</tr>
<tr>
<td>Interrogative</td>
<td>Question</td>
</tr>
<tr>
<td>Imperative</td>
<td>Directive</td>
</tr>
<tr>
<td>Exclamative</td>
<td>Exclamation</td>
</tr>
</tbody>
</table>

Table 5.3 Mapping between clause types and sentential force

RMs *shi-(y)a* (‘yes-SFP’) when there is contextual evidence available in the context, suggesting that the use of Mandarin RMs is sensitive to the nature of the evidence rather than the SFP in the trigger. The correspondence between the SFPs in the particle question triggers and the nature of the evidence that supports the initiator’s belief will be discussed in Section 5.3.2.2.4.
However, our storyboard introspective data show that a combination of the four-term system of clause type presented in Table 5.3 and the classification system of speech acts based on the canonical illocutionary force is not detailed enough to characterize the intricacy of the relation between RMs and their triggers. On the one hand, the introspective data show that triggers of the same clause types are not necessarily answered in the same way. The trigger in (14) *Qing wen nin you-meiy-you yang gou?* (‘Do you have a dog?’) and the trigger in (15) *Wo neng-bu-neng mo nide gou?* (‘Could I touch you dog?’) are both interrogatives which have the illocutionary force of questions, however, their responses belong to different answering systems. (14) can only be answered with the echo system by repeating the verb *you* (‘have’) in the trigger, while (15) can be responded to with the RMs *xing* (‘okay’) or *hao* (‘okay’), but not *shi* (‘yes’) or *dui* (‘yes’). On the other hand, triggers of the same type of speech act are not always answered in the same way, either. The trigger in (16) *Ni xin yangle tiao gou ba?* (‘You’ve gotten a new dog, haven’t you?’) and the trigger in (18) *Ni xin yangle tiao gou (y)a?* (‘You’ve gotten a new dog, haven’t you?’) are both questions asking for confirmation, however, (16) is responded to with the simplex RMs *shi/dui* (‘yes’), while (18) is responded to with the modified forms of *shi* and *dui* (‘yes’). Moreover, the trigger in (19) *Xian ziwo jieshao yixia.* (‘First, briefly introduce yourself.’) and the trigger in (20) *Xian qian san bu zou!* (‘Three steps forward march!’) are of the same clause type and speech act type. They are both imperatives which have the illocutionary force of directives, but (19) is responded to with the RM *hao* (‘okay’), while (20) can only be responded to with the RM *shi* (‘yes’).

In order to capture these similarities and differences, on the dimension of the grammatical form, we will subdivide the major clause types according to the contextual factors which are encoded in the clauses, such as the bias of the speaker, and the nature of the evidence for the
speaker’s belief. On the dimension of the speech act type, this study identifies the type of speech act based on the primary illocutionary force of the targeted clauses (Huddleston & Pullum, 2002). The illocutionary force of a clause is different from its sentential force in the sense that the sentential force is in a one-to-one correspondence with the type of a clause, as displayed in Table 5.3, while the illocutionary force is not. A clause normally bears more than one illocutionary force, however, only one of them is considered primary/salient while the rest are secondary (Huddleston & Pullum, 2002). The primary illocutionary force of an ordinary clause is normally the same as the canonical sentential force of its clause type, however, when they are different, we have what is generally referred to as an indirect speech act, whose primary illocutionary force can only be inferred by the addressee from both the sentential force of the utterance and the context in which the utterance occurs (Searle, 1975).

In short, the discussion above shows that Mandarin RMs are distinguished by not only the grammatical form but also the speech act type of the trigger. There is no one-to-one correspondence between these two dimensions, no matter how we subdivide clause types or speech acts, the present study thus determines to code the triggers based on a combination of the grammatical form and speech act type. Since the criteria for delimiting the grammatical forms of clauses are language-specific, in order to provide theoretical justification for the coding of the triggers, the rest of this section systematically discusses the traditional classifications of Mandarin clauses in terms of their grammatical forms and speech act types. The discussion of the criteria for coding the triggers is organized by clause types and their canonical sentential forces.

5.3.2.1 Declaratives and statements

Declaratives are typically used to make statements containing propositions which can be evaluated as either true or false, as exemplified by (25).
Mandarin declaratives are characteristically unmarked. The forms of all other major clause types are based on the form of declaratives in combination with other syntactic properties. Declaratives are prototypically used with the illocutionary force of statements, however, according to Collins (2006: 183–4), this correlation may be affected by three factors: (i) performative verbs, as in (26); (ii) rising intonation, as in (27); and (iii) modals which are used deontically (28) or expressions of the speaker’s wish (29).

(25) Ta zai kan shu.  
3SG PROG look book  
‘(S)he is reading a book.’

(26) Wo mingling ni likai.  
1SG command 2SG leave  
‘I command you to leave.’

(27) Context: John once told Mary that he did not like dogs. Mary runs into John on the street. John has a dog on a leash. Mary thinks that it must be John’s dog. Mary wants to confirm what she thinks and asks John if it is his dog.

Mary: Ni xin yang le tiao gou?  
2SG new raise ASP CL dog  
‘You’ve gotten a new dog?’

(28) Ni dei xian likai.  
1SG must earlier leave  
‘You must leave first.’

(29) Wo xiang kan shu.  
1SG want look book  
‘I want to read a book.’

First, following Austin (1975) and Sadock & Zwicky (1985), this study considers ordinary declaratives which have performative verbs – that is, verbs explicitly denoting the illocutionary force of the utterance, such as mingling (‘command’), yaoqiu (‘request’), xuanbu (‘declare’), chengnuo (‘promise’) – as explicit performatives. Syntactically, a Mandarin explicit performative typically contains a first-person subject, followed by a performative verb without any modals or
aspectual particles and a second person object. Explicit performatives can be used to perform various speech acts, with one example being the command in (26).

Second, the declaratives which are prosodically marked by rising intonation are conventionally associated with biased questions in Mandarin. This study codes declaratives which are marked by questions marks (?) as rising declaratives. Following Sudo’s (2013) terminology, rising declaratives in Mandarin normally involve two distinctive types of bias: (i) *epistemic bias*, which is about the speaker’s private beliefs and expectations based on old evidence, and (ii) *evidential bias*, relevant to the *contextual evidence* which is in principle available to all interlocutors involved in the conversation. For example, *Ni xin yang le tiao gou?* (‘You’ve gotten a new dog?’) in (27) indicates that Mary had a negative epistemic bias and an initial expectation for the negative answer based on previous evidence that is not immediately available to the addressee. After seeing John with a dog on the street, however, she has contextual evidence that contradicts her epistemic bias, which leads to a positive evidential bias towards the answer.

Finally, this study considers declaratives which contain modals, such as *xiang* (‘want’), *hui* (‘will’), and *dei* (‘should’), as modal declaratives, as shown in (28) and (29). See also Cui & Chi (2013) and Zhu (1996) for relevant discussion on the annotation of Mandarin modals. Like explicit performatives, Mandarin modal declaratives can also be used to perform different types of speech acts, as illustrated by the request in (28) and the wish in (29).

5.3.2.2 Interrogatives and questions

Interrogatives are prototypically used with the illocutionary force of questions to gain information from the addressee. Traditionally, interrogatives are standardly classified as either *polar questions*, *alternative questions*, or *variable questions*, based on their grammatical forms
(Collins, 2006; Huddleston & Pullum, 2002; Sadock & Zwicky, 1985). However, the standard classification system is not applicable to the coding of Mandarin interrogatives in this study, since it is primarily concerned with neutral questions and their truth-conditional meanings, without addressing the bias and emotive attitudes of the speaker or the type of the evidence that the speaker has.

The Chinese classical tradition generally identifies four subtypes of interrogatives: (i) question-word questions, (ii) disjunctive questions, (iii) tag questions, and (iv) particle questions (Li & Thompson, 1989). This study will follow the traditional classification of Mandarin interrogatives.

5.3.2.2.1 Question-word questions

Mandarin question-word questions are marked by the presence of question-words such as shenme (‘what’) and zenme (‘how’) and are conventionally used as neutral questions, as shown in (30).

(30) Context: John wants to invite Mary for lunch, but he does not have her schedule. So, he calls Mary to check whether she is available right now.

\[
Ni \ zai \ gan \ shenme? \\
1SG \ PROG \ do \ WH \\
‘What are you doing?’
\]

5.3.2.2.2 Disjunctive questions

Mandarin disjunctive questions are composed of two or more constituents joined by the conjunction haishi (‘or’), and can be divided into two general categories: A-Not-A questions and X-or-Y questions. As the name suggests, A-Not-A questions are formulated by juxtaposing the positive and negative forms of the predicate verb or adjective of a sentence. Mandarin A-Not-A
questions can be subdivided into $V$-$Not$-$V$ questions and $C$-$Not$-$C$ questions, as exemplified by (31) and (32), respectively.

(31) $Ta$ $kan$-$bu$-$kan$ $shu$?
3SG look-$NEG$-look book
‘Does (s)he read?’

(32) $Ta$ $shi$-$bu$-$shi$ $zai$ $jia$ $kan$ $shu$?
3SG COP-$NEG$-COP at home look book
‘Is it the case that (s)he is at home reading a book?’

The “A” constituents in $V$-$Not$-$V$ questions are regular verbs or modal verbs, while in $C$-$Not$-$C$ questions they can only be the copula $shi$. Mandarin $V$-$Not$-$V$ questions are generally considered as the default form of neutral polar questions in Mandarin as they convey no pre-existing expectations from the speakers about the answers. $V$-$Not$-$V$ questions tend not to be responded to with RMs; instead, they are normally responded to by using the echo response system, that is, by repeating the verb in the trigger. In contrast, $C$-$Not$-$C$ questions are generally used as verum questions with a narrow focus on the truth value. As noticed in Li & Thompson (1989: 541) and Schaffar & Chen (2001), Mandarin $C$-$Not$-$C$ questions cannot be used in “out-of-the-blue” contexts, but typically in contexts where the proposition has already been brought up in the conversation. One constituent of the utterance is narrowly focused by accentuation while the rest of the utterance is background information, as exemplified by (32), which requires for its felicitous use that either of the propositions ‘(s)he is at home’ or ‘(s)he is reading a book’ has been established in the conversation and thus become background information, while the other proposition is at issue and narrowly focused by accentuation.

To account for the differences between Mandarin $V$-$Not$-$V$ and $C$-$Not$-$C$ questions, Schaffar & Chen (2001) analyze their forms in a syntactic model of focus and argue that the $V$-$Not$-$V$ morpheme is the head of a functional category Pol1, which is situated directly above the
VP within the I-projection and licenses information focus, and thus V-Not-V interrogatives can be used in all-new contexts as neutral questions with a wide-focus reading. The C-Not-C morpheme is the head of Pol2, which is part of the C-projection and licenses contrastive focus, and therefore C-Not-C questions can be used as verum questions with a narrow focus on the truth value. Note that although most of the previous studies on Mandarin C-Not-C questions consider Mandarin C-Not-C questions as biased questions, some of them can also be used as neutral questions in discourse-initial contexts, as shown in (33).

(33) Context: Mark is a TV reporter and is trying to find some natives on the street to do an interview. A random guy passes him, and Mark asks him if he is native.

\[
\begin{array}{llll}
\text{Ni} & \text{shi-bu-shi} & \text{bendi} & \text{ren?} \\
1\text{SG} & \text{COP-NEG-COP} & \text{local} & \text{people} \\
\end{array}
\]

‘Are you native?’

Based on a corpus study, Shao & Zhu (2002) find that within the 209 instances of C-Not-C questions that they collected, 186 of them are biased questions, accounting for 89% of the total, while 23 of them are neutral questions, accounting for 11% of the total. Furthermore, they also find that the constituents following the C-Not-C constituents are generally verb phrases in biased C-Not-C questions but noun phrases in neutral C-Not-C questions. On the basis of these findings, this study codes C-Not-C + NP questions as neutral questions, as in (33), while other subtypes of C-Not-C questions are coded as biased questions, if there is no contextual evidence against it.

In addition to A-Not-A questions, X-or-Y questions are the other subtype of Mandarin disjunctive questions. Mandarin X-or-Y questions are constructed by connecting two or more alternatives, namely, the possible answers in an exhaustive way joined with the conjunction *haishi* (‘or’). The syntactic nature of the alternatives may vary, but within one interrogative all the alternatives are normally of the same syntactic category. X-or-Y questions are generally
considered neutral questions, as they are used to seek information rather than confirmation, and speakers have no bias towards the polarity of the answer. Therefore, this study codes them as neutral questions.

5.3.2.2.3 Tag questions

Mandarin tag questions are formed by combining ordinary declaratives with RM-Not-RM or RM-SFP tags, and generally have two functions: (i) seeking confirmation of the proposition encoded in the anchor before the tag; and (ii) serving to make requests. The tag questions which contain the RMs *shi/dui* (‘yes’) are typically used as biased questions, as in (34), and the tag questions which contain the RMs *xing/hao* (‘okay’) are usually used as requests, as in (35).

(34)  
Ta zai kan shu, shi-bu-shi?  
3SG PROG look book yes-NEG-yes  
‘(S)he is reading a book, isn’t (s)he?’

(35)  
Ni xian likai, hao-ma?  
2SG earlier leave okay-SFP  
‘You leave first, will you?’

5.3.2.2.4 Particle questions

Mandarin particle questions are composed of either an ordinary declarative, an A-Not-A question, or a question-word question, followed by a de-stressed and neutral-toned SFP. The classification of Mandarin particle interrogatives is still controversial as Chinese linguists have not reached consensus on the issues of Mandarin SFPs. Based on Rizzi’s (1997) split CP hypothesis, Li (2006) and Paul (2016) both propose that Mandarin SFPs are heads of functional projections in a multi-layered split CP domain. Li (2006) argues that the SFP *ne* is an evaluative marker which indicates that the speaker considers the content in the preceding anchor particularly important. The SFPs *ba* and *ma* are degree markers on sentence force, and their only distinction is that the former marks a higher degree of assertive or directive force than the latter.
does. The SFP *a* is a discourse marker which serves to highlight the relevance of the utterance to the discourse context. Paul (2014) proposes that the SFPs *ma* and *ba* express the clause types and impose selectional restrictions on their TP complements, while the SFP *a* encodes the speaker’s attitudes.

This section classifies Mandarin particle questions into two different categories based on their distinctive semantic interpretations and selectional restrictions. The first category includes particle questions ending with the SFPs *ma*, *ba*, and *ha*, which can only select non-interrogative TPs and are therefore incompatible with TP-internal disjunctive or question-word questions. The SFP *ha* is a dialectal variant of the SFP *ba* and is used more frequently in the Northern Mandarin dialect (Yang & Wiltschko, 2016). The second category includes particle questions ending with the SFPs *a*, *ya*, *la*, and *ne*. The reason to classify *a*, *ya*, *la*, and *ne* as one category is because they are all able to select not only non-interrogative TPs, but also interrogative TPs, and are thus compatible with TP-internal disjunctive or question-word interrogatives. When co-occurring with non-interrogative constituents, the questions are coded as particle questions, however, when following interrogative constituents, their clause types are coded as the same as the preceding interrogative constituents for reasons discussed later in this section. The selectional restrictions of Mandarin particle questions are summarized in Table 5.4. The header row indicates the type of clause the SFPs combine with.

<table>
<thead>
<tr>
<th></th>
<th>non-interrogative</th>
<th>disjunctive interrogative</th>
<th>question-word interrogative</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ma</em></td>
<td>✅ <em>ma</em>-question</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td><em>ba</em></td>
<td>✅ <em>ba</em>-question</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td><em>ha</em></td>
<td>✅ <em>ha</em>-question</td>
<td>×</td>
<td>×</td>
</tr>
</tbody>
</table>
First of all, on the one hand, since *ma* is the default question marker in Mandarin which turns an ordinary declarative into a polar question, it is uncontroversial that *ma* should be analyzed as a complementizer taking a TP complement (Paul, 2014). However, the interpretation of *ma*-questions is still a matter of debate. Some scholars claim that *ma*-questions are conventionally used as neutral questions in the sense that their answers are “maximally unpredictable” to the speaker (Li, 2006: 35). However, there is evidence showing that *ma*-questions are not entirely semantically neutral, and their interpretation is highly context-dependent, as exemplified by the minimal pair in (36) (Guo, 2000; Huang, Li, & Li, 2009; Schaffar & Chen, 2001).

(36) Context 1: John and Mary want to find a place for dinner. When they pass by a restaurant called Green Leaf, John asks Mary if she has ever been to this restaurant, and Mary replies.

a. John: *Ni* *lai-guo* *zhe-jia* *canting* *ma*?
   2SG come-ASP DET-CL restaurant SFP
   ‘Have you ever been to this restaurant?’

   Mary:  *#Shi. /#Dui. /#Xing. /#Hao. /Lai-guo.*
   yes/yes/okay/okay/come-ASP
   ‘Yes.’

Context 2: John invites Mary to a restaurant called Green Leaf that he recently discovered for dinner. Mary orders her food without looking at the menu. John asks Mary if she has ever been to this restaurant, and Mary replies.

b. John: *Ni* *lai-guo* *zhe-jia* *canting* *ma*?
   2SG come-ASP DET-CL restaurant SFP

<table>
<thead>
<tr>
<th></th>
<th>non-interrogative</th>
<th>disjunctive interrogative</th>
<th>question-word interrogative</th>
</tr>
</thead>
<tbody>
<tr>
<td>*(y/l)*a</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>*(y/l)*a-question</td>
<td></td>
<td>disjunctive question</td>
<td>question-word question</td>
</tr>
<tr>
<td><em>ne</em></td>
<td>✔</td>
<td>✔</td>
<td>question-word question</td>
</tr>
<tr>
<td><em>ne-question</em></td>
<td></td>
<td>disjunctive question</td>
<td>question-word question</td>
</tr>
</tbody>
</table>

Table 5.4: Syntactic distribution of Mandarin particle questions
‘Have you ever been to this restaurant?’

Mary:  

Shi. /Dui. /#Xing. /#Hao. /Lai-guo.

yes/yes okay/okay come-ASP

‘Yes.’

(36a) and (36b) and their corresponding contexts are adapted from Schaffar & Chen (2001). The grammatical forms and English translations of the triggers in (36a) and (36b) are the same. Their only differences lie in the context and prosodic properties, and the strategy that the responder utilizes in response to the trigger. In context 1, John has no evidence of whether or not Mary has been to the restaurant, and thus he is not in favor of or against either the positive or the negative answer. In context 2, John has contextual evidence which is available to both of the interlocutors, that is, Mary orders the food without looking at the menu, suggesting that Mary has come to the restaurant before, and thus he is biased towards the positive answer. The prosodic difference between the triggers in (36a) and (36b) is that the trigger in (36b) carries a stress accent on the verb lai (‘come’) which is absent in (36a). In terms of the response strategy, when the initiator has no evidence or bias towards the polarity of the answer, as in context 1, the responder cannot use any of the RMs to respond, but only the echo answer system, repeating the verb in the trigger. In context 2, where the initiator has evidence and bias towards the answer, the responder can use not only the echo answer system but also the RM shi (‘yes’) to respond, because what is being asked by the initiator is to be given the truth value of the proposition. On the other hand, ba- and ha-questions differ from ma-questions in that they are always used as biased questions to ask for a confirmation of the proposition encoded in the declarative anchor.

The second category includes particle questions ending with the SFPs a, ya, la, and ne, which are all able to select not only non-interrogative TPs, but also interrogative TPs. The SFP a is an unstressed vowel whose realization is partially determined by its preceding syllable.
Generally, when a follows words that end in consonants or certain vowel clusters, it tends to be realized as a, and when a follows words ending in high vowels a, o, e, i, ü or high vowels clusters ia, ua, uo, üe, ie, ai, uai, ui, ei, it is often realized as ya (Zhou, 2018). It should be mentioned that our introspective data and the corpus data show that the RM shi can be modified by either a or ya. Lastly, when the SFP a follows an utterance ending with the SFP le, the string le a is realized as la (Zhou, 2018). As the most frequently used SFP in Mandarin daily conversational speech, discussion of a seems to be unavoidable in studies of Mandarin SFPs (see e.g., Chu, 2009; Li, 2006; Li & Thompson, 1989; Zhou, 2018). However, since the exact meanings and functions of a are highly dependent on contextual factors and thus difficult to pin down, there is still no consensus in Chinese linguistics circles. According to the literature, the functions of the SFP a and its variants include: expressing astonishment, enhancing exclamative mood, and asking for confirmation (Xinhua Dictionary, 2019); reminding, warning, addressing, expressing impatience, and providing explanation (Chao, 1968; Lv, 1980); indicating that the situation is different from the speaker’s epistemic bias (Jin, 2011); serving as the overt realization of “ego-evidentiality” (Badan & Cheng, 2015); reducing the “forcefulness of the message conveyed by the sentence” (Li & Thompson, 1989); conveying the speaker’s personal concern, increasing the degree of relevance between conversational turns (Chu, 2002, 2009; Li, 2006); evoking contrast and marking deviance (Wu, 2004). Some studies demonstrate that a and its variants serve the discourse function of interpersonal orientation and have at least two different pitch movements: a high rising tone indicating that the utterance containing a is addressee-oriented, and a falling tone which indicates the utterance is speaker-oriented (Chu, 2002, 2009; Li, 2006; Wu, 2004). This study does not attempt to discuss the functions of a and its variants in detail or identify their core properties, which are beyond the scope of this study. In
terms of *ne*, the function of *ne* in *ne*-questions is to indicate that the speaker considers the matter that is being inquired about to be particularly important and is eager to get the answer from the addressee (Li, 2006).

On the one hand, the clause types of the questions which are formulated by juxtaposing interrogative constituents and the SFPs *a*, *ya*, *la*, and *ne* are coded as the same clause types of the interrogative constituents. When the SFPs *a*, *ya*, *la*, and *ne* follow interrogative TPs, their omission does not affect the grammaticality and interrogativity of the utterance, but their presence brings in extra information. (37) and (38) exemplify the occurrences of *a*, *ya*, *la*, and *ne* with disjunctive questions and question-word questions respectively.

(37) *Ta* shi-bu-shi *chi su* *(ne/(y)a/la),ID?*
   3SG COP-NEG-COP eat vegetable SFP/SFP/SFP.SFP
   ‘Is (s)he vegetarian?’

(38) *Ni* *chi* *shenme* *(ne/(y)a/la)ID?*
   1SG eat WH SFP/SFP/SFP.SFP
   ‘What do you eat?’

(37) and (38) are still grammatical disjunctive and question-word questions even without the SFPs; however, although not represented by the English translation, their implications are distinctive with the presence of different SFPs. The questions in (37) and (38) without any SFPs are felicitous in discourse-initial contexts. The *ne*-questions in (37) and (38) can be paraphrased as “what I really want to know right now is, is (s)he vegetarian/what do you eat?” The *(y)a*-questions in (37) and (38) are felicitous in contexts such as a follow-up “repair” question when there is no response from the addressee in the previous conversational turn, or where the initiator attempts to interrupt an ongoing conversation and to attract the addressee’s attention (Li, 2006: 56). While none of the cited literature above discusses the pragmatic differences between *a* and its variants (focus on the phonological tendencies, as outline above), there is evidence illustrating
that the SFP \textit{ya} tends to confine its usage to emotionally positive contexts and the SFP \textit{a} does not seem to have this restriction (Yuan, 2019). In terms of \textit{la}, recall that \textit{la} is a combination of \textit{le} and \textit{a}, and the most common context in which \textit{le} occurs is when the state of affairs described in the utterance has undergone certain changes and thus is relevant to the present situation. A natural interpretation of the \textit{la}-question in (37) can be paraphrased as something like “Has (s)he become a vegetarian now?”, while the \textit{la}-question in (38) can be paraphrased as something like “What (kind of food) have you eaten?” and used in the context when the addressee starts to show signs of an allergic reaction visible to the speaker, and the speaker wants to check if it is caused by a food allergy. Both examples illustrate the change of state in terms of the current situation.

On the other hand, the SFPs \textit{a} and its variants are able to select non-interrogative TPs, as illustrated by (39).

(39) \textit{Ni yang gou (y)a/la)?}  
\textit{1SG raise dog SFP/SFP.SFP}  
‘Do you have a dog?’

As mentioned in the preceding section on declaratives, rising declaratives in Mandarin are semantically interpreted as questions, which means that overt lexical interrogative devices such as A-Not-A morphemes, question words, or sentence-final question particles are not obligatory in the formation of Mandarin questions. Questions which contain the SFPs \textit{a} and its variants are traditionally termed particle-associated questions in previous research, because there is no consensus about whether or not \textit{a} and its variants can be considered as question markers which have the force of questions, in other words, whether \textit{a} and its variants turn ordinary declaratives into questions or the rising intonation turn the utterances ending with these SFPs as questions. This is not an empirical question that can be settled by simply comparing the sentence intonation of Mandarin rising declaratives and particle-associated questions, because they are both marked
by a raise of the F0 in the final syllable (Gu & Liu, 2015). This study does not intend to settle the issue. Utterances ending with SFPs ma, ba, ha, (y/l)a, and ne and marked by question marks are uniformly termed and coded as particle questions in this study.

Apart from a and its variants, the SFP ne can also co-occur with non-interrogative constituents to form questions, as shown in (40). When in appropriate contexts, the ne-question in (40a) can be interpreted in three different ways and have the same communicative effects as the ma-question in (40b), the C-Not-C question in (40c), and the question-word question in (40d). According to Wu (2005) and Li (2006), the SFP ne in ne-questions serves as a topic marker whose function is to bring up a new topic to the current conversation. As a “change of topic” marker, ne is often used in rhetorical questions in which the speakers are completely certain about the answers.

(40)

a. Wo laizi Beijing, ni ne?
   1SG come Beijing 2SG SFP
   ‘I come from Beijing, what about you?’

b. Ni laizi Beijing ma?
   1SG come Beijing SFP
   ‘Do you come from Beijing?’

c. Ni shi-bu-shi laizi Beijing?
   1SG COP-NEG-COP come Beijing
   ‘Do you come from Beijing?’

d. Ni laizi naer?
   1SG come WH
   ‘Where do you come from?’

On the dimension of speech act type, the coding scheme for questions is as follows: (i) question-word questions which are not rhetorical questions are coded as neutral questions; (ii) V-Not-V questions and C-Not-C + NP questions are generally coded as neutral questions; the other
subtype of C-Not-C questions are coded as biased questions; (iii) RM-Not-RM and RM-SFP tag questions which contain the RMs shi/dui (‘yes’) are coded as biased questions; (iv) ma-questions can be biased or neutral, and thus the coding of ma-questions is context-dependent; ba-questions and ha-questions are generally coded as biased questions; as for (y/l)a-questions, when these SFPs co-occur with TP-internal non-interrogatives, they are coded as biased questions; when the SFPs co-occur with TP-internal interrogatives, including disjunctive and question-word questions, they are coded as neutral questions; ne-questions are generally coded as neutral questions whether they co-occur with TP-internal non-interrogatives or TP-internal interrogatives. In addition, rising declaratives are coded as biased questions, and explicit performatives which contain the performative verb wen (‘ask’) are coded depending on the context. The coding scheme for questions used in the corpus study is summarized in Table 5.5.

<table>
<thead>
<tr>
<th>question-word question</th>
<th>( \rightarrow ) neutral or biased question</th>
</tr>
</thead>
</table>
| disjunctive question   | \[ \begin{align*}
| \quad A-Not-A Q & \rightarrow \text{neutral question or requests} \\
| \quad V-Not-V Q & \rightarrow \text{neutral question or requests} \\
| \quad C-Not-C Q & \rightarrow \text{neutral question} \\
| \quad C-Not-C \: \text{NP} Q & \rightarrow \text{neutral question} \\
| \quad C-Not-C Q & \rightarrow \text{biased question} \\
| \quad X-\text{or-}Y \: \text{question} & \rightarrow \text{neutral question} \\
| \end{align*} \] |
| tag question           | \[ \begin{align*}
| \quad \text{RM-Not-RM \: tag} \: Q & \rightarrow \text{biased question} \\
| \quad \text{shi/dui-Not-shi/dui} \: \text{tag} \: Q & \rightarrow \text{biased question} \\
| \quad \text{RM-SFP \: tag} \: Q & \rightarrow \text{biased question} \\
| \quad \text{shi/dui-SFP \: tag} \: Q & \rightarrow \text{biased question} \\
| \end{align*} \] |
| particle question       | \[ \begin{align*}
| \quad ma\text{-question} & \rightarrow \text{neutral or biased question} \\
| \quad ba\text{-question} & \rightarrow \text{biased question} \\
| \quad ha\text{-question} & \rightarrow \text{biased question} \\
| \quad (y/l)a\text{-question} & \rightarrow \text{biased question} \\
| \quad \text{non-interrogative} + (y/l)a & \rightarrow \text{biased question} \\
| \quad \text{interrogative} + (y/l)a & \rightarrow \text{neutral or biased question} \\
| \quad \text{non-interrogative} + ne & \rightarrow \text{neutral question} \\
| \quad \text{interrogative} + ne & \rightarrow \text{neutral question} \\
| \end{align*} \] |

Table 5.5 The coding scheme for questions in Mandarin
5.3.2.3 Imperatives and directives

Imperatives are typically used by the speaker to direct the addressee. Directive is the general term covering a broad range of speech acts such as commanding, requesting, praying, entreating, inviting, permitting, and advising. Traditionally, Mandarin imperatives are classified by Chinese linguists according to their pragmatic functions. The standard four-term classification system (Fang, 2000) subdivides Mandarin imperatives into commanding, requesting, suggesting and entreating imperatives based on the relationship between the speaker and the addressee, and the morphosyntactic and lexical devices the speaker uses to mark the imperatives. All the distinctive properties of the four major subtypes of Mandarin imperatives are summarized in Table 5.6, including (a) the relationship between the speaker and the addressee; (b) the restrictions on co-occurrence with the SFPs ma, ba, ne, a and its variants; (c) the performative verb(s) which explicitly denote(s) its illocutionary force; the morphosyntactic or lexical devices which formally mark (d) its positive form and (e) its negative form; and (f) whether the speaker and the addressee are included or excluded.

<table>
<thead>
<tr>
<th>Command</th>
<th>a) S &gt;&gt; A (the social status of the speaker is much higher than the addressee)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b) a, *ba, *ne, *ma (can only occur in a-questions, but not ba-, ne-, or ma-questions)</td>
</tr>
<tr>
<td></td>
<td>c) performative verb: mingling (‘command’)</td>
</tr>
<tr>
<td></td>
<td>d) positive form: gei wo (‘give me’), bixu (‘must’), fei…buke (‘must’)</td>
</tr>
<tr>
<td></td>
<td>e) negative form: bu zhun (‘not allow’), bu xu (‘not allow’), shao (‘reduce’)</td>
</tr>
<tr>
<td></td>
<td>f) *inclusive; *nin (2SG.POL) (the addressees of commands do not include the speakers; the addressees of commands cannot be nin (2SG.POL))</td>
</tr>
</tbody>
</table>

(41) (Gei wo) kan shu qu.
    give 1SG look book go
    ‘Go and read a book!’
The performative verbs *kan* (‘think’), *xiang* (‘think’), *renwei* (‘think’), and *juede* (‘feel’) can be used to perform requests in Mandarin Chinese, as shown in the following example which is taken from Fang (2000: 54).

\[
\text{Wo kan ni shui qu ba.} \\
\text{ISG think 2SG sleep go SFP} \\
\text{‘You need to go to sleep.’}
\]

According to Fang (2000), *ma*-questions cannot be used as suggestions, but *hao-ba* (‘okay-SFP’) tag questions can be used as suggestions.
Entreaty

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>S &lt; A (the social status of the speaker is lower than that of the addressee)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td>*a, *ba, ne, ma (can only occur in ne- and ma-questions, but not a- or ba-questions)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c)</td>
<td>performative verb: qing (‘please’), qiu (‘entreat’), qingqiu (‘entreat’)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d)</td>
<td>positive form: hao-ba/xing-ba/hao-ma/xing-ma (‘okay-SFP’), hao-bu-hao/xing-bu-xing (‘okay-NEG-okay’), neng-bu-neng (can-NEG-can), ke-bu-keyi (can-NEG-can),</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e)</td>
<td>negative form: (qianwen) bie/buyao (…hao-ba/xing-ba/hao-ma/xing-ma/hao-bu-hao/xing-bu-xing) (‘please do not…, okay?’), neng-bu-neng/ke-bu-keyi bie/buyao (‘can you not…?’)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f)</td>
<td>*inclusive (the addressees of entreaties do not include the speakers)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(44) qian wan buyao likai, hao-ma?
    please NEG.IMP leave RM-SFP
    ‘Please do not leave, okay?’

Table 5.6 Fang’s (2000: 54) four-term classification system of Mandarin imperatives

Table 5.6 presents all the morphosyntactic and lexical devices which are frequently used to mark subtypes of Mandarin imperatives. Most of these devices are not peculiar to any subtypes or the major clause type of imperatives; in other words, they are not defining characteristics in the definition of clause types or clause subtypes. However, some of these devices can only occur in negative imperatives, such as bie/beng (‘do not’), or in non-imperatives which have the force of directives, such as heku/hebi (‘no need’) in question-word questions, hao-bu-hao/xing-bu-xing (‘okay-NEG-okay’) in tag questions, and neng-bu-neng/ke-bu-keyi (‘can-NEG-can’) in V-Not-V questions.

In general, this study codes utterances which do not start with first-person singular subject pronouns, occur as independent clauses with verbs that are not followed by any modals or aspectual particles, and are used by the speaker to direct the addressee, as ordinary imperatives— that is, imperatives which have the illocutionary force of directives and are formally distinct clause-types. In terms of the type of speech act, ordinary imperatives and other clause
types which are endowed with an indirect directive force by means of other devices, including: RM-Not-RM tag questions and RM-SFP tag questions which contain the RMs xing (‘okay’) or hao (‘okay’), and explicit performatives which contain the performative verbs mingling (‘command’), yaoqiu (‘request’), kan (‘think’), xiang (‘think’), renwei (‘think’), juede (‘feel’), jianyi (‘suggest’).

5.3.2.4 Exclamatives and exclamations

According to Zanuttini & Portner (2003: 46–7), exclamatives cannot serve as complements to non-factive verbs such as think or believe, and their encoded propositions “lie at the extreme end of some contextually given scale”. Exclamatives are typically used to express the speaker’s affective states or attitudes, which are derived from the scalar implicature of exclamatives, toward the encoded proposition (Zanuttini & Portner, 2003: 54). Like declaratives, exclamatives also represent propositions as being true, however, exclamatives highlight the strong emotional reaction of the speaker to the proposition, while declaratives highlight the speaker’s intellectual assessments of the truth of the proposition.

Badan & Cheng (2015) suggest that scalar focus, ego-evidentiality, and factivity are the three essential components of Mandarin exclamatives, and propose that there are two types of true exclamatives in Mandarin. Type I is characterized by combining the degree adverb zhe-me/na-me (‘this-ME/that-ME’) which is composed of the demonstrative pronoun zhe ‘this’ or na ‘that’ and the affix -me, with a gradable adjective and an optional SFP a or its variants, while Type II is formulated by connecting the scalar degree adverb duo-me (‘much/many.ME’) to a gradable adjective and a mandatory SFP a or its variants, as exemplified in (45) and (46) respectively.
Furthermore, Badan & Cheng (2015) also argue that, although *a* and its variants are obligatory in the second type of imperatives, they do not have the sentential force of exclamatives by themselves since they can also be used in other clause types. Instead, they serve as an overt realization of ego-evidentiality, which indicates that the speaker has “intimate and immediate knowledge of the situation which is not mediated by inference…” (Badan & Cheng, 2015: 404). Huddleston (1984) and Collins (2006) use the term *exclamatory statement* instead of the more traditional term *exclamation* to distinguish the sentential force of “true” exclamative clauses from the exclamatory realization of other clause types such as interrogative exclamatives *Ni yiwei ni shi shui?* (‘Who do you think you are?’) or imperative exclamatives *Qu si ba!* (‘Go to hell!’). However, in terms of the type of speech act, this study uniformly maps both Mandarin Type I and Type II exclamatives, and the exclamatory realization of other clause types, to exclamations.

5.3.2.5 **Expressives and expressive idioms**

Expressives are used to express psychological states such as emotive reaction of the speaker with regard to the content of the proposition in the clauses (Searle, 1975). There is no consensus on the delimitation of the expressive class since the grammatical form of expressives varies from sentence to sentence, and most of expressives are not even full clauses, however, they are still “syntactically special constructions with special uses and require description in every language in which they occur” (Sadock & Zwicky 1985: 188). Following Allan (2006), this study does not
consider expressives as a pure syntactic category, rather it defines them as formulaic idioms which are used to express the speaker’s psychological state or emotive reaction to something in the environment, and are thus often associated with ritualized events such as greeting (47), thanking (48), farewelling (49), back-channelling (50), addressing (51), and so on.

(47) *Nihao* (‘Hello.’)

(48) *Xiexie.* (‘Thanks.’)

(49) *Zaijian.* (‘Bye.’)

(50) *Shi-shi-shi.* (‘Yes, yes, yes.’)

(51) *Yuehan.* (‘John.’)

To sum up, this section introduced the method and the data material used in the corpus study, and established the criteria used for categorizing and coding the Mandarin RMs and triggers in this study. In the next section, I will present and discuss the quantitative and qualitative results of the corpus study.
Chapter 6: Results and Discussion

6.1 The quantitative analysis

In this chapter, I will present the results of the quantitative corpus analysis of the frequency of occurrence and distribution of the four simplex RMs shi (‘yes’), dui (‘yes’), xing (‘okay’), hao (‘okay’) and the modified forms of the RM shi (‘yes’), based on the data from the MCRM dataset.

6.1.1 Simplex response markers

First, I will present and discuss the results of the simplex RMs in our corpus data. Table 6.1 shows the frequency of occurrence of the four Mandarin simplex RMs shi (‘yes’), dui (‘yes’), xing (‘okay’), hao (‘okay’) in the MCRM dataset, ranked according to their total number of occurrences, namely, the raw frequencies, in descending order. The raw frequencies are indicated in the Freq. column and the percentages are indicated in the % column.

<table>
<thead>
<tr>
<th>Rank</th>
<th>RM type</th>
<th>Freq.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>dui (‘yes’)</td>
<td>898</td>
<td>60.55%</td>
</tr>
<tr>
<td>2</td>
<td>hao (‘okay’)</td>
<td>461</td>
<td>31.09%</td>
</tr>
<tr>
<td>3</td>
<td>shi (‘yes’)</td>
<td>117</td>
<td>7.89%</td>
</tr>
<tr>
<td>4</td>
<td>xing (‘okay’)</td>
<td>7</td>
<td>0.47%</td>
</tr>
<tr>
<td>Total</td>
<td>simplex RM</td>
<td>1483</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 6.1 The frequencies of occurrence of the simplex RMs in the MCRM dataset

As shown in Table 6.1, the simplex RMs shi (‘yes’), dui (‘yes’), xing (‘okay’), hao (‘okay’) in the MCRM dataset total to 1483 tokens, representing a mere 0.066% of the total number of Chinese characters (2,259,952) in the GALE Phase 4 Chinese Broadcast Conversation corpus. Note that the texts from the GALE Phase 4 Chinese Broadcast Conversation corpus are not
segmented at the word level. Based on a corpus study, Tsou & Kwong (2015) found that the average Mandarin word has 1.78 characters. Among the four types of Mandarin simplex RMs, the RM dui (‘yes’) has the highest raw frequency, occurring 898 times and accounting for 60.55% of the total number of simplex RMs in our data. The second most frequently used simplex RM is hao (‘okay’), occurring 461 times (31.09%) in the dataset, followed by shi (‘yes’) which occurs 117 times (7.89%) in total. Recall from Section 2.3 that Yan (2005) proposes that shi (‘yes’) is not commonly used as a positive response to interrogatives in Mandarin. The low frequency of occurrence of the simplex RM shi (‘yes’) in our data suggests that shi is not commonly used as a positive response in general in Mandarin, compared with other Mandarin positive RMs dui (‘yes’) and hao (‘okay’). In addition, the raw frequency of the simplex RM xing (‘okay’) is much lower than the rest of the simplex RMs, occurring only 7 times in the dataset, comprising less than 0.5% of the total number of simplex RMs. Considering that our corpus data are drawn from broadcast conversations, which are typically expected to represent formal spoken language in corpus studies, the fact that xing (‘okay’) has a significantly lower frequency than other simplex RMs suggests that it is much less felicitous in formal contexts than the other simplex RMs. This supports the hypothesis that the simplex RM xing is infelicitous in formal contexts.

To test Hypothesis 1 in Section 4.3, the following section provides a quantitative analysis of the discourse functions and distributions of the four Mandarin simplex RMs by speech act types. The results are presented in Table 6.2. Hypothesis 1 is repeated here for convenience.

**Hypothesis 1:**

The RMs shi/dui (‘yes’) and xing/hao (‘okay’) are in complementary distribution:

(i) the RMs shi/dui (‘yes’) are used to respond to statements, questions, and exclamations;
(ii) the RMs *xing/hao* (*okay*) are used in response to directives.

<table>
<thead>
<tr>
<th></th>
<th><em>shi</em></th>
<th>%</th>
<th><em>dui</em></th>
<th>%</th>
<th><em>xing</em></th>
<th>%</th>
<th><em>hao</em></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Statements</strong></td>
<td>70</td>
<td>59.8%</td>
<td>658</td>
<td>73.3%</td>
<td>5</td>
<td>71.4%</td>
<td>275</td>
<td>59.7%</td>
</tr>
<tr>
<td>biased Q</td>
<td>30</td>
<td>25.6%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>3.3%</td>
</tr>
<tr>
<td>neutral Q</td>
<td>12</td>
<td>10.3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24</td>
<td>5.2%</td>
</tr>
<tr>
<td><strong>Questions</strong></td>
<td>42</td>
<td>35.9%</td>
<td>200</td>
<td>22.3%</td>
<td></td>
<td></td>
<td>39</td>
<td>8.5%</td>
</tr>
<tr>
<td><strong>Exclamations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>0.6%</td>
</tr>
<tr>
<td><strong>Subtotal:</strong></td>
<td>112</td>
<td>95.7%</td>
<td>863</td>
<td>96.1%</td>
<td>5</td>
<td>71.4%</td>
<td>314</td>
<td>68.1%</td>
</tr>
<tr>
<td>command</td>
<td>1</td>
<td>0.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>51</td>
<td>11.1%</td>
</tr>
<tr>
<td>request</td>
<td>2</td>
<td>1.7%</td>
<td></td>
<td></td>
<td>1</td>
<td>14.3%</td>
<td>4</td>
<td>0.9%</td>
</tr>
<tr>
<td>suggestion</td>
<td></td>
<td></td>
<td>2</td>
<td>0.2%</td>
<td>4</td>
<td>0.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Directives</strong></td>
<td>3</td>
<td>2.6%</td>
<td>12</td>
<td>1.3%</td>
<td>1</td>
<td>14.3%</td>
<td>55</td>
<td>11.9%</td>
</tr>
<tr>
<td>commissive</td>
<td>1</td>
<td>0.9%</td>
<td>2</td>
<td>0.2%</td>
<td>10</td>
<td>2.2%</td>
<td>5</td>
<td>1.1%</td>
</tr>
<tr>
<td>address</td>
<td>1</td>
<td>0.9%</td>
<td>1</td>
<td>0.1%</td>
<td>11</td>
<td>2.4%</td>
<td>45</td>
<td>9.8%</td>
</tr>
<tr>
<td>greet</td>
<td>1</td>
<td>0.9%</td>
<td></td>
<td></td>
<td>1</td>
<td>0.2%</td>
<td>19</td>
<td>4.1%</td>
</tr>
<tr>
<td>thank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>farewell</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>back-channel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>declaration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>situation</td>
<td>9</td>
<td>1%</td>
<td>11</td>
<td>1.2%</td>
<td>9</td>
<td>1.9%</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td><strong>Expressive idioms</strong></td>
<td>2</td>
<td>1.7%</td>
<td>23</td>
<td>2.6%</td>
<td>1</td>
<td>14.3%</td>
<td>92</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>117</td>
<td>100%</td>
<td>898</td>
<td>100%</td>
<td>7</td>
<td>100%</td>
<td>461</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 6.2 The distribution of Mandarin simplex RMs by speech acts

Table 6.2 presents the frequency of occurrence of the four Mandarin simplex RMs *shi* (*yes*), *dui* (*yes*), *xing* (*okay*), *hao* (*okay*) in the MCRM dataset organized by speech acts. The raw frequencies are indicated in the RM column and the percentages are indicated in the % column. Following the coding schemes for the triggers in Section 5.3.2, the speech acts in Table 6.2 are classified into five general categories: statements, questions, directives, exclamations, and
expressive idioms. Questions are subdivided into biased and neutral questions; directives are further divided into commands, requests, suggestions, and entreaties. Given that no entreaties which are responded to with simplex RMs are found in our corpus data, the category of entreaties is not provided Table 6.2. The total number of occurrences of the RMs in each of the five categories is provided and highlighted in bold with a grey background. The occurrences of the RMs in response to statements, questions, and exclamations in total are calculated and provided in the Subtotal row, also highlighted in bold with a grey background.

The results in Table 6.2 show that more than 95% of the simplex RMs shi (‘yes’) and dui (‘yes’) found in our data are used in response to statements, questions, and exclamations. There are 70 tokens of shi in our data that are used to respond to statements, and 42 shi that are used in response to questions, totaling to 112 tokens and representing 95.7% of all tokens of simplex shi in the corpus. There is no occurrence of shi in the dataset that is found in response to exclamations. On the other hand, out of a total occurrence of 898 tokens of dui (‘yes’) in our data, 658 occurrences are used to respond to statements, 200 occurrences to respond to questions, and 5 occurrences to respond to exclamations, accounting for 96.1% of the total number of dui (‘yes’) in the dataset. These distributions partly support the hypothesis that the Mandarin simplex RMs shi (‘yes’) and dui (‘yes’) are mainly used to respond to statements and questions. Furthermore, among the 5 occurrences of RMs which are used to respond to exclamations, all of them are the RM dui (‘yes’).

The RMs xing/hao (‘okay’) are primarily used to respond to statements in our dataset. Out of the total number of 7 tokens of xing (‘okay’) in our data, 5 (71.4%) occurrences are used to respond to statements, 1 (14.3%) occurrence responds to a directive, and 1 (14.3%) occurrence responds to a situation (i.e., when there is no verbal trigger and the RM is used to respond to
either the initiator’s action or the events that happen in the context). As for the RM hao (‘okay’), out of a total of 461 occurrences of hao (‘okay’) in the data, 275 (59.7%) occurrences are used to respond to statements and 39 (8.5%) occurrences to respond to questions. The rate of hao (‘okay’) used to respond to directives (11.9%) is much higher than for the RMs shi (‘yes’) (2.6%) and dui (‘yes’) (1.3%), suggesting that the RM hao (‘okay’) is more likely to be used in response to directives than shi/dui (‘yes’). What is special about the RM hao (‘okay’) is that 20% of the tokens of hao found in our data are used to respond to expressive idioms, including commissive, addressing, greeting, thanking, farewell, back-channel, and declaration, compared to the RMs shi (‘yes’) at 1.7% and dui (‘yes’) at 2.6%.

In summary, our findings contradict the hypothesis that the RMs shi/dui (‘yes’) are used to respond to statements, questions, and exclamations, while the RMs xing/hao (‘okay’) are used in response to directives. Our findings suggest that, although the distributions of the RMs shi/dui (‘yes’) and xing/hao (‘okay’) are indeed very different, they are not in complementary distribution since all of them are primarily used in response to statements. Leaving aside statements, the distribution of the RMs shi/dui (‘yes’) is largely complementary to xing/hao (‘okay’), with shi/dui (‘yes’) primarily being used in response to questions and xing/hao (‘okay’) mainly being used in response to directives and expressive idioms.

To test Hypothesis 2, repeated below, the following section provides a quantitative analysis of the distributions of the four Mandarin simplex RMs by clause types. The results are presented in Table 6.3.

**Hypothesis 2:**

As responses to questions, the RMs shi/dui (‘yes’) are restricted to biased questions:

(i) the RMs shi/dui (‘yes’) are only used to respond to particle questions;
(ii) the RM s shi/dui (‘yes’) cannot respond to A-Not-A questions.

<table>
<thead>
<tr>
<th></th>
<th>shi</th>
<th>dui</th>
<th>xing</th>
<th>hao</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-Not-C Q</td>
<td>10 (23.8%)</td>
<td>18 (9.0%)</td>
<td>5 (12.8%)</td>
<td></td>
</tr>
<tr>
<td>tag Q</td>
<td>13 (31.0%)</td>
<td>62 (31.0%)</td>
<td>5 (12.8%)</td>
<td></td>
</tr>
<tr>
<td>ma-Q</td>
<td>1 (2.4%)</td>
<td>22 (11.0%)</td>
<td>2 (5.1%)</td>
<td></td>
</tr>
<tr>
<td>ba-Q</td>
<td>4 (9.5%)</td>
<td>7 (3.5%)</td>
<td>1 (2.6%)</td>
<td></td>
</tr>
<tr>
<td>ha-Q</td>
<td>2 (4.8%)</td>
<td>24 (12.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a-Q</td>
<td></td>
<td>7 (3.5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ya-Q</td>
<td></td>
<td>1 (0.5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>la-Q</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rising declarative question-word Q</td>
<td></td>
<td>14 (7.0%)</td>
<td>2 (5.1%)</td>
<td></td>
</tr>
<tr>
<td>question-word Q</td>
<td></td>
<td>2 (1.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biased Q</td>
<td>30 (71.4%)</td>
<td>157 (78.5%)</td>
<td>0</td>
<td>15 (38.5%)</td>
</tr>
<tr>
<td>V-Not-V Q</td>
<td>8 (19.0%)</td>
<td>30 (15.0%)</td>
<td>18 (46.2%)</td>
<td></td>
</tr>
<tr>
<td>C-Not-C Q</td>
<td>1 (2.4%)</td>
<td>8 (4.0%)</td>
<td>2 (5.1%)</td>
<td></td>
</tr>
<tr>
<td>X-or-Y Q</td>
<td>1 (2.4%)</td>
<td>1 (0.5%)</td>
<td>1 (2.6%)</td>
<td></td>
</tr>
<tr>
<td>ma-Q</td>
<td>1 (2.4%)</td>
<td>3 (1.5%)</td>
<td>3 (7.7%)</td>
<td></td>
</tr>
<tr>
<td>a-Q</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ya-Q</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>la-Q</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ne-Q</td>
<td>1 (2.4%)</td>
<td>1 (0.5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>explicit performative</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral Q</td>
<td>12 (28.6%)</td>
<td>43 (21.5%)</td>
<td>0</td>
<td>24 (61.5%)</td>
</tr>
<tr>
<td>Total</td>
<td>42 (100%)</td>
<td>200 (100%)</td>
<td>0 (NA)</td>
<td>39 (100%)</td>
</tr>
</tbody>
</table>

Table 6.3 The distribution of simplex RMs in response to questions by clause types

Note that although we discussed in Section 5.3.2.2.2 that the C-Not-C questions which are formulated by combining C-Not-C morphemes with noun phrases are typically used as neutral questions, there are no C-Not-C + NP questions in the corpus data. Thus, all the C-Not-C question are simply labeled as C-Not-C questions in the following analyses. Table 6.3 only include the triggers which are used as questions. That is, tag questions, V-Not-V questions, ma-
questions, *ha*-questions, and rising declaratives which are used as directives are not considered in this analysis. As shown in Table 6.3, both the RMs *shi* (‘yes’) and *dui* (‘yes’) are more likely to be used in response to biased questions rather than neutral questions, and their distribution patterns are similar: 71.4% of *shi* (‘yes’) versus 78.5% of *dui* (‘yes’) are used to respond to biased questions, and 28.1% of *shi* (‘yes’) versus 21.5% of *dui* (‘yes’) are used to respond to neutral questions. In addition to particle questions, the RMs *shi*/*dui* (‘yes’) are also commonly used to respond to tag questions, C-Not-C questions, and question-word questions. In terms of Hypothesis 2 (ii), our corpus data demonstrate that the RMs *shi*/*dui* (‘yes’) are not frequently used to respond to V-Not-V questions, but are commonly used to respond to C-Not-C questions, which contradicts the hypothesis that the RMs *shi*/*dui* (‘yes’) cannot respond to A-Not-A, since both V-Not-V questions and C-Not-C questions are subtypes of A-Not-A questions.

Apart from the RMs *shi*/*dui* (‘yes’), our results show that the RM *xing* (‘okay’) is not used to respond to questions. But considering that there are only 7 instances of *xing* (‘okay’) in total, the data size is not enough to draw any reasonable conclusions. The distribution pattern of *hao* (‘okay’) is very different from the other Mandarin simplex RMs. In our corpus data, 39 tokens of *hao* (‘okay’) are used to respond to questions, and among them, 15 (38.5%) tokens are used in response to biased questions while 24 tokens (61.5%) are used in response to neutral questions. Moreover, the data show that the RM *hao* (‘okay’) has a much higher frequency (46.2%) in response to neutral question-word questions than the RMs *shi* (‘yes’) at 19.0% and *dui* (‘okay’) at 15.0%.

To sum up, our results suggest that the RMs *shi* (‘yes’) and *dui* (‘yes’) are more likely to be used in response to biased questions, providing supportive evidence for the hypothesis that the RMs *shi*/*dui* (‘yes’) are restricted to biased questions. However, in addition to particle questions,
they are also commonly used to respond to tag questions, C-Not-C questions, and question-word questions, contradicting the hypothesis that the RMs shi/dui (‘yes’) is only used to respond to particle questions. Furthermore, although the RMs shi/dui (‘yes’) are not frequently used to respond to V-Not-V questions, they are commonly used to respond to C-Not-C questions, which contradicts the hypothesis that the RMs shi/dui (‘yes’) cannot respond to A-Not-A questions, since both V-Not-V questions and C-Not-C questions are subtypes of A-Not-A questions.

6.1.2 Complex response markers

This section will present the results for the modified forms of shi (‘yes’) in the MCRM dataset. Table 6.4 shows the distribution of these complex RMs which comes from an exhaustive count of all the forms of shi in our data, including both the simplex and modified forms of shi (‘yes’), ranked according to their raw frequencies in descending order. The raw frequencies are indicated in the Freq. column and the percentages are indicated in the % column.

<table>
<thead>
<tr>
<th>Simplex shi</th>
<th>Freq.</th>
<th>Complex shi</th>
<th>Freq.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>shi</td>
<td>117</td>
<td>shi-ba</td>
<td>36</td>
<td>15.8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>shi-de</td>
<td>30</td>
<td>13.2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>shi-a</td>
<td>16</td>
<td>7.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>shi-shi</td>
<td>15</td>
<td>6.6%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>shi-ma</td>
<td>12</td>
<td>5.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>shi-ya</td>
<td>2</td>
<td>0.9%</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td>228</td>
<td><strong>117</strong></td>
<td>51.3%</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.4 The frequencies of occurrence of the complex RM shi in the MCRM dataset

Table 6.4 shows that Mandarin simplex RM shi (‘yes’) can be modified by the SFPs ba, de, and a, the RM shi, and the SFPs ma and ya. The simplex RM shi is found to have the highest frequency, occurring 117 times in total, accounting for 51.3% of all 228 instances of shi in the
MCRM dataset. The occurrences of all the modified forms of *shi* total to 111 (48.7%), almost as many as the simplex *shi*. The second most frequently used form is *shi-ba*, occurring 36 times in total (15.8%), followed by *shi-de* (30, 13.2%), *shi-a* (16, 7.0%), *shi-shi* (15, 6.6%), *shi-ma* (12, 5.3%), and *shi-ya* (2, 0.9%).

Although our corpus data indicate that the RM *shi* can be modified by either *a* or *ya*, there are only 2 instances of *shi-ya* in the data, accounting for less than 1% of all forms of *shi* (‘yes’), compared to *shi-a* (‘yes-SFP’) which occurs 16 times in the dataset and accounts for 7% of all forms of *shi* (‘yes’). The scarceness of *shi-ya* (‘yes-SFP’) does not accord with Zhou’s (2018) observation that the SFP *a* tends to be realized as *ya* when it follows words ending in high vowels *a*, *o*, *e*, *i*, *ü* or high vowel clusters *ia*, *ua*, *üe*, *ie*, *ai*, *uai*, *ui*, *ei*. Table 6.5 and Table 6.6 present the results for the distributions of the complex RM *shi* (‘yes’) by clause types and speech acts, respectively. Given that the data size of some forms of *shi* is very small, in terms of proportion, the distributions of the complex RM *shi* by clause types and by speech acts are largely similar, except for questions and some minor clause types. Therefore, in the following section, I will discuss the two types of distribution uniformly.

<table>
<thead>
<tr>
<th></th>
<th>shi</th>
<th>shi-ba</th>
<th>shi-de</th>
<th>shi-a</th>
<th>shi-shi</th>
<th>shi-ma</th>
<th>shi-ya</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ordinary Dec.</strong></td>
<td>71</td>
<td>15</td>
<td>13</td>
<td>6</td>
<td>10</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(60.7%)</td>
<td>(41.7%)</td>
<td>(43.3%)</td>
<td>(37.5%)</td>
<td>(66.7%)</td>
<td>(91.7%)</td>
<td>(50%)</td>
</tr>
<tr>
<td><strong>rising Dec.</strong></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(12.5%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>explicit</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>performative</strong></td>
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<td></td>
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<td></td>
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<td>(0.85%)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Declaratives</strong></td>
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<td>8</td>
<td>10</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(61.5%)</td>
<td>(41.7%)</td>
<td>(43.3%)</td>
<td>(50.0%)</td>
<td>(66.7%)</td>
<td>(91.7%)</td>
<td>(50.0%)</td>
</tr>
<tr>
<td><strong>question-word Q</strong></td>
<td>8</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(6.8%)</td>
<td>(13.3%)</td>
<td>(6.3%)</td>
<td>(6.7%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clause Type</td>
<td>shi</td>
<td>shi-ba</td>
<td>shi-de</td>
<td>shi-a</td>
<td>shi-shi</td>
<td>shi-ma</td>
<td>shi-ya</td>
</tr>
<tr>
<td>-------------</td>
<td>-----</td>
<td>--------</td>
<td>--------</td>
<td>-------</td>
<td>---------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>V-Not-V Q</td>
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<td>2</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.7%)</td>
<td>(13.3%)</td>
<td>(6.3%)</td>
<td>(13.3%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-Not-C Q</td>
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<td></td>
<td>(9.4%)</td>
<td>(10.0%)</td>
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<td></td>
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<td>X-or-Y Q</td>
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</tr>
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<td></td>
<td></td>
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<td></td>
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<td></td>
<td>(6.3%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ma-Q</td>
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<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.7%)</td>
<td>(6.7%)</td>
<td>(2.8%)</td>
<td>(6.7%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ba-Q</td>
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<td></td>
</tr>
<tr>
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<td>(3.4%)</td>
<td>(2.8%)</td>
<td>(6.3%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ha-Q</td>
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<td></td>
<td>1</td>
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<td>1</td>
<td>1</td>
<td></td>
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<tr>
<td></td>
<td>(1.7%)</td>
<td></td>
<td>(3.3%)</td>
<td></td>
<td>(6.7%)</td>
<td>(6.7%)</td>
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<tr>
<td>a-Q</td>
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</tr>
<tr>
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<td></td>
<td>(3.3%)</td>
<td></td>
<td>(12.5%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ya-Q</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>ne-Q</td>
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<td></td>
<td></td>
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<td>Interrogatives</td>
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<td>8</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(35.9%)</td>
<td>(2.8%)</td>
<td>(50%)</td>
<td>(50%)</td>
<td>(33.3%)</td>
<td>(8.3%)</td>
<td>(50.0%)</td>
</tr>
<tr>
<td>Imperatives</td>
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<td>1</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>(0.9%)</td>
<td>(3.3%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Exclamative</td>
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</tr>
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<td>1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.7%)</td>
<td>(55.6%)</td>
<td>(3.3%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total: 228 (100%)</td>
<td>117</td>
<td>36</td>
<td>30</td>
<td>16</td>
<td>15</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>(100%)</td>
<td>(100%)</td>
<td>(100%)</td>
<td>(100%)</td>
<td>(100%)</td>
<td>(100%)</td>
<td>(100%)</td>
</tr>
</tbody>
</table>

Table 6.5 The distribution of the complex RM *shi* by clause types

<table>
<thead>
<tr>
<th>Clause Type</th>
<th>shi</th>
<th>shi-ba</th>
<th>shi-de</th>
<th>shi-a</th>
<th>shi-shi</th>
<th>shi-ma</th>
<th>shi-ya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statements</td>
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<td>13</td>
<td>6</td>
<td>10</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>59.8%</td>
<td>38.9%</td>
<td>43.3%</td>
<td>37.5%</td>
<td>66.7%</td>
<td>91.7%</td>
<td>50%</td>
</tr>
<tr>
<td>biased Q</td>
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<td>1</td>
<td>7</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>25.6%</td>
<td>2.8%</td>
<td>23.3%</td>
<td>56.2%</td>
<td>6.7%</td>
<td>8.3%</td>
<td>50%</td>
</tr>
<tr>
<td>neutral Q</td>
<td>12</td>
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<td>7</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10.3%</td>
<td>2.8%</td>
<td>23.3%</td>
<td>6.2%</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
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<td>10</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>35.9%</td>
<td>2.8%</td>
<td>46.7%</td>
<td>62.5%</td>
<td>26.7%</td>
<td>8.3%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>shi</td>
<td>shi-ba</td>
<td>shi-de</td>
<td>shi-a</td>
<td>shi-shi</td>
<td>shi-ma</td>
<td>shi-ya</td>
</tr>
<tr>
<td>-----------</td>
<td>-----</td>
<td>--------</td>
<td>--------</td>
<td>------</td>
<td>--------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td><strong>Exclamations</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>command</td>
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<td>0.9%</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>request</td>
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<td>1.7%</td>
<td>2</td>
<td>6.7%</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Directives</strong></td>
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<td>2.6%</td>
<td>2</td>
<td>6.7%</td>
<td>1</td>
<td>6.7%</td>
<td></td>
</tr>
<tr>
<td>commissive</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>address</td>
<td>1</td>
<td>0.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>greet</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>thank</td>
<td></td>
<td></td>
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<td>1</td>
<td>3.3%</td>
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</tr>
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<td>farewell</td>
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</tr>
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<td>back-channel</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Others</strong></td>
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<td>21</td>
<td>58.3%</td>
<td>1</td>
<td>3.3%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>117</td>
<td>100%</td>
<td>36</td>
<td>100%</td>
<td>30</td>
<td>100%</td>
<td>16</td>
</tr>
</tbody>
</table>

Table 6.6 The distribution of the complex RM shi by speech acts

Table 6.5 and Table 6.6 show that the rates of the modified forms of shi (‘yes’) in response to declaratives and statements are generally lower than the simplex shi (approx. 60%), except for shi-shi and shi-ma. The rate of shi-shi is similar to the simplex shi, but the rate of shi-ma is much
higher than the simplex *shi*. 11 instances of *shi-ma* are found to be used in response to declaratives and statements, accounting for 91.7% of all 12 instances of *shi-ma* in our data.

Second, the rates of *shi-ba* (2.8%) and *shi-ma* (8.3%) which are used in response to questions are much lower than the simplex RM *shi* (35.9%). In terms of the questions, *shi-de* is more likely to be used in response to question-word questions (13.3%) and V-Not-V questions (13.3%), compared to simplex *shi* at 6.8% to question-word questions and 1.7% to V-Not-V questions. As for A-Not-A questions, the rates of *shi-de* (13.3%), *shi-a* (6.3%), and *shi-shi* (13.3%) which are used to respond to V-Not-V questions are all much higher than the simplex *shi* (1.7%). Thus, *shi-de* (23.3%) is more likely to be used in response to neutral questions than the simplex *shi* (9.4%). There are 11 occurrences of the simplex *shi* (9.4%) in our data that are used to respond to C-Not-C questions, however, except for *shi-de* (3 occurrences, 10%), none of the modified forms of *shi* is found to be used in response to C-Not-C questions. Furthermore, 13 occurrences of the simplex *shi* (11.1%) found in the dataset are used to respond to tag questions, while none of the modified forms of *shi* is found to be used in response to tag questions, except for *shi-a* (1 occurrence, 6.3%). Lastly, the rates of the modified forms of *shi* which are used in response to particle questions are generally higher than the simplex *shi* (8 occurrences, 6.8%), except for *shi-ba* (1 occurrence, 2.8%). Out of the total number of 16 *shi-a* in our data, 5 (31.2%) occurrences are used to respond to particle questions. There is only one occurrence of *shi* and one occurrence of *shi-de* used in response to imperatives and directives. None of the simplex or complex forms of *shi* are used in response to exclamatives. In addition, what is special about *shi-de* is that it has a much higher frequency (20 occurrences, 55.6%) in response to back-channelling, while none of the simplex *shi* or other modified forms of *shi* is found to be used in response to back-channelling in our data.
In summary, the distributions of the modified forms of *shi* (‘yes’) generally pattern with the simplex RM *shi*. Both of them tend not to be used to respond to directives and exclaimations. However, they differ in the following ways: (i) in contrast to the simplex *shi*, the complex *shi-ba, shi-de, shi-a*, and *shi-ya* are less likely to be used in response to declaratives and statements, however, *shi-ma* is mainly used to respond to declarative and statements; (ii) *shi-de* is more likely to be used in response to question-word questions, V-Not-V questions, and neutral questions than other forms of *shi*, including the simplex *shi*; (iii) both the simplex *shi* and *shi-de* are more likely to be used in response to C-Not-C questions compared to other modified forms of *shi*; (iv) the simplex *shi* is more likely to be used in response to tag questions, but less likely to respond to particle questions than the modified forms of *shi*.

6.2 The qualitative analysis

The results of the quantitative analysis of the simplex and complex *shi* (‘yes’) in the preceding section suggest that the modification of Mandarin simplex RMs indeed affects their discourse functions and thus changes their distributions. Based on our findings from the storyboard introspective analysis, we proposed two general hypotheses on how the modification of Mandarin simplex RMs can impact their essential functions. To test these hypotheses, this section starts by analyzing the essential discourse functions of the simplex RMs. Hypotheses 4 is repeated here for convenience.

**Hypothesis 4:**

Mandarin positive simplex RMs only have the agreement and acknowledgement functions, but not the answering function.

Hypothesis 4 predicts that the Mandarin positive simplex RMs can only be used in response to a trigger which asks the initiator to either partially or fully commit to its informative
content. That is, Mandarin RMs cannot be used in response to neutral questions. To verify this prediction, the frequency of occurrence of the simplex RMs which are used in response to biased and neutral questions are counted and provided in Table 6.7.

<table>
<thead>
<tr>
<th></th>
<th>shi (117) %</th>
<th>dui (898) %</th>
<th>xing (7) %</th>
<th>hao (461) %</th>
</tr>
</thead>
<tbody>
<tr>
<td>biased Q</td>
<td>25.6%</td>
<td>17.5%</td>
<td>n/a</td>
<td>3.3%</td>
</tr>
<tr>
<td>neutral Q</td>
<td>10.3%</td>
<td>4.8%</td>
<td>n/a</td>
<td>5.2%</td>
</tr>
</tbody>
</table>

Table 6.7 The proportions of the simplex RMs used in response to neutral questions

The results in Table 6.7 show that the RM xing (‘okay’) is not used in response to questions. 9.4% of the occurrences of shi (‘yes’), 4.8% of the occurrences of dui (‘yes’), and 5.2% of the occurrences of hao (‘okay’) found in our data are used to respond to neutral questions, which seems to contradict Hypothesis 4, and thus we further investigate each occurrence in the hope of finding the reason that makes them felicitous in response to neutral questions. In what follows, I discuss some possible reasons for this pattern along with illustrative data from the corpus. Note that the translations for the data are necessarily rough due to space limitations.

First, some of the RMs are used to indicate the responder’s agreement with the background information in the trigger, rather than to provide a positive answer to the neutral question, as shown in (52), in which the responder uses the simplex shi (‘yes’) to indicate his agreement with the initiator’s inference that ‘you must have yelled too’.

(52) Li:  
\textit{Na Qiuyu ni dangshi zai xianchang, ni yinggai ye zai nahan zhuwei, ni hande shi shenme?}  
\textit{Qiuyu, you were on the scene, you must have yelled too, what did you yell?}  
\text{(Trigger)}

Qiu:  
\textit{Shi, uh women han, you hendo ku hao.}  
\textit{Yes, we yelled a lot of slogans.}  
\text{(RM+Host clause)}

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Second, some of the RMs are simply used to acknowledge the trigger. They are used as a backchanneling device to indicate the responder’s engagement with the current speaker’s utterance, and to support the speaker without publicly committing to the proposition in the trigger, as exemplified by (53).

(53) Speaker#5: *Ruguo dalai lama huilai le, tanpan tan hao le huilaile, Xizang haihui caiqu nage zhengjiaoheyi de zhengzhi tixi ma?* *(Trigger)*

‘If the negotiation is successful and Dalai comes back, will Tibet have a theocratic government?’

Xiao_Xun: *Hao, xiexie nin, uh, xiexienin tichu wenti.* *(RM+Host clause)*

‘Okay, thank you, thank you for asking the questions.’

The third reason is that some RMs are used by the responder to indicate his/her agreement with the event, i.e., the speech act of questioning, rather than the informative content of the trigger (see Guntly, 2019). The conversation in (54) is special in that it has three participants, and the addressee of the trigger is the third participant, Xiao_Long. The responder Yao uses the RM *dui* (‘yes’) to indicate that this is the question he also wants to ask.

(54) Mang: *Ni dangchu zenme jiu xue kuaiban ne?* *(Trigger)*

‘Why did you want to learn clapper talk at that time?’

Yao: *Dui.* *(RM)*

‘Yes.’

The last reason only applies to the RM *shi* (‘yes’), namely that unlike the other simplex RMs, *shi* indeed has the answering function. Although rare, it can be used as a positive answer to certain neutral questions whose main verb is the copula *shi*, as exemplified by (55), in which the trigger is a neutral *ma*-question.

(55) Li: *Ni dangshi shiersui zuowei huojushou dehua, nianji shi zui xiaode ma?* *(Trigger)*

‘As a 12-year-old torch bearer,

‘Are you the youngest?’

Qi: *Shi, shi zui xiaode yige.* *(RM+Host clause)*
‘Yes, I’m the youngest.’

With further investigation, we find that out of the 12 occurrences of shi which are used to respond to neutral questions, 6 occurrences are used to indicate the responder’s agreement with the background information in the trigger, and 4 occurrences are simply used to acknowledge the trigger. Two occurrences of shi are used to provide positive answers to neutral questions, but both of them are due to the reason that the main verb for the trigger is the copula shi. The former three reasons are extremely common for the RMs dui (‘yes’) and hao (‘okay’) when they are used in response to neutral questions. Overall, the third reason is more common for the RM dui (‘yes’), while the second reason is more common for the RM hao (‘okay’) than for other RMs.

To sum up, our investigation reveals that Mandarin simplex RMs are used predominantly to indicate agreement and acknowledgement. Although our results show that they are used to respond to neutral questions occasionally, in most cases, they are used to indicate either the responder’s agreement with the background information in the trigger or the responder’s agreement with the speech act of questioning. That is to say, these RMs are essentially used to indicate agreement rather than to provide positive answers to their neutral question triggers.

The distribution of the four Mandarin simplex RMs by discourse functions is presented in Table 6.8. The results support the hypothesis that Mandarin positive simplex RMs only have the agreement and acknowledgement functions. Furthermore, the results in Table 6.8 demonstrate that the distribution of functions of the RMs shi (‘yes’) is similar to those of dui (‘yes’) and xing (‘okay’), but complementary to that of the RM hao (‘okay’). 85.5% of the occurrences of shi (‘yes’) and 13.7% of the RM hao (‘okay’) found in our data are used to indicate agreement, while 12.8% of shi (‘yes’) and 86.3% of hao (‘okay’) are used to indicate acknowledgement. In
addition, the RM *shi* occasionally can be used as a positive answer to a neutral question, but only when the main verb of the neutral question trigger is the copula *shi*.

<table>
<thead>
<tr>
<th></th>
<th>shi</th>
<th>%</th>
<th>dui</th>
<th>%</th>
<th>xing</th>
<th>%</th>
<th>hao</th>
<th>%</th>
</tr>
</thead>
<tbody>
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<td>1.7%</td>
<td>100</td>
<td>85.5%</td>
<td>731</td>
<td>81.4%</td>
<td>7</td>
<td>100%</td>
</tr>
<tr>
<td>agreement</td>
<td>100</td>
<td>85.5%</td>
<td>731</td>
<td>81.4%</td>
<td>7</td>
<td>100%</td>
<td>63</td>
<td>13.7%</td>
</tr>
<tr>
<td>acknowledgement</td>
<td>15</td>
<td>12.8%</td>
<td>167</td>
<td>18.6%</td>
<td>7</td>
<td>100%</td>
<td>398</td>
<td>86.3%</td>
</tr>
<tr>
<td>Total: 1483</td>
<td>117</td>
<td>100%</td>
<td>898</td>
<td>100%</td>
<td>7</td>
<td>100%</td>
<td>461</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 6.8 The distribution of the simplex RMs by discourse functions

To test hypothesis 5, repeated below for convenience, I conducted a qualitative analysis of discourse functions of the modified forms of *shi* (‘yes’).

**Hypothesis 5:**

(i) Mandarin simplex RMs are modified to indicate: the responder’s commitment to the trigger, the nature of evidence supporting the initiator’s belief, the intensity of the responder’s emotive attitude or the degree of the responder’s expectation about the trigger.

(ii) Some previously established functions of Mandarin complex RMs like making concessions, expressing politeness, expressing strong feelings, and so on, are derived from the combination of the agreement function or acknowledgement function and contextual factors.

First, we start with the complex RMs *shi-ba* and *shi-a*. Recall that these two forms are the responses that we obtained from a minimal pair of storyboards (23) and (24), targeting the emotive attitudes of the responder. (23) and (24) have the same trigger *Yuehan zuijin zai jianshen* (‘John has been working out lately’) but different contexts. In (23) the trigger is unexpected.
because the responder has counter-evidence and an epistemic bias against the trigger, whereas the trigger in (24) is expected because the responder has epistemic evidence for the trigger. Both of these contexts explicitly indicate that the responder is unable to commit to the trigger for some reason: in (23) the responder has counter-evidence for the trigger, while in (24) the responder does not want to get involved in that topic. Based on the contextual information and the grammatical form of the modifier, we hypothesize that: (i) in both cases the simplex RM *shi* is modified to indicate the responder’s reluctance to commit to the proposition and to update the common ground; (ii) the modifier *ma* is used to indicate that the trigger is unexpected, while the modifier *ba* encodes that the trigger is expected. To test these hypotheses against the corpus data, we further investigate all occurrences of *shi–ba* and *shi–ma* in the dataset.

With further investigation, we found that *shi–ba* is predominantly used to indicate acknowledgement of the trigger, but not to indicate agreement with the informative content of the trigger, as shown in (56).

(56) **Ma:** *Yao laoshi xiangsheng shuode hao, en, tingshuo kuaibao ye dade hao.*

   ‘Teacher Yao is good at performing comic dialog, en, (I) heard that (you) are also good at performing clapper talk.’  

   *(Background)*

   **Yao:** *Hai zouhe.*

   ‘Not too bad.’

   **Ma:** *Shi–ba.*

   ‘Oh yeah?’

   **Yao:** *Hai zouhe.*

   ‘Not too bad.’

Following Zhao’s (2006) classification, the discourse functions of the complex RM *shi–ba* in (56) is to make concessions and to express politeness, however, in this study, we argue that these discourse functions are derived from the combination of the acknowledgement function of the
simplex *shi* and contextual factors. The responder (Ma) in (56) has hearsay evidence that the initiator (Yao) is good at performing clapper talk. Although the initiator denies it, the responder is still certain about his previous knowledge and knows that the initiator denies it out of modesty. But since the responder has absolute epistemic authority over the information in the trigger, and the social status of the responder is higher than the initiator, the responder cannot indicate disagreement in this context. Thus the responder uses *shi-ba* as a backchanneling device to indicate acknowledgement of the trigger and to support the speaker without publicly committing on the trigger.

Furthermore, the triggers which are responded to with *shi-ba* are indeed often expected by the responder, which supports the hypothesis that the modifier *ba* encodes that the trigger is expected. In addition, the occurrences of *shi-ba* in our data are characterized by the following distinctive usages which are not found in any other forms of *shi*: (i) *shi-ba* is often used in response to positive or neutral responses, but not in initial responses. The responses that *shi-ba* responds to are often either paraphrases or repetition of the background sentence, or RMs which are used to indicate acknowledgement; (ii) *shi-ba* tends not to have follow-up responses, and they are often the final turn in the conversation, as exemplified by (57).

(57) Ma: *Ta you zhegu yili, bupa ren kan, beidili xiaongfu, suoyi ta cai neng dao jintian zhege shuiping.* *(Background)*
‘He has perseverance, not afraid of losing face, and works hard, that’s why he can make the achievement today.’

Yao: *Dui, zhe hen zhongyao* *(Trigger)*
‘Yes, it’s very important’

Ma: *Shi-ba* *(RM)*
‘Oh yeah?’
In (57) the trigger is a supportive acknowledgement of the background sentence, and the responder uses *shi-ba* also to indicate acknowledgement of the trigger, since the responder is the source of the background sentence, and there is nothing in the trigger that the responder is asked to commit to and agree with. Moreover, *shi-ba* is the final conversational turn, suggesting the initiator knows that it is merely an acknowledgement which does not require a response.

On the other hand, the complex RM *shi-ma* is predominantly used to ask for clarification, and thus the responder is not committed to the trigger at all. The triggers which are responded to with *shi-ma* are always unexpected to the responder, which also supports the hypothesis that the modifier *ma* is used to indicate that the trigger is unexpected. In addition, another noticeable difference between *shi-ba* and *shi-ma* is that only 11.1% (4 occurrences) of *shi-ba* are responded to with follow-up sentences, while 75% (9 occurrences) of *shi-ma* have follow-up responses. This difference can be explained by the fact that *shi-ba* is generally used to indicate acknowledgement while *shi-ma* is usually used to ask for clarification. Consider the example in (58). The responder in (58) has an epistemic bias against the trigger and does not believe that Hong Kong is a conservative society. The initiator perceives the responder’s epistemic bias encoded in her response and re-asserts the trigger in the follow-up sentence.

(58) Liang:  *Xianggang shi ge hen baoshoude yige shehui.*  
‘Hong Kong is a very conservative society.’  
(Matcher)  

Meng:  *Shi-ma.*  
‘Oh yeah?’  
(RMP)  

Liang:  *Ya, dangran, xianggang shi hen baoshoude yige difang a*  
‘Of course, Hong Kong is a very conservative place’  
(Follow-up)

Now let us turn to the complex RMs *shi-de* (‘yes-SFP’) and *shi-shi* (‘yes-yes’). According to Zhao (2006), the functions of *shi-de* and *shi-shi* are similar: they are both used to
indicate the speaker’s sincerity and firmness. Shi-de is more often used in answers to neutral questions, while shi-shi is generally used to indicate agreement. However, based on the corpus data, we argue that both shi-de and shi-shi are used predominantly to indicate agreement. The simplex RM shi is modified by the SFP de and the RM shi to increase the responder’s degree of commitment to, and sincerity about, the trigger. The results of our corpus study show that the proportion of shi-de (7 occurrences, 23.3%) which are used in response to neutral questions is indeed higher than the simplex shi (12 occurrences, 10.3%), shi-a (1 occurrence, 6.2%), and shi-shi (3 occurrences, 20%), which provides supportive evidence for Zhu’s (2006) claim.

However, with further investigation, we find that although shi-de has the answering function, it is very rare. Only 1 out of the total 30 occurrences found in our data is used as a positive answer, as shown in (59), in which the RM shi-de is used as a positive answer to the neutral ma-question in the trigger. The rest of the shi-de in the corpus data are still used to indicate agreement with either the background information in the trigger or the speech act of questioning.

(59) speaker#1: Ye shejidao zhongguo xizangde huati ma, tamen tiwende jiaodu douyou shenme? (Trigger)
‘Did it involve any topics on China Tibet? From which perspectives do they ask questions?’

speaker#4: Shi-de, wo renwei keneng youjici tidaoguo. (RM+Host clause)
‘Yes, I think they probably mentioned it several times.’

On the other hand, out of the total number of 14 shi-shi in our data, 3 occurrences (20%) are used to respond to neutral questions, however, all of them are used to indicate agreement with the background information in the trigger. Thus, all the occurrences of shi-shi in our dataset are used to indicate agreement, which supports Zhu’s (2006) claim about shi-shi. Consider the examples in (60) and (61), which illustrate that the speaker modifies the simplex shi with the
SFP *de* or the RM *shi* in order to increase his/her commitment to the trigger and the degree of sincerity and firmness of the response.

(60) **Zhang:** *Ye jiushi shuo zhege peixun shi weile nimen genghaode nenggou lvxing nimende zeren* (Trigger)

‘So this training is to better prepare you to fulfill your responsibility’

speaker#52: **Shi-de,** *women ye gandao zhege shiming guangrong, zeren zhongda.* (RM+Host clause)

‘Yes, we also feel that the mission is glorious, and the responsibility is heavy.’

(61) **Kang:** *Zhe ye zhongfeng shuoming jiushi women guojia de zheyang yizhong renmin peishenyuan zhida huajie shehui maodunde yige feichang haode liangyong fangshi* (Trigger)

‘this fully demonstrates that our national people’s jury system becomes a very good way to resolve social conflicts

**Wang:** **Shi-shi-shi,** *geng shihe zhege hexie shehui de jianshe.* (RM+Host clause)

‘Yes, yes, yes, more suitable for establishing this harmonic society.’

The responder in (60) is a volunteer for the 2008 Beijing Olympic Games, and the topic is the goals of the training that he received. The host clause makes it clear that the responder believes that the mission is glorious, and the hard training is worth it, and thus he modifies his response with the SFP *de* to increase his commitment to the trigger, i.e. the goal of the training, and the degree of sincerity and firmness. On the other hand, the responder in (61) is a government official, and the topic is the Chinese people’s jury system. His role determines that he has to fully support the system, especially in a formal broadcast interview on a national TV station, and his host clause illustrates that it is indeed the case. Thus, he uses the reduplicated form of *shi* to increase his commitment to the trigger and the degree of sincerity of his response.

Finally, let us turn to the complex RMs *shi-a* (‘yes-SFP’) and *shi-ya* (‘yes-SFP’). Recall that these two forms are the responses that we obtained from the storyboards (18) and (21) which target the nature of the evidence and emotive attitudes of the responder, respectively. Based on
the results of the storyboard introspection, we hypothesize that: (i) **shi-a** and **shi-ya** are interchangeable; (ii) **shi-a** and **shi-ya** are used when there is contextual evidence available; (iii) **shi-a** and **shi-ya** are used to increase the intensity of the responder’s emotive attitude towards the trigger. To test these hypotheses against the corpus data, we further investigate all occurrences of **shi-a** and **shi-ya** in the dataset. There are 16 instances of **shi-a** and only 2 instances of **shi-ya** in our dataset, suggesting that **shi-a** is much more common than **shi-ya**. The distribution of **shi-ya** overlaps with that of **shi-ba**. One occurrence of **shi-ya** is used in response to a declarative and statement, as shown in (62), and the other occurrence is used to respond to a biased **ma**-question, as shown in (63). Both occurrences of **shi-ya** are used to indicate agreement with an implication that the asserted proposition or the bias in the trigger is obvious.

(62) Xu: \[ Zhende biande yidang zhizheng yihou jiuhui yizhi xiaqu le. \] (Trigger)
     ‘If it comes to one-party ruling government, then it will always be.’

Wu: \[ Shi-ya. \] (RM)
     ‘Yes.’

(63) Zeng: \[ Ni ye hui zheme kan ma? \] (Trigger)
     ‘Do you also think so?’

Wu: \[ Shi-ya. \] (RM)
     ‘Yes.’

Our data show that **shi-a** can also be used in response to statements or questions to indicate that asserted proposition or the response to the question is obvious, as shown in (64), which suggests that **shi-a** and **shi-ya** are interchangeable in this case. However, given that there are only 2 occurrences of **shi-ya** in our data, it is hard to say if **shi-ya** and **shi-a** are interchangeable in all contexts.

(64) Hu: \[ Bu shi a, dajia hezuo ba \] (Background)
     ‘No, we cooperated’
Wu:  *shi hezuo ma?*  
‘Is it cooperation?’

Hu:  *Shi-ya.*  
‘Yes.’

Following Zhao’s (2006) classification, the discourse function of the complex RM *shi-ya* in (64) and *shi-a* in (65) and (66) is to express strong feelings, however, in this study, we argue that this discourse function is derived from the combination of the agreement function of the simplex RM *shi* and contextual factors. The responder in (64) uses *shi-ya* to indicate his agreement with the initiator’s contextual bias, i.e. ‘it is cooperation’, and to indicate that his agreement should be obvious. We argue that the implication of obviousness for both *shi-a* and *shi-ya* is derived from the core function of the SFP *a* and its variants. Recall from Section 5.3.2.2.4 on the coding for particle questions that the SFP *a* and its variants can serve as the overt realization of ego-evidentiality (Badan & Cheng, 2015). In (64), the SFP *ya* is used by the responder to suggest that there is contextual evidence supporting the initiator’s contextual bias, i.e. the initiator’s background sentence, and thus the RM can be paraphrased as something like ‘yes, didn’t I just tell you?’. In terms of *shi-ya*, there is no textual clue to the contextual evidence in (63), but in (62) the contextual evidence comes from the background information about the one-party ruling government, and the responder believes that, as a political commentator, this evidence should be immediately available to the initiator as well. Since *shi-a* carries an implication of obviousness, it is often used to respond to negative triggers, as shown in (65). Out of the 16 occurrences of *shi-a* found in our data, 7 occurrences (43.8%) are used in response to negative declaratives or interrogatives. The trigger in (65) is a negative rising declarative, and the RM *shi-a* (‘yes-SFP’) can be interpreted as “of course I didn’t subscribe to this text”.

(65)  speaker#5:  *Ni meiyou ding guo zhege duanxin?*  
*(Trigger)*
‘You didn’t subscribe to this text?’

Fan:  
\( \text{Shi-a.} \)  
‘Yes.\( \) (RM)

In addition, our data show that the complex RM \( \text{shi-a} \) can be used to increase the intensity of the responder’s emotive attitude towards the trigger, as shown in (66).

(66)  
\( \text{Zongxuan peiyang chulai le.} \)  
‘Finally (you) finished (your) training.’  
\( \text{(Trigger)} \)

Fan:  
\( \text{Shi-a, buwang zhe dule ji nian daxue ba} \)  
‘Yes. These years in college are not in vain.’  
\( \text{(RM+Host clause)} \)

The responder in (66) has strong, mixed emotions about the hard training in medical school, and thus he uses the modified RM \( \text{shi-a} \) to indicate his agreement with the initiator and to convey his strong emotions to the trigger. In terms of \( \text{shi-ya} \), recall that there is evidence illustrating that the SFP \( \text{ya} \) tends to confine its usage to emotionally positive contexts and the SFP \( \text{a} \) does not seem to have this restriction (Yuan, 2019). Thus, we hypothesize that the complex RM \( \text{shi-ya} \) is more likely to be used to increase the responder’s positive emotive attitudes, however, given the rarity of \( \text{shi-ya} \) in our data, we could not find enough occurrences of \( \text{shi-ya} \) to test this hypothesis against corpus data.

To sum up, in this chapter, in order to test the hypotheses that were generated from the targeted construction storyboard introspection, we conducted a quantitative corpus analysis of the frequency of occurrence and distribution of the four simplex RMs \( \text{shi} \) (‘yes’), \( \text{dui} \) (‘yes’), \( \text{xing} \) (‘okay’), \( \text{hao} \) (‘okay’) and the modified forms of the RM \( \text{shi} \) (‘yes’), and a qualitative analysis of their discourse functions. The results of our corpus study show that:

(i) Overall, all the simplex RMs investigated in this study are primarily used in response to statements. Apart from the statements, however, the RMs \( \text{shi/dui} \) (‘yes’) and \( \text{xing/hao} \) (‘okay’)

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are largely in complementary distribution: shi and dui are primarily used in response to questions while xing and hao are mainly used in response to directives and expressive idioms.

(ii) In general, the simplex RMs shi/dui (‘yes’) are more likely to be used in response to biased questions rather than neutral questions. They are commonly used to respond to not only particle questions, but also tag questions, C-Not-C questions, and question-word questions. Although V-Not-V questions and C-Not-C questions are both subtypes of A-Not-A questions, the former type of questions tend not to be responded to with the simplex RMs shi and dui since they are generally interpreted as neutral questions.

(iii) The simplex RM xing (‘okay’) is infelicitous in formal contexts, however, given the nature of our corpus data, there is no evidence from the corpus data supporting the hypothesis that the simplex RM hao (‘okay’) can also be used in informal contexts; and the simplex RM shi (‘yes’) is used to respond to directives only when the social status of the responder is lower than the initiator.

(iv) Mandarin positive RMs in general, including both the simplex and complex ones, are predominantly used to indicate agreement with or acknowledgement of the trigger. Only the simplex RM shi and the complex RM shi-de have the answering function in our data, but their usages are rare and only confined to questions whose main verbs are the copula shi.

(v) Some previously established functions of Mandarin complex RMs like making concessions, expressing politeness, expressing strong feelings are derived from the combination of either the agreement function or acknowledgement function and contextual factors. The simplex RM shi is modified by the SFPs ba and ma to reduce the responder’s commitment to the trigger and to indicate the responder’s emotive attitude. The SFP ba is used when the trigger is expected by the responder, while the SFP ma is used when the trigger is unexpected. The
simplex RM *shi* is modified by the SFPs *de* and the RM *shi* to increase the responder’s commitment to the trigger, and thus increase the responder’s sincerity and firmness; the modification of the simplex RM *shi* with the SFPs *a* and its variants does not affect the responder’s commitment to the trigger. They are used when there is contextual evidence available, and thus the complex RMs *shi-a* and *shi-ya* often carry an implication of obviousness. The modifier *a* can also be used to increase the intensity of the responder’s emotive attitude.
Chapter 7: Conclusion

This thesis provided a comprehensive and data-supported analysis of the four most common positive simplex RMs shi (‘yes’), dui (‘yes’), xing (‘okay’), hao (‘okay’) and all the modified forms of shi (‘yes’), such as shi-de (‘yes-SFP’) and shi-ma (‘yes-SFP’), in Mandarin Chinese conversation. In Chapter 2, I described the systems for short responses to polar questions across languages and the system of RMs in Mandarin Chinese. In Chapter 3, I analyzed the semantic properties, syntactic structures, and essential functions of Mandarin RMs. In Chapter 4, guided by Wiltschko et al.’s (2018) approach to multi-functionality, I identified the contextual factors that Mandarin RMs are sensitive to by using the targeted construction storyboard (Burton & Matthewson, 2015) introspective analysis. In Chapter 5 and 6, I tested the effects of these contextual factors on Mandarin RMs with the corpus data. In Chapter 6, I presented the results of the corpus study, provided an overview of the distribution of Mandarin RMs in real-life conversation, identified all the modified forms of shi in the corpus, and discussed how the modification of simplex RMs relates to the contextual factors and affects the essential functions of the simplex RMs. With the data from the storyboard introspection and the corpus study, I demonstrated that the form and the discourse function of Mandarin RMs are contextually dependent. Mandarin simplex RMs generally only have the agreement and acknowledgement functions. Some of the previously established discourse functions of Mandarin RMs such as acceptance, expressing politeness and strong feelings, and making a concession, are derived from the combination of the essential functions the simplex RMs and the contextual factors.

The implications of this study are threefold. First of all, RMs are pervasive and play a significant role in daily life conversation in many, if not all languages. This thesis provided the
first comprehensive account of both the simplex and complex Mandarin RMs by using data from real-life conversation. Second, a precise characterization of the complex RM *shi* has implications for future work on the other types of complex RMs in Mandarin Chinese. Lastly, establishing a systematic analytical procedure for the analysis of Mandarin RMs also has implications for cross-linguistic research on RMs in other languages, which will eventually contribute to a better understanding of the structure of conversation and human communication.

In the course of the thesis, I have touched on several questions which deserve further investigation. For instance, in Section 5.3.2 on the coding of interrogatives, on the one hand, I reviewed the previous studies on the classification of C-Not-C questions in Mandarin. I simply followed the previous studies and assumed that C-Not-C questions are generally biased verum questions, but C-Not-C+NP questions are neutral questions, and hypothesized that Mandarin RMs cannot be used to respond to C-Not-C+NP neutral questions. On the other hand, our corpus data show that the simplex RM *shi* and the complex RM *shi-de* can sometimes be used as positive answers to neutral C-Not-C questions whose main verbs are the copula *shi*, but these questions are not in the form of C-Not-C+NP. It would be interesting to investigate the differences between the biased and neutral C-Not-C questions, and how they relate to RMs that have the answering function. Second, in terms of the SFPs, I only listed the functions of SFPs used in particle questions. It would be interesting to compare whether the functions of SFPs differ between particle questions and modified forms of RMs which contain the same SFPs.
References


Appendix: The Eh-lab Conversation Boards

Context: Candid camera

Context: John works out

Context: John’s dog
Context: Forward march