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All structures great and small

On copular sentences with *shì* in Mandarin

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On copular sentences with *shì* in Mandarin

Proefschrift

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door

Hang CHENG

geboren te Ma'anshan, China
in 1990

To the past years, which are

Swifter far than summer's flight
Swifter far than youth's delight
Swifter far than happy night

from "Remembrance"
– P.B. Shelley

Contents

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Abbreviations

CLF	classifier
COP	copula
DE	*de* in sentence final position
DEM	demonstrative
EXP	experiential aspect marker
FEM	feminine
MAS	masculine
NEG	negation
PFV	perfective aspect marker
PL	plural
PROG	progressive aspect marker
PST	past tense
Q	interrogative particle
RED	reduplication
SFP	sentence final particle
SG	singular
SHI	*shì* in non-prototypical copular sentences
SUB	subordinate operator
TM	topic marker

CHAPTER 1

Introduction

1.1 Background

Many languages have one or more elements viewed as a copula. Copulas are often regarded as functional elements with little semantic contribution, associated with establishing a predication relation. Such elements display what is almost the greatest degree of variation cross-linguistically (Pustet 2003; Arche, Fábregas & Marín 2019). To name a few types of variation, languages differ in the number of copulas they have in their lexicon. For instance, English and Mandarin both have only one copula, namely, *be* in English and *shì* 是 in Mandarin.[1] In contrast, Spanish and Hebrew, for instance, have two copulas. For languages with multiple copular elements, they vary in the ways the copulas differ in their functional scopes. For instance, Spanish *ser* generally combines with nominal predicates or individual-level adjective predicates, while *estar* combines with gerunds or stage-level adjective predicates. The Hebrew pronominal copula *hu* only occurs in the sentences in the present tense, while the verbal copula *h.y.y.* can occur in past-tense sentences.

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[1]In formal contexts, a couple of other copular elements are used in Mandarin, such as *wéi* 为 and *nǎi* 乃. However, these can arguably be viewed as remnants of

Copulas in different languages or different copular elements in a single language may have different origins, which is supposed to lead to distinctive semantic and syntactic properties for given copular elements. As noted in C. N. Li and Thompson (1977), a large group of copulas in the world's languages originated from verbs, while another group of copulas originated from pronominal elements. Copulas also differ in the grammatical categories of the complement they can take. For instance, Mandarin *shì* normally only combines with nominal constituents. English *be*, in contrast, can also combine with APs and PPs. Moreover, copulas within or across languages can surface under different categories including verbs, pronouns, and particles (Stassen 1997; Pustet 2003)/prepositions (Arche et al. 2019). They are also analysed as heading different functional projections such as Pred, *v*, T/Infl, and higher functional heads in the C-domain (Arche et al. 2019). The extent of cross-linguistic diversity drives systematic investigation of the copular system in different languages.

Copular structure is one of the most simple but fundamental structures in human languages, which provides "an unparalleled window into the study of the innermost mechanisms and properties of human language" (Arche et al. 2019: 1). The structure and semantics of predication have received enormous attention in the literature since the ancient Greek classics. In the realm of modern linguistics, predication remains an essential topic. "The syntax of predication remains a fertile area for linguistic analysis, with important repercussions for theory construction." (Den Dikken & O'Neill 2017: 32). A tremendous amount of research has been conducted to explore "the function of copulars, their morphosyntactic properties, their syntagmatic properties, [...], their historical origin, and their distribution in discourse" (Pustet 2003: 1) in various languages.

When it comes to Mandarin, however, the significance of studying the fundamental properties of copula(s) and copular structures seems to have been overlooked. Research on the historical origin of *shì* and other copulas in history abounds, comprising the majority of studies on Chinese copulas (e.g. C. N. Li and Thompson 1977; Xiao 2003; Feng and Wang 2003; Dong 2004; B. Ma and Cai 2006; Liang 2012). A great deal of research has also been done on non-canonical copular

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copulas that were used more actively in the past.

sentences containing *shì*, especially cleft constructions (e.g. Simpson and Wu 2002; Xiong 2007; L. L.-S. Cheng 2008; Paul and Whitman 2008; Long and Xiao 2009; Long and Xiao 2011; Hole 2011; D. Zheng 2017; W. Wang 2018) and so-called "special" copular sentences (H. Zhang & Deng 2010, 2011). In contrast, little research investigates issues such as the function of *shì* in copular sentences (L. Huang 2015), and the syntactic properties of *shì* (X. Chen & Luo 2005; Zeng 2013; W. Li 2016). The taxonomy of Mandarin copular sentences and their structures, the syntactic distribution of the copula and copular clauses, and the question as to how *shì* contributes to the cross-linguistic diversity of copulas have barely been discussed.

This thesis is dedicated to the syntactic properties of the Mandarin copula *shì* 是 and copular clauses containing *shì*. Three core issues will be discussed. First, what is the nature of *shì*? Specifically, where is it situated in the structure? Second, how many types of copular sentences are there in Mandarin? Are they structurally related? And finally, how are copular sentences temporally encoded, given that a simple structure without VP is proposed. Is there a TP in copular structures? The first two issues are central questions concerning the copula and copular sentences (Den Dikken & O'Neill 2017; Arche et al. 2019). Close investigation into these issues on the basis of Mandarin data will, on the one hand, give a better understanding of the Mandarin copula and copular sentences and, on the other, contribute to global theories of copulas and copular sentences in the world's languages. The significance of the third issue is also twofold. Discussions about the existence of TP in copular sentences are essential to our understanding of copular structures. Moreover, the phenomena addressed in this thesis and the hypothesis proposed will also contribute to our understanding of the temporal system in Mandarin.

1.2   Three issues

1.2.1   The nature of *shì*

As mentioned in the previous section, the nature of copulas and the position of the copular element in the syntactic structure vary across languages. It has been proposed that copulas in different languages

instantiate various functional heads, including T, *v*, Pred, or even higher ones like Fin or SUBJ. Following the idea that copulas function as support for inflectional features when the predicate is non-verbal, a wide range of studies analyse copulas as the spell-out of T/Infl (for instance, Baker 2003 for English *be*, cf. Becker 2004 for English *am/are/is* only; Doron 1983 for Hebrew *hu*; Citko 2008 for Polish *to*). Another group of studies views copulas as verbal support, especially when languages that lack overt inflectional morphology for tense, aspect, and agreement are concerned (Hale & Keyser 1993; Harley 1995; Moro 1997; Mikkelsen 2005). Under this view, copulas are analysed as the realisation of *v*. Copulas have also been proposed to instantiate Pred (Bowers 1993, 2001), a functional head proposed to establish the basic predication relation. Many copulas in Bantu languages are analysed as instantiations of Pred (Baker 2003). Some recent studies argue for positions higher than T in the structure that may host copulas. O'Neill (2015, 2019) views the English copulas in a special type of copular sentence (Amalgam Specificational Copular sentences) as pure morphological support. It has been proposed that copulas are situated in the left periphery, heading Fin. Cardinaletti (2004), Rizzi (2015b), and Shlonsky and Rizzi (2018) propose that Hebrew *hu* and Polish *to* may lexicalise a high functional projection SUBJP, a projection in relation to a multiple-layer subject cartographic proposal.

How about Mandarin *shì*? Various proposals have been advanced for its position in the structure. *Shì* is traditionally categorised as an auxiliary or a (copular) verb (e.g. Chao 1968; Zhu 1982; Guo 1993, 2002; Zuo 2009). In structural terms, it has been proposed in many studies that *shì* is the spell-out of *v*/V (C.-T. J. Huang 1988; Simpson & Wu 2002; L. L.-S. Cheng 2008; Paul & Whitman 2008; Hole 2011; Zhan & Sun 2013). However, the idea that *shì* heads VP has not been carefully argued for but simply been taken for granted. Also, most of the above-mentioned studies centre on cleft constructions. As will be shown in Chapter 2, *shì* in Mandarin cleft constructions may have different distributions from the one in copular sentences. *Shì* has also been proposed to head other functional projections. For instance, Baker (2003) proposes that *shì* heads Pred and establishes the predicational relation. Tse (2016) proposes that *shì* instantiates T on the basis of a grammaticalisation view.

This thesis will investigate the syntactic distribution of the copula *shì*. Chapter 4 will discuss at length a number of properties of *shì* that indicate that *shì* does not spell out Pred, V, or T. Instead, it will be proposed that *shì* lexicalises a functional head comparable to SUBJ in the sense of Cardinaletti (2004), Rizzi (2015b), and Shlonsky and Rizzi (2018). In addition, it will be argued that there is no VP in copular structures, which is consistent with the analyses proposed for copular structures containing pronominal copulas in other languages such as Hebrew (Doron 1983; Rothstein 1995; Shlonsky & Rizzi 2018) and Polish (Citko 2008).

1.2.2 Types of copular sentences and their structures

The general format of copular sentences can be schematised as "XP *be* YP [YP is not participle VP]" (Den Dikken 2017: 3). This schema gives rise to a variety of different types of copular sentences. As will be discussed in Chapter 2, in Mandarin, only nominal predicates admit the use of the copula *shì*. This thesis will concentrate on copular sentences where both XP and YP in the schema are instantiated as NP/DP, that is, NP1/DP1 *be* NP2/DP2.

No consensus has been reached on how fine-grained a taxonomy should be proposed for copular sentences in the world's languages. On the grounds of the properties of nominals flanking the copula, Higgins (1979) first proposes a four-way taxonomy of copular sentences, shown in (1).

			NP1	NP2
	a.	Predicational	referential	predicational
(1)	b.	Specificational	superscriptional	specificational
	c.	Identificational	referential	identificational
	d.	Identity	referential	referential

Declerck (1988) adds the fifth category, namely, "definitional copular sentences" to the taxonomy. The sentences in (2) and (3) exemplify the above-mentioned types of copular sentences.

(2)   a. Dr. Jekyll is a handsome man.   *Predicational*

        b. My best friend is Dr. Jekyll.   *Specificational*

        c. That is Dr. Jekyll.   *Identificational*

        d. Dr. Jekyll is Mr. Hyde.   *Identity*

                      (Den Dikken & O'Neill 2017: 3)

(3)   A pyramid is what the Egyptians built to bury their pharaos in.

                                 Definition

                         (Declerck 1988: 114)

Heggie (1988), in contrast, reduces the number of types to three, treating the identificational copular sentences identified by Higgins as a hybrid category of specificational and equative/identity sentences. Mikkelsen (2005) also arrives at a three-way typology on the basis of semantic types of the nominals.

The question as to how to view the structural relation between different types of copular sentences is even controversial. There are at least two core questions. First, do equative copular sentences share the same underlying structure with predicational or/and specificational copular sentences? Second, do specificational sentences have a closer derivational relation with predicational sentences or with equative sentences? A group of studies argues that specificational sentences have a derivational relation with predicational sentences (Heggie 1988; Heycock 1995; Moro 1997, 2017; Adger & Ramchand 2003; Mikkelsen 2005; Den Dikken 2006, 2017). These studies propose that specificational copular sentences are derived via movement of the predicate noun phrase over the referential one. For them, equative sentences are reduced to special semantic interpretations of the two noun phrases with the same subject–predicate structural relation. In contrast, in line with the view that equative sentences have a different structure from predicational sentences, specificational sentences are linked to equatives (Heycock & Kroch 1999; Rothstein 2004).

The typology of copular sentences can be a function of various factors. Den Dikken and O'Neill (2017) address two major groups of properties: semantic and information-structural properties, and morphosyntactic properties. The semantic-based criteria mainly concern referentiality, subject and predicate, and information structure. The morphosyntactic-based criteria mainly concern linear order, copula distribution,

extraction restrictions, case, agreement, ellipsis, and connectivity. To put forth a reasonable taxonomy of copular sentences within or across languages requires comprehensive and systematic studies of copular sentences. In general, research on the taxonomy of copular types is not fruitful (Den Dikken & O'Neill 2017). When it comes to Mandarin, the taxonomy and relevant issues have seldom been touched upon in previous studies.

This thesis will examine the above-mentioned factors in relation to Mandarin copular sentences. From the semantic perspective, in accordance with Mikkelsen's (2005) generalisation, I will show that Mandarin displays a three-way taxonomy: predicational, specificational, and equative sentences, as shown in (4).

(4) a. 张三是李四的老师。   *Predicational*
   Zhāngsān shì Lǐsì de lǎoshī.
   Zhangsan COP Lisi SUB teacher
   'Zhangsan is Lisi's teacher.'

   b. 李四的老师是张三。   *Specificational*
   Lǐsì de lǎoshī shì Zhāngsān.
   Lisi SUB teacher COP Zhangsan
   'Lisi's teacher is Zhangsan.'

   c. 罗老师 *(就) 是张三。   *Equative*
   *Luó lǎoshī *(jiù) shì Zhāngsān.*
   Luo teacher exactly COP Zhangsan
   'Teacher Luo is Zhangsan.'

Considering the fact that an additional adverb *jiù* 就 'exactly' is always obligatory in equative sentences, in addition to a couple of other semantic and syntactic properties of equative sentences that are distinct from predicational and specificational sentences, the current thesis regards equatives as copular sentences with a structure different from that of the other two types of copular sentences. When copular sentences in which bare *shì* functions as the linking element are concerned, we arrive at a two-way taxonomy: predicational and specificational sentences. In terms of syntactic analysis, a unified underlying structure for both types of sentences will be argued for. Specificational sentences are analysed as the inverse structure of predicational sentences that are derived via predicate inversion, in the spirit of Moro (1997), Mikkelsen (2005), and

Den Dikken (2006). The distinctive properties of these types of sentences are presumably accounted for by the proposed structures.

1.2.3   Temporal interpretation of copular sentences

As briefly touched upon in Section 1.2.1, the thesis argues that *shì* does not instantiate T and that the copular structure contains no VP. One question thus arises: Is there a TP in Mandarin copular sentences?

It is interesting that for some copular sentences, such as the one in (5), the grammaticality and the truth value hold regardless of whether the subject is alive or dead. In addition, a living subject (e.g. Mike) and a dead one (e.g. Barbara) can coordinate, functioning as the subject of a single predicate, as shown in (6a). Similarly, in the stripping-like constructions such as in (6b), whether or not the subject is living can be different in the two clauses.[2]

(5)   迈克是德州人。
      Màike shì   Dézhōu rén.
      Mike   COP Texas   people
      'Mike is/was from Texas.'

(6)   a. 迈克和芭芭拉都是德州人。
         Màike hé   Bābālā   dōu shì   Dézhōu rén.
         Mike   and Barbara all   COP Texas   people
         'Mike is from Texas, and Barbara was from Texas.'

      b. 迈克是德州人，芭芭拉也是。
         Màike shì   Dézhōu rén,   Bābālā   yě   shì.
         Mike   COP Texas   people Barbara also   SHI
         'Mike comes from Texas, and Barbara, too.'

In contrast, another group of copular sentences in Mandarin, exemplified by (7), presents a different pattern. When uttered in isolation, the subject of (7) must be alive; otherwise the sentence is infelicitous. In addition, as shown in (8), unlike (5), neither coordination of a living and a dead subject nor forming stripping-like constructions is felicitous.

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[2]In the current study, I gloss *shì* in non-prototypical copular sentences as SHI instead of COP. For more details see Section 2.3 in Chapter 2.

(7) 迈克是中学生。
Màike shì   zhōngxuéshēng.
Mike   COP secondary.school.student
'Mike is/*was a secondary school student.'

(8) a. *迈克和芭芭拉都是中学生。
*Màike hé   Bābālā   dōu shì   zhōngxuéshēng.
Mike   and Barbara all   COP secondary.school.student

b. *迈克是中学生，芭芭拉也是。
*Màike shì   zhōngxuéshēng,   Bābālā   yě   shì.
Mike   COP secondary.school.student Barbara also SHI

In fact, such a phenomenon is not particular to copular sentences in Mandarin. The parallel pattern can also been observed in non-copular sentences. Sentences (copular and non-copular) allowing for the use of a dead subject, as well as the conjoined subjects and stripping-like constructions, all contain individual-level predicates (ILPs, henceforth). In contrast, the other groups of sentences all contain stage-level predicates (SLPs henceforth). In other languages, such as English, in addition to the distinction between ILP sentences and SLP sentences in terms of the temporal interpretation, there is a close connection between the tense of ILP sentences and whether the subject is alive or dead. For instance, when uttered in isolation, the past tense in (9) indicates that Henry is dead.

(9) Henry was French.

(Kratzer 1995: 155)

That a past-tense sentence with an ILP imposes restrictions on the lifetime of the subject is taken as "lifetime effects" in the literature (e.g. Musan 1997; Husband 2012). Obviously, the connection between the tense of the sentences and whether the subject is alive or dead cannot be observed in Mandarin. To account for the distinction in terms of temporal interpretation between ILP sentences and SLP sentences, as well as the differences between Mandarin ILP sentences and those of other languages, Chapter 6 proposes on the basis of Sun (2014) that Mandarin ILP sentences do not have TP in the structure, as opposed to SLP sentences, which do have TP. To answer the question as to whether copular sentences have TP or not, ILP copular sentences do not have TP, but SLP copular sentences do.

1.3 Scope of the study

The current thesis centres on prototypical copular sentences in contemporary Mandarin and *shì* in these sentences. Special attention will be paid to the structural relation between predicational copular sentences and specificational copular sentences. Properties of equatives will also be discussed.

Other structures containing *shì* will not be discussed in the current study. The last section of Chapter 2 will give a brief overview of the uses of *shì* in various types of sentences that are generally not taken as prototypical copular sentences. In general, *shì* occurs in three types of contexts. First, *shì* can be used to express affirmation or emphasis (e.g. (10)). Second, *shì* is used in Mandarin cleft sentences, like copulas in many other languages (e.g. (11)). It can float in the sentence, above VP, and appear immediately to the left of the focused constituent. Finally, *shì* forms a crucial part of elliptical constructions in Mandarin (e.g. (12)). For instance, *shì* is obligatory in stripping and in sluicing when arguments are elided.

(10) *shì* for affirmation or emphasis

    a. 你是在担心他吗?   *Weakened shì*
         Nǐ shì zài   dānxīn tā ma?
         2SG COP PROG worry 3SG Q
         '(Is it true) that you are worrying about him?'

    b. 小十一**是**喜欢吃华夫饼。   *Stressed shì*
         XiǎoShíyī   **shì** *xǐhuan chī huáfūbǐng.*
         little.Eleven SHI like   eat waffle
         'El DOES like eating waffles.'

(11) *shì* in clefts
    迈克是去年在实验室遇到小十一的。
    Màike shì qùnián zài shíyànshì yùdào xiǎoShíyī   de.
    Mike SHI last.year at laboratory meet little.Eleven DE
    'It was last year that Mike met El in the lab.'

(12)   *shì* in ellipsis

    a. 小十一吃了一盒华夫饼，迈克也是。   *Stripping*
       XiǎoShíyī   chī le   yī-hé   huáfūbǐng, Màike yě shì.
       little.Eleven eat PFV one-box waffle   Mike too SHI
       'El ate a box of waffles, and Mike, too.'

    b. 迈克买了一包东西，但我不知道是什么。 *(Pseudo-)Sluicing*
       Màike mǎi le   yī-bāo dōngxi, dàn wǒ bù   zhīdào shì
       Mike buy PFV one-bag thing   but 1SG NEG know SHI
       shenme.
       what
       'Mike bought a bag of things, but I do not know what.'

Two criteria can be used to distinguish the copula use of *shì* from the other uses of it. First, *shì* presents various prosodic properties in different types of sentences. There are three ways *shì* can be articulated from a prosodic perspective. I take the standard copular sentences as the neutral context and the pronunciation of *shì* in a standard copular sentence as the standard. *Shì* in cleft sentences and in elliptical constructions (stripping and sluicing) is pronounced in the same way as *shì* in copular sentences proper. However, when *shì* is used to express affirmation or emphasis, it is frequently stressed or produced in a weakened way. In some contexts, *shì* bears an extra stress (see (10b)), and I will simply label this type of *shì* as "stressed *shì*". In other contexts, *shì* is pronounced in a weakened way (see (10a)). It is almost toneless and its consonant or/and vowel are not fully articulated. I will label this type of *shì* as "weakened *shì*".

In addition, as will be introduced in Chapter 2, in principle, only nominal constituents can appear in the postcopular position. However, stressed *shì* can also precede APs, VPs, PPs, and IPs, in addition to NPs. Weakened *shì* can co-occur with APs, PPs, and IPs, but not with NPs. *Shì* in cleft constructions can precede VPs, APs, PPs, and IPs in addition to NPs. Also, *shì* in stripping is followed by nothing.

1.4   Organisation of the thesis

The above-mentioned three issues will be addressed in the remainder of this thesis. Chapters 2 and 3 provide descriptions about some

basic properties of *shì* and three types of copular sentences. Chapters 4, 5, and 6 in turn present the analysis of the three issues. Chapter 7 concludes the thesis.

Chapter 2 introduces the basic properties of *shì* in copular sentences. First, in addition to the widely acknowledged generalisation that *shì* can only combine with nominal predicates, two exceptions to the generalisation will be discussed. Second, contexts where *shì* can be omitted will be described at length. The last section of the chapter will provide an overview of non-copular uses of *shì* in Mandarin.

Chapter 3 turns to the investigation of the taxonomy of Mandarin copular sentences. I will first show the three-way taxonomy of Mandarin copular sentences in semantic terms. The taxonomy and the corresponding diagnostics follow Mikkelsen (2005). The semantic and syntactic properties of equative sentences will then be delineated. On the grounds of these properties in equative sentences, this chapter will argue that Mandarin does not have true equatives with a single *shì*. The rest of this chapter will focus on the two-way taxonomy from a syntactic perspective. Similarities and distinctions between predicational and specificational copular sentences will be examined. The reversibility of the sentences, the semantic types of subjects, the availability of *shì* omission, the pattern of focus, and restrictions on extraction will be discussed one by one.

Chapter 4 examines the position where *shì* is situated in the structure. As mentioned in the beginning of this chapter, the distribution of copular elements presents great cross-linguistic diversity. This chapter will first give a brief review of proposals of the position of copulas in various languages (namely, Pred, *v*, T, Fin, or SUBJ). With respect to Mandarin, I will argue that *shì* does not instantiate Pred or T. Furthermore, with careful examination of the compatibility of *shì* with modality and the experiential marker *guo*, I will propose that *shì* does not head VP, either. In fact, copular structures must be devoid of a VP. The last section will show that such an analysis of *shì* is consistent with analyses of pronominal copulas and corresponding copular structures in other languages such as Hebrew *hu* and Polish *to*.

Chapter 5 presents the structural analysis of Mandarin copular sentences on the basis of the previous descriptions in Chapters 2 and 3, as well as a discussion of the position of *shì* in Chapter 4. I will

propose that both predicational and specificational copular sentences start from an asymmetric base structure for the predicational relation. Specificational copular sentences are analysed as inverted predicational sentences, following Moro (1997), Mikkelsen (2005), and Den Dikken (2006). The elements of the structures, namely, the predicational core, the subject position, and the lower FocP, the motivation for predicate inversion, and derivation of the sentences will be introduced step by step. And finally, I will show that the proposed structure is explanatory for the similarities and distinctions between the two types of copular sentences described in Chapter 3.

Chapter 6 delves into the issue of whether copular structures contain TP. I will argue that copular sentences with stage-level predicates have a TP, while those with individual-level predicates do not. I will first show that Mandarin copular sentences also have the IL/SL-distinction, on a par with non-copular sentences. The properties of the predicate nominals are decisive to the IL/SL-distinction in Mandarin copular sentences. A special property of ILP sentences in relation to temporal interpretation will be then discussed at length. That is, Mandarin ILP sentences do not show a past–present distinction and the living–dead status of the subjects will not influence the felicity of the sentences in out-of-the-blue contexts, as opposed to SLP sentences. The chapter accordingly proposes that Mandarin ILP sentences (copular and non-copular) have no TP in the structure.

Chapter 7 presents the conclusions of the whole thesis, as well as questions that remain open for future research.

CHAPTER 2

Basic properties of *shì*

    Shì 是 is the copula in contemporary Mandarin. Its homophones also occur in various non-copular constructions. This chapter will first present a description of restrictions on the distribution of *shì* when it functions as the copula and then an overview of presumably non-copular use of *shì* in Mandarin.

2.1 The category of the postcopular constituent

In Mandarin, the use of *shì* is constrained for copular sentences. In principle, only nominal predicates admit the use of the copula *shì*. *Shì* is seldom used when the predicate is an AP, PP, or VP (for exceptions see the next two subsections).[1] The examples in (1) show the contrast between the use of the copula *shì* when the predicates are of different lexical categories.

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[1]I would like to point out again that the *shì* under discussion here should not bear extra stress or be pronounced in a weakened way. See Section 2.3.1 in this chapter for an inventory of various prosodic patterns associated with different uses of *shì* in Mandarin. In addition, note that, unlike its copular counterparts in some European languages, *shì* is not used as an auxiliary in passives, the perfective, the progressive,

(1)   a. 迈克＊（是）学生。   *NP*
          *Màike *(shì) xuéshēng.*
          Mike   COP   student
          'Mike is a student.'

      b. 迈克（＊是）很帅。   *AP*
          *Màike (*shì) hěn shuài.*
          Mike COP   very handsome
          'Mike is handsome.'

      c. 迈克（＊是）在家。   *PP*
          *Màike (*shì) zài jiā.*
          Mike COP   at home
          'Mike is at home.'

      d. 迈克（＊是）见过小十一。   *VP*
          *Màike (*shì) jiàn guo xiǎoShíyī.*
          Mike COP   see EXP little.Eleven
          'Mike has met El.'

Section 2.1.1 will list all kinds of NPs that are allowed to occur in the postcopular position. Sections 2.1.2 and 2.1.3 will introduce two special cases in which non-nominal elements are permissible in the postcopular position.

2.1.1   Nominals

With respect to categories of predicative nominal phrases, the post-copular position allows for nearly all types of nominal phrases. The sentences in (2) through (4) show the range of NPs. Specifically, first, the postcopular nominal can be a bare NP, an indefinite NP with a numeral and classifier, or a modified NP (modified by an adjective or relative clause).[2]

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or existential constructions.

[2]Postcopular bare NPs can only have the indefinite reading. The definite maximality reading is unavailable for predicate NPs (see Cheng, Heycock, and Zamparelli 2017 for an exemplary context and also examples in Cantonese).

(2) a. 迈克是学生。   *Bare NP*
     Màike shì   xuéshēng.
     Mike   cop student
     'Mike is a student.'

   b. 迈克是一个学生。   *Num-Cl-NP*
     Màike shì   yī-ge   xuéshēng.
     Mike   cop one-CLF student
     'Mike is a student.'

   c. 迈克是 (一个) 聪明的学生。   *Modified NP*
     Màike shì   (yī-ge)   cōngming de   xuéshēng.
     Mike   cop one-CLF smart   SUB student
     'Mike is a smart student.'

   d. 迈克是 (一个) 学过物理的学生。   *Modified NP*
     Màike shì   (yī-ge)   xué   guo wùlǐ   de   xuéshēng.
     Mike   cop one-CLF learn EXP physics SUB student
     'Mike is a student who has learned physics.'

A postcopular nominal can also be a definite noun phrase, as shown in (3). Proper names, pronouns, NPs with demonstratives, and nominals with possessives are all permissible in the postcopular position.

(3) a. 迈克最好的朋友是小十一。   *Proper name*
     Màike zuì   hǎo   de   péngyou shì   xiǎoShíyī.
     Mike   most good SUB friend   COP little.Eleven
     'Mike's best friend is El.'

   b. 迈克最好的朋友是她。   *Pronoun*
     Màike zuì   hǎo   de   péngyou shì   tā.
     Mike   most good SUB friend   COP 3SG
     'Mike's best friend is her.'

   c. 迈克最好的朋友是那个人。   *NP with demonstrative*
     Màike zuì   hǎo   de   péngyou shì   nà-ge   rén.
     Mike   most good SUB friend   COP DEM-CLF person
     'Mike's best friend is that person.'

   d. 迈克是小十一的男朋友。   *Possessives*
     Màike shì   xiǎoShíyī   de   nánpéngyou.
     Mike   cop little.Eleven SUB boyfriend
     'Mike is El's boyfriend.'

Lastly, quantifiers can be observed in the postcopular position, as shown in (4). Crucially, similar to English and other languages, they can only yield group readings, in the sense that groups of plural individuals are treated as entities (Partee 1986; Heycock & Kroch 1999). Note particularly that the universal quantifier *suǒyǒu* 'all' is allowed in the postcopular position. In contrast, *měi* 'every' can never occur in the same position.[3]

(4)   a. 这本书的作者是两个中学生。   *number-NP*
         Zhè-běn   *shū*   *de*   *zuòzhě*   *shì*   *liǎng-ge*
         DEM-CLF   book   SUB   author   COP   two-CLF
         zhōngxuéshēng.
         secondary.school.student
         'The authors of this book are two secondary school students.'

    b. 疫情的受害者是大部分人。   *most-NP*
         Yìqíng   *de shòuhàizhě shì*   *dàbùfen rén.*
         disease.outbreak SUB victim   COP most   people
         'The victims of the disease outbreak are most people.'

    c. 疫情的受害者是所有人。   *all-NP*
         Yìqíng   *de shòuhàizhě shì*   *suǒyǒu rén.*
         disease.outbreak SUB victim   COP all   people
         'The victims of the disease outbreak are all the people.'

    d. *疫情的受害者是每个人。   *every-NP*
         *Yìqíng   *de shòuhàizhě shì*   *měi-ge*   *rén.*
         disease.outbreak SUB victim   COP every-CLF people
         Intended: 'The victims of the disease outbreak are every person.'

2.1.2 Exception 1: Postcopular non-nominals

The first exception to the generalisation that *shì* only co-occurs with nominal predicates mainly concerns bare APs, bare VPs, and IPs, as shown in (5).

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[3]Similar phenomena in English have been noted in Heycock and Kroch (1999):

(i)   ?? What she bought was every book on linguistics.

                              (Heycock & Kroch 1999: 384)

(5) a. 我的爱好是看电视。 (Zhan & Sun 2013: 756)
   Wǒ de àihào shì kàn diànshì.
   1SG SUB hobby COP watch TV
   'My hobby is watching TV.'

   b. 这个房子的特点是干净。 (Gao & Ji 1963: 54)
   Zhè-ge fángzi de tèdiǎn shì gānjìng.
   DEM-CLF house SUB characteristic COP clean
   'The characteristic of this house is that it is clean.'

   c. 她的遗憾是只跑了一圈。 (Zhan & Sun 2013: 763)
   Tà de yíhàn shì zhǐ pǎo le yī-quān.
   3SG SUB regret COP only run PFV one-circle
   'Her regret is that she has only run one lap.'

In fact, these bare APs/VPs and IPs can also occur in the precopular position, as shown in (6), which presents sentences with the reversed word orders of those in (5).

(6) a. 看电视是我的爱好。
   Kàn diànshì shì wǒ de àihào.
   watch TV COP 1SG SUB hobby
   'Watching TV is my hobby.'

   b. 干净是这个房子的特点。
   Gānjìng shì zhè-ge fángzi de tèdiǎn.
   clean COP DEM-CLF house SUB characteristic
   'That it is clean is the characteristic of this house.'

   c. 只跑了一圈是她的遗憾。
   Zhǐ pǎo le yī-quān shì tà de yíhàn.
   only run PFV one-circle COP 3SG SUB regret
   'That she has only ran one lap is her regret.'

It is unclear whether these are real exceptions, since these VPs, APs, and IPs can appear in positions that are normally occupied by nominal constituents. One approach to analysing this phenomenon is to assume that we are dealing with nominalisation. For Mandarin, another prototypical context for the discussion of nominalisation concerns the structure [N *de* V/A] (Xiang 1991; G. Cheng 1999; D. Wang 2002; Lu 2003; G. Zhou 2004; Si 2004; Deng 2006; R. Zhou 2012). (7) presents the most well-known examples in the literature.

(7) a. 这本书的出版
     zhè-běn shū   de   chūbǎn
     DEM-CLF book SUB publish
     'the publication of this book'

   b. 柠檬的酸
     níngméng de   suān
     lemon   SUB sour
     'the sourness of lemons'

This situation, namely, non-nominal constituents occurring in positions normally reserved for nominal elements, is also comparable to similar cases in other languages. For instance, in English, APs, PPs, and CPs can sometimes occur in the subject position of copular sentences, such as in the (a) sentences in (8) to (10). Such constituents are termed 'Honorary NPs' in Safir (1983) and 'elliptical NPs' in Blom and Daalder (1977) and Den Dikken (1987).

(8) a. Under the bed is a good place to hide.

   b. A good place to hide is under the bed.

(9) a. Bashful is a terrible thing to be.

   b. A terrible thing to be is bashful.

(10) a. What they did was fight.

   b. Fight was what they did.

(Den Dikken 2017: 3-4)

The current study will not engage in the debates on nominalisation and related theoretical issues. I will consider nominalisation to be an open possibility for analysing cases where bare APs/VPs and IPs occur in the postcopular position. Since this phenomenon could be attributed to other independent reasons such as nominalisation or semantic effects of referentiality, the existence of the above-mentioned examples will not undermine the claim that the Mandarin copula *shì* typically combines with nominal constituents.

2.1.3 Exception 2: Non-gradable adjectives

It is widely acknowledged that, in Mandarin, adjective predicates do not admit the use of *shì* (e.g. Pustet 2003). More precisely, the simple

combination of *shì* and an adjective predicate is rejected, as shown in (11).[4]

(11) a. * 张三是高。   *Gradable adjective with an open scale*
          **Zhāngsān shì   gāo.*
          Zhangsan COP tall
          Intended: 'Zhangsan is tall.'

     b. * 这个杯子是满。   *Gradable adjective with a closed scale*
          **Zhè-ge   bēizi shì   mǎn.*
          DEM-CLF cup COP full
          Intended: 'This cup is full.'

     c. * 这个答案是错。   *Non-gradable adjective*
          **Zhè-ge   dá'àn   shì   cuò.*
          DEM-CLF answer COP wrong
          Intended: 'This answer is wrong.'

However, as long as *de* appears in addition to *shì*, (11b) and (11c) will become grammatical, though (11a) remains ungrammatical, as shown in (12). Following Zhu (1961) (among others), *de* is analysed as a nominaliser. Alternatively, *de* is followed by an empty N. Whichever analysis is correct, the A-*de* structure is nominal, and thus no longer constitutes a counterexample to the claim that *shì* typically combines with nominals.

(12) a. * 张三是高的。   *Gradable adjective with an open scale*
          **Zhāngsān shì   gāo de.*
          Zhangsan COP tall DE
          Intended: 'Zhangsan is tall.'

     b. 这个杯子是满的。   *Gradable adjective with a closed scale*
          Zhè-ge   bēizi shì   mǎn de.
          DEM-CLF cup COP full DE
          'This cup is full.'

     c. 这个答案是错的。   *Non-gradable adjective*
          Zhè-ge   dá'àn   shì   cuò   de.
          DEM-CLF answer COP wrong DE
          'This answer is wrong.'

---

[4]The classification of adjectives follows Kennedy and McNally (2005).

It is well known that bare adjective predicate sentences in Mandarin will either yield only the comparative reading, as in (13a) and (13b), or lead to an "incomplete/ungrammatical" sentence, as in (13c), (Zhu 1982; Sybesma 1992, 1999; Grano 2012; Y. Wu & Zhu 2013; Fang 2017, 2018; Xiong & Yang 2020). To yield the positive reading of the adjectives, gradable adjectives with an open scale such as *gāo* 'tall' must co-occur with a degree adverb such as *hěn*, as shown in (14a). Non-gradable adjectives, in contrast, are by their nature incompatible with degree adverbs like *hěn*, as shown in (14b). In fact, being sandwiched between *shì* and *de* (i.e. (12c)) is the only possible predicative form for Mandarin non-gradable adjectives (Grano 2012; Fang 2017, 2018), a fact that has been long overlooked.

(13)   a. 张三高。
            Zhāngsān gāo.
            Zhangsan tall
            'Zhangsan is taller (than someone else in the discourse).'

        b. 这个杯子满。
            Zhè-ge   bēizi mǎn.
            DEM-CLF cup   full
            'This cup has even more water (than some other cup in the discourse, though both are almost full).'

        c. *这个答案错。
            *Zhè-ge   dá'àn   cuò.
            DEM-CLF answer wrong
            Intended: 'This answer is wrong.'

(14)   a. 张三很高。
            Zhāngsān hěn gāo.
            Zhangsan very tall
            'Zhangsan is tall.'

        b. *这个答案很错。
            *Zhè-ge   dá'àn   hěn cuò.
            DEM-CLF answer very wrong
            Intended: 'This answer is wrong.'

Gradable adjectives with a closed scale have two possible predicative forms. One consists of the adjective with *shì...de*, as shown in (15a). This yields the positive reading of the adjective predicate. The other

is composed of the adjective and a degree adverb such as *hěn*, which gives rise to an intensified reading of the adjective predicate, as shown in (15b).

(15)   a. 这个杯子是满的。
      Zhè-ge   bēizi shì mǎn de.
      DEM-CLF cup COP full DE
      'This cup is full.'

     b. 这个杯子很满。
      Zhè-ge   bēizi hěn mǎn.
      DEM-CLF cup very full
      'This cup is very full.'

In short, it is true that adjectives cannot co-occur with a single *shì* to form an adjective predicate sentence in Mandarin. However, when *de* occurs in addition to *shì*, two types of adjective predicates are permissible, namely, gradable adjectives with a closed scale and non-gradable adjectives.[5]

Before closing this section, I will make a short remark on *hěn*. I will not go so far as to claim that *hěn* is another copula in Mandarin that selects only gradable adjectives (e.g. B. Zhang 2011).[6] However, I will view such an analysis as an open possibility because the use of *hěn* indeed satisfies the definitions of copula that will be mentioned in Chapter 4 (e.g. Pustet 2003, Arche, Fábregas, & Marín 2019). It is semantically bleached, since it does not yield the intensified degree reading 'very'. Also, it plays a role in relation to predication and is in complementary distribution with *shì*. Cross-linguistically speaking, it is also a common phenomenon that languages adopt multiple copulas with varied selective properties (Pustet 2003; Moro 2017; Arche, Fábregas, & Marín 2019). As the current study focuses on the syntactic properties of *shì* and not on all possible copular elements in Mandarin, I will not delve into a discussion about the identity of *hěn* in adjective predicate sentences.

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[5]Analysis of the use of *shì* with adjectives is more likely to require resorting to semantic accounts, which would be a large, independent project. An elaborate description of the use of *shì* and *hěn* in relation to the predicative forms of Mandarin adjectives is included in Appendix A. An account for the distinction is left for future research.

[6]Although not proposing that *hěn* is a copula, He and Jiang (2011) and Grano

2.1.4   Interim summary

In sum, this section reviews the selectional property of postcopular constituents in Mandarin. In principle, the copula *shì* is only compatible with nominal predicates. Except for NPs with *every*-quantification, all types of noun phrases can appear in the postcopular position. Two apparent exceptions to this generalisation have also been discussed in this section. For one thing, bare APs, bare VPs, and IPs in a nominalised reading can also appear in the postcopular position. Furthermore, though gradable adjectives with an open scale do not co-occur with *shì*, gradable adjectives with a closed scale can co-occur with *shì* if an extra *de* also occurs. Furthermore, the only possible predicative form for non-gradable adjectives involves *shì* as well as *de*. Since, as we have seen, these exceptions may very well be only apparent (the postcopular constituent may be nominalised) and to keep the discussion clear, this thesis will focus solely on the canonical cases in which the postcopular constituents are uncontroversially nominal (or, in other words, "double-NP" copular sentences, using Moro's 1997, 2017 term).

2.2   Obligatoriness of *shì*

Shì is obligatory in all the examples in section 2.1. In general, it tends to be obligatory in most contexts, whether matrix or embedded. Some languages allow for omission of the copula (or "copula dropping", to use Pustet's 2003 term) in matrix sentences. For instance, the Turkish copula suffix -*DIr* is optional in all contexts. In another group of languages, copula dropping is restricted to specific grammatical contexts. For instance, Hebrew and Arabic do not use a copula in the affirmative present tense. The Russian copula *byt'* is also obligatorily omitted in the present tense. The Hungarian copula *van* must be omitted in the third person present tense. Kenya Luo copula *ni* only co-occurs with nominal subjects but must be omitted when the subjects are pronominal or demonstrative.

(2012) argue, respectively, that *hěn* and *shì* have comparable functions. For He and Jiang (2011), both *hěn* and *shì* are analysed as type-shifters that can convert NPs into predicates. Specifically, *hěn* creates extrinsic properties, while *shì* creates intrinsic properties. For Grano (2012), the use of both *hěn* and *shì* is required by the T head, to fulfil "the T[+V] Constraint", to use his term. Reviews of other analyses of *hěn* are referred to in N. N. Zhang (2015) and L. Zhang (2020).

Unlike any of the above-mentioned languages, *shì* in Mandarin matrix copular sentences is only omissible in two contexts. Its omissibility is not influenced by the properties of the subject or the tense of the sentence.

The first context concerns multi-clausal pair-lists. Copular sentences allow gapping in a pair-list context. For instance, the copula *shì* in the second and third clauses in (16) can be absent, resulting in a gapping-like sentence. Crucially, in addition to the copula, additional elements can be omitted in the same contexts, as shown in (17).

(16) 张三是数学老师，李四（是）物理老师，赵六（是）化学老师。
Zhāngsān shì shùxué lǎoshī, Lǐsì (shì) wùlǐ lǎoshī, Zhàoliù
Zhangsan COP maths teacher Lisi COP physics teacher Zhaoliu
(shì) huàxué lǎoshī.
COP chemistry teacher
'Zhangsan is a maths teacher, Lisi a physics teacher, Zhaoliu a chemistry teacher.'

(17) 张三是数学老师，李四物理，赵六化学。
Zhāngsān shì shùxué lǎoshī, Lǐsì wùlǐ, Zhàoliù huàxué.
Zhangsan COP maths teacher Lisi physics Zhaoliu chemistry
'Zhangsan is a maths teacher, Lisi a physics teacher, Zhaoliu a chemistry teacher.'

This phenomenon is interesting because it has been reported that Mandarin lacks canonical gapping (Paul 1999; S.-W. Tang 2001b; Wei 2011). However, the acceptability of (16) and (17) indicates that for some reason, gapping is possible with *shì*, even though it is unavailable with regular verbs. As shown in (18), when the verb *dāng* 'serve as' is used instead of the copula *shì*, the sentence (18) becomes ungrammatical or at least seriously degraded, even though the same interpretation is intended. The sentences in (19) are two prototypical examples showing that Mandarin lacks canonical gapping. (19a) is an example with an eventive main verb, while (19b) has a stative main verb.

(18)   */?? 张三当了数学老师，李四物理老师，赵六化学老师。[7]
　　　*/??*Zhāngsān dāng   le   shùxué lǎoshī, Lǐsì wùlǐ   lǎoshī,*
　　　Zhangsan serve.as PFV maths   teacher Lisi physics teacher
　　　Zhàoliù huàxué   lǎoshī.
　　　Zhaoliu chemistry teacher
　　　Intended: 'Zhangsan is a maths teacher, Lisi a physics teacher,
　　　and Zhaoliu a chemistry teacher.'

(19)   a.   * 张三吃了苹果，李四香蕉。
　　　　　**Zhāngsān chī le   píngguǒ, Lǐsì xiāngjiāo.*
　　　　　Zhangsan eat PFV apple   Lisi banana
　　　　　Intended: 'Zhangsan ate apples, and Lisi bananas.'

　　　b.   * 张三喜欢苹果，李四香蕉。
　　　　　**Zhāngsān xǐhuan píngguǒ, Lǐsì xiāngjiāo.*
　　　　　Zhangsan like   apple   Lisi banana
　　　　　Intended: 'Zhangsan likes apples, and Lisi bananas.'

Note that gapping is not observed when the clauses are negative in form.[8]

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[7]The use of the perfective marker *le* is crucial here. First, as will be discussed in Chapter 4, *shì* is incompatible with the perfective marker *le*, as shown in (ia). For the same intended reading of (ia), *shì* can be replaced with the verb *dāng* 'serve as'. However, the perfective marker is then obligatory, as shown in (ib). In this sense, the sentence with *le* in addition to the verb *dāng* 'serve as' constitutes a minimal pair with the copula sentence in (16). In addition, (18) without *le* can be taken as an instance of the pair-list bare clauses I discuss elsewhere (H. Cheng 2021), sentences with a different structure from episodic sentences, which actually do permit gapping.

(i)   a. 张三是（* 了）数学老师。
　　　　*Zhāngsān shì (*le) shùxué lǎoshī.*
　　　　Zhangsan COP PFV maths teacher
　　　　'Zhangsan is a maths teacher.'

　　　b. 张三当 *（了）数学老师。
　　　　*Zhāngsān dāng   *(le) shùxué lǎoshī.*
　　　　Zhangsan serve.as PFV maths teacher
　　　　'Zhangsan is a maths teacher.'

[8]Note that it is also impossible to only drop *shì* because the negator *bù* in Mandarin cannot negate nominal phrases.

(20)　a.　张三不是数学老师，李四 * (不是) 物理老师，赵六 * (不是)
化学老师。　　　　　　　　　　　　　　　　cf. (16)
Zhāngsān bù　shì　shùxué lǎoshī, Lǐsì *(bù shì)　wùlǐ
Zhangsan NEG COP maths　teacher Lisi NEG COP physics
lǎoshī, Zhàoliù *(bù shì) huàxué　lǎoshī.
teacher Zhaoliu NEG COP chemistry teacher
'Zhangsan is not a maths teacher, Lisi a physics teacher,
Zhaoliu a chemistry teacher.'

　　b.　* 张三不是数学老师，李四物理，赵六化学。　　cf. (17)
*Zhāngsān bù　shì　shùxué lǎoshī, Lǐsì wùlǐ,　Zhàoliù
Zhangsan NEG COP maths　teacher Lisi physics Zhaoliu
huàxué.
chemistry
Intended: 'Zhangsan is not a maths teacher, Lisi a physics
teacher, Zhaoliu a chemistry teacher.'

The second context of *shì* omission in a matrix clause has received
much attention in previous studies, a context that can be referred to as
"nominal predicate constructions" (Chao 1968; Zhu 1982; S.-W. Tang
2001a; Wei 2007; Q. Zhang 2010). Nominal predicate constructions are
generally defined as clauses in which subjects are directly predicated by
nominal elements without the appearance of the copula *shì* or verbal
elements such as *yǒu*, as shown in (21).

(21)　a.　孔子鲁人。　　　　　　　　　　(Chao 1968: 113)
Kǒngzǐ　Lǔ rén.
Confucius Lu people
'Confucius is from Lu State.'

　　b.　这孩子大眼睛。　　　　　　　　　(Zhu 1982: 103)
Zhè háizi dàyǎnjing.
DEM kid　big.eye
'This kid has big eyes.'

　　c.　今天星期日。
Jīntiān xīngqīrì.
today　Sunday
'Today is Sunday.'

d. 土豆两欧元。
   Tǔdòu liǎng-ōuyuán.
   potato two-euro
   'These potatoes cost two euros.'

e. 迈克十五岁。
   Màike shíwǔ suì.
   Mike   fifteen age
   'Mike is fifteen.'

Although analyses vary in whether or not these sentences are generated by omission of *shì* (or other relevant verbs such as *yǒu* 'have'), the current study views it an open possibility that the so-called nominal predicate constructions involves *shì*-omission. First, nominal predicate sentences are highly constrained in Mandarin (Zhu 1982; S.-W. Tang 2001a; Q. Zhang 2010), unlike copulaless sentences in Hebrew, Arabic, and Polish, in which the copula is consistently dropped in the present tense. For instance, such *shì*-omission in Mandarin is only found in predicational sentences and never in specificational or equative sentences. In fact, only a small group of predicational sentences allows for omission of the copula. The predicates in these sentences normally denote nationality, appearance, or temporal/locative properties; and the nominals are preferably modified by an adjective or a numeral–classifier combination. Second, *shì* can be added to all the nominal predicate constructions reported in the literature. Crucially, the insertion of *shì* will only give rise to pragmatic nuances for some speakers. And lastly, when forming negation, question–answer pairs, or A-not-A questions, or when combining with adverbs and modality, *shì* (and sometimes *yǒu* 'have' or other verbs) is always obligatory.

In contexts where embedded small clauses without a copula are allowed in many well-studied languages, either the copula *shì* or a verb must occur. For instance, in English, the copula is optional in the embedded clauses in both (22a) and (22b). In fact, *to be* tends to be absent. However, their Mandarin equivalents require the presence of an extra element in between the subject and the predicate of the embedded clauses, as shown in (23). This extra element can be the copula *shì*, as in (23a). It may also be a verb, as in (23b), depending on the semantics of the matrix verb.

(22)   a.   We consider John (to be) the best candidate.

         b.   We elected John (to be) the president.

(23)   a.   我们当张三＊（是）最佳候选人。
           Wǒmen dāng   *Zhāngsān *(shì) zuìjiā hòuxuǎnrén.*
           1PL   consider Zhangsan COP   best   candidate
           'We consider Zhangsan the best candidate.'

         b.   我们选张三＊(做) 总统。
           Wǒmen xuǎn Zhāngsān *(zuò)   *zǒngtǒng.*
           1PL   elect Zhangsan serve.as president
           'We elected Zhangsan the president.'

I am not denying the existence of small clauses in Mandarin, but it is worth noting that Mandarin seems to have a very small inventory of verbs that can take a small clause (without *shì*) as their complement (S.-W. Tang 1998). For instance, both sentences in (24) can take a small clause as the complement of the matrix verb, indicated by the possibility of *shì* omission (cf. (23b)). In addition, Mandarin small clauses with no *shì* are observed mainly in non-assertive sentences, such as rhetorical questions (e.g. (24a)) or imperatives (e.g. (24b)). In a neutral context, an assertion like (25) becomes seriously degraded as compared to its non-assertive counterparts in (24).

(24)   a.   你当张三（是）傻子吗?
           Nǐ   dāng   *Zhāngsān (shì) shǎzi ma?*
           2SG consider Zhangsan COP   idiot Q
           'Do you consider Zhangsan an idiot?'

         b.   你就当张三（是）傻子!
           Nǐ   jiù   dāng   *Zhāngsān (shì) shǎzi!*
           2SG just consider Zhangsan COP   idiot
           'You can just consider Zhangsan an idiot.'

(25)   ?? 李四当张三傻子。
      ??*Lǐsì dāng*   *Zhāngsān shǎzi.*
       Lisi consider Zhangsan idiot
       Intended: 'Lisi considers Zhangsan an idiot.'

To summarise, this section lists three contexts where *shì* can be conditionally omitted. In matrix clauses, *shì* can be omitted in multi-clausal sentences, giving rise to gapping-like sentences. In addition, with

a certain group of predicate nominals, *shì* can also be omitted, resulting in what has been referred to as "nominal predicate constructions". In embedded clauses, *shì* can also be omitted under a number of verbs. The embedded clauses without *shì* can be taken as small clauses.

2.3   An overview of non-copular uses of *shì*

The copula *shì* is homonymous with a couple of elements that fulfil particular meanings or functions, especially those associated closely with focus structures and elliptical structures. This section is a collection of various types of what I consider to be "non-copular" structures containing *shì*. Note crucially that there may be good reasons to argue that some of the structures mentioned in this section should be analysed as copular sentences even though they may display seemingly divergent properties from standard copular sentences. These possibilities will be briefly pointed out during the course of my discussion. Though essential, the current study will not delve into issues like whether these homonyms should be categorised separately or whether a unified analysis of *shì* should be pursued.[9]

2.3.1   *Shì* with different prosodic properties

Mandarin *shì* presents different prosodic properties in different types of sentences. Although I have not conducted an acoustic analysis, the intuitive judgements are clear-cut and consistent among native speakers. There are three types of *shì*s from the prosodic perspective. I take the standard copular sentences such as (1) as the neutral context and the pronunciation of *shì* in a standard copular sentence as the standard. In some contexts, *shì* bears extra stress, which I will simply term "stressed *shì*". In some other contexts, in contrast, *shì* is pronounced in a weakened way. It is almost toneless and its consonant or/and vowel are not fully articulated. Interestingly, the grammatical categories of the post-*shì* constituents in sentences with stressed *shì* or weakened *shì* are different from standard copular sentences. In addition to nominal constituents, stressed *shì* can also precede APs, VPs, PPs, and IPs. The weaker *shì*

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[9]*Shì* in this section is glossed as SHI instead of COP.

can co-occur with APs, VPs, PPs, and IPs, but not with NPs/DPs.[10]

2.3.1.1 Stressed *shì*

Shì can carry extra stress to express affirmation or emphasis (Chao 1968; Zhu 1982; Lü 1999; Long & Kuang 2017; Ye 2020). For instance, the first *shì* in B1 indicates the affirmation of A1's assertion that 'Zhangsan is not a teacher'. B2 corrects A2 by emphasising that Zhangsan IS a teacher. *Shì* in both cases is pronounced with stronger intensity than that of *shì* in a standard copular sentence. The boldface type indicates the extra stress.

(26) a. A1: 张三不是老师，对不对？
　　　　　Zhāngsān bù shì lǎoshī, duì-bù-duì?
　　　　　Zhangsan NEG COP teacher correct-NEG-correct
　　　　　'Zhangsan is not a teacher, right?'
　　　　B1: 对，张三**是**不是老师。
　　　　　Duì, Zhāngsān **shì** *bù shì lǎoshī.*
　　　　　correct Zhangsan SHI NEG COP teacher
　　　　　'Yes, it is true that Zhangsan is not a teacher.'
　　b. A2: 张三不是老师吧？
　　　　　Zhāngsān bù shì lǎoshī ba?
　　　　　Zhangsan NEG COP teacher SFP
　　　　　'Is Zhangsan not a teacher?'
　　　　B2: 不，张三**是**老师。
　　　　　Bù, Zhāngsān **shì** *lǎoshī.*
　　　　　NEG Zhangsan COP teacher
　　　　　'No, Zhangs IS a teacher.'

Note that when functioning as an emphatic marker, the post-*shì* constituent is not restricted to be nominal. The sentences in (27) are examples containing different types of post-*shì* constituents.

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[10]Note that weakened *shì* cannot occur in nominal predicate constructions like those in (21). I mentioned in the previous section that *shì* can be added to all the nominal predicate sentences one can find in the literature. When added, *shì* is pronounced in the same way as in standard copular sentences.

(27)   a. 张三**是**老师。   *NP*
           Zhāngsān **shì** *lǎoshī.*
           Zhangsn SHI teacher
           'Zhangsan IS a teacher.'

        b. 迈克**是**很聪明。   *AP*
           Màike **shì** *hěn cōngming.*
           Mike   SHI very smart
           'Mike IS very smart.'

        c. 小十一**是**喜欢吃华夫饼。   *VP*
           XiǎoShíyī   **shì** *xǐhuan chī huáfūbǐng.*
           little.Eleven SHI like   eat waffle
           'El DOES like eating waffles.'

        d. 迈克**是**在家。   *PP*
           Màike **shì** *zài jiā.*
           Mike   SHI at home
           'Mike IS at home.'

        e. 迈克**是**去过实验室。   *IP*
           Màike **shì** *qù guo shíyànshì.*
           Mike   SHI go EXP lab
           'Mike DID go to the lab once.'

Shì can be pronounced with even stronger intensity and obvious longer duration when a concessive reading is implied in addition to the emphatic meaning. A special melody or contour over *shì* can also be observed.[11] If *shì* in (27) is pronounced in such a way, the discourse must be associated with a concessive implication in addition to simple affirmation. The concessive reading can be explicitly presented by adding an extra clause, as shown in (28). For instance, the first clause in (28a) confirms and emphasises the statement that Zhangsan is a teacher. However, the second clause denies the fact that he teaches chemistry, which might be more crucial to the discourse.

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[11]It may be the case that the stress on *shì* is linked to the emphatic or affirmative reading and that the special melody is associated with the concessive implication. The stronger intensity and longer duration of *shì* here result from the combination of two prosodic mechanisms.

(28) a. 张三**是**老师，但是不教化学。
         Zhāngsān **shì** *lǎoshī, dànshì bù   jiāo huàxué.*
         Zhangsn SHI teacher but   NEG teach chemistry
         'Zhangsan IS a teacher, but he does not teach chemistry.'

    b. 迈克**是**很聪明，但是不会做这道题。
         Màike **shì** *hěn   cōngming, dànshì bù   huì   zuò*
         Mike   SHI very smart   but   NEG be.able.to do
         zhè-dào tí.
         DEM-CLF puzzle
         'Mike IS very smart, but he cannot solve this puzzle.'

    c. 小十一**是**喜欢吃华夫饼，但是现在买不到。
         XiǎoShíyī   **shì** *xǐhuan chī huáfūbǐng, dànshì xiànzài mǎi*
         little.Eleven SHI like   eat waffle   but   now   buy
         bù   dào.
         NEG arrive
         'El DOES like eating waffles, but she cannot buy them any-where.'

    d. 迈克**是**在家，但是他在睡觉。
         Màike **shì** *zài jiā,   dànshì tā   zài   shuìjiào.*
         Mike   SHI at home but   3SG PROG sleep
         'Mike IS at home, but he is sleeping.'

    e. 迈克**是**去过实验室，但是没有做实验。
         Màike **shì** *qù guo shíyànshì, dànshì méiyǒu zuò shíyàn.*
         Mike   SHI go EXP lab   but   NEG   do experiment
         'Mike DID go to the lab once, but he did not conduct / participate in the experiment.'

Stressed *shì* should not be simply viewed as a copular *shì* plus an extra stress for at least two reasons. First, stressed *shì* cannot be negated (Long & Kuang 2017). For instance, the addition of a negator as shown in (29) gives rise to unparsable sentences.

(29) a. * 张三不**是**老师。   cf. (27a)
         Zhāngsān* bù   **shì *lǎoshī.*
         Zhangsn NEG SHI teacher

    b. * 迈克不**是**很聪明。   cf. (27b)
         Màike* bù   **shì *hěn   cōngming.*
         Mike   NEG SHI very smart

Second, stressed *shì* can co-occur with the copula *shì* as long as they are separated by other elements. For instance, as shown in (30), stressed *shì* co-occurs with the copula *shì* when the copula is negated or combined with modality.

(30)   a. 张三**是**不是老师。
           Zhāngsān **shì** *bù   shì   lǎoshī.*
           Zhangsan SHI NEG COP teacher
           'Zhangsan ISn't a teacher.'

        b. 张三**是**可能是骗子。
           Zhāngsān **shì** *kěnéng   shì   piànzi.*
           Zhangsan SHI be.likely COP liar
           'Zhangsan IS possibly a liar.'

2.3.1.2   Weakened *shì*

The co-occurrence of the "weakened" *shì* and verbal predicates or adjectival predicates has also been noticed in the literature, such as by Zhu (1982) and Lü (1999). This *shì* is pronounced in a "weakened" way in the sense that it is almost toneless and the consonant and/or the vowel is not fully articulated. The most frequently attested contexts for the use of weakened *shì* involve juxtaposed contrastive clauses. (31a) exemplifies sentences with VP predicates and (31b) exemplifies sentences with AP predicates. Monoclausal sentences also allow for this use of *shì*, as shown in (32).

(31)   a. 他是去接人，不是去送人。   (Zhu 1982: 105)
           Tā   shì   qù jiērén,   bù   shì   qù sòngrén.
           3SG COP go pick.up.people NEG COP go see.off.people
           'He is going to pick someone up, not to see someone off.'

        b. 张三是聪明，李四是帅。
           Zhāngsān shì   cōngming, Lǐsì shì   shuài.
           Zhangsan COP smart   Lisi COP handsome
           'Zhangsan is smart while Lisi is handsome.'

(32)   a. 他是没钱。   (Pustet 2003: 60)
           Tā   shì   méi qián.
           3SG COP NEG money
           '(It is the case that) he does not have money.'

b. 谁也是送他一本书?   (Soh 2007: 186)
    Shuí yě   shì   sòng tā   yī-běn   shū?
    who also COP give 3SG one-CLF book
    'Who also gave him a book?'

c. 你是在担心他吗?
    Nǐ   shì   zài   dānxīn tā   ma?
    2SG COP PROG worry   3SG Q
    '(Is it true) that you are worrying about him?'

Weakened *shì* is frequently associated with (contrastive) focus but it behaves differently from stressed *shì* and *shì* in clefts, which are also linked to focus. First, they have different prosodic properties. I share the judgements in Zhu's (1982) description that the *shì* in these cases tends to be pronounced in a weakened way as compared to that of a standard copular sentence with a nominal predicate or that of a copular sentence with a bare AP/VP or IP predicate. In contrast, stressed *shì* always bears extra stress, and *shì* in cleft sentences is always pronounced in the same way as the one in standard copular sentences. Second, unlike the stressed *shì* discussed in the previous subsection, this weakened *shì* can be negated, such as the second *shì* in (31a). It is worth noting, however, that sentences containing weakened *shì* (especially monoclausal sentences) do not necessarily imply contrastiveness. For instance, *shì* in (32c) simply conveys a sense of affirmation, which is possibly associated to the positive polarity. More investigation of the nature of this weakened *shì* is needed in regards to its acoustic features, contexts of use, and structural properties. Considering the fact that this weakened *shì* never co-occurs with a post-*shì* nominal and that the post-*shì* elements are always VPs/APs/PPs, it seems that this *shì* is in complementary distribution with the copula *shì*.

2.3.2   Cleft

The most crucial non-copular use of *shì* discussed in the literature is *shì* in cleft constructions. *Shì* is widely used in Mandarin cleft sentences, in many cases co-occurring with *de* (postverbal or sentence-final). It is pronounced in the same way as the copula *shì* in standard copular sentences. *Shì* can float in the sentence, above VP, and appear adjacent to the left of the focused constituent (L. L.-S. Cheng 2008). As shown

in (33), the temporal phrase *qùnián* 'last year', the locative phrase *zài shíyànshì* 'in the lab', and the subject Mike are the focused constituents in each sentence in (33), respectively. *Shì* is immediately attached to the left of these focused constituents in each case.

(33) a. 迈克是去年在实验室遇到小十一的。
         Màike shì qùnián   zài shíyànshì yùdào xiǎoShíyī   de.
         Mike SHI last.year at laboratory meet little.Eleven DE
         'It is last year that Mike met El in the lab.'

      b. 迈克去年是在实验室遇到小十一的。
         Màike qùnián   shì zài shíyànshì yùdào xiǎoShíyī   de.
         Mike last.year SHI at laboratory meet little.Eleven DE
         'It is in the lab that Mike met El last year.'

      c. 是迈克去年在实验室遇到小十一的。
         Shì Màike qùnián   zài shíyànshì yùdào xiǎoShíyī   de.
         SHI Mike   last.year at laboratory meet little.Eleven DE
         'It is Mike who met El last year.'

The identity of this *shì* and the analysis of Mandarin cleft structures have long been under debate. Many current studies analyse this *shì* as a copula (L. L.-S. Cheng 2008; Paul & Whitman 2008; Zhan & Sun 2013; W. Li 2016; J. Chen 2017). However, it has also been viewed as some other head in the literature. For instance, *shì* in cleft constructions has been analysed as an inflectional element (C.-T. J. Huang 1988), a modal verb (D. Shi 1994), or the head of a FocP on top of IP (Ye 2020). Although it is intriguing to explore whether or not the *shì* in clefts is the copula and what the function of the *de* is, this thesis will not touch upon on these issues but rather focus solely on standard copular sentences in Mandarin. One crucial reason is that the post-*shì* constituent in a cleft construction is not nominal except when the subject is the focus, as in (33c). When the subject is the focus, however, the pre-*shì* position is empty. In other words, Mandarin cleft constructions do not show an obvious NP-*shì*-NP structure.

2.3.3 Ellipsis

Shì appears in elliptical constructions in Mandarin. For instance, *shì* obligatorily accompanies a stripping remnant. It is also obligatory in

sluicing when arguments are elided. *Shì* in these two structures is pronounced in the same way as the copula *shì* in standard copular sentences.

2.3.3.1 Stripping

Shì is obligatory in the elided clause in a stripping-like structure, co-occurring with the additive morpheme *yě* 'too, also'. The combination of the additive morpheme *yě* and *shì* is used regardless of whether the antecedent is affirmative or negative in form, as shown in (34), as opposed to the English stripping structure exemplified in (35).

(34) a. 小十一吃了一盒华夫饼，迈克也是。
       XiǎoShíyī   chī le   yī-hé   huáfūbǐng, Màike yě shì.
       little.Eleven eat PFV one-box waffle   Mike   too SHI
       'El ate a box of waffles, and Mike, too.'

      b. 小十一没吃华夫饼，迈克也是。
       XiǎoShíyī   méi chī huáfūbǐng, Màike yě shì.
       little.Eleven NEG eat waffle   Mike   too SHI
       'El did not eat waffles, and Mike, neither.'

(35) a. John read the book, and Bill, too.

      b. John did not read the book, and Bill, neither.

Mandarin stripping (or PolP Ellipsis, to use Soh's 2007 term; see below) differs from canonical VP-ellipsis (VPE) in Mandarin in two respects. First, in canonical VPE, the change of polarity in the antecedent clause will lead to the change in form in the elided clause. In other words, as shown in (36b), when the antecedent is negative in form, the remnant must contain a negator.

(36) a. 小十一会唱那首歌，迈克也会。
       XiǎoShíyī   huì   chàng nà-shǒu   gē,   Màike yě
       little.Eleven be.able.to sing   DEM-CLF song, Mike   too
       huì.
       be.able.to
       'El can sing that song, and Mike also can.'

b. 小十一不会唱那首歌，迈克也不会。
    XiǎoShíyī   bù   huì   chàng nà-shǒu gē,   Màike yě
    little.Eleven NEG be.able.to sing   DEM-CLF song, Mike too
    bù   huì.
    NEG be.able.to
    'El cannot sing that song, and Mike cannot, either.'

Second, canonical VPE in Mandarin allows for the combination of
an affirmative clause and a negative clause when *què* 'but' is used instead
of *yě* 'also, too'. For instance, (37) shows that a negative clause can
serve as the antecedent to an affirmative clause and vice versa. However,
as shown in (38), such combinations are unavailable in stripping even
though *què* 'but' is used.

(37)   a. 小十一会唱那首歌，迈克却不会。
            XiǎoShíyī   huì   chàng nà-shǒu gē,   Màike què bù
            little.Eleven be.able.to sing   DEM-CLF song, Mike but NEG
            huì.
            be.able.to
            'El can sing that song, but Mike cannot.'

        b. 小十一不会唱那首歌，迈克却会。
            XiǎoShíyī   bù   huì   chàng nà-shǒu gē,   Màike què
            little.Eleven NEG be.able.to sing   DEM-CLF song, Mike but
            huì.
            be.able.to
            'El cannot sing that song, but Mike can.'

(38)   a. * 小十一吃了一盒华夫饼，迈克却不是。
            **XiǎoShíyī   chī le   yī-hé   huáfūbǐng, Màike què bù*
            little.Eleven eat PFV one-box waffle   Mike but NEG
            shì.
            SHI

        b. * 小十一没吃华夫饼，迈克却是。
            **XiǎoShíyī   méi chī huáfūbǐng, Màike què shì.*
            little.Eleven NEG eat waffle   Mike but SHI

On the basis of above-mentioned core properties of this *shì*, Soh
(2007, 2018) analyses it as the Polarity head, which differs from the
canonical copula use of *shì*. Specifically, this polarity head is supposed

to occupy a higher position than that of negation. Hence, in the case of negation, the elided structure contains negation, with the consequence that the negator never surfaces with stripping. As this *shì* is never followed by a nominal constituent (actually, it is never followed by anything), the structural analysis of it will not be addressed in the current study.

2.3.3.2 (Pseudo-)sluicing

Mandarin sluicing is argued to be a pseudo-sluicing construction involving a base-generated [*pro*-COP-*wh*] structure (Y.-H. A. Li & Wei 2014, 2017). One crucial property of this construction in Mandarin is the obligatory appearance of *shì* when the *wh*-element is an argument, as shown in (39). When the *wh*-element is an adjunct, *shì* is optional, as shown in (40). Considering the obligatoriness of the use of *shì* in these two conditions and its pronunciation property, *shì* in the Mandarin pseudo-sluicing construction is very much like the canonical copula use of *shì*. However, as a pseudo-sluicing construction does not contain a nominal precopular constituent, the analysis of *shì* in pseudo-sluicing constructions will not be addressed in this thesis, either.

(39)   a.   迈克买了一包东西，但我不知道 *(是) 什么。
            *Màike mǎi le   yī-bāo   dōngxi, dàn wǒ bù   zhīdào *(shì)*
            Mike   buy PFV one-bag thing   but 1SG NEG know   SHI
            shenme.
            what
            'Mike bought a bag of things, but I do not know what.'

       b.   有个人喜欢迈克，但我不知道 *(是) 谁。
            *Yǒu ge   rén   xǐhuan Màike, dàn wǒ bù   zhīdào *(shì)*
            have CLF people like   Mike   but 1SG NEG know   SHI
            shéi.
            who
            'Someone likes Mike, but I do not know who.'

(40) a. 迈克去了一个地方，但我不知道 (是) 在哪里。
          Màike qù le   yī-ge   dìfang, dàn wǒ bù   zhīdào (shì) zài
          Mike go PFV one-CLF place but 1SG NEG know SHI   at
          nǎlǐ.
          where
          'Mike went somewhere, but I do not know where.'

      b. 迈克去了一个地方，但我不知道 (是) 什么时候。
          Màike qù le   yī-ge   dìfang, dàn wǒ bù   zhīdào (shì)
          Mike go PFV one-CLF place but 1SG NEG know SHI
          shénme shíhou.
          what   time
          'Mike went somewhere, but I do not know when.'

      c. 迈克去了一个地方，但我不知道 (是) 为什么。
          Màike qù le   yī-ge   dìfang, dàn wǒ bù   zhīdào (shì)
          Mike go PFV one-CLF place but 1SG NEG know SHI
          wèishénme.
          why
          'Mike went somewhere, but I do not know why.'

2.3.4 Interim summary

This section briefly reviewed five non-copular uses of *shì* in Mandarin. First, in different structures, *shì* can be pronounced in distinguishable ways. In addition to the standard pronunciation in copular sentences, *shì* can either bear an extra stress or be pronounced in a weakened way. Among the above-mentioned five uses, one is relevant to stressed *shì*, one is relevant to weakened *shì*, and the rest should be pronounced in the same way as in standard copular sentences. Second, as mentioned at the beginning of this section, the current section is a collection of various apparent "non-copular" structures containing *shì*. Among all these uses of *shì*, stressed *shì* with an emphatic function and the so-called 'dummy' *shì* (Soh 2007) in stripping should be distinguished from standard copula *shì*. *Shì* in the other three uses, namely, weakened *shì*, the *shì* in cleft constructions, and the *shì* in (pseudo-)sluicing, can all be argued to be the copula or have been argued to be the copula in the literature. However, as these three types of *shì* do not typically occur in the NP-*shì*-NP environment that is the primary focus of this thesis, they will not be discussed in the current study.

Types of Mandarin copular sentences

3.1 Previous research on types of copular sentences

The question as to how fine-grained a typology should be proposed for double-NP copular sentences across and within languages has long been contentious. The most fundamental distinction lies in the referentiality of the NPs flanking the copula: they can be either referential or non-referential.[1] Higgins (1979) first proposes a four-way distinction. His influential classification is presented in (1), and (2) presents examples of different types of sentences.

			NP1	NP2
	a.	Predicational	referential	predicational
(1)	b.	Specificational	superscriptional	specificational
	c.	Identificational	referential	identificational
	d.	Identity	referential	referential

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[1]Such a dichotomy has been discussed under various labels. Keen readers are referred to Den Dikken (2017) for a more detailed review.

(2)   a. Dr. Jekyll is a handsome man.   *Predicational*

        b. My best friend is Dr. Jekyll.   *Specificational*

        c. That is Dr. Jekyll.   *Identificational*

        d. Dr. Jekyll is Mr. Hyde.   *Identity*

                  (Den Dikken & O'Neill 2017: 3)

Subsequent research shows a clear bipartition with respect to the way copular sentences are classified. One approach pursues an even more fine-grained typology on the basis of Higgin's four-way distinction. For instance, Declerck (1988) proposes that definitions constitute a separate category, arriving at a five-way distinction. *A pyramid is what the Egyptians built to bury their pharaos in* is regarded as a definition By Declerck. In contrast, the other approach tries to reduce the number of types. Crucially, the class of identificational copular sentences has been regarded as a hybrid category of specificational and identity/equative sentences (e.g. Heggie 1988; Mikkelsen 2005). Mikkelsen (2005), for instance, abstracts away from syntactic issues and arrives at a three-way typology based on the semantic types of nominal elements, following Partee (1986). Her way of classification is shown in (3).

			NP1	NP2
(3)	a.	Predicational	$<e>$	$<e,t>$
	b.	Specificational	$<e,t>$	$<e>$
	c.	Identity (Equative)	$<e>$	$<e>$

Regarding the syntactic construction of copular sentences, a two-way classification has been pursued. One pivotal move since Heggie (1988) is to treat specificational sentences as having the inverse order of either predicational sentences or identity/equative sentences. It is proposed that the inverse order is derived via movement of the predicative noun phrase. Proposals that analyse specificational sentences as inverse sentences of predicational ones assume that predicational and specificational sentences are two instantiations of the same underlying subject–predicate structural relation of copular sentences (Heggie 1988; Heycock 1995; Moro 1997, 2017; Adger & Ramchand 2003; Mikkelsen 2005; Den Dikken 2006, 2017). Put differently, there may be "just one macro-type of copular sentences" (Den Dikken 2017: 11). The class of identity/equative sentences is reduced to special semantic interpretations of the two noun phrases with the same subject–predicate

structural relation. In contrast, the other group of proposals contrasts identity/equatives from predicational copular sentences from both syntactic and semantic perspectives. Specificational sentences are linked to identity/equatives instead of predicational sentences (Heycock & Kroch 1999; Rothstein 2004).

This chapter argues for a three-way taxonomy of Mandarin copular sentences (i.e. predicational, specificational, and equative) on semantic grounds and a unified underlying syntactic structure for predicational and specificational sentences. In addition, I will show that there are no true equative copular sentences in Mandarin where a single *shì* links the two noun phrases. Section 3.2 will first show that in Mandarin, predicational, specificational, and equative copular sentences show distinguishable semantic properties from each other. Section 3.3 will introduce the main properties of Mandarin equative sentences. Crucially, equatives in Mandarin require an adverb *jiù* preceding the copula *shì*. Section 3.4 will focus on the distinctions between predicational and specificational copular sentences. The syntactic analysis of these two types of sentences will be presented in Chapter 5, after the examination of the position of *shì* in Chapter 4.

3.2 The three-way taxonomy: From the semantic perspective

Mandarin data fit nicely into Mikkelsen's three-way typology regarding the semantic types of NPs flanking the copula. For instance, (4a), a predicational copular sentence, expresses that the entity Zhangsan has the property of being Lisi's teacher. The precopular NP is referential (of type <e>), while the postcopular NP is property-denoting (of type <e,t>). (4b), with an inverse order of (4a), is a specificational copular sentence, which specifies the person who bears the property of being Lisi's teacher is Zhangsan. In (4b), the non-referential property-denoting NP (of type <e,t>) occupies the precopular position and the referential entity-denoting NP (of type <e>) occupies the postcopular position. (4c) can be viewed as an equative copular sentence. It indicates that there are two individual entities (both of type <e>) and that they are equated. Note crucially that a focus-associated adverb such as *jiù* is obligatory in an equative copular sentence. For further discussions on

jiù and Mandarin equative sentences see Section 3.3.

(4)   a.   张三是李四的老师。   *Predicational*
          Zhāngsān shì   Lǐsì de   lǎoshī.
          Zhangsan COP Lisi SUB teacher
          'Zhangsan is Lisi's teacher.'

      b.   李四的老师是张三。   *Specificational*
          Lǐsì de   lǎoshī   shì   Zhāngsān.
          Lisi SUB teacher COP Zhangsan
          'Lisi's teacher is Zhangsan.'

      c.   罗老师就是张三。   *Equative*
          Luó lǎoshī   jiù   shì   Zhāngsān.
          Luo teacher exactly COP Zhangsan
          'Teacher Luo is Zhangsan.'

3.2.1   Reversibility

All three types of copular sentences in Mandarin are reversible in word order. Sentences in (5) respectively represent the reversed order of sentences in (4). It is clear that the reversed order of the predicational sentence (i.e. (4a)) is the same as the specificational sentence (i.e. (4b)), and vice versa. When it comes to equative sentences such as (4c) and (5c), the two orders both result in equative sentences. The adverb *jiù* is obligatory in both orders, and it immediately precedes the copula.

(5)   a.   李四的老师是张三。   cf. (4a)
          Lǐsì de   lǎoshī   shì   Zhāngsān.
          Lisi SUB teacher COP Zhangsan
          'Lisi's teacher is Zhangsan.'

      b.   张三是李四的老师。   cf. (4b)
          Zhāngsān shì   Lǐsì de   lǎoshī.
          Zhangsan COP Lisi SUB teacher
          'Zhangsan is Lisi's teacher.'

      c.   张三就是罗老师。   cf. (4c)
          Zhāngsān jiù   shì   Luó lǎoshī.
          Zhangsan exactly COP Luo teacher
          'Zhangsan is Teacher Luo.'

The reversibility between predicational and specificational copular sentences is affected by the (in)definiteness of the predicative nominals. A predicational sentence with an indefinite predicative nominal (Num–Cl–N or bare noun) does not have a corresponding inverse order because the subject in Mandarin cannot be indefinite (Chao 1968; C. N. Li & Thompson 1981; Tsai 1994, 2001; Shyu 1995; Y.-H. A. Li 1998; L. L.-S. Cheng & Sybesma 1999).[2] For instance, the NPs cannot be flipped in either sentence in (6). (7a) is ungrammatical. (7b) *per se* is a grammatical sentence, but it is interpreted differently from (6b). The precopular bare noun in (7b) must be interpreted as the unique definite physics teacher in the discourse, since bare nouns in Mandarin can also be interpreted as definite (L. L.-S. Cheng & Sybesma 1999).

(6) a. 张三是一个物理老师。
         Zhāngsān shì yī-ge wùlǐ lǎoshī.
         Zhangsan COP one-CLF physics teacher
         'Zhangsan is a physics teacher.'

     b. 张三是物理老师。
         Zhāngsān shì wùlǐ lǎoshī.
         Zhangsan COP physics teacher
         'Zhangsan is a physics teacher.'

(7) a. * 一个物理老师是张三。
         **Yī-ge wùlǐ lǎoshī shì Zhāngsān.*
         one-CLF physics teacher COP Zhangsan
         Intended: 'A physics teacher is Zhangsan.'

     b. 物理老师是张三。
         Wùlǐ lǎoshī shì Zhāngsān.
         physics teacher COP Zhangsan
         'The physics teacher is Zhangsan.'

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[2]Counterexamples exist showing that an indefinite nominal can sometimes occur in the subject position in Mandarin; for examples and discussion see Tsai (1994, 2001); Y.-H. A. Li (1998). This use of Num–Cl–N structure is always closely associated with contrastive topics. Also, these apparent indefinite nominals have been argued to express a quantity interpretation rather than the standard non-quantity indefinite individual-denoting interpretation (Y.-H. A. Li 1998).

3.2.2 Subject type

Although, as shown previously, the subject in predicational, specific-ational and equative copular sentences must all be definite, the referentiality of the subject NP differs between the three types of sentences. Mikkelsen (2005) provides a number of diagnostics showing that subjects of both predicational and equative sentences are referential, while subjects of specificational sentences are predicative. She notes that the pronominals used in tag questions, left-dislocation, and question–answer pairs differ across sentence types. Specifically, in English, predicational sentences pattern with equative sentences that pronominals in the above-mentioned contexts show phi-feature agreement with the subject, whereas specificational sentences pick up the neutral form *it* or the demonstrative *that*. Danish data show a pattern parallel to English. The English examples below present the diagnostics adopted in Mikkelsen (2005: 72-78) (cited with minor adaptation). Keen readers of Danish examples are referred to her book.

(8)   a. The tallest girl in the class is Swedish.   *Predicational*

        b. The tallest girl in the class is Molly.   *Specificational*

        c. [Pointing to a player on the field]
            SHE is Molly Jacobson.   *Equative*

(9)   Tag questions

        a. The tallest girl in the class is Swedish, isn't **she**?

                                     Predicational

        b. The tallest girl in the class is Molly, isn't **it**?

                                     Specificational

        c. [Pointing to a player on the field]
            SHE is Molly Jacobson, isn't **she**?   *Equative*

(10)   Left-dislocation

        a. As for the tallest girl in the class, **she** is Swedish.

                                       Predicational

        b. As for the tallest girl in the class, **it** is Molly.

                                     Specificational

        c. [Pointing to a player on the field]
            As for HER, **she** is Molly Jacobson.   *Equative*

(11) Question–answer pairs

    a. Q: What nationality is the tallest girl in the class?
       A: She/*It/*That is Swedish.   *Predicational*

    b. Q: Who is the tallest girl in the class?
       A: *She/It/That is Molly.   *Specificational*

    c. Q: [Pointing to a person] Who is she?
       A: She/*It/*That is Molly Jacobson.   *Equative*

These diagnostics are based on the connection between the semantic interpretation of nominals and the corresponding anaphoric pronominal forms. Specifically, *it* and *that* in English can be used as property anaphors (Mikkelsen 2005 and reference therein). (12) shows that *it* and *that* can be anaphoric to APs and VPs that are canonically taken as property-denoting elements.[3]

(12)   a. They said that Sheila was [beautiful] and she is **that**.

    b. John [talks quietly]. **It/That** is a good thing to do.

                          (Mikkelsen 2005: 68)

When Mandarin is concerned, *tag questions* and *question–answer pairs* cannot be effective diagnostics because the occurrence of any above-mentioned pronominals is rejected in Mandarin equivalents of English tag questions (e.g. (13)) and is odd in question–answer pairs (e.g. (14)).[4]

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[3]Mikkelsen (2005) also points out that the use of *it* and *that* are not connected to uncertain reference or proposition denoting. First, *it* and *that* can be used even though the phi-feature of the antecedent is obvious, as shown in (i), which makes the uncertain reference account untenable. Second, if *it* and *that* are anaphoric to propositions, they should be expected to occur in all tag questions, contrary to fact. As we saw in (9), *it/that* is unavailable in the tag of predicational and equative sentences.

  (i)   The lead **actress** in that movie is Ingrid Bergman, isn't **it**?
                          (Mikkelsen 2005: 89)

[4]Although it is preferable that the answers in question–answer pairs such as (14) have null subjects. *Tā* '3SG, she' in (14a) and both *tā* and *nà* 'that' in (14b) are not completely rejected. In any case, the use of *nà* is preferable to that of *tā* in (14b). Moreover, though still odd, the occurrence of *nà* in (14b) is much better than in (14a). The pattern is comparable to what will be discussed in later paragraphs in regard to topicalisation and the use of anaphoric pronominals.

(13)   Tag questions
   a. 你们班最高的女生是瑞典人,(* 她/* 那) 不是吗?

Predicational

Nǐmen bān zuì gāo de nǚshēng shì Ruìdiǎnrén,
2PL class most tall SUB female.student COP Swedish
(**tā*/**nà*) *bù shì ma?*
3SG/DEM NEG SHI Q
'The tallest girl in your class is a Swedish, isn't she?'

   b. 你们班最高的女生是 Molly,(* 她/* 那) 不是吗?

Specificational

Nǐmen bān zuì gāo de nǚshēng shì Molly,
2PL class most tall SUB female.student COP Molly
(**tā*/**nà*) *bù shì ma?*
3SG/DEM NEG SHI Q
'The tallest girl in your class is Molly, isn't it?'

(14)   Question–answer pairs
   a. A: 你们班最高的女生是哪国人?   *Predicational*
      Nǐmen bān zuì gāo de nǚshēng shì nǎ
       2PL class most tall SUB female.student COP which
guó rén?
country people
         'What is the nationality of the tallest girl in your class?'
      B: (? 她/* 那)(是) 瑞典人。
      (?*Tā*/**nà*) (*shì*) *Ruìdiǎnrén.*
      3SG/DEM COP Swedish
         'She is Swedish.'

   b. A: 你们班最高的女生是谁?   *Specificational*
      Nǐmen bān zuì gāo de nǚshēng shì shéi?
       2PL class most tall SUB female.student COP who
         'Who is the tallest girl in your class?'
      B: (?? 她/?? 那)(是)Molly。
      (??*Tā*/??*nà*) (*shì*) Molly.
      3SG/DEM COP Swedish
         'That is Molly.'

   A comparable pattern in (10), namely, pronominals in relation
to the left-dislocation construction, can be attested in Mandarin, al-

though they are not as clear-cut as in English and Danish.[5] First, the demonstrative *nà* 'that' cannot be used in predicational sentences, as in (15a), while it can be used in specificational sentences, as in (15b). The predicational sentence only permits the use of *tā* '3SG, she'. In addition, for reasons unclear to me, *tā* in specificational sentences is acceptable to several speakers I have consulted, although the use of *nà* 'that' is greatly preferred.

(15)   a. 我们班最高的女孩啊，她/* 那是瑞典人。

                                                                 Predicational

        Wǒmen bān   zuì   gāo de   nǚhái a,   tā/*nà   shì
        1PL   class most tall SUB girl   TM 3SG/DEM COP
        Ruìdiǎnrén.
        Swedish
        'As for the tallest girl in our class, she is Swedish.'

    b. 我们班最高的女孩啊，？她/那是 Molly。[6]

                                                                   Specificational

        Wǒmen bān   zuì   gāo de   nǚhái a, ?tā/nà   shì Molly.
        1PL   class most tall SUB girl   TM 3SG/DEM COP Molly
        'As for the tallest girl in our class, that is Molly.'

(16) demonstrates that, like English, *nà* 'that' in Mandarin can be anaphoric to property-denoting VPs and APs. Therefore, at least the availability of *nà* 'that' distinguishes the type of subject in copular sentences. When *nà* can be used, the subject is predicative; when *nà* cannot be used, the subject is referential.[7]

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[5]The left-dislocation construction containing a pronominal in Mandarin has been discussed under the name "hanging topic". "Left-dislocation" has been used to refer to topicalisation with a gap (see Badan and Del Gobbo 2010 and references therein). To avoid confusion and misinterpretation (especially with the term "left-dislocation"), in the current thesis, I will use "hanging topic" to refer to left-dislocation with a resumptive pronoun or demonstrative and "postcopular nominal topicalisation" for left-dislocation with a gap.

[6]I add a question mark in front of *tā* 'she' to show that though both *tā* 'she' and *nà* 'that' are acceptable in (15b), but there is difference in the degree of acceptability (or preference) between them.

[7]This generalisation is in fact inadequate for the use of *nà* 'that'. When the subject NP is inanimate, especially when it is an abstract noun, *nà* can be used. However, this generalisation in the main text holds for animate (especially human) subjects, and that is what is relevant.

(16) a. 张三 [很用功]，**那**是个好习惯。
      Zhāngsān [hěn yònggōng], **nà** *shì ge hǎo xíguàn.*
      Zhangsan very diligent   DEM COP CLF good habit
      'Zhangsan is diligent, and that is a good habit.'

   b. 张三 [说话很快]，**那**不是个好习惯。
      Zhāngsān [shuōhuà hěn kuài], **nà** *bù shì ge hǎo*
      Zhangsan speak   very fast   DEM NEG COP CLF good
      xíguàn.
      habit
      'Zhangsan speaks fast, and that is not a good habit.'

As for equative sentences, *nà* 'that' is not available in either order. As shown in (17), only *tā* 'she' can be used, indicating that the subject of a Mandarin equative sentence is referential (or not predicative). In fact, both nominals in a Mandarin equative sentence are referential.

(17) a. 我们班最高的女孩啊，她/* 那就是 Molly。[8]
      *Wǒmen bān zuì gāo de nǚhái a, tā/*nà jiù shì*
      1PL   class most tall SUB girl   TM 3SG/DEM exactly COP
      Molly.
      Molly
      'As for the tallest girl in our class, she is Molly.'

   b. Molly 啊，她/* 那就是我们班最高的女孩。
      *Molly a, tā/*nà jiù shì wǒmen bān zuì gāo de*
      Molly TM 3SG/DEM exactly COP 1PL   class most tall SUB
      nǚhái.
      girl
      'As for Molly, she is the tallest girl in our class.'

The semantic type of the subjects in the three types of copular sentences can be summarised in (18). The choice of anaphoric pronominal

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[8]Here is a scenario for use of an equative sentence.

(i) A: 听说张三喜欢班里最高的女孩。你怎么说他喜欢 Molly？
      Tīngshuō Zhāngsān xǐhuan bānlǐ   zuì gāo de nǚhái. Nǐ zěnme shuō
      hearsay Zhangsan like   in.class most tall SUB girl   2SG how   say
      tā xǐhuan Molly?
      3SG like   Molly

      'I heard that Zhangsan likes the tallest girl in the class. How come do you say that he likes Molly?'

in the hanging topic construction in Mandarin displays a pattern similar to the one pointed out by Mikkelsen (2005) in English and Danish. The subjects of predicational and equative sentences are referential, of type <e>, whereas the subjects of specificational sentences are predicative, of type <e,t>. In fact, both nominals in equative sentences are referential, of type <e>.

(18)

	pronominal		subject type
Predicational	*tā*	**nà*	<e>
Specificational	?*tā*	*nà*	<e,t>
Equative	*tā*	**nà*	<e>

Taken together, the reversibility and the subject type of each type of copular sentences in Mandarin, a three-way taxonomy from the semantic perspective can be attested in Mandarin, corresponding to Mikkelsen's classification presented in (3), repeated here as (19).

(19)

		NP1	NP2
a.	Predicational	<e>	<e,t>
b.	Specificational	<e,t>	<e>
c.	Identity/Equative	<e>	<e>

Before moving on to a discussion about Mandarin equative sentences, it is worth pointing out that (17) is grammatical with the use of *nà* 'that' if the specificational interpretation is yielded rather than the equative interpretation. Accordingly, *tā* 'she' becomes dispreferred. Such a case shows that the focus adverb *jiù* can also be used in specificational copular sentences. However, *jiù* in equative and specificational sentences is interpreted distinctively and pronounced with distinct prosodic features. *Jiù* in equatives always bears the stress, together with *shì* and

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B1: 我们班最高的女孩就是 Molly!
Wǒmen bān zuì gāo de nǚhái jiù shì Molly!
1PL class most tall SUB girl exactly COP Molly

'The tallest girl in our class is Molly!'

B2: Molly 就是我们班最高的女孩!
Molly *jiù shì wǒmen bān zuì gāo de nǚhái!*
Molly exactly COP 1PL class most tall SUB girl

'Molly is the tallest girl in our class!'

means 'exactly, precisely', which seems to emphasise the co-identity of the two noun phrases flanking the copula. However, *jiù* in specificational sentences can either bear the stress or not. When it does not bear the stress, it means 'then'. The context will involve contrastiveness. For instance, the speaker may talk about the shortest girl in the class and then turn to a statement/conversation about the tallest girl in the class. In contrast, when *jiù* bears extra stress (while *shì* does not, in contrast to equatives), sometimes with a longer duration, it conveys the speaker's confidence that the statement cannot be wrong. The interaction between the prosodic properties of *jiù-shì* and the interpretations of the sentences is intricate. I leave precise acoustic analysis for future research. Note crucially that these two uses of *jiù* associated with specificational copular sentences can be equally carried over to predicational copular sentences and non-copular sentences. In other words, they are not restricted to specificational copular sentences. In contrast, the use of *jiù* in relation to equative copular sentences is particular to this specific type of sentence.

3.3 No true equatives in Mandarin with a bare *shì*

Although the previous section presented evidence for a three-way taxonomy of Mandarin copular sentences, this section shows that equatives differ from the other two types of copular sentences in Mandarin. Most prominently, all equatives contain the adverb *jiù*, which is not required in predicational and specificational sentences. This calls into question the existence of true equative copular sentences with a bare *shì* in Mandarin.

(20) exemplifies typical equative sentences in Mandarin. They express the identity between the two entities denoted by the two nominals flanking the copula *shì* (more precisely, the combination of *jiù-shì*). For instance, (20a) indicates that the person whose name is *Zhāngsān* is the same person who is also known as *Teacher Luo*. (20b) indicates that their attitudes (though towards different people) are the same. Similarly, (20c) indicates that Molly is the very person that the other speaker knows as the tallest girl in the class.

(20)   a. 张三就是罗老师。
          Zhāngsān jiù   shì Luó lǎoshī.
          Zhangsan exactly COP Luo teacher
          'Zhangsan is Teacher Luo.'

    b. 你对张三的态度就是我对李四的态度。
          Nǐ duì   Zhāngsān de tàidù jiù   shì wǒ duì
          2SG toward Zhangsan SUB attitude exactly COP 1SG toward
          Lǐsì de   tàidù.
          Lisi SUB attitude
          'Your attitude toward Zhangsan is my attitude toward Lisi.'

    c. Molly 就是我们班最高的女孩。
          Molly *jiù   shì wǒmen bān zuì gāo de nǚhái.*
          Molly exactly COP 1PL   class most tall SUB girl
          'Molly is the tallest girl in our class.'

Heycock and Kroch (1999: 373–381) provide a few diagnostics arguing for the existence of true equative sentences in English. Unfortunately, however, Mandarin fails to provide corresponding examples for most tests. First, the authors show that true equatives are impossible in an embedded small clause, regardless of the order of the two nominals. However, Mandarin only allows for very limited cases of small clauses (see Section 2.2 in Chapter 2). Hence, in Mandarin, being able to appear in the small clause context identifies a predicational construction. However, not being able to occur in small clause contexts leads to no definitive conclusion. Second, as also pointed out in Rothstein (1995), non-restrictive modification is disallowed for predicative noun phrases, while both noun phrases in equative sentences can be modified by a non-restrictive relative clause. However, Mandarin does not exhibit formal distinctions between restrictive and non-restrictive relative clauses.

In addition to the obligatory occurrence of the adverb *jiù* (and the stress on both *jiù* and *shì*), a number of other properties distinguishing Mandarin equative sentences from both predicational and specificational sentences can be observed. These properties of equative sentences will be presented in the following subsections. Section 3.3.1.1 will show that the occurrence of the adverb *jiù* is consequential. Section 3.3.1.2 and Section 3.3.1.3 will show that both nominals flanking the combination of *jiù-shì* should be referential and discourse-old. Section 3.3.1.4 will show that the postcopular nominal of an equative sentence cannot be topicalised

in either order. Note that, first, *jiù* is not required in either predicational or specificational sentences. Second, as discussed in Section 3.2.2, in predicational and specificational sentences, one nominal constituent is referential and the other is non-referential. Third, as will be shown in Section 3.4.1, nominals in predicational and specificational sentences are not necessarily discourse-old. And last, although the postcopular nominal in a specificational sentence cannot be topicalised either, that of a predicational sentence can, which will be shown in Section 3.4.3.

3.3.1 Properties of Mandarin equative sentences

3.3.1.1 Obligatory use of the adverb *jiù*

The adverb *jiù* is obligatory in Mandarin equative copular sentences. On the one hand, some clauses will be ungrammatical if *jiù* is absent. For instance, (20a) and (20b) become ungrammatical when *jiù* does not occur, as in (21).

(21) a. * 张三是罗老师。   cf. (20a)
          Zhāngsān shì   Luó lǎoshī.
          Zhangsan COP Luo teacher
          Intended: 'Zhangsan is Teacher Luo.'

      b. * 你对张三的态度是我对李四的态度。   cf. (20b)
          Nǐ duì   Zhāngsān de tàidù   shì wǒ duì   Lǐsì
          2SG toward Zhangsan SUB attitude COP 1SG toward Lisi
          de   tàidù.
          SUB attitude
          Intended: 'Your attitude toward Zhangsan is my attitude toward Lisi.'

On the other hand, the equative readings are unavailable to other sentences although they may remain grammatical when *jiù* is omitted. These sentences can only be interpreted as predicational or specificational sentences, without *jiù*. For instance, (22) shows two equative sentences. Sentences in (23) respectively correspond to those in (22), leaving out *jiù*. Both sentences in (23) are grammatical, but they are no longer equatives. (23a) is a predicational sentence, while (23b) is a specificational sentence. The crucial difference between (22) and (23)

is whether both nominals will be interpreted as referential entities and as discourse-old information. This will be discussed more in detail in Sections 3.3.1.2 and 3.3.1.4.

(22)   a. Molly 就是我们班最高的女孩。   *Equative*
         Molly *jiù*   *shì* *wǒmen bān* *zuì* *gāo de* *nǚhái.*
         Molly exactly COP 1PL   class most tall SUB girl
         'Molly is the tallest girl in our class.'

       b. 我们班最高的女孩就是 Molly。   *Equative*
         Wǒmen bān *zuì* *gāo de* *nǚhái jiù*   *shì* Molly.
         1PL   class most tall SUB girl   exactly COP Molly
         'The tallest girl in our class is Molly.'

(23)   a. Molly 是我们班最高的女孩。   *Predicational*
         Molly *shì* *wǒmen bān* *zuì* *gāo de* *nǚhái.*
         Molly COP 1PL   class most tall SUB girl
         'Molly is the tallest girl in our class.'

       b. 我们班最高的女孩是 Molly。   *Specificational*
         Wǒmen bān *zuì* *gāo de* *nǚhái shì* Molly.
         1PL   class most tall SUB girl   COP Molly
         'The tallest girl in our class is Molly.'

That the (non-)occurrence of *jiù* leads to a different interpretation can also be observed in embedding contexts. When *jiù* is absent, the sentences are interpreted predicatively even if both noun phrases are personal names, as in (24). The second nominal refers to the characteristics of the person rather than directly denoting the person. (24a) can be interpreted as 'do you think Zhangsan will behave in the same way as Lisi does', and (24b) is the reverse. In contrast, when *jiù* occurs, as in (25), the sentences have the equative reading. Both sentences mean 'do you mistakenly think Zhangsan is (the same person who is also called) Lisi?' Although for such an intended meaning, *yǐwéi* 'consider, think' is preferable to *dāng*, the interpretative pattern regarding the occurrence of *jiù* is the same.

(24)   a. 你当/以为张三是李四吗?
         Nǐ *dāng/yǐwéi Zhāngsān shì* *Lǐsì ma?*
         2SG consider   Zhangsan COP Lisi Q
         'Do you think Zhangsan is the same as Lisi?'

b. 你当/以为李四是张三吗?
   Nǐ   dāng/yǐwéi Lǐsì shì   Zhāngsān ma?
   2SG consider   Lisi COP Zhangsan Q
   'Do you think Lisi is the same as Zhangsan?'

(25) a. 你当/以为张三就是李四吗?
   Nǐ   dāng/yǐwéi Zhāngsān jiù   shì   Lǐsì ma?
   2SG consider   Zhangsan exactly COP Lisi Q
   'Do you think Zhangsan is Lisi?'

   b. 你当/以为李四就是张三吗?
   Nǐ   dāng/yǐwéi Lǐsì jiù   shì   Zhāngsān ma?
   2SG consider   Lisi exactly COP Zhangsan Q
   'Do you think Lisi is Zhangsan?'

3.3.1.2 Both nominals are referential

As mentioned in Section 3.2.2, the choice between *tā* '3SG' and *nà* 'that' as the anaphoric pronominal in relation to the hanging topic can be used to distinguish the type of subject in Mandarin. It was shown in (17), repeated here as (26), that *nà* 'that' is not available in either order of equatives. Instead, only *tā* 'she' can be used. Hence, both nominals are referential (of type <e>).

(26) a. 我们班最高的女孩啊，她/* 那就是 Molly。
   Wǒmen bān zuì   gāo de nǚhái a, tā/*nà   jiù   shì
   1PL   class most tall SUB girl   TM 3SG/DEM exactly COP
   Molly.
   Molly
   'As for the tallest girl in our class, she is Molly.'

   b. Molly 啊，她/* 那就是我们班最高的女孩。
   Molly *a,   tā/*nà   jiù   shì   wǒmen bān zuì   gāo de*
   Molly TM 3SG/DEM exactly COP 1PL   class most tall SUB
   nǚhái.
   girl
   'As for Molly, she is the tallest girl in our class.'

3.3.1.3 Both nominals are discourse-old

It will be shown in Section 3.4.1 that either nominal in a predicational sentence can be the carrier of new information and that the postcopular nominal in a specificational sentence is the focus, which is seldom discourse-old. When it comes to equative sentences, however, both nominals flanking the copula must be discourse-old.[9] In other words, both entities denoted by the nominals must be known in the discourse. The use of notions such as "topic/focus" and "discourse-new/old" follows Mikkelsen (2005) and Prince (1992). Let us have a look at (22) and (23) again. They are repeated here as (27) and (28). For instance, (27a) can be used to describe Molly's property as being the tallest girl, and (27b) can be used to identify the tallest girl in the class as Molly. The precopular nominals in both sentences can be viewed as topics, while the postcopular nominals are discourse-new.[10] However, for (28) to be felicitous, both Molly and the very girl who is the tallest in the class should be mentioned in the previous discourse. A possible context is provided in footnote 8 on page 51. For instance, the speakers may have mentioned something about Molly and something about the tallest girl in the class. The equative sentence establishes the co-identity between the two people, the relation of which is unknown (or new) to one of the speakers.

(27) a. Molly 是我们班最高的女孩。
         Molly *shì   wǒmen bān   zuì   gāo de   nǚhái.*
         Molly COP 1PL   class most tall SUB girl
         'Molly is the tallest girl in our class.'

      b. 我们班最高的女孩是 Molly。
         Wǒmen bān   zuì   gāo de   nǚhái shì Molly.
         1PL   class most tall SUB girl   COP Molly
         'The tallest girl in our class is Molly.'

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[9]Anikó Lipták (p.c.) suggests that the obligatory nature of *jiù* in Mandarin equative sentences may be relevant for this property. As both nominals are discourse-old, the identity relation presents the new information. The focus adverb *jiù* is used in relation to the information focus on the copula.

[10]In fact, as summarised in Mikkelsen (2005: Ch.8 and Ch.9), predicational copular sentences can entertain various types of information structures, whereas the specificational copular sentences invariantly have a topic–focus structure. A similar pattern in Mandarin data will be presented in Section 3.4.1.

(28) a. Molly 就是我们班最高的女孩。
      Molly *jiù   shì wǒmen bān   zuì   gāo de   nǚhái.*
      Molly exactly COP 1PL   class most tall SUB girl
      'Molly is the tallest girl in our class.'

   b. 我们班最高的女孩就是 Molly。
      Wǒmen bān   zuì   gāo de   nǚhái jiù   shì Molly.
      1PL   class most tall SUB girl   exactly COP Molly
      'The tallest girl in our class is Molly.'

3.3.1.4 Constraints on topicalisation

As will be shown in the Section 3.4.3, extraction restrictions have been discussed extensively when different types of copular sentences are compared. However, when it comes to Mandarin, the only diagnostic in relation to the extraction restriction is the availability of topicalising the postcopular nominals. For an extensive discussion on extraction restrictions on Mandarin copular sentences, see Section 3.4.3. In short, the postcopular nominal in a predicational sentence can be topicalised, whereas that of a specificational sentence cannot; see again (29). As for equatives, the postcopular nominal cannot be topicalised in either order, as shown in (30).

(29) a. 我们班最高的女孩，Molly 可能是。   *Predicational*
      Wǒmen bān   zuì   gāo de   nǚhái, Molly *kěnéng shì.*
      1PL   class most tall SUB girl   Molly be.likely COP
      'As for the tallest girl in our class, that is probably Molly.'

   b. * Molly，我们班最高的女孩可能是。   *Specificational*
      Molly, wǒmen bān   zuì   gāo de   nǚhái kěnéng shì.
      Molly 1PL   class most tall SUB girl   be.likely COP

(30) a. * 我们班最高的女孩，Molly 可能就是。   *Equative*
      Wǒmen bān   zuì   gāo de   nǚhái, Molly *kěnéng jiù*
      1PL   class most tall SUB girl   Molly be.likely exactly
      shì.
      COP

b. * Molly，我们班最高的女孩可能就是。   *Equative*
    Molly, wǒmen bān zuì gāo de nǚhái kěnéng jiù
    Molly 1PL   class most tall SUB girl   be.likely exactly
    shì.
    COP

In sum, Mandarin equative sentences display a number of distinctive properties from both predicational and specificational copular sentences. First, the adverb *jiù* is obligatory in addition to an obligatory *shì*. Both *jiù* and *shì* must bear stress. Otherwise, the sentence is either ungrammatical or cannot have the equative interpretation. Second, both nominals flanking the copula are referential, of type <e>. Third, the entities these nominals denote must be discourse-old. In addition, unlike the inversion relation between the predicational and specificational copular sentences, equative sentences are independently reversible between the two word orders. And finally, with respect to the extraction constraints, the equative sentences are subject to the same extraction restrictions as those of specificational sentences in that the postcopular nominal cannot be topicalised.

3.3.2   Two types of true equatives

Heycock and Kroch (1999) particularly mention two types of sentences that they recognise as true equative sentences in English. In fact, equivalents of both types of sentences can be found in Mandarin. Crucially, it will be shown that these sentences share with the prototypical equatives such as (20) the key properties discussed in the previous subsections.

The first type of true equative sentences Heycock and Kroch (1999) identify can be exemplified as (31a). The word-to-word translation (with the addition of *jiù*) is presented in (31b), which is a grammatical equative copular sentence.[11]

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[11]In Mandarin, there are better ways to express the co-identity of the two kinds of attitude, as shown in (i).

(31) a. Your attitude toward Jones is my attitude toward Davies.

  b. 你对张三的态度 *(就) 是我对李四的态度。
   *Nǐ duì   Zhāngsān de tàidù   *(jiù) shì wǒ duì*
   2SG toward Zhangsan SUB attitude exactly COP 1SG toward
   Lǐsì de   tàidù.
   Lisi SUB attitude
   'Your attitude toward Zhangsan is my attitude toward Lisi.'

The result of the hanging topic test for the subject type (see also Section 3.2.2) and postcopular nominal topicalisation (see also Sections 3.3.1.4 and 3.4.3) applied to (31b) shows a pattern similar to (26) and (30). One difference is that the demonstrative *nà* 'that' is acceptable here, though *tā* 'it' is still preferable. It is unclear whether the availability of using *nà* is influenced by the semantically abstract nature of the noun phrase.

(32) Hanging topic test

  a. 你对张三的态度啊，它/? 那就是我对李四的态度。
   Nǐ duì   Zhāngsān de tàidù   a, tā/?nà   jiù
   2SG toward Zhangsan SUB attitude TM 3SG/DEM exactly
   shì wǒ duì   Lǐsì de tàidù.
   COP 1SG toward Lisi SUB attitude
   'As for your attitude toward Zhangsan, it is exactly my attitude toward Lisi.'

(i) a. 你对张三的态度和我对李四的态度一样。
   Nǐ duì   Zhāngsān de tàidù   hé wǒ duì   Lǐsì de tàidù
   2SG toward Zhangsan SUB attitude and 1SG toward Lisi SUB attitude
   yīyàng.
   same
   'Your attitude toward Zhangsan is the same as my attitude toward Lisi.'

  b. 你对张三的态度和我对李四的态度是一样的。
   Nǐ duì   Zhāngsān de tàidù   hé wǒ duì   Lǐsì de tàidù   shì
   2SG toward Zhangsan SUB attitude and 1SG toward Lisi SUB attitude SHI
   yīyàng de.
   same   DE
   'Your attitude toward Zhangsan is the same as my attitude toward Lisi.'

b. 我对李四的态度啊，它/? 那就是你对张三的态度。
Wǒ duì Lǐsì de tàidù a, tā/?nà jiù shì nǐ
1SG toward Lisi SUB attitude TM 3SG/DEM exactly COP 2SG
duì Zhāngsān de tàidù.
toward Zhangsan SUB attitude
'As for my attitude toward Lisi, it is exactly your attitude toward Zhangsan.'

(33) Postcopular nominal topicalisation

a. * 我对李四的态度啊，你对张三的态度可能就是。
**Wǒ duì Lǐsì de tàidù a, nǐ duì Zhāngsān*
1SG toward Lisi SUB attitude TM 2SG toward Zhangsan
de tàidù kěnéng jiù shì.
SUB attitude be.likely exactly COP

b. * 你对张三的态度啊，我对李四的态度可能就是。
**Nǐ duì Zhāngsān de tàidù a, wǒ duì Lǐsì*
2SG toward Zhangsan SUB attitude TM 1SG toward Lisi
de tàidù kěnéng jiù shì.
SUB attitude be.likely exactly COP

The second type of true equative sentences that Heycock and Kroch (1999) distinguish is the tautology. This type involves the appearance of identical adjectives on both sides of the copula. The existence of this type of sentence is taken as another crucial argument for the existence of true equative sentences in English. Heycock and Kroch (1999) argue that these sentences pose a problem for a predicative analysis regarding type ambiguity. Assuming the existence of true equative sentences permits the analysis that the two adjectives are of the same type, namely <e,t>. Otherwise, only one adjective can be of their normal type <e,t>, while the other must be of the higher type: <<e,t>,t>. As tautologies such as (34) indeed assert that the *honest/dishonest* property is identical to itself, approaches involving different types for adjectives in one sentence are problematic.

(34) a. When it comes down to it, honest is honest.

b. You can dress it up if you like, but in the end being dishonest is just being dishonest.

(Heycock & Kroch 1999: 375)

Counterparts of the English tautologies can be found in Mandarin too, with *jiù* occurring, such as the one in (35).

(35) 你可以伪装自己，但是不诚实 *(就) 是不诚实。
      *Nǐ   kěyǐ wěizhuāng zìjǐ, dànshì bù   chéngshí *(jiù)   shì bù*
      2SG may disguise   self but NEG honest   exactly COP NEG
      chéngshí.
      honest
      'You can have your camouflage, but dishonest is dishonest.'

(36) 张三 *(就) 是张三，无恶不作。
      *Zhāngsān *(jiù)   shì   Zhāngsān, wú'èbúzuò.*
      Zhangsan exactly COP Zhangsan unscrupulous
      '(After all), Zhangsan is Zhangsan, who is unscrupulous.'

Application of the hanging topic test and postcopular element topicalisation of the above tautologies results in a pattern similar to the above-mentioned equative sentences. First, as shown in (37), using a pronoun is preferable to the demonstrative. When the nominal is animate, use of the demonstrative *nà* is rejected, as shown in (37b). When the nominal is inanimate, as in (37a), the pronoun *tā* 'it/he' and the demonstrative *nà* 'that' are both available for hanging topics. Again, the availability of using *nà* may be influenced by the semantic abstractness of the noun phrase. Second, topicalisation of postcopular elements is impossible, as shown in (38). Moreover, such topicalisation does not lead to ungrammaticality of the sentences; they are completely unparsable for native speakers.

(37) Hanging topic test
      a. 不诚实啊，它/那就是不诚实。
          Bù chéngshí a,   tā/nà   jiù   shì bù chéngshí.
          NEG honest   TM 3SG/DEM exactly COP NEG honest
          'As for dishonest, it is dishonest.'
      b. 张三啊，他/* 那就是张三。
          *Zhāngsān a, tā/*nà   jiù   shì Zhāngsān.*
          Zhangsan TM 3SG/DEM exactly COP Zhangsan
          'As for Zhangsan, he is Zhangsan.'

(38) Postcopular nominal topicalisation

    a.   * 不诚实啊，不诚实可能就是。
         *Bù   chéngshí a,   bù   chéngshí kěnéng   jiù   shì.
         NEG honest   TM NEG honest   be.likely exactly COP

    b.   * 张三啊，张三可能就是。
         *Zhāngsān a,   Zhāngsān kěnéng   jiù   shì.
         Zhangsan TM Zhangsan be.likely exactly COP

In short, counterparts of the two special equative sentences Heycock and Kroch (1999) identify can also be found in Mandarin. They do not show special properties distinguishing them from the prototypical equatives in (20) with regard to referentiality of the nominals and the availability of topicalising the postcopular nominal. Crucially, *jiù* is also obligatory in these two cases.

Taking into consideration the requirement of *jiù* in the equative sentences – the most prototypical ones or the two special cases distinguished by Heycock and Kroch (1999) – this section shows that Mandarin does not have equative copular sentences with a bare *shì*. In addition, equative sentences containing the combination of *jiù-shì* display a number of distinctive properties from predicational and specificational copular sentences. Hence, they need to be analysed differently.

3.4 The two-way taxonomy: Canonical and inverse

Given that *predicational*, *specificational*, and *equative* are terms defined by the semantic properties of copular sentences, when the structure is discussed, I will employ the terms "canonical" and "inverse", following the terminology in Heycock (1995), Moro (1997), and Den Dikken (2006), among others. For languages in which the subject precedes the object, including English and Mandarin, canonical sentences can be characterised as those in which the pre-copular nominal is referential, while the postcopular nominal is predicative. Accordingly, in inverse sentences, the pre-copular nominal is predicative (or "attributive", see Heycock 1995), while the postcopular nominal is referential. For instance, (39a) represents a canonical copular sentence, while (39b) represents an inverse sentence.

(39)   a. 迈克是小十一的好朋友。   *Canonical*
           Màike shì xiǎoShíyī   de hǎo péngyou.
           Mike   COP little.Eleven SUB good friend
           'Mike is a good friend of El.'

        b. 小十一的好朋友是迈克。   *Inverse*
           XiǎoShíyī   de hǎo péngyou shì Màike.
           little.Eleven SUB good friend   COP Mike
           'The good friend of El is Mike.'

Roughly speaking, canonical sentences correspond to predicational copular sentences, while inverse sentences correspond to specificational copular sentences.[12] However, the use of *canonical* and *inverse* explicitly exhibits the core conception of the structural analysis this thesis argues for. For one thing, this pair of terms reflects the fundamental assumption of the current analysis that all Mandarin copular sentences have a uniform underlying structure. Particularly, the predicational order is viewed as the canonical order of the two NPs. Furthermore, it is proposed that inverse sentences are derived via the crucial step of "predicate inversion" (Moro 1997, 2017; Mikkelsen 2005; Den Dikken 2006, 2017). In other words, specificational copular sentences are analysed as copular sentences with predicate inversion. The structural analysis will be presented in Chapter 5. The remainder of this section will examine the distinctions between canonical and inverse sentences/orders with respect to semantic interpretations and syntactic behaviours.

3.4.1   The pattern of focus

The first distinction between canonical and inverse copular sentences lies in the pattern of focus. As observed in many other languages, either position of a canonical copular sentence in Mandarin can be in focus. In contrast, in an inverse copular sentence, it is the postcopular element that must be in focus. Assuming that the answer to the wh-element

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[12]Den Dikken (2006: 263) in particular points out the distinction between the terms "inverse" and "reverse". According to him, the predicate occupies a higher position than the subject in both reverse predication and inverse predication structures. The inverse predication structure is derived via A-movement of the predicate. In contrast, the predicative nominal in a reverse predication structure is base-generated in a high position. A typical example for the reverse predication structure is *Brian is clever for a five-year-old.*

is the focus of the sentence, the pattern of question–answer pairs in different discourses indicates the pattern of focus of both types of copular sentences (Heycock 1995). The answers in (40) are both canonical sentences, and those in (41) are inverse sentences. As shown in (40), the noun phrases on either side of the copula in canonical sentences can bear focus, since both answers are felicitous for as responses to the questions. In contrast, the distinction in felicity between the two answers in (41) indicates that in inverse sentences only the postcopular element can be in focus. The phrases in focus are presented in bold.

(40) Answering with canonical sentences

    a. A: Was the culprit John or Bill?
       B: **John** was the culprit.

    b. A: Was John the culprit or the victim?
       B: John was the **culprit**.

(41) Answering with inverse sentences

    a. A: Was the culprit John or Bill?
       B: The culprit was **John**.

    b. A: Was John the culprit or the victim?
       B: # The **culprit** was John.

<div align="right">(Heycock 1995: 224)</div>

The equivalents of (40) and (41) in Mandarin are presented as (42) and (43), respectively. Mandarin data parallel what Heycock (1995) notices in English.[13]

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[13] Note that alternative questions are actually blocked in the precopular position except when they are echo questions.

(i)   a. */?? 张三还是李四是你的老师?
      */??*Zhāngsān háishì Lǐsì shì nǐ de lǎoshī?*
      Zhangsan or   Lisi COP 2SG SUB teacher
      Intended: 'Is Zhangsan or Lisi your teacher?'

  b. * 你的老师还是你的学生是张三?
     **Nǐ de lǎoshī háishì nǐ de xuéshēng shì Zhāngsān?*
     2SG SUB teacher or   2SG SUB student COP Zhangsan
     Intended: 'Is Zhangsan your teacher or student?'

In contrast, alternative questions about the subjects are acceptable for non-copular sentences.

(42) Answering with canonical sentences
  a. A: 犯人是张三还是李四?
        Fànrén shì   Zhāngsān háishì Lǐsì?
        culprit COP Zhangsan or   Lisi
        'Was the culprit Zhangsan or Lisi?'
    B: **张**三是犯人。
        Zhāngsān *shì   fànrén.*
        Zhangsan   COP culprit
        '**Zhangsan** was the culprit.'
  b. A: 张三是犯人还是受害者?
        Zhāngsān shì   fànrén háishì shòuhàizhě?
        Zhangsan COP culprit or   victim
        'Was Zhangsan the culprit or the victim?'
    B: 张三是**犯人**。
        Zhāngsān shì   **fànrén**.
        Zhangsan COP culprit
        'Zhangsan was the **culprit**.'

(43) Answering with inverse sentences
  a. A: 犯人是张三还是李四?
        Fànrén shì   Zhāngsān háishì Lǐsì?
        culprit COP Zhangsan or   Lisi
        'Was the culprit Zhangsan or Lisi?'
    B: 犯人是**张**三。
        Fànrén shì   **Zhāngsān**.
        culprit COP Zhangsan
        'The culprit was **Zhangsan**.'
  b. A: 张三是犯人还是受害者?
        Zhāngsān shì   fànrén háishì shòuhàizhě?
        Zhangsan COP culprit or   victim
        'Was Zhangsan the culprit or the victim?'

(ii) 张三还是李四要去北京?
      Zhāngsān háishì Lǐsì yào qù Běijīng?
      Zhangsan or   Lisi will go Beijing
      'Will Zhangsan or Lisi go to Beijing?'

B: # **犯人**是张三。
   #**Fànrén** *shì*   *Zhāngsān.*
   culprit   COP Zhangsan
   'The **culprit** was Zhangsan.'

Similarly, Halliday (1967, cited from Mikkelsen 2005: 133) also notes the different patterns of focus between predicational and specificational sentences. The reasoning is the same as in Heycock (1995). As shown in (44a), when *John* is the focus, either a predicational sentence or a specificational sentence can be used as the answer to the question. In contrast, when *the winner* is the focus, only the predicational sentence qualifies as an answer to the question because A3 violates the focus pattern of a standard specificational sentence.

(44)   a.   Q: Who is the winner?
             A1: **John** is the winner.   *Predicational*
             A2: The winner is **John**.   *Specificational*
        b.   Q: What is John?
             A3: # **The winner** is John.   *Specificational*
             A4: John is **the winner**.   *Predicational*

However, Halliday's test cannot be applied to Mandarin simply because the equivalents of the question in (44b) are ungrammatical, as shown in (45).[14] When the nominals denote human beings, the corresponding wh-element can only be *shéi* 'who'. Note that as Mandarin is a wh-in-situ language, the equivalent of the question in (44b) has two variants, which correspond to a predicational sentence (45a) and a specificational sentence (45b), respectively.

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[14]Heggie (1988) argues for the semantic distinction of postcopular nominals of predicational and specificational copular sentences on the basis of the contrast between the use of 'what' and 'who', following Higgins (1973, cited from Heggie 1988). Specifically, the answer to 'what' only refers to a property in relation to a person, whereas the answer to 'who' can refer to a person. The contrast can be seen in (i) and (ii). This test cannot be carried over to Mandarin for the same reason that Halliday's (1967) test cannot be applied to Mandarin data, that is, (45) is entirely unacceptable.

(i)   a.   A: What is John?
            B: John is the concert pianist I told you about.

(45)   a.   * 约翰是什么?   *Predicational*
                Yuēhàn shì   shénme?
                John   cop what
                Intended: 'What is John?'

        b.   * 什么是约翰?   *Specificational*
                Shénme shì   Yuēhàn?
                what   cop John
                Intended: 'What is John?'

The above pattern presented in (42) and (43) does not present the whole picture of the Mandarin data. In fact, in Mandarin the precopular nominal in an inverse sentence can have information focus, functioning as the carrier of new information (following É.Kiss's 1998 definition of foci). For instance, B1 is a specificational sentence. The precopular nominal *Lǐsì de lǎoshī* 'Lisi's teacher' in B1 in (46) has information focus, since it provides the answer to the question. Note that the word order pattern of question–answer pairs is more complex in Mandarin than what we have seen in English (cf. (i) and (ii) on page 67) when the question sentence involves a wh-constituent. Since Mandarin is a wh-in-situ language, the wh-constituent can occur on the either side of the copula. (46) and (47) show that when the wh-constituent in the question occupies the precopular position, the answer allows for both canonical and inverse orders. In contrast, as shown in (48) and (49), when the wh-constituent occupies the postcopular position, the constituent answering the question must occur in the postcopular position regardless of the type of copular sentence.

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        b.   A: What is the concert pianist I told you about?
              B1: # The concert pianist I told you about is John.
              B2: The concert pianist I told you about is French.   (Heggie 1988: 74)

(ii)   a.   A: Who is my teacher?
              B1: John is your teacher.
              B2: Your teacher is John.

        b.   A: Who is John?
              B1: *Your teacher is John.
              B2: That man over there is John.   (Heggie 1988: 75)

(46)   A: 谁是张三? [15]   *Specificational*
      Shéi shì Zhāngsān?
      who COP Zhangsan

      'Who is Zhangsan?'

    B1: 李四的老师是张三。   *Specificational*
      Lǐsì de lǎoshī shì Zhāngsān.
      Lisi SUB teacher COP Zhangsan

      'Lisi's teacher is Zhangsan.'

    B2: ? 张三是李四的老师。   *Predicational*
      ?Zhāngsān shì Lǐsì de lǎoshī.
      Zhangsan COP Lisi SUB teacher

      'Zhangsan is Lisi's teacher.'

(47)   A: 谁是李四的老师?   *Predicational*
      Shéi shì Lǐsì de lǎoshī?
      who COP Lisi SUB teacher

      'Who is Lisi's teacher?'

    B1: 张三是李四的老师。   *Predicational*
      Zhāngsān shì Lǐsì de lǎoshī.
      Zhangsan COP Lisi SUB teacher

      'Zhangsan is Lisi's teacher.'

---

[15]In fact, use of a D-linked wh-expression is preferable:

(i)   A: 哪一个是张三?
     Nǎ   yī-ge   shì Zhāngsān?
     which one-CLF COP Zhangsan

     'Which one/person is Zhangsan?'

    B1: 李四的老师是张三。
     Lǐsì de lǎoshī shì Zhāngsān.
     Lisi SUB teacher COP Zhangsan

     'Lisi's teacher is Zhangsan.'

    B2: ? 张三是李四的老师。
     ?Zhāngsān shì Lǐsì de lǎoshī.
     Zhangsan COP Lisi SUB teacher

     'Zhangsan is Lisi's teacher.'

B2: 李四的老师是张三。   *Specificational*
  Lǐsì de lǎoshī shì Zhāngsān.
  Lisi SUB teacher COP Zhangsan

  'Lisi's teacher is Zhangsan.'

(48) A: 张三是谁？   *Predicational*
   Zhāngsān shì shéi?
   Zhangsan COP who

   'Who is Zhangsan?'

  B1: 张三是李四的老师。   *Predicational*
   Zhāngsān shì Lǐsì de lǎoshī.
   Zhangsan COP Lisi SUB teacher

   'Zhangsan is Lisi's teacher.'

  B2: * 李四的老师是张三。   *Specificational*
   *Lǐsì de lǎoshī shì Zhāngsān.
   Lisi SUB teacher COP Zhangsan

   'Lisi's teacher is Zhangsan.'

(49) A: 李四的老师是谁？   *Specificational*
   Lǐsì de lǎoshī shì shéi?
   Lisi SUB teacher COP who

   'Who is Lisi's teacher?'

  B1: 李四的老师是张三。   *Specificational*
   Lǐsì de lǎoshī shì Zhāngsān.
   Lisi SUB teacher COP Zhangsan

   'Lisi's teacher is Zhangsan.'

  B2: * 张三是李四的老师。   *Predicational*
   *Zhāngsān shì Lǐsì de lǎoshī.
   Zhangsan COP Lisi SUB teacher

   'Zhangsan is Lisi's teacher.'

The pattern in terms of the felicitous types of answers to each question type exemplified by (46) to (49) is summarised in Table 3.1. The corresponding distribution of topic and focus is presented in Table 3.2. In short, predicational sentences and specificational sentences present a parallel pattern. The availability of the word orders of the answers is also influenced by the position of the wh-constituent in the question in addition to the information structure.

Table 3.1: Types of question–answer pairs (with *wh*-questions)

Question / Answer	Precopular *wh-*		Postcopular *wh-*	
	Canonical	Inverse	Canonical	Inverse
Canonical	+ e.g. 47B1	? e.g. 46B2	+ e.g. 48B1	- e.g. 49B2
Inverse	+ e.g. 47B2	+ e.g. 46B1	- e.g. 48B2	+ e.g. 49B1

+: felicitous; -: infelicitous; ?: marked

Table 3.2: Top-Foc distribution

Question		Answer	Precopular NP	Postcopular NP
Canonical	Precopular *wh-*	Canonical (e.g. 47B1)	Focus	
		Inverse (e.g. 47B2)	Topic	Focus
	Postcopular *wh-*	Canonical (e.g. 48B1)	Topic	Focus
		Inverse (e.g. 48B2)	-	-
Inverse	Precopular *wh-*	Canonical (e.g. 46B2)	?Topic	?Focus
		Inverse (e.g. 46B1)	Focus	
	Postcopular *wh-*	Canonical (e.g. 49B2)	-	-
		Inverse (e.g. 49B1)	Topic	Focus

-: infelicitous answer; ?: marked answer

Similarly to what has been observed in English (Declerck 1988), Mandarin inverse sentences also differ from canonical sentences in that they always lead to an "exhaustiveness understanding". For instance, (50a) is neutral as to whether El has only one good friend or that she has more friends. On the other hand, (50b) implies that Mike is the only good friend El has.

(50)   a. 迈克是小十一的好朋友。
        Màike shì xiǎoShíyī de hǎo péngyou.
        Mike COP little.Eleven SUB good friend
        'Mike is a good friend of El.'

       b. 小十一的好朋友是迈克。
        XiǎoShíyī de hǎo péngyou shì Màike.
        little.Eleven SUB good friend COP Mike
        'The good friend of El is Mike.'

This shows that in inverse sentences, the postcopular noun phrase is interpreted exhaustively. The exhaustive interpretation of the postcopular phrase can further be illustrated with examples in which an inverse

copular clause is followed by coordinated material that contains a similar postcopular noun phrase. Coordination with its inverse counterpart (i.e. (50b)) is not permitted; (51b) is unacceptable, as opposed to (51a).

(51)   a. 迈克是小十一的好朋友, 也是威尔的好朋友。
           Màike shì xiǎoShíyī   de hǎo péngyou, yě shì Wēi'ěr
           Mike COP little.Eleven SUB good friend   also COP Will
           de   hǎo péngyou.
           SUB good friend
           'Mike is a good friend of El, and he is also a good friend of Will.'
      b. * 小十一的好朋友是迈克, 也是威尔。
           **XiǎoShíyī   de   hǎo   péngyou shì   Màike, yě   shì*
           little.Eleven SUB good friend   COP Mike   also COP
           Wēi'ěr.
           Will

The exhaustive reading of the postcopular phrase in inverse structures can be attributed to the definiteness of then precopular noun phrase.[16] Recall that it has been shown in Section 3.2.1 that although there are a few exceptions, subjects in Mandarin sentences are definite. The definiteness of the subject nominal presupposes the uniqueness of the entity in the discourse. In other words, as indicated in the translation line, the subject nominal phrase *xiǎoShíyī de hǎo péngyou* 'El's good friend' presupposes that there is only one good friend of El in the context. This means that the postcopular noun phrase, identifying the precopular noun phrases' identity is necessarily interpreted exhaustively. Conversely, as the postcopular predicative nominals can only be indefinite (see footnote 2 on page 16), no uniqueness is presupposed for the postcopular nominal in canonical sentences such as (50a). Hence, no exhaustive interpretation is presupposed.

Declerck (1988) also notes the contrast between definite NP subjects and indefinite NP subjects. Compare the sentences in (52). (52a) implies that there are more than one example whereas (52b) indicates that World War II is the only example linked to the discourse.[17]

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[16]I thank Jenny Doetjes and Caroline Heycock for pointing out this possibility to me.

[17]Declerck argues that the connection between a definite NP subject and the

(52)   a. An example of this is World War II.
        b. The example of this is World War II.

A parallel pattern can be observed in Mandarin. The equivalent of sentences in (52) are presented in (53). The precopular nominal in (53a) is indefinite while that in (53b) is definite. (53a) implies that there are other example(s) other than World War II whereas (53b) implies that World War II is the only example in the context. Again, as shown in (54), additional material can be added to (53a) but not (53b).

(53)   a. 这样的一个例子是二次大战。   cf. (52a)
            Zhèyàng de   yī-ge   lìzi   shì   èrcìdàzhàn.
            such   SUB one-CLF example COP World.War.II
            'An example of this is World War II.'

        b. 这样的例子是二次大战。   cf. (52b)
            Zhèyàng de   lìzi   shì   èrcìdàzhàn.
            such   SUB example COP World.War.II
            'The example of this is World War II.'

(54)   a. 这样的一个例子是二次大战，还有一个是一次大战。
            Zhèyàng de   yī-ge   lìzi   shì   èrcìdàzhàn,   háiyǒu
            such   SUB one-CLF example COP World.War.II also
            yī-ge   shì   yīcìdàzhàn.
            one-CLF COP World.War.I
            'An example of this is World War II, and another example is World War I.'

        b. * 这样的例子是二次大战，也是一次大战。
            **Zhèyàng de   lìzi   shì   èrcìdàzhàn,   yě   shì*
            such   SUB example COP World.War.II also COP
            yīcìdàzhàn.
            World.War.I
            Intended: 'An example of this is World War II, and another example is World War I.'

_____

exhaustivity is an implicature, rather than presupposition or entailment. The exhaustiveness understanding can be derived by Cooperative Principle. A cooperative speaker will give the full list of values that satisfy the variable when using a specificational sentence. Keen readers are referred to Declerck (1988) for details.

The current thesis will not delve into the exact source of exhaustiveness associated with specificational copular sentences in Mandarin and other languages. What is crucial here is that inverse sentences have a pattern of focus distinct from that of canonical sentences. In a canonical sentence, both nominals can be in focus. In contrast, in an inverse sentence, only the postcopular nominal can be in focus. Crucially, the postcopular nominal in an inverse sentence is always in focus.

3.4.2   Obligatoriness of *shì*

As introduced in Section 2.2 in Chapter 2, while predicational copular sentences enjoy limited freedom in the optionality of copula *shì*, specificational copular sentences never allows for the omission of *shì*. Here are more examples showing the contrast between the two types of sentences regarding the occurrence of *shì*. The most crucial context is small clauses under verbs such as 'consider'. The English examples are presented below.

(55)   a. I consider [[Susan] [my best friend]].

       b.   * I consider [[my best friend] [Susan]].

(56)   I consider [my best friend to be Susan].

Mandarin exhibits the same pattern, although the use of small clauses is indeed limited. It is worth pointing out that Mandarin probably has two different words corresponding to 'consider'. One always requires an overt copula *shì*, while the other allows for a small clause without the copula. The complement clause of the verb *rènwéi* 'consider, think' ought not to be taken as a small clause, but rather as a finite clause. As shown in (57), when *rènwéi* 'consider' is the matrix verb, *shì* is obligatory in the embedding clauses for both word orders.[18]

(57)   a. 我认为苏珊 *(是) 我最好的朋友。
        Wǒ rènwéi   Sūshān *(*shì*) *wǒ   zuì   hǎo   de   péngyou.*
        1SG consider Susan   COP   1SG most good SUB friend
        'I consider Susan my best friend.'

b. 我认为我最好的朋友 *(是) 苏珊。
*Wǒ rènwéi wǒ zuì hǎo de péngyou *(shì) Sūshān.*
1SG consider 1SG most good SUB friend COP Susan
'I consider my best friend to be Susan.'

In contrast, *shì* can be optional in canonical clauses (but not in inverse clauses) when *dāng* 'consider' is the matrix verb. (58a) presents the example where *shì* can be omitted under *dāng*. The reversed order between *Zhāngsān* and *shǎzi* 'idiot' requires an overt *shì*, as in (58b).[19] Admittedly, although a sentence like (58b) may sound a bit odd or even marginal to many speakers, it will become completely ungrammatical if *shì* is absent.

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[18]Major evidence comes from the locality constraint of object preposing to the internal topic position in Mandarin (Shyu 1995, 2001; Paul 2002; Kuo 2009). It has been argued that the internal topic position that is the landing site of the proposed object is an A-position. The contrast between (ib) and (iib) shows that the complement of *rènwéi* 'consider' is a finite clause, whereas that of *bī* 'force' is not, considering that the A-movement is clause-bound.

(i)   a.   我认为张三偷走了那个面包。
          Wǒ rènwéi Zhāngsān tōu-zǒu le nà-ge miànbāo.
          1SG consider Zhangsan steal-away PFV DEM-CLF bread
          'I thought Zhangsan stole that piece of bread.'

    b.   我 *< 那个面包 > 认为张三 < 那个面包 > 偷走了。
          *Wǒ *<nà-ge miànbāo> rènwéi Zhāngsān <nà-ge miànbāo>*
          1SG DEM-CLF bread consider Zhangsan DEM-CLF bread
          tōu-zǒu le.
          steal-away PFV

(ii)   a.   我逼张三偷走了那个面包。
          Wǒ bī Zhāngsān tōu-zǒu le nà-ge miànbāo.
          1SG force Zhangsan steal-away PFV DEM-CLF bread
          'I forced Zhangsan to steal that piece of bread.'

    b.   我 < 那个面包 > 逼张三 *< 那个面包 > 偷走了。
          *Wǒ <nà-ge miànbāo> bī Zhāngsān *<nà-ge miànbāo> tōu-zǒu*
          1SG DEM-CLF bread force Zhangsan DEM-CLF bread steal-away
          le.
          PFV

[19]Note that *shǎzi* 'idiot' in (58b) must have a definite reading, that is, 'the idiot' identified in the discourse.

(58)   a. 你当张三 (是) 傻子吗?   (=(24a) in Chapter 2)
        Nǐ   dāng   Zhāngsān (shì) shǎzi ma?
        2SG consider Zhangsan COP idiot Q
        'Do you consider Zhangsan an idiot?'

        b. 你当傻子 *(是) 张三吗?
        *Nǐ   dāng   shǎzi *(shì) Zhāngsān ma?*
        2SG consider idiot COP   Zhangsan Q
        'Do you consider the idiot to be Zhangsan?'

In certain contexts, *shì* can also be optional in matrix clauses. However, this is only the case in canonical sentences. First, most of the nominal predicate examples in (21) in Chapter 2 (on page 27) disallow an inverse order because the initial nominal of a sentence must be definite. Only (21c) is reversible, but an overt *shì* is obligatory in its inverse counterpart, as shown in (59).

(59)   a. 今天 (是) 星期日。   (=(21c) in Chapter 2)
        Jīntiān (shì) Xīngqīrì.
        today   COP Sunday
        'Today is Sunday.'

        b. 星期日 * (是) 今天。
        *Xīngqīrì *(shì) jīntiān.*
        Sunday COP   today
        'Sunday is today.'

In addition, as shown in Chapter 2, unlike non-copular sentences, gapping can be found in Mandarin copular sentences when a pair-list context is constructed. However, in the same contexts, *shì* cannot gap if the word order is reversed, as shown in (60).

(60) a. 张三是数学老师，李四（是）物理老师，赵六（是）化学老
师。 (=(16) in Chapter 2)
Zhāngsān shì shùxué lǎoshī, Lǐsì (shì) wùlǐ lǎoshī,
Zhangsan COP maths teacher Lisi COP physics teacher
Zhàoliù (shì) huàxué lǎoshī.
Zhaoliu COP chemistry teacher
'Zhangsan is a maths teacher, Lisi a physics teacher, and
Zhaoliu a chemistry teacher.'

b. 数学老师 *(是) 张三，物理老师 *(是) 李四，化学老师 *(是)
赵六。
*Shùxué lǎoshī *(shì) Zhāngsān, wùlǐ lǎoshī *(shì) Lǐsì,*
maths teacher COP Zhangsan physics teacher COP Lisi
*huàxué lǎoshī *(shì) Zhàoliù.*
chemistry teacher COP Zhaoliu
'The maths teacher is Zhangsan, the physics teacher is Lisi,
and the chemistry teacher is Zhaoliu.'

In sum, canonical sentences allow for the absence of *shì* in some
contexts, such as small clauses under verbs like 'consider', nominal pre-
dicate constructions, and gapping. In contrast, *shì* is always obligatory
in inverse sentences.

3.4.3 Extraction restrictions

Much attention has been paid in the literature to the extraction restric-
tions on the postcopular noun phrase in inverse sentences as compared to
canonical sentences (Heycock 1995; Moro 1997; Heycock & Kroch 1999;
Den Dikken 2006). It has been observed that, in English and Italian,
extraction of either the entire postcopular phrase or anything out of that
phrase is impossible. (61) and (62) below are examples from English. In
a canonical sentence, a postcopular noun phrase, or an element thereof,
can be extracted, as in (61), whereas inverse sentences do not allow
extraction of either, as shown in (62).

(61) *Canonical:*

a. Which of the themes do you think that phrase of music was?

b. What do you think the photograph of the president may have
been the cause of?

(62) *Inverse:*

    a. * Which phrase of music do you think one of the themes was?

    b. * What do you think the cause of the riot may have been the photograph of?

<div align="right">(Heycock 1995: 226)</div>

Though robust for many languages as a test showing the differences between canonical and inverse structures, extraction can hardly be applied to Mandarin. First of all, as Mandarin is a wh-in-situ language, Mandarin counterparts of (61) and (62) cannot be formulated. Applicable A′-movement concerns topicalisation and relativisation. However, relativisation cannot be used to differentiate between the two types of structures, either. For one thing, both canonical and inverse constructions yield ungrammaticality when either nominal flanking *shì* is relativised, as shown in (64) and (65), as opposed to (63).

(63) *Non-copular sentences*

    a. 达斯汀唱了一首歌。
        Dásītīng chàng le   yī-shǒu gē.
        Dustin   sing   PFV one-CLF song
        'Dustin sang a song.'

    b. [达斯汀唱 t] 的那首歌
        [*Dásītīng chàng* t] *de   nà-shǒu gē*
        Dustin   sing   t SUB DEM-CLF song
        'that song that Dustin sang'

    c. [t 唱了一首歌] 的男孩
        [t *chàng le   yī-shǒu gē*]   *de   nánhái*
        t sing   PFV one-CLF song SUB boy
        'the boy who sang a song'

(64) *Canonical copular sentences*

    a. 达斯汀是晚会主持人。
        Dásītīng shì   wǎnhuì zhǔchírén.
        Dustin COP ball   host
        'Dustin is the host of the ball.'

b. *[达斯汀是 t] 的那个晚会主持人
*[*Dásītīng shì* t] *de nà-ge wǎnhuì zhǔchírén*
Dustin COP t SUB DEM-CLF ball host
Intended: 'that ball host who is Dustin'

c. */?? [t 是晚会主持人] 的那个男孩
*/??[t *shì wǎnhuì zhǔchírén*] *de nà-ge nánhái*
t COP ball host SUB DEM-CLF boy
Intended: 'that boy who is the ball host'

(65) *Inverse copular sentences*

a. 晚会主持人是达斯汀。
Wǎnhuì zhǔchírén shì Dásītīng.
ball host COP Dustin
'The host of the ball is Dustin.'

b. *[晚会主持人是 t] 的那个男孩
*[*wǎnhuì zhǔchírén shì* t] *de nà-ge nánhái*
ball host COP t SUB DEM-CLF boy
Intended: 'that boy who is the ball host'

c. *[t 是达斯汀] 的那个晚会主持人
*[t *shì Dásītīng*] *de nà-ge wǎnhuì zhǔchírén*
t COP Dustin SUB DEM-CLF ball host
Intended: 'that ball host who is Dustin'

Furthermore, relativising element inside a postcopular noun phrase cannot be used to differentiate canonical and inverse sentences, either. Although the contrast between (66b) and (67b) appears to show that extraction from the postcopular nominal is available in canonical sentences but unavailable in inverse sentences, (66b) actually contains the so-called "gapless" relative clauses for which no extraction is assumed to be involved (L. L.-S. Cheng & Sybesma 2005; N. Zhang 2008; C.-T. J. Huang, Li & Li 2009). The examples below in (66) and (67) are translations of corresponding examples in Moro (1997).

(66) *Canonical:*

a. 那个人的发言是案件的起因。
Nà-ge rén de fāyán shì ànjiàn de qǐyīn.
DEM-CLF person SUB speech COP court.case SUB cause
'That person's speech was the cause of the court case.'

b. [那个人的发言是起因] 的案件
[*nà-ge   rén   de fāyán shì qǐyīn*] *de ànjiàn*
DEM-CLF person SUB speech COP cause SUB court.case
'the court case whose cause was that person's speech'

(67) *Inverse:*

a. 案件的起因是那个人的发言。
ànjiàn   de qǐyīn shì nà-ge   rén   de fāyán.
court.case SUB cause COP DEM-CLF person SUB speech
'the cause of the court case was that person's speech.'

b. *[案件的起因是发言] 的那个人
*[*ànjiàn   de qǐyīn shì fāyán de*] *nà-ge   rén*
court.case SUB cause COP speech SUB DEM-CLF person
Intended: 'the person whose speech is the cause of the court case'

Consequently, the only applicable diagnostic of extraction restrictions on postcopular nominals in Mandarin is topicalisation. (68a) is a canonical sentence, and (68b) is an inverse sentence. The two sentences show differences in the availability of topicalising the postcopular noun phrases. Although (69a) may be to a certain extent odd or unnatural to many speakers, (69b) is completely bad.

(68)   a. 张三是李四昨天见到的那个人。
Zhāngsān shì Lǐsì zuótiān   jiàn-dao   de   nà-ge
Zhangsan COP Lisi yesterday see-arrive SUB DEM-CLF
rén.
person
'Zhangsan is the person Lisi met yesterday.'

b. 李四昨天见到的那个人是张三。
Lǐsì zuótiān   jiàn-dao   de   nà-ge   rén   shì
Lisi yesterday see-arrive SUB DEM-CLF person COP
Zhāngsān.
Zhangsan
'The person Lisi met yesterday was Zhangsan.'

(69)   a.   ?? 李四昨天见到的那个人啊，张三是。
            ??Lǐsì zuótiān   jiàn-dao de   nà-ge   rén   a,
            Lisi yesterday see-arrive SUB DEM-CLF person TM
            Zhāngsān shì.
            Zhangsan COP
            'As for the person who Lisi met yesterday, Zhangsan was.'

       b.   * 张三啊，李四昨天见到的那个人是。
            **Zhāngsān a,   Lǐsì zuótiān   jiàn-dao   de   nà-ge*
            Zhangsan TM Lisi yesterday see-arrive SUB DEM-CLF
            rén   shì.
            person COP

For unknown reasons, the oddness of sentences like (69a) can be removed
or at least greatly eliminated by adding a sentence-final particle (70a)
or a modal element (71a). However, such salvaging strategies have no
effect on inverse sentences, as attested by the ungrammaticality of (70b)
and (71b).

(70)   a.   李四昨天见到的那个人啊，张三是的（呀）。
            Lǐsì zuótiān   jiàn-dao de nà-ge   rén   a, Zhāngsān
            Lisi yesterday see-arrive SUB DEM-CLF person TM Zhangsan
            shì   de (ya).
            COP DE SFP
            'As for the person who Lisi met yesterday, Zhangsan was.'

       b.   * 张三啊，李四昨天见到的那个人是的（呀）。
            **Zhāngsān a,   Lǐsì zuótiān   jiàn-dao   de   nà-ge*
            Zhangsan TM Lisi yesterday see-arrive SUB DEM-CLF
            rén   shì   de (ya).
            person COP DE SFP

(71)   a.   李四昨天见到的那个人啊，张三可能是。
            Lǐsì zuótiān   jiàn-dao de nà-ge   rén   a, Zhāngsān
            Lisi yesterday see-arrive SUB DEM-CLF person TM Zhangsan
            kěnéng   shì.
            be.likely COP
            'As for the person who Lisi met yesterday, Zhangsan was
            likely to be.'

b. * 张三啊，李四昨天见到的那个人可能是。
    Zhāngsān a, Lǐsì zuótiān jiàn-dao de nà-ge
    Zhangsan TM Lisi yesterday see-arrive SUB DEM-CLF
    rén   kěnéng shì.
    person be.likely COP

The improvement in the acceptability/grammaticality judgement of (70a) and (71a) from (69a) indicates that the oddness of (69a) can be attributed to independent reason(s) that dislike(s) a bare *shì* stranding in sentence-final position. Crucially, the contrast between the (a) sentences and (b) sentences in (70) and (71) suggests that Mandarin allows for topicalisation of the postcopular nominal in canonical sentences while it disallows for topicalising the postcopular nominal in inverse sentences.

In short, a distinction between canonical and inverse sentences in terms of extraction restrictions can also be observed. Specifically, canonical sentences allow for topicalising the postcopular nominal, whereas inverse sentences do not. Other diagnostics in relation to extraction, including wh-questions and relativisation, cannot be effectively applied to Mandarin to differentiate the two types of copular sentences for various reasons.

3.4.4 Interim summary

This section examines the relation and distinctions between Mandarin canonical and inverse copular sentences. It has been shown that inverse sentences have a number of properties opposite to those of canonical sentences. Semantically speaking, the postcopular element of an inverse sentence must be referential and be interpreted exhaustively. It is always in focus. Structurally speaking, inverse sentences always require overt use of the copula *shì*, while canonical sentences allow for omission of *shì* under certain circumstances. In addition, topicalisation of postcopular elements in inverse sentences is prohibited, while no such restriction applies for canonical sentences. Chapter 5 will argue for the single-structure approach to account for the relation between Mandarin predicational and specificational copular sentences as well as their distinctions. The distinction in the course of derivation results in the distinctions between the two types of sentences we have observed.

3.5   Conclusion

This chapter discussed the taxonomy of copular sentences in Mandarin. From the semantic perspective, Mandarin displays a three-way taxonomy: predicational, specificational, and equative sentences. The semantic types of the nominals in the three types of copular sentences present a clear-cut three-way distinction, evidenced by the "hanging topic" pronominal test, shown in (72), adapted from Mikkelsen (2005).

			NP1	NP2
(72)	a.	Predicational	$<$e$>$	$<$e,t$>$
	b.	Specificational	$<$e,t$>$	$<$e$>$
	c.	Identity (Equative)	$<$e$>$	$<$e$>$

However, as all the apparent equative sentences in Mandarin additionally require the adverb *jiù*, this suggests that true equative copular sentences do not exist in Mandarin with a single *shì*. Specifically, a group of sentences will be ungrammatical without the occurrence of *jiù*, let alone having the equative interpretation. Another group of sentences will only have the predicational or specificational interpretation if *jiù* is absent. In addition, for sentences that have it, this *jiù-shì* is coupled with a special prosodic pattern in which both *jiù* and *shì* must be stressed.

As far as the use of the linking element between the two nominal constituents is concerned, a clear pattern can be observed in Mandarin, shown in (73). In both matrix and embedded clauses, *shì* can conditionally be optional in predicational copular sentences, while it is always obligatory in specificational copular sentences. In addition to an obligatory *shì*, the adverb *jiù* is also required in equative sentences, irrespective of the word order.

(73)   a. Predicational: NP1 (*shì*) NP2

     b. Specificational: NP2 *(*shì*) NP1

     c. Equative: NP1/NP2 *(*jiù shì*) NP2/NP1

If copular sentences in which the bare *shì* functions as the linking element are concerned, we arrive at a two-way taxonomy: predicational and specificational sentences. In terms of syntactic analysis, a unified underlying structure for both types of sentences will be argued for in

Chapter 5. On the basis of the unified underlying structure, predicational sentences are viewed as the canonical structure, while specificational sentences are taken to be the inverse structure; the inverse structure is derived via predicate inversion (Moro 1997; Mikkelsen 2005; Den Dikken 2006). The canonical and inverse sentences differ from each other in a number of respects. First, they show a different pattern of focus. The postcopular nominal in an inverse sentence must be in focus, and it is an identificational focus which has the exhaustive interpretation. Second, *shì* in canonical sentences can be omitted in a few contexts, whereas *shì* in inverse sentences is always obligatory. Lastly, the postcopular nominal in a canonical sentence can be topicalised whereas that of an inverse sentence cannot. All the contrast between the two types of sentences will be accounted for by the structure proposed in Chapter 5. Before moving to the structural analysis, the next chapter will first examine the distribution and nature of *shì*.

CHAPTER 4

The position of *shì* in the structure

This chapter discusses the position of *shì* in the structure. It is proposed that *shì* is situated high in the structure and that it heads a functional projection comparable to SUBJ proposed in Cardinaletti (2004), Rizzi (2015b), and Shlonsky and Rizzi (2018). The distribution of copular elements presents great cross-linguistic diversity. With a review of proposals for the position of copulas in different languages (namely, Pred, *v*, T, Fin, or SUBJ), I will first argue that the Mandarin copula *shì* is not the spell-out of Pred or T. Evidence from compatibility with modality and aspectual markers, especially the experiential marker *guo*, indicates that *shì* is situated high in the structure and that copular structures do not contain a VP. The last section shows that the current analysis of *shì* is consistent with analyses for other pronominal copulas in languages such as Hebrew and Polish.

4.1 Positions for copulas across languages

The nature of copulas and the position of copular elements in the syntactic structure may vary drastically in different languages. Copulas across languages have been proposed to occupy various functional heads,

including Pred, *v*, T, or even higher ones like Fin or SUBJ. The positions
proposed for copulas in the literature can be summarised in a schema like
that in (1) (cf. Arche et al. 2019). As the structural analysis in regard to
the position of copulas also reflects our understanding of copulas across
languages, Section 4.1.1 will first present some definitions of copulas and
discussions of their function. The remainder of this section will review
analyses proposed for copulas across languages.

(1)

CP
├── C
└── …
    └── SUBJ2P
        ├── SUBJ2
        └── …
            └── FinP
                ├── Fin
                └── …
                    └── TP
                        ├── T
                        └── …
                            └── *v*P
                                ├── *v*
                                └── …
                                    └── PredP
                                        ├── Pred
                                        └── DP/AP/PP
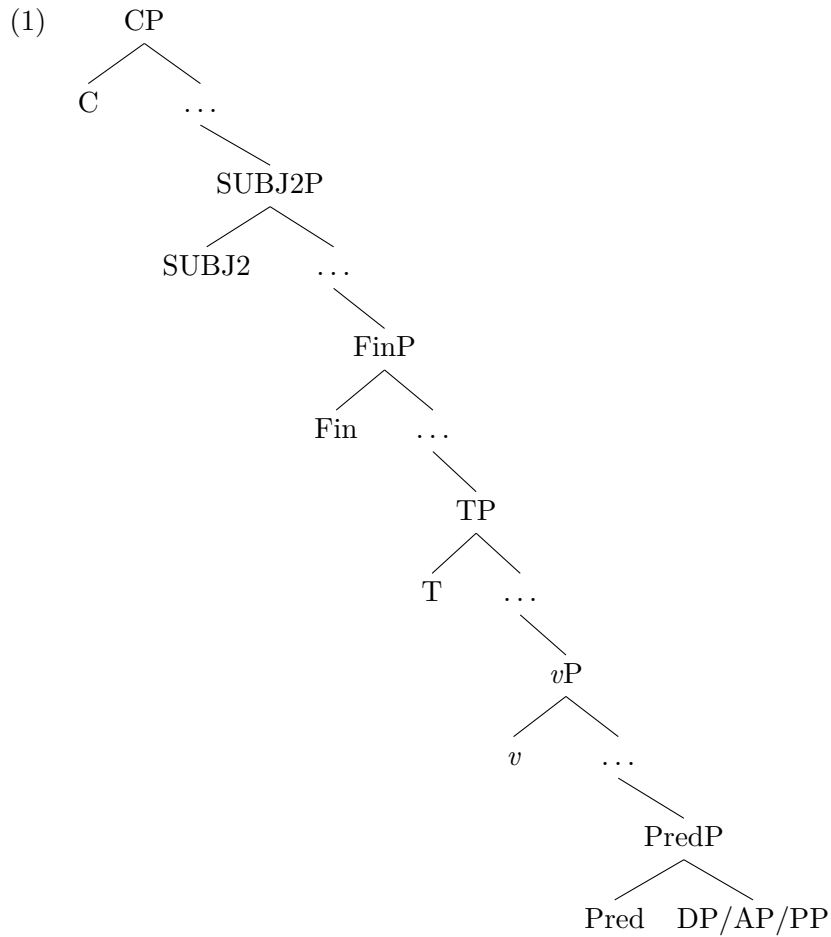
4.1.1 Definition and function of copulas

Although many languages have one or more elements viewed as a copula, defining the term *copula* is by no means an easy task. Some well-articulated definitions are essentially based on two core properties characterising *copulas* across the world's languages: a lack of semantic content and association with predication. For instance, below in (2) are two definitions in the literature. Though not uncontroversial, these definitions allow room for interpreting and exploring the observations that copulas do not constitute a distinct, cross-linguistically attested grammatical category and that the range of structures in which copulas can partake presents great cross-linguistic divergence.

(2)   a.   A copula is a linguistic element which co-occurs with certain lexemes in certain languages when they function as predicate nucleus. A copula does not add any semantic content to the predicate phrase it is contained in.

<div align="right">(Pustet 2003: 5)</div>

       b.   A copula element is an element needed to define a predication structure.

<div align="right">(Arche et al. 2019: 6)</div>

What role(s) do copulas play in terms of predication? Moro (1997, 2018) summarises three traditions for analysing copulas: (a) A copula serves as a support for inflectional features, especially tense. This tradition stems from Aristotle. A copula is not a predicate but a semantically empty element used in non-verbal environments. It functions as a sign or carrier of inflectional features, especially tense, that cannot be expressed via the non-verbal predicate. (b) A copula is a sign of affirmation. This tradition was first advanced by Abelard and further developed by the Port-Royal school in the 17th century. They accepted the previous claim that a copula is not a predicate, not even the predicate of *existence*, but took one step farther away from Aristotle by viewing the copula not only as a support for tense. Crucially, a copula also couples the subject with the predicate, resulting in a judgement. (c) A copula is also a sign of identity. This tradition starts from Frege and Russell. A copula has been considered to be ambiguous between being a sign of identity and of predication. The following sections will show how these views of the role(s) of copulas influence the structural analysis of copulas.

4.1.2 Copulas as T or lower heads

A wide range of studies analyse copulas as the spell-out of T/Infl (for instance, Baker 2003 for English *be*, cf. Becker 2004 for English *am/are/is* only; Doron 1983 for Hebrew *hu*; Citko 2008 for Polish *to*). This approach follows the Aristotelian tradition, taking copulas as support for inflectional features when the predicate is non-verbal. It explains why copulas are more frequently combined with non-verbal predicates cross-linguistically and why they tend not to make an interpretative contribution. In addition, in some copula-dropping languages, copular elements are only obligatory when the inflectional morpheme is overt. For instance, in Arabic, a copula does not occur in the affirmative present tense but must occur in a negative sentence or in the past tense.

   However, not all languages display overt inflectional morphology for tense, aspect, agreement, and so forth. Mandarin is an example of such a language. Hence, there is no straightforward empirical evidence for the analysis that copulas in this type of language serve as support for inflectional features. In addition, observations that copulas in some languages can follow a root modal (see Picallo 1990, cited from Arche et al. 2019) and that some copulas are sensitive to the lexical properties of the predicates lead to analyses that copulas in some languages head a functional projection lower than TP. One approach views copulas as the realisation of v (or more specifically, v_{BE} as "a flavor of v" (Harley 1995) in some literature). Copulas are accordingly regarded as verbal supports (Hale & Keyser 1993; Harley 1995; Moro 1997; Mikkelsen 2005). Copulas are thus supposed to be essential for non-verbal predicates and to be associated with verbal inflections. Note that although some copulas can be combined with certain verbal affixes (e.g. *be–en* and *be–ing* in English), this approach does not take copulas to be full verbs but rather to be supporting elements, since in general copulas do not contribute lexical meaning.[1]

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[1]It has been under debate whether or not copulas contain any lexical meaning. For instance, on the basis of the interpretative contrast between sentence pairs such as *Ben made Sarah polite* and *Ben made Sarah be polite* in English, Becker (2004) distinguishes the non-finite form *be* from the inflected *am/are/is*. The former has a particular contentful meaning: to act. Such an "active" or "eventive" reading is absent in the interpretation of the inflected forms of copula *be*. She further stipulates that *be* heads VP while *am/are/is* heads IP.

The other approach proposes an even lower position for copulas: Pred. Accordingly, copulas are regarded as the support element for establishing a predication relation between a subject and a non-verbal predicate. From the structural perspective, such an approach presupposes the view that a predicative relation is mediated by a functional head like Pred in the sense of Bowers (1993) and Svenonius (1994). For instance, Bowers (1993) and especially Baker (2003) analyse copulas (or copular particles) in many Bantu languages as the realisation of Pred. Mandarin *shì* is also taken as a spell-out of Pred in Baker (2003).

4.1.3 Copulas as Fin

Contrary to approaches that take copulas to be the realisation of lower heads such as v/V or Pred, some recent studies argue that some positions even higher than T in the structure may host copulas in some languages. O'Neill (2015, 2019) proposes that, in English, copulas (inflected and uninflected) in a special type of copular sentence, namely, Amalgam Specificational Copular sentences (ASC henceforth), is purely morphological support and a spell-out of Fin in the left-periphery. A typical example of an ASC sentence is *What he needs is he needs sleep.* An ASC sentence differs from a standard specificational copular sentence in that both constituents flanking the copula have the syntactic form of a root CP and are semantically propositional (O'Neill 2019).

Her proposal that copulas in ASC sentences are morphological support and situated high in the structure is based on the following observations. First, from the semantic perspective, the past-shifted interpretation is unavailable for ASC sentences, in contrast to canonical specificational copular sentences. For instance, (3a), a canonical specificational copular sentence, has a default sequence-of-tense (SOT) reading, where the time of *being blue* is bound by the time of *thinking.* The reading that the time of *being blue* precedes the time of *thinking* is also available for it. In contrast, (3b), an ASC sentence, only has the SOT reading. That is, the time when Jane is studying art history must be bound by the time of *finding.* The sentence is infelicitous for expressing that the speaker found that Jane's major used to be art history, regardless of whether or not the second *was* in (3b) bears a stress. Hence, she concludes that the tensed form of the copula in an ASC sentence is not associated with a tense meaning, or in other words, "the tense form is

fake" (O'Neill 2019: 52).

(3)   a. I thought that John's house was blue.   (O'Neill 2019: 53)
      b. Yesterday, I found out that what Jane was studying was she
         studied art history.   (Adapted from O'Neill 2019: 55)

Second, the copula in an ASC sentence is incompatible with nega-
tion, future modal *will*, aspectual inflection, and V/T-domain modifica-
tion, as shown in (4). Instead, the copulas in ASC sentences are always
compatible with C-domain modification, as shown in (5).

(4)   a. * What she likes isn't she likes coffee.
      b. * What they('ll) need will be they('ll) need a vacation.
      c. * What she liked had always been she liked coffee.
      d. * <Suddenly / Occasionally>, she liked coffee was <sud-
         denly / occasionally> what she liked.

(5)   <Surprisingly / Unfortunately / Apparently>, she likes coffee is
      <surprisingly / unfortunately / apparently> what she likes.
                                                    (O'Neill 2019: 57-58)

These observations indicate that the copula in ASC sentences cannot
be associated with the V/T-domain, but occupies a position in the C-
domain of a clause. O'Neil proposes that the copula heads FinP. Cru-
cially, in her proposal, the sentence structure of ASC sentences is special:
these sentences lack the V- and T-domain; only the C-domain is present.
The structure is presented as (6). Particularly, it assumes that [tense]
and [ϕ] are born in Force and transmitted down the spine to Fin, while
[Fin] is inherently specified in Fin. The context variable in [Spec, FinP]
is bound by the illocutionary operator in [Spec, ForceP]. Further feature-
spreading from Fin is blocked here, as the context variable is bound and
the features of Fin are valued locally. Otherwise, as in standard copular
sentences, unvalued features on Fin can be further inherited by T.

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[2]O'Neill (2019) also argues that the copula in one subtype of ASC sentences can
be viewed as colon-like, functioning much like a topic marker. Hence, she proposes
that copulas in this subtype of ASC sentences indeed head Top in the structure. Here
is one example of this group of sentences: *That's what she likes, (is) (she likes) coffee*
(O'Neill 2019: 58).

(6)

```
                          ForceP
                    _____|_____
                   |               |
              Op-ASSERT_i        Force′
                              ____|_____
                             |          |
                       Force_[T,φ]     MoodP
                                    ____|_____
                                   |          |
                             Mood_[T,φ]       ToP
                                          _____|_____
                                         |           |
                                   Top_[T,φ]        FinP
                                                 ____|____
                                                |         |
                                               CP        Fin′
                                                       ___|___
                                                      |       |
                                              Fin_[T,φ,Fin]   CP
                                                      |
                                                      is
```
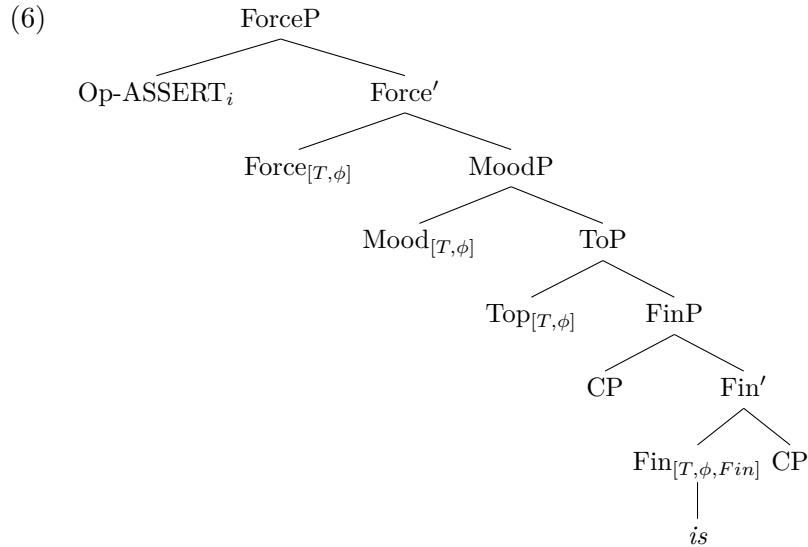
4.1.4   Copulas as SUBJ

Another approach that also assumes a high position in the structure, namely, the head of SUBJP, for copulas is advanced by Cardinaletti (2004), Rizzi (2015b), and Shlonsky and Rizzi (2018).[3] On the one hand, this analysis is based on the cartography of subjecthood. Cardinaletti (2004) argues that the preverbal subject position should be split into multiple positions for different types of subjects. Two functional projections are accordingly proposed: AgrSP and SubjP. According to her, the former is the projection for phi-feature checking on the nominal DP, whereas the latter is a higher projection in the structure, for "subject-of-predication" feature checking. The relative position between these two projections as well as that of the structural spine of the clause can be presented as in (7), a schema adapted from Cardinaletti (2004: 120) and Rizzi (2015b: 26).

(7)   ... FinP ... SubjP ... AgrSP ... TP ... VP ...

---

[3]Cardinaletti (2004) dubs the high subject projection SubjP. Rizzi (2015b) and Shlonsky and Rizzi (2018) change the label to SUBJP to avoid confusion with the projection for the subject in small clauses.

Moreover, this analysis addresses the properties of subjects that interact with the labelling algorithm in the spirit of Chomsky (2013). Specifically, the external Merge of two phrases already formed, such as a subject DP and a *v*P, presumably lead to problems with labelling the node created by Merge. Chomsky (2013) suggests that the node created by Merge receives its label from the closest head. Rizzi (2015b: 18) interprets this "closeness" as meaning that "no other head intervenes between the two heads in hierarchical terms", which can be formalised as (8).

(8) H_1 is the closest head to α iff

    I. α contains H_1, and

    II. there is no H_2 such that i) α contains H_2, and ii) H_2 c-commands H_1.

When it comes to the Merge of the subject DP and *v*P, both heads of the two projections qualify as the closest head to the new node according to Rizzi (2015a), since nothing intervenes between α and either D or *v*.

(9)
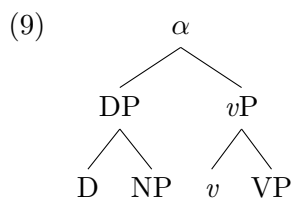
Two ways are proposed to rescue the labelling failure. The first solution is that one phrase moves out of the $[_\alpha$ XP YP] configuration and the other phrase remains as the candidate for labelling. The other solution is that the two phrases XP-YP form a "criterial configuration" (Rizzi 2015a, 2015b). In a criterial configuration, the two phrases agree in terms of a criterial feature, which expresses properties of "scope-discourse semantics", such as topic, focus, or Q. α is hence labelled by the criterial head. Both solutions are associated with the subject DP. First, under the VP-internal subject hypothesis, the subject DP is proposed to be assigned thematic roles within *v*P and moves out to a higher position for licensing purposes. As the subject DP moves out, α can be labelled as *v*. Second, as subject movement must stop at some point, there must

be a "halting site" from which the subject DP will not move any further. Rizzi (2015a, 2015b) proposes that the halting sites for the subject are criterial positions and that a criterial configuration is eventually formed. The criterial feature for subjects is proposed as [+Subj], which has the "aboutness" property.[4] As a result, the node created by Merge of the subject DP and another functional projection (say, FP) is labelled as SUBJ, as shown in (10).

(10) α (=SUBJ)

         DP$_{[+Subj]}$ SUBJ
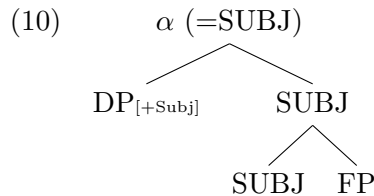
                   SUBJ   FP

With respect to the SUBJP, the SUBJ head is supposed to attract the nominal bearing the [+Subj] feature to its spec position, and the aboutness interpretation is triggered at the interface (Rizzi 2015a, 2015b). In addition, freezing effects are expected to be observed in SUBJ position in the sense of Rizzi's (2015a) proposal of "Criterial Freezing". That is, the nominal attracted to the spec position of SUBJP should be frozen there and cannot be extracted. Therefore, [Spec, SUBJP] can function as a halting site for subjects.

In terms of copular sentences, Cardinaletti (2004) proposes that, for one thing, the fronting predicate in inverse copular sentences moves to [Spec, SUBJP] and the movement is triggered by some features other than phi-features. For the other, she suggests that Hebrew *hu* can be analysed as SUBJ. Her proposal for copular structures has been developed by Rizzi and Shlonsky. Following Bianchi and Chesi (2012), Rizzi (2015a, 2015b), and Shlonsky and Rizzi (2018) split the single Subj into two positions: SUBJ1 and SUBJ2. SUBJ1 is obligatory on the clausal spine, expressing weaker interpretive properties such as pure aboutness. In contrast, SUBJ2, which is higher than SUBJ1, is optional. It is selected when the sentence is to express categorical judgements. On the basis of such a distinction, Shlonsky and Rizzi (2018) argue that

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[4]Rizzi (2015b) argues that although both subjects and topics have the "aboutness" property, interpretive conditions for topics are more demanding than for subjects. Subjects are supposed to express pure aboutness, while topics express both aboutness and connection to the discourse context.

the subjects in the three types of copular sentences in Hebrew occupy different subject positions. The sentences in (11) respectively represent the three types of sentences.

(11)   a. Root bare small clause
           Dani xaver-i   ha tov.
           Dani friend-my the good
           'Dani is my good friend.'

       b. Canonical sentence
           Dani lo/ken   xaver-i   ha tov.
           Dani neg/yes friend-my the good
           'Dani is not/IS my good friend.'

       c. Inverse sentence
           Xaver-i   ha tov   *(hu)   (lo/ken) Dani.
           friend-my the good 3SG.MAS neg/yes Dani
           'My good friend is not/IS Dani.'

                                        (Shlonsky & Rizzi 2018: 38-45)

(11a) is a root bare small clause with no overt copular element intervening between the nominal constituents. Although no copular element occurs in either sentence, (11b) is regarded to be not as bare as (11a), since polarity particles occur in between the nominal constituents. Shlonsky and Rizzi (2018) argue that, as shown in (12), since a generic nominal cannot occur in a bare small clause but can occur when a polarity particle is present, the nominal constituents must occupy different subject positions. More precisely, the subject in (11a) stays in [Spec, PredP] while the subject in (11b) occupies a high subject position above Pol(arity), that is, SUBJ1. The subject of an inverse copular sentence such as (11c) is proposed to occupy an even higher subject position, namely [Spec, SUBJ2P], because the subject is interpretatively more constrained. As shown in (13), only a D-linked subject is compatible with *hu.* Accordingly, the obligatory *hu* is analysed as lexicalising SUBJ2 (Shlonsky & Rizzi 2018).

(12)   a. *Namer* l*o/ken/bevaday/betax   nadir be arc-enu.*
           tiger   neg/yes/of.course/certainly rare   in country-ours
           'Tigers are not/ARE/of course/certainly rare in our country.'

b.   * *Namer nadir be arc-enu.*
     tiger   rare   in country-ours
     Intended: 'Tigers are rare in our country.'

(13)   a.   *Mi (*hu)   more?*
          who 3SG.MAS teacher
          'Who is a teacher?'

b.   *Eize   baxur ?(hu)   more?*
     which guy   3SG.MAS teacher
     'Which guy is a teacher?'

Their system of three subject positions can be schematised as (14).

(14)   ... DP SUBJ2 ... DP SUBJ1 ... Pol ... DP Subj PredP
                                          (Shlonsky & Rizzi 2018: 43)

In addition, Polish *to* is also assumed to lexicalise SUBJ2 in Shlonsky and Rizzi (2018). According to them, the subject of a canonical copular sentence in Polish occupies the [Spec, SUBJ1] position, while the subject of an inverse copular sentence occupies the [Spec, SUBJ2] position. As opposed to Hebrew, Shlonsky and Rizzi argue that Polish does not exploit the low Subject position, namely, [Spec, PredP].

4.1.5   Interim summary

This section reviewed various proposals concerning the nature of copulas across languages. Copulas have been proposed to be the head of TP, as inflectional support; or the head of vP/VP, as verbal support; or the head of PredP, as support for a predicational relation; or the head of FinP, as pure morphological support. In addition, some types of copulas in a number of languages have been proposed to lexicalise SUBJ, which is in relation to a multiple-layer subjecthood cartographic proposal. As the Amalgam Specificational Copular sentences represent a very specific type of sentences that is not found in many languages (including Mandarin), the current thesis will not further delve into the proposal that copulas instantiate the Fin head. The remainder of this chapter will argue that *shì* does not realise the head of TP, vP/VP, or PredP; rather, it is comparable to Hebrew *hu* in line with Shlonsky and Rizzi's (2018) SUBJ proposal.

4.2   *Shì* is neither Pred nor T

In contemporary Mandarin, *shì* is generally recognised as a copula, although the specific terms and lexical classification vary between studies (e.g. *xìcí* 系词 'copula' (Liang 2012); *xì dòngcí* 系动词 'copular verb' (Chao 1968; Zhu 1982; Guo 1993; Zuo 2009); or *pànduàn dòngcí* 判断动词 *lit.* 'judgement verb' (M. Zheng 2001)). Aside from the debates on the lexical classification on *shì*, the question has barely been discussed as to where *shì* is situated in the syntactic structure, given the cross-linguistic diversity of functional projections that a copula can head – Pred, *v*, T/Infl, or some other head.

4.2.1   *Shì* is not Pred

Contra Baker (2003), in which Mandarin *shì* is regarded as instantiation of the Pred head, the current study argues that *shì* cannot head PredP. First of all, as will be discussed in more detail in the next chapter, the current thesis follows the presumption that the most basic structure for the predication relation is an asymmetric structure mediated by the functional head Pred, following Bowers (1993), Svenonius (1994), Adger and Ramchand (2003), and Mikkelsen (2005), among others. Also, the two nominals are assumed to be merged in a fixed order; that is, the referential nominal (the subject) occupies the specifier of PredP and the predicative one (the predicate) occupies the complement of Pred, as shown in (15).[5]

(15)
```
             PredP
            /     \
      XP_Subj    Pred′
                /     \
             Pred    XP_Pred
```
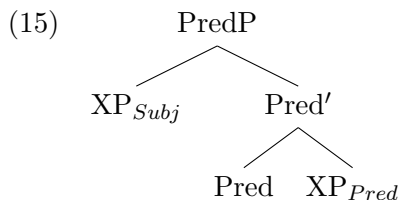
In English and many other languages, complement small clauses under verbs such as *consider* can be analysed as PredP (Mikkelsen 2005). As mentioned in Section 3.4.2 in Chapter 3, Mandarin *shì* can

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[5]Section 5.1.1 in Chapter 5 provides a more detailed introduction to and discussion of the asymmetric predicational structure and the fixed merging order of the nominals.

optionally occur in the embedded clause under the matrix verb *dāng* 'consider'. Crucially, *shì* is omissible in canonical structures but not in inverse structures. Again, as shown in (16), when the referential nominal *Zhāngsān* precedes the predicative nominal *shǎzi* 'idiot', the sentence is grammatical. However, the reverse order of the two nominals leads to an ungrammatical sentence.

(16)   a.   你当 [张三傻子] 吗?
            Nǐ   dāng   [Zhāngsān shǎzi] ma?
            2SG consider Zhangsan idiot   Q
            'Do you consider Zhangsan an idiot?'

       b.   * 你当 [傻子张三] 吗?
            **Nǐ   dāng   [shǎzi Zhāngsān] ma?*
            2SG consider idiot   Zhangsan Q
            Intended: 'Do you consider the idiot to be Zhangsan?'

(16b) can be rescued by including *shì*. Both orders are available if *shì* occurs in the embedded clauses, as shown in (17).

(17)   a.   你当 [张三是傻子] 吗?
            Nǐ   dāng   [Zhāngsān shì   shǎzi] ma?
            2SG consider Zhangsan COP idiot   Q
            'Do you consider Zhangsan an idiot?'

       b.   你当 [傻子是张三] 吗?
            Nǐ   dāng   [shǎzi shì   Zhāngsān] ma?
            2SG consider idiot   COP Zhangsan Q
            'Do you consider the idiot to be Zhangsan?'

The rationale that *shì* is not the spell-out of Pred but a functional head higher than Pred is simple and straightforward. If Pred spells out as *shì*, the contrast between (16b) and (17b), which is brought about by the (non-)occurrence of *shì*, should not be expected. However, such a contrast can be accounted for by assuming that the embedded small clauses with/without *shì* correspond to two different structures. When *shì* does not occur, as in (16), the matrix verb takes PredP as its complement. Only the canonical order is permitted, which is decided by the nature of PredP. In contrast, when *shì* does occur, as in (17), the embedded structure is larger than PredP.[6] Following Moro (1997) and Den Dikken (2006), the existence of the extra position introduced

by the projection that *shì* heads can provide a landing site for predicate inversion, yielding an inverse sentence.

Further evidence involving negation, and especially adverbial modification, corroborates the analysis that the contrast between (16) and (17) is associated with structures of different sizes rather than simply the optionality of *shì*. As shown in (18) and (19), the embedded clauses can be negated or modified by adverbs only when *shì* occurs. In other words, in Mandarin, negation and modification cannot directly combine with PredP. They must combine with the higher functional projection headed by *shì*.[7]

(18) 你当 [张三不 *(是) 傻子] 吗?
      *Nǐ   dāng   [Zhāngsān bù   *(shì) shǎzi] ma?*
      2SG consider Zhangsan NEG COP   idiot   Q
      'Do you believe Zhangsan not an idiot?'

(19) a. 你当 [张三一直 *(是) 傻子] 吗?
          *Nǐ   dāng   [Zhāngsān yīzhí *(shì) shǎzi] ma?*
          2SG consider Zhangsan always COP   idiot   Q
          'Do you believe that Zhangsan is always an idiot?'

      b. 你当 [张三真的 *(是) 傻子] 吗?
          *Nǐ   dāng   [Zhāngsān zhēnde *(shì) shǎzi] ma?*
          2SG consider Zhangsan truly   COP   idiot   Q
          'Do you believe that Zhangsan is truly a idiot?'

---

[6]Grano (2012) ascribes the distinctions of obligatoriness of using *shì* in matrix and embedded contexts to conditions imposed by T. Specifically, he proposes that the matrix clause is always tensed, which requires the occurrence of *shì*, while the embedding small clause is tenseless, and thus does not require an overt *shì*. On the one hand, I agree with him that the existence of an extra functional projection makes the difference in terms of the (non-)occurrence of *shì*; on the other, the next subsection will argue that the specific functional projection is irrelevant to T.

[7]It is possible that the negator *bù* cannot stand alone but must cliticise to another element, such as *shì*. If this is true, it supports (or at least will not undermine) the analysis that the embedded clauses of sentences in (16) and (17) have the same structure while those in (16) involve *shì* omission. However, it is unlikely that adverbs must cliticise to *shì*. Therefore, the fact that the adverbs can only occur in clauses containing *shì* indicates that the embedded clauses with/without *shì* correspond to two different structures.

c. 你当 [张三只/也 *(是) 傻子] 吗?
*Nǐ   dāng   [Zhāngsān zhǐ/yě   *(shì) shǎzi] ma?*
2SG consider Zhangsan only/also COP   idiot   Q
'Do you believe that Zhangsan is only/also an idiot?'

4.2.2 *Shì* **is not T**

This subsection argues that *shì* cannot be the spell-out of T, either. The evidence comes from the properties of individual-level (IL henceforth) states in contrast to that of stage-level (SL henceforth) states in Mandarin. A more elaborate discussion of the relevant phenomena will be presented in Chapter 6. In brief, on a par with non-copular sentences, Mandarin copular sentences do have the IL/SL-distinction, though different structures from non-copular sentences will be proposed for copular sentences in the later sections of this chapter and the next chapter. The properties of the nominal predicates of a copular sentence are decisive for whether a copular sentence is individual-level or stage-level. What is crucial here in relation to the question as to whether *shì* heads TP regards the IL/SL-distinction in terms of the temporal structures of these two types of predicates. Copular sentences with individual-level predicates (ILP henceforth) show no present/past contrast. The dead–living status of the subject does not affect the felicity of sentences uttered in isolation, as opposed to sentences with stage-level predicates (SLP henceforth). For instance, conceptually speaking, one's region of origin is typically individual-level, as normally it can never be changed, whereas *being a secondary school student* only characterises a stage that an individual undergoes. As suggested in the translation line, (20a) is felicitous no matter whether Mike is alive or dead, while, when uttered in isolation, (20b) will be infelicitous if Mike has died.

(20) a. 迈克是德州人。   *Individual-level*
      Màike shì   Dézhōu rén.
      Mike COP Texas   people
      'Mike is/was from Texas.'

  b. 迈克是中学生。   *Stage-level*
      Màike shì   zhōngxuéshēng.
      Mike   COP secondary.school.student
      'Mike is/*was a secondary school student.'

This property of Mandarin ILPs is interesting. It differs from what has been observed in other languages. As will also be discussed at length in Chapter 6, in English, for instance, past-tense sentences with ILPs impose restrictions of lifetime on the subjects, as opposed to sentences with SLPs (Kratzer 1995; Musan 1997; Magri 2009; Husband 2012). In other words, a past-tense sentence with an ILP, when uttered in isolation, implies that the subject is dead. For instance, when uttered out of the blue, (21) suggests that Henry was dead, while in (22) it is unknown whether he is dead or alive.

(21)   Henry was French.   *Individual-level*
                                                      (Kratzer 1995: 155)

(22)   Henry was happy.   *Stage-level*

In addition, as has been cross-linguistically attested, ILPs are in general incompatible with temporal adverbials, in contrast to SLPs. (23) exemplifies the Mandarin data.

(23)   a.   *迈克去年是德州人。   *Individual-level*
             **Màike qùnián   shì   Dézhōu rén.*
             Mike   last.year COP Texas   people
             Intended: 'Mike was from Texas last year.'
        b.   迈克去年是中学生。   *Stage-level*
             Màike qùnián   shì   zhōngxuéshēng.
             Mike   last.year COP secondary.school.student
             'Mike was a secondary school student last year.'

Taking into account the above-mentioned properties of Mandarin ILP sentences, which differ from SLP sentences in Mandarin as well as ILP sentences in other languages, Chapter 6 will propose that Mandarin sentences (copular and non-copular) containing ILPs do not have T. When it comes to copular sentences, if the "no T" hypothesis for Mandarin ILP sentences is on the right track, copular sentences with ILPs contain no T. Consequently, *shì* in ILP sentences is not the spell-out of T. Assuming there is only one copula *shì*, which occupies the same position in both ILP and SLP sentences, *shì* in SLP sentences should not be taken as the spell-out of T, either. In a word, *shì* in copular sentences is not coupled with T, irrespective of the type of predicate.

4.3 Distribution of the copula *shì*

The previous section argued that *shì* cannot instantiate Pred or T. This section proposes that *shì* does not head VP/*v*P.[8] It must be situated high in the structure. The empirical evidence comes from its compatibility with modality and aspectual markers. Crucially, the incompatibility of *shì* with the experiential marker *guo* indicates that in addition to semantic accounts in relation to stativity, the distribution of *shì* delineated by this section should also be ascribed to syntactic factors.

4.3.1 *Shì* and modality

4.3.1.1 Hierarchy of modality in Mandarin

The distribution of Mandarin modals has been described in a refined way and is well accounted for using the cartographic approach. X.-Y. K. Huang (2009), T.-H. J. Lin (2012), Tsai (2015a), and Yang (2020), among others, entertain a three-tier analysis of Mandarin modals in line with Rizzi (1997), Cinque (1999), and Butler (2003). First, TP signals the dichotomy of epistemic modals and root modals. Epistemic modals, which indicate the speaker's attitude or judgements on actual or possible situations, project on top of TP. In contrast, root modals, which mediate the relation between subjects and predicates, project below TP. Additionally, deontic modals expressing obligation, permission, and volition are encoded below TP but above *v*P. The remaining root modals expressing ability, namely, dynamic modals, occupy a position below *v*P. (24) lists a few examples of Mandarin modal auxiliaries and adverbs. The

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[8]It has widely been proposed that *shì* heads *v*P/VP. For instance, C.-T. J. Huang (1988) analyses the copula *shì* as the V head, as opposed to the *shì* in cleft constructions, where it is analysed as the I head. Moreover, in studies that pursue a unified analysis of *shì* in copular sentences and clefts (e.g. Simpson and Wu 2002; L. L.-S. Cheng 2008; Paul and Whitman 2008; Hole 2011; Zhan and Sun 2013), *shì* is normally taken as the head of VP. However, as discussion of the position of *shì* is not the focus of these works, the claim that *shì* heads VP has not been carefully argued for but has rather been taken for granted. In addition, studies on the Mandarin light verb system always include v_{BE}, which is analysed as the lowest light verb (C.-T. J. Huang 1997; T.-H. J. Lin 2001; J. J.-P. Lin 2004; Tsai 2015c; Cai 2016). However, in those systems, v_{BE} does not usually have an overt instantiation or does not correspond to copula at all.

three-tiered hierarchical structure is given in (25), simplified from Tsai (2015b).

(24) *Examples of Mandarin modality*

- *Epistemic modals*: *yīnggāi* 'should', *kěnéng* 'be likely to', *yīdìng* 'definitely', *huì* 'will'

- *Deontic modals*: *yīnggāi* 'ought to', *bìxū/děi* 'have to', *kéyǐ* 'be permitted to'

- *Dynamic modals*: *néng/huì* 'be able to', *kěn* 'be willing to'

(25)
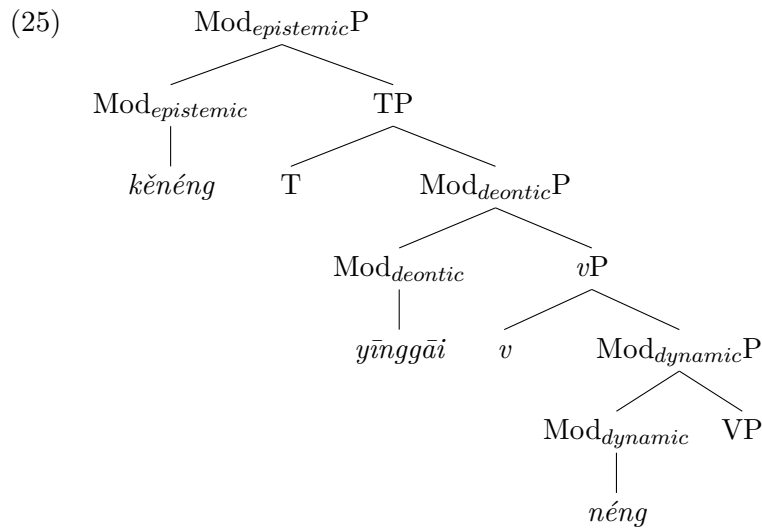
The modality hierarchy has been effectively used as a diagnostic to locate target elements in many studies. The current study will also base part of the examination of the position of copula *shì* on this hierarchy. It is worth pointing out that the question is under debate as to whether modal elements in Mandarin are auxiliaries or adverbs. Since only modal auxiliaries that are functional heads should be used for the hierarchical tests, the next subsection will first justify the idea that the modal elements used in the current section can be viewed as auxiliaries. Then Section 4.3.1.3 will examine the relative position between *shì* and modal auxiliaries.

4.3.1.2 Auxiliary/adverb distinction of Mandarin modality

Generally speaking, auxiliaries in Mandarin can be directly negated by *bù* or *méi* and can form A-not-A questions. In contrast, adverbs can do neither. The contrast is shown in (26) and (27). Both *yīnggāi* 'ought to' and *bìxū* 'have to' express deontic modality. However, only *yīnggāi* can be directly negated by *bù* and form an A-not-A question.

(26) Modal auxiliary

    a. 小十一应该逃出实验室。
        XiǎoShíyī yīnggāi táo-chū shíyànshì.
        little.eleven ought.to escape-out laboratory
        'El ought to escape the laboratory.'

    b. 小十一不应该逃出实验室。   *Negation*
        XiǎoShíyī bù yīnggāi táo-chū shíyànshì.
        little.eleven NEG ought.to escape-out laboratory
        'El should not escape the laboratory.'

    c. 小十一应该不应该出实验室？   *A-not-A question*
        XiǎoShíyī yīnggāi-bù-yīnggāi táo-chū shíyànshì?
        little.eleven ought.to-NEG-ought.to escape-out laboratory
        'Should El escape the laboratory or not?'

(27) Modal adverb

    a. 小十一必须逃出实验室。
        XiǎoShíyī bìxū táo-chū shíyànshì.
        little.eleven have.to escape-out laboratory
        'El has to escape the laboratory.'

    b. * 小十一不必须逃出实验室。   *Negation*
        *XiǎoShíyī bù bìxū táo-chū shíyànshì.
        little.eleven NEG have.to escape-out laboratory
        Intended: 'El does not have to escape the laboratory.'

    c. * 小十一必须不必须逃出实验室？   *A-not-A question*
        *XiǎoShíyī bìxū-bù-bìxū táo-chū shíyànshì?
        little.eleven have.to-NEG-have.to escape-out laboratory
        Intended: 'Does El have to escape the laboratory?'

Two more diagnostics are proposed for the modal auxiliary/adverb distinction in Tsai (2009, cited from Chou 2013). First, the constituent following a modal auxiliary can be preposed but that following a modal

adverb cannot, as shown in (28). Second, a modal auxiliary can license
VP-ellipsis, while a modal adverb cannot, as shown in (29).

(28) VP-preposing
   a. 逃出实验室，小十一应该。
      Táo-chū   shíyànshì, xiǎoShíyī   yīnggāi.
      escape-out laboratory little.eleven ought.to
      'Escape the laboratory, El should.'

   b. * 逃出实验室，小十一必须。
      **Táo-chū   shíyànshì, xiǎoShíyī   bìxū.*
      escape-out laboratory little.eleven have.to
      Intended: 'Escape the laboratory, El must.'

(29) VP-ellipsis
   a. 小十一应该逃出实验室，小十二也应该。
      XiǎoShíyī   yīnggāi táo-chū   shíyànshì, xiǎoShí'èr yě
      little.eleven ought.to escape-out laboratory little.twelve too
      yīnggāi.
      ought.to
      'El should escape the laboratory, and little Twelve should,
      too.'

   b. * 小十一必须逃出实验室，小十二也必须。
      **XiǎoShíyī   bìxū   táo-chū   shíyànshì, xiǎoShí'èr*
      little.eleven have.to escape-out laboratory little.twelve
      yě   bìxū.
      too have.to
      Intended: 'El has to escape the laboratory; and little
      Twelve has to, too.'

However, both diagnostics proposed by Tsai (2009) have been chal-
lenged. For instance, (30a) is a counterexample to the VP-preposing
test. As shown in (31), although *huì* can be negated by *bù* and can form
an A-not-A question, it fails to license VP-preposing in sentences like
(30a). In contrast, without multiple modals, (30b) improves greatly from
(30a), even though it is not perfectly acceptable.

(30)   a. ＊能去台北，张三明天会。   (T.-H. J. Lin 2012: 164)
              ＊Néng   qù Táiběi, Zhāngsān míngtiān huì.
              be.able.to go Taibei Zhangsan tomorrow will
              Intended: 'Zhangsan will be able to go to Taipei tomorrow.'

        b. ?去台北，张三明天会。
              ?Qù Táiběi, Zhāngsān míngtiān huì.
              go Taipei Zhangsan tomorrow will
              Intended: 'Zhangsan will go to Taipei tomorrow.'

(31)   a. 张三明天不会去台北。
           Zhāngsān míngtiān bù   huì qù Táiběi.
           Zhangsan tomorrow NEG will go Taipei
           'Zhangsan will not go to Taipei tomorrow.'

        b. 张三明天会不会去台北?
           Zhāngsān míngtiān huì-bù-huì   qù Táiběi?
           Zhangsan tomorrow will-NEG-will go Taipei
           'Will Zhangsan go to Taipei tomorrow?'

Chou (2013) also casts doubts on the VP-ellipsis test, since some English auxiliaries do not license ellipsis either. For instance, *be* cannot license ellipsis in (32) (for more details see Harwood 2015).

(32)   ＊They're being noisy, you are being, too.

                                     (Chou 2013: 122)

Among all the modal auxiliaries and adverbs in Mandarin, the epistemic *kěnéng* 'be likely to' and *yīnggāi* 'should' are the most controversial cases.[9] As shown in (33) and (34), *kěnéng* can be negated and form A-not-A questions, whereas *yīnggāi* cannot.

(33)   a. 麦克不可能忘记小十一。
           Màike bù   kěnéng   wàngjì xiǎoShíyī.
           Mike   NEG be.likely.to forget little.Eleven
           'Mike is unlikely to forget El.'

---

[9]Note that *yīnggāi* in Mandarin is ambiguous between a deontic reading and an epistemic reading, on a par with *should* in English. The one in sentences above, i.e. (26), (28), and (19) is a deontic modal. The one that will be discussed together with *kěnéng* is an epistemic modal.

b. 麦克可能不可能忘记小十一？
Màike kěnéng-bù-kěnéng   wàngjì xiǎoShíyī?
Mike   be.likely.to-NEG-be.likely.to forget little.Eleven
'Is it likely for Mike to forget El?'

(34) a. *麦克不/没应该听说了威尔的事情。
*Màike bù/méi yīnggāi tīngshuō le   Wēi'ěr de   shìqing.
Mike   NEG   should hear.of PFV Will   SUB   issue
Intended: 'Mike should have not heard of what happened
to Will.'

b. *麦克应该不/没应该听说了威尔的事情？
*Màike yīnggāi-bù/méi-yīnggāi tīngshuō le   Wēi'ěr de
Mike   should-NEG-should   hear.of PFV Will   SUB
shìqing.
issue
Intended: 'Should Mike have not heard of what happened
to Will?'

In addition, *kěnéng* can license VP-ellipsis while *yīnggāi* cannot, as
shown in (35) and (36).

(35) a. 麦克可能听说了威尔的事情, 南希也可能。
Màike kěnéng   tīngshuō le   Wēi'ěr de   shìqing, Nánxī
Mike   be.likely.to hear.of PFV Will   SUB   issue   Nancy
yě   kěnéng.
too be.likely.to
'Mike could have heard of what happened to Will; Nancy,
too.'

b. 麦克可能没听说威尔的事情, 南希也可能（没）。
Màike kěnéng   méi tīngshuō Wēi'ěr de   shìqing, Nánxī
Mike   be.likely.to NEG hear.of Will   SUB   issue   Nancy
yě   kěnéng   (méi).
too be.likely.to NEG
'Mike could have not heard of what happened to Will; Nancy
could have not, either.'

(36) a. * 麦克应该听说了威尔的事情, 南希也应该。
      Màike yīnggāi tīngshuō le Wēi'ěr de shìqing, Nánxī
      Mike should hear.of PFV Will SUB issue Nancy
      yě yīnggāi.
      too should
      Intended: 'Mike should have heard of what happened to Will; Nancy, too.'

  b. * 麦克应该没听说威尔的事情, 南希也应该。
      Màike yīnggāi méi tīngshuō Wēi'ěr de shìqing, Nánxī
      Mike should NEG hear.of Will SUB issue Nancy
      yě yīnggāi.
      too should
      Intended: 'Mike should have not heard of what happened to Will; Nancy should have not, either.'

Although both the VP-preposing and the VP-ellipsis tests have been challenged, the counterexamples are all cases where auxiliaries fail to license VP-preposing or/and VP-ellipsis. In contrast, adverbs have not been observed to license VP-preposing and VP-ellipsis. As the current study does not aim at classifying Mandarin modal elements, both tests will be considered so as to single out the most prototypical modal auxiliaries for the discussion of their hierarchical relation with *shì*. As a result, the current study will take *kěnéng* as an epistemic modal auxiliary but not use *yīnggāi* for the hierarchical diagnostics.[10] In the next subsection, the remaining auxiliaries will be used for the discussion of the relative position of *shì* and modality: *kěnéng* 'be likely to' and *huì* 'will' as epistemic modals; *yīnggāi* 'ought to', *děi* 'have to', and *néng/kěyǐ* 'be permitted to' as deontic modals; and *kěn/yuànyì* 'be willing to' and *néng/huì/kěyǐ* 'can, be able to' as dynamic modals.

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[10]In fact, *yīnggāi* patterns with epistemic necessity modals in other languages in terms of the impossibility of being negated or forming questions. For instance, as shown in (i), the epistemic necessity modal *must* in English cannot be negated or form a question, either. Such incompatibility might be semantically attributed to the evidential property of epistemic necessity modals that they express the speaker's certainty about the proposition, which can neither be negated nor questioned (von Fintel & Gillies 2006; T.-H. J. Lin 2012).

(i) a. John must be rich.   *Necessity or obligation*
    b. John must not be rich.   **Necessity*

4.3.1.3 Relative position between *shì* and modals

First, *shì* can co-occur with epistemic modals, following the modal auxiliary, as shown in (37).

(37) a. 张三 *< 是 > 可能 < 是 > 李四的老师。
      *Zhāngsān *<shì> kěnéng   <shì> Lǐsì de   lǎoshī.*
      Zhangsan COP   be.likely.to COP   Lisi SUB teacher
      'Zhangsan is possibly Lisi's teacher.'

    b. 张三 *< 是 > 会 < 是 > 李四的老师。
      *Zhāngsān *<shì> huì <shì> Lǐsì de   lǎoshī.*
      Zhangsan COP   will COP   Lisi SUB teacher
      'Zhangsan will be Lisi's teacher.'

In contrast, *shì* is not compatible with the root modals regardless of the order between *shì* and the modal elements, as shown in (38) and (39).

(38) Deontic modals
    a. *张三 < 是 > （应）该 < 是 > 李四的老师。
      **Zhāngsān <shì> (yīng)gāi <shì> Lǐsì de   lǎoshī.*
      Zhangsan COP   ought.to COP   Lisi SUB teacher
      Intended: 'Zhangsan ought to be Lisi's teacher.'

    b. *张三 < 是 > 能/可以 < 是 > 李四的老师。
      **Zhāngsān <shì> néng/kěyǐ   <shì> Lǐsì de   lǎoshī.*
      Zhangsan COP   be.permitted.to COP   Lisi SUB teacher
      Intended: 'Zhangsan is permitted to be Lisi's teacher.'

(39) Dynamic modals
    a. *张三 < 是 > 肯 < 是 > 李四的老师。
      **Zhāngsān <shì> kěn   <shì> Lǐsì de   lǎoshī.*
      Zhangsan COP   willing.to COP   Lisi SUB teacher
      Intended: 'Zhangsan is willing to be Lisi's teacher.'

---

    c. John must like Bill.   *Necessity or obligation*
    d. Must John like Bill?   **Necessity*
                                     (T.-H. J. Lin 2012: 172)

b. *张三 < 是 > 能/会/可以 < 是 > 李四的老师。
Zhāngsān <shì> néng/huì/kěyǐ <shì> Lǐsì de   lǎoshī.
Zhangsan COP   be.able.to   COP   Lisi SUB teacher
Intended: 'Zhangsan is able to be Lisi's teacher.'

Interestingly, lexical verbs such as *dāng* 'serve as' or *zuò* 'do', which may give rise to a similar interpretation to *shì* regarding the relevant sentences, are compatible with root modals. As shown in (40) and (41), all the sentences are grammatical and the verbs consistently follow the root modal.

(40) Deontic modals
    a. 张三（应）该当/做李四的老师。
    Zhāngsān (yīng)gāi dāng/zuò   Lǐsì de   lǎoshī.
    Zhangsan ought.to serve.as/do Lisi SUB teacher
    'Zhangsan ought to be Lisi's teacher.'

    b. 张三能/可以当/做李四的老师。
    Zhāngsān néng/kěyǐ   dāng/zuò   Lǐsì de   lǎoshī.
    Zhangsan be.permitted.to serve.as/do Lisi SUB teacher
    'Zhangsan is permitted to be Lisi's teacher.'

(41) Dynamic modals
    a. 张三肯当/做李四的老师。
    Zhāngsān kěn   dāng/zuò   Lǐsì de   lǎoshī.
    Zhangsan be.willing.to serve.as/do Lisi SUB teacher
    'Zhangsan is willing to be Lisi's teacher.'

    b. 张三能/会/可以当/做李四的老师。
    Zhāngsān néng/huì/kěyǐ dāng/zuò   Lǐsì de   lǎoshī.
    Zhangsan be.able.to   serve.as/do Lisi SUB teacher
    'Zhangsan is able to be Lisi's teacher.'

It is worth pointing out that root modals in Mandarin can in fact co-occur with stative predicates. (42) and (43) are some examples. Hence, the incompatibility of *shì* and root modals can not be ascribed to the static nature of *shì*.

(42)   Deontic modals
   a.   张三应该相信李四。
        Zhāngsān yīnggāi   xiāngxìn Lǐsì.
        Zhangsan ought.to believe   Lisi.
        'Zhangsan ought to believe Lisi.'
   b.   张三可以知道这件事。
        Zhāngsān kěyǐ   zhīdào zhè-jiàn   shì.
        Zhangsan be.permitted.to know   DEM-CLF issue.
        'Zhangsan is permitted to be informed of this issue.'
   c.   他们得有责任心。
        Tāmen děi   yǒu zérènxīn.
        3PL   have.to have sense.of.responsibility
        'They must have sense of responsibility.'

(43)   Dynamic modals
   a.   张三肯相信这种说法。
        Zhāngsān kěn   xiāngxìn zhè-zhǒng shuōfǎ.
        Zhangsan be.willing.to believe   DEM-kind statement
        'Zhangsan is willing to believe this statement.'
   b.   张三愿意有自己的组织。
        Zhāngsān yuànyì   yǒu zìjǐ de   zǔzhī.
        Zhangsan be.willing.to have self SUB organisation
        'Zhangsan is willing to own his own organisation.'

Also, cross-linguistically speaking, it is not uncommon that copulas can embed under root modals, as shown in (44). Therefore, the incompatibility of the copula *shì* with root modals is to a certain extent a language-specific property of Mandarin.

(44)   a.   You have to be a nice person.
       b.   Puedes ser agresivo.
            you.can be aggressive
            'You're allowed to be aggressive.'

                                                        (Arche et al. 2019: 17)

In sum, *shì* is only compatible with epistemic modals, and it follows modal auxiliaries. In contrast, *shì* is incompatible with root modals regardless of the relative order between them. Such incompatibility is

language-specific and should not be ascribed to the static nature of *shì*. Assuming a root modal only c-selects VP, the incompatibility of *shì* with root modals indicates that *shì* does not head VP. Additionally, as described in Chapter 2, the postcopular constituent cannot be a VP. Presumably, *shì* does not selects VP, either. As indicated in Section 4.2.1 and will be further discussed, *shì* is supposed to take PredP as its complement. Hence, the structure of sentences containing both copula *shì* and compatible modality should be as schematised as (45).

(45)

```
                    Mod_epistemic P
                   /            \
          Mod_epistemic          shiP
               |                /     \
            kěnéng           shi       PredP
                              |       /      \
                             shì    NP1      Pred'
                                            /    \
                                         Pred    NP2
```
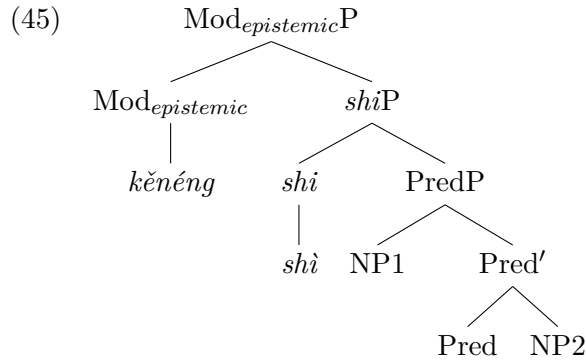
Before closing off this section, I will provide some counterexamples to the generalisation that *shì* is incompatible with root modals. For instance, in contrast to the ungrammatical sentences presented in (46), sentences in (47) are well formed even though *shì* is combined with root modals.

(46) a. */?? 张三得是李四的老师。
         */??*Zhāngsān děi   shì Lǐsì de   lǎoshī.*
          Zhangsan have.to COP Lisi SUB teacher
          Intended: 'Zhangsan has to be Lisi's teacher.'

      b. * 张三可以是李四的老师。
          **Zhāngsān kěyǐ   shì Lǐsì de   lǎoshī.*
          Zhangsan be.allowed COP Lisi SUB teacher
          Intended: 'Zhangsan is permitted to be Lisi's teacher.'

(47)   a. 这个人得是一个学过语言学的人。
        Zhè-ge   rén   děi/bìxū shì yī-ge   xué   guo yǔyánxué
        DEM-CLF people have.to   COP one-CLF study EXP linguistics
        de   rén.
        SUB people
        'The people (we are looking for) must be someone who has
        studied linguistics.'

        b. 这个人可以是一个外国人。
        Zhè-ge   rén   kěyǐ   shì yī-ge   wàiguórén.
        DEM-CLF people be.allowed COP one-CLF foreigner
        'The people (we are looking for) can be a foreigner.'

These sentences are normally seen in an intensional context such
as in job advertisements. Both the subject and the object are in fact
non-referential. Presumably, the modal element takes the full sentence
containing *shì* as its complement. The subject of the embedded copular
sentence then raises to the spec position of the modality.[11]

4.3.2 *Shì* and *guo*

Shì is incompatible with any aspectual marker, a property mentioned in
almost all previous research on Mandarin *shì* (Chao 1968; C. N. Li and
Thompson 1981; Zhu 1982; to name a few studies). The sentences in
(48) exemplify the combination of *shì* with different types of aspectual

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[11]As pointed out by Wei-Tien Dylan Tsai (p.c.), the incompatibility of deontic
modals and *shì* can be lessened by a disjunctive construal. For instance, (i) is well-
formed, or at least greatly improved from (39b). For one thing, similar to the potential
analysis of sentences in (47), the modal element may take the full clause containing *shì*
as its complement and the subject raises. For another, it is sometimes observed that
multi-clausal sentences are sometimes more "tolerant" than mono-clausal sentences
(see, for instance, S.-W. Tang and Lee 2000, Tsai 2008, H. Cheng 2021).

(i)   张三可以是李四的老师，也可以是王五的老师。   cf. (39b)
       Zhāngsān kěyǐ   shì Lǐsì de   lǎoshī, yě kěyǐ   shì
       Zhangsan is.permitted.to COP Lisi SUB teacher also is.permitted.to COP
       Wángwǔ de   lǎoshī.
       Wangwu SUB teacher
       'Zhangsan is permitted to be Lisi's teacher, and he is also permitted to be
       Wangwu's teacher.'

markers in Mandarin, namely, the progressive markers *zài* and *zhe*, the perfective marker *le*, and the experiential marker *guo*. All the sentences are ungrammatical.

(48) a. *南希在是麦克的姐姐。   *Progressive*
      **Nánxī zài   shì Màike de   jiějie.*
      Nancy PROG COP Mike SUB elder.sister
      Intended: 'Nancy is Mike's elder sister.'

   b. *南希是着麦克的姐姐。   *Progressive*
      **Nánxī shì   zhe   Màike de   jiějie.*
      Nancy COP PROG Mike SUB elder.sister
      Intended: 'Nancy is Mike's elder sister.'

   c. *南希是了麦克的姐姐。   *Perfective*
      **Nánxī shì le   Màike de   jiějie.*
      Nancy COP PFV Mike SUB elder.sister
      Intended: 'Nancy became Mike's elder sister.'

   d. *南希是过麦克的姐姐。   *Experiential*
      **Nánxī shì guo Màike de   jiějie.*
      Nancy COP EXP Mike SUB elder.sister
      Intended: 'Nancy was once Mike's elder sister.'

   Again, in contrast, when *shì* is replaced by verbs like *dāng* 'serve as' or *zuò* 'do', all the above sentences in (48) become grammatical, as shown in (49).

(49) a. 南希在当/做麦克的姐姐。   *Progressive*
      Nánxī zài   dāng/zuò Màike de   jiějie.
      Nancy PROG serve.as/do Mike SUB elder.sister
      'Nancy is Mike's elder sister.'

   b. 南希当/做着麦克的姐姐。   *Progressive*
      Nánxī dāng/zuò   zhe   Màike de   jiějie.
      Nancy serve.as/do PROG Mike SUB elder.sister
      'Nancy is Mike's elder sister.'

   c. 南希当/做了麦克的姐姐。   *Perfective*
      Nánxī dāng/zuò   le   Màike de   jiějie.
      Nancy serve.as/do PFV Mike SUB elder.sister
      'Nancy became Mike's elder sister.'

d. 南希当/做过麦克的姐姐。   *Experiential*
   Nánxī dāng/zuò   guo Màike de   jiějie.
   Nancy serve.as/do EXP Mike SUB elder.sister
   'Nancy was once Mike's elder sister.'

The progressive markers *zài* and *zhe* and the perfective marker *le* is only compatible with eventive predicates. On the one hand, as shown in (50), they cannot co-occur with stative predicates, as opposed to eventive predicates as shown in (51). On the other, as shown in (52), some stative predicates can indeed co-occur with *le* or *zhe*, but they can only have the eventive interpretation.

(50)   Stative predicate
       a.   *约翰在喜欢玛丽。
            **Yuēhàn zài   xǐhuān Mǎlì.*
            John   PROG like   Mary
       b.   */?? 约翰喜欢着玛丽呢。[12]
            */??*Yuēhàn xǐhuān zhe   Mǎlì ne.*
            John   like   PROG Mary SFP
       c.   *约翰喜欢了玛丽。
            **Yuēhàn xǐhuān le   Mǎlì.*
            John   like   PFV Mary

(51)   Eventive predicate
       a.   约翰在亲玛丽。
            Yuēhàn zài   qīn Mǎlì.
            John   PROG kiss Mary
            'John is kissing Mary.'
       b.   约翰亲着玛丽呢。
            Yuēhàn qīn zhe   Mǎlì ne.
            John   kiss PROG Mary SFP
            'John is kissing Mary.'
       c.   约翰亲了玛丽。
            Yuēhàn qīn le   Mǎlì.
            John   kiss PFV Mary
            'John kissed Mary.'

(52) a. 移动支付很便捷。
  Yídòng zhīfù   hěn biànjié.
  mobile payment very convenient
  'Mobile payment is convenient.'

  b. 移动支付便捷了我们的生活。
  Yídòng zhīfù   biànjié   le   wǒmen de   shēnghuó.
  mobile payment convenient PFV 1PL   SUB life
  'Mobile payment has made our life more convenient.'

  c. 移动支付便捷着我们的生活。
  Yídòng zhīfù   biànjié   zhe   wǒmen de   shēnghuó.
  mobile payment convenient PROG 1PL   SUB life
  'Mobile payment is making our life more convenient.'

Nonetheless, as shown in (53), *guo* can co-occur with both stative and eventive predicates. If *shì* is considered stative, its incompatibility with the progressive markers and the perfective maker is expected. In contrast, the incompatibility of *shì* with *guo* is not expected. Thus, the remainder of this section will only address the incompatibility of *shì* with the experiential marker *guo*.

(53) a. 约翰喜欢过玛丽。
  Yuēhàn xǐhuan guo Mǎlì.
  John   like   EXP Mary
  'John once liked Mary.'

  b. 约翰亲过玛丽。
  Yuēhàn qīn guo Mǎlì.
  John   kiss EXP Mary
  'John kissed Mary before.'

I will argue that the incompatibility of *shì* and *guo* exemplified in (54) cannot be ascribed to semantic or pragmatic incompatibility.

(54) *南希是过斯蒂夫的女朋友。
  **Nánxī shì   guo Sīdìfú de   nǚpéngyou.*
  Nancy COP EXP Steve SUB girlfriend
  Intended: 'Nancy was once Steve's girlfriend.'

On the one hand, as shown above, the use of *guo* is compatible with both stative and eventive predicates. On the other hand, the use of

guo is in fact sensitive to another list of semantic requirements, all of which copular sentences in principle can meet. In addition, some adverbs such as *céngjīng/yīdù* 'once (upon a time)' may contribute semantics to a sentence comparable to that of *guo*. Interestingly, *shì* is compatible with these adverbs, but not with *guo*. Section 4.3.2.1 will first present examples of the co-occurrence of *guo* and stative predicates. Then the licensing conditions of *guo* will be introduced in Section 4.3.2.2, followed by a discussion of the use of *shì* in Section 4.3.2.3.

4.3.2.1 Stativity and *guo*

First of all, unlike *zài*, *zhe*, and *le*, *guo* is compatible with many statives (both individual-level and stage-level statives). Crucially, these "statives" do not necessarily yield eventive interpretations when co-occurring with *guo*. Recall that the stative predicate *biànjié* 'convenient' in (52) can only have the eventive interpretation when co-occurring with *zhe* or *le*. (55) exemplifies the combination of *guo* and individual-level statives, and (56) shows it with two different stage-level statives.

(55)   Individual-level stative
    a. 张三聪明过。
        Zhāngsān cōngming guo.
        Zhangsan intelligent EXP
        'Zhangsan was once intelligent.'
    b. 达斯汀胖过。
        Dásītīng pàng guo.
        Dustin   fat   EXP
        'Dustin was once fat.'

(56)   Stage-level stative
    a. 张三消沉过。
        Zhāngsān xiāochen guo.
        Zhangsan depressed EXP
        'Zhangsan was once depressed.'
    b. 达斯汀喜欢过南希。
        Dásītīng xǐhuan guo Nánxī.
        Dustin   like   EXP Nancy
        'Dustin once liked Nancy.'

(57) lists a few more examples of statives co-occurring with *guo.* Crucially, these verbs are regarded as being among the statives that are the least possible to combine with aspectual markers (Guo 1997, 2002; Zuo 2009). Provided the contexts are appropriate the following sentences are acceptable. As will be shown in the next subsection, *shì*, in contrast, does not require peculiar contexts, such as surreal scenarios that may occur in some fiction stories, to fulfil the semantic requirements of *guo* but they can by no means co-occur in a single sentence.

(57)   a. 张三姓过王。
        Zhāngsān xìng   guo Wáng.
        Zhangsan surname EXP Wang(surname)
        'Zhangsan's surname was once Wang.'

       b. 这栋房子属于过她。
          Zhè-dòng fángzi shǔyú guo tā.
          DEM-CLF house belong EXP 3SG
          'This house once belonged to her.'

       c. 二加二等于过五。(in a science fiction story, for instance)
          èr jiā èr děngyú guo wǔ.
          two plus two equate EXP five
          'Two plus two once equalled five.'

4.3.2.2 Licensing conditions for *guo*

Guo is categorised as an experiential marker because it indicates that the eventuality involving the subject occurred at least once in the past. The subject of a sentence containing *guo* does not necessarily receive the thematic role *experiencer* (Yeh 1993a; J.-S. Wu 2009). In fact, animacy, sentience, or agentivity of the subject is not required.

In addition, *guo* is not restricted to certain Vendler verb classes. As shown in (58), it is compatible with states, activities, accomplishments, and achievements.

(58)   a. 达斯汀喜欢过南希。   *State*
        Dásītīng xǐhuan guo Nánxī.
        Dustin like   EXP Nancy
        'Dustin once liked Nancy.'

b. 小十一吃过华夫饼。   *Activity*
    XiǎoShíyī   chī guo huáfūbǐng.
    little.eleven eat EXP waffle
    'El had once eaten waffles.'

c. 我摔断过腿。   *Accomplishment*
    Wǒ shuāi-duàn guo tuǐ.
    1SG fall-break   EXP leg
    'I once broke my leg.'

d. 迈克赢过几次比赛。   *Achievement*
    Màike yíng guo jǐ-cì   bǐsài.
    Mike   win EXP some-CLF competition
    'Mike had won a couple of competitions.'

The majority of observations concerning the licensing conditions of
guo focus on the semantic perspective. Although discussion of the core
semantic properti(es) of *guo* has not reached a consensus, a few crucial
properties of *guo* are generally recognised. First of all, the event or state
took place at least once in the past (Chao 1968). More crucially, the
event has ended at the reference time and the final state no longer holds
(C. N. Li & Thompson 1981; Yeh 1993a, 1996; Smith 1997; J.-S. Wu
2009). J.-S. Wu (2008) terms this feature "terminability" and regards
it as the core semantics of *guo*, to which other properties of *guo* are
reducible. Take (58a) as an example. This sentence means that during
some time interval in the past Dustin liked Nancy but he does not fancy
her any more.

"Discontinuity" is another label used to describe such a property
(Chao 1968; Iljic 1990; Smith 1997). For instance, (58c) will be infe-
licitous if my leg is still broken. However, the asymmetry regarding
the requirement of "terminability" or "discontinuity" between sentences
with definite or indefinite objects to some extent undermines the gener-
alisation of the "terminability/discontinuity" requirement. Events with
a definite object require the discontinuity interpretation, whereas such
an interpretation is not obligatory for events with indefinite objects. For
instance, the computer described in (59a) must have gotten repaired.
In contrast, whether or not the computer has been repaired cannot be
inferred from (59b).

(59) a. 我弄坏过这台电脑。
      Wǒ nòng-huài guo zhè-tái diànnǎo.
      1SG make-break EXP DEM-CLF computer
      'I once broke this computer.'

    b. 我弄坏过一台电脑。
      Wǒ nòng-huài guo yī-tái diànnǎo.
      1SG make-break EXP one-CLF computer
      'I once broke a computer.'

The other property is labelled as "repeatability" (J.-h. Ma 1977; Yeh 1993a, 1996; Smith 1997; J.-S. Wu 2008). For instance, the ungrammaticality of (60a) can be accounted for using the fact that Zhangsan cannot die twice except in certain magical or surreal contexts. As death can be "repeated" among a group of people, (60b) is well formed.

(60) a. * 张三死过。
      *Zhāngsān sǐ guo.
      Zhangsan die EXP
      Intended: 'Zhangsan once died.'

    b. 那栋楼死过几个人。
      Nà-dòng lóu sǐ guo jǐ-ge rén.
      DEM-CLF building die EXP some-CLF people
      'A couple of people once died in that building.'

A few exceptions to the "repeatability" constraint have been reported. For instance, even though Zhangsan cannot be young again just as he cannot die again, (61a) is acceptable. Similarly, the team can only attend the 1992 Olympic Games once, but (61b) is also felicitous. On the basis of her "terminability" account, J.-S. Wu (2008) ascribes the contrast between (61) and (60a) to whether the termination of the events or states has been reached. In (60a), the state of Zhangsan being dead has not terminated or changed; hence the sentence is ruled out. However, Zhangsan being young or the Taiwan baseball team playing in the finals has ended, so the sentences are grammatical. Note crucially that the main point the current study adheres to is that no case (except for copular sentences) has been reported where the "repeatability" requirement has been fulfilled but the sentence containing *guo* is ungrammatical.

(61)   a.   张三（也）年轻过。[13]
             Zhāngsān (yě) niánqīng guo.
             Zhangsan too young   EXP
             'Zhangsan was once young.'

       b.   中华队打过 1992 年奥运棒球决赛。   (J.-S. Wu 2008: 24)
             Zhōnghuáduì   dǎ   guo   1992   nián
             Zhonghua.team   participate.in   EXP   1992   year
             Aòyùn   bàngqiú juésài.
             Olympic.Games baseball final.game
             'The Taiwan baseball team played in the finals of the 1992
             Olympic Games.'

4.3.2.3   The incompatibility of *shì* with *guo*

This subsection shows that *guo* cannot co-occur with *shì* even if the terminability/discountinuity and the repeatability requirements are both fulfilled. Imagine such a scenario, for instance, where Nancy used to be Steven's girlfriend. They broke up last month, and they are not currently in a relationship with each other. However, there is still a possibility that the relationship will resume at some point in the future. Put differently, the state of Nancy being Steven's girlfriend has terminated and is independent of the current discourse. Moreover, such a state is repeatable in the future. In a word, the semantic requirements of *guo* have all been satisfied. Observe, however, that (62) is ungrammatical.

(62)   *南希是过斯蒂夫的女朋友。
        **Nánxī shì   guo Sīdìfū de   nǚpéngyou.*
        Nancy COP EXP Steve SUB girlfriend
        Intended: 'Nancy was once Steve's girlfriend.'

    In addition, neither the use of an extra *yě*, which improves (61a), nor using an indefinite DP, which would have rescued (60a), makes any difference in the grammaticality of (62), as illustrated in (63).

---

[12]Though the sentence without *yě* is acceptable for many Mandarin speakers, inclusion of *yě* 'too' is in fact preferred. J.-S. Wu (2008) suggests that inclusion of additive *yě* probably contributes to the implication of more than one person being young in the context. In other words, the recurrence of 'being young' is implied, and consequently the "repeatability" requirement is satisfied.

(63) a. *南希也是过斯蒂夫的女朋友。

      Nánxī yě shì guo Sīdìfū de nǚpéngyou.
      Nancy also COP EXP Steve SUB girlfriend
      Intended: 'Nancy was once Steve's girlfriend, too.'

  b. *这个班有几个人是过斯蒂夫的女朋友。

      Zhè-ge bān yǒu jǐ-ge   rén   shì guo Sīdìfū de
      DEM-CLF class have some-CLF person SHI EXP Steve SUB
      nǚpéngyou.
      girlfriend
      Intended: 'A couple of people in this class were once Steve's girlfriends.'

Crucially, to depict the above-mentioned scenario, on the one hand, again, we can substitute the copula *shì* with verbs such as *dāng* 'serve as' or *zuò* 'do'. On the other, adverbs such as *céngjīng* 'before, once upon a time' can be used in addition to *shì*, as shown in (65).

(64) 南希当/做过斯蒂夫的女朋友。
    Nánxī dāng/zuò   guo Sīdìfū de   nǚpéngyou.
    Nancy serve.as/do EXP Steve SUB girlfriend
    'Nancy was once Steve's girlfriend.'

(65) 南希曾经是斯蒂夫的女朋友。
    Nánxī céngjīng shì Sīdìfū de   nǚpéngyou.
    Nancy before   COP Steve SUB girlfriend
    'Nancy was once Steve's girlfriend.'

Note that the adverb *céngjīng* frequently co-occurs with non-copular sentences containing *guo* (Z. Ma 2003). (66) lists counterparts of (58) that include *céngjīng*. All of the sentences below are still grammatical, with no interpretative distinctions from those in (58).

(66) a. 达斯汀曾经喜欢过南希。   (cf. (58a))
      Dásītīng céngjīng xǐhuan guo Nánxī.
      Dustin once   like   EXP Nancy
      'Dustin once liked Nancy.'

  b. 小十一曾经吃过华夫饼。   (cf. (58b))
      XiǎoShíyī   céngjīng chī guo huáfūbǐng.
      little.eleven once   eat EXP waffle
      'El had once eaten waffles.'

   c. 我曾经摔断过腿。   (cf. (58c))
      Wǒ céngjīng shuāi-duàn guo tuǐ.
      1SG once   fall-break   EXP leg
      'I once broke my leg.'

   d. 迈克曾经赢过几次比赛。   (cf. (58d))
      Màike céngjīng yíng guo jǐ-cì   bǐsài.
      Mike   once   win EXP some-CLF competition
      'Mike had won a couple of competitions.'

In a nutshell, copular sentences like (62) fulfil all the semantic requirements licensing *guo*, yet the sentences are still bad. Hence, a syntactically grounded account is expected. In line with what was discussed at the end of previous subsection, assuming that aspectual elements c-select a VP, the incompatibility of *shì* and *guo* indicates that *shì* does not head VP. Again, as *shì* does not select VP as its complement either, copular structures contain no *v*P/VP or AspP. The proposed structure is as (67).[13]

(67)

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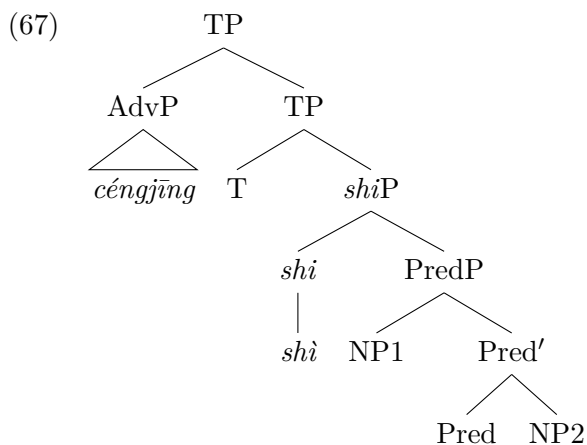
[13]That *shi*P is placed below TP in (67) is simply based on the surface order between the adverb *céngjīng* and *shì*. However, TP may be lower than *shi*P and the temporal adverb may move to a topic position. It can be shown that temporal adverbs such as *céngjīng* can precede an epistemic modal in the surface order. However, Mod$_{epis}$P is higher than TP in the structure, which was discussed at the beginning of this section and illustrated in (25).

4.3.3 Interim summary

This section examined the distribution of *shì* in relation to modality and aspectual markers. Specifically, *shì* is incompatible with any aspectual markers. It can co-occur with epistemic modals but not with root modals. In contrast, verbs such as *dāng* 'serve as' or *zuò* 'do' are compatible with all above-mentioned constructions. Although analyses resorting to semantic incompatibility may account for part of the data, they cannot explain the incompatibility of *shì* with *guo* – *shì* can fulfil all the semantic requirements of *guo*, but it cannot co-occur with *guo*. I therefore propose that this distribution of *shì* is attributed to its structural properties: *shì* is not the head of VP, and there is no VP in the structure of copular sentences. Also, *shì* is situated high in the structure. It is a position higher than lexical verbs which presumably head V. The structures for copular and non-copular sentences are respectively presented in (68) and (69). Again, assuming that root modals and Aspect c-select VP, the contrasts we observe with respect to the compatibility with modality and aspectual markers between copula *shì* and verbs such as *dāng* 'serve as' and *zuò* 'do', which have a comparable meaning to *shì* in certain cases, are expected. *shì* is incompatible with any of the aspectual markers or the root modals, while *dāng* and *zuò* are compatible with both.

(i) 南希曾经可能喜欢过斯蒂夫。
     Nánxī céngjīng kěnéng xǐhuan guo Sīdìfū.
     Nancy once   be.likely.to like EXP Steve
     'It is likely that Nancy once liked Steve.'

(68)   Copular structure

```
                        Mod_epistemic P
                   ╱                      ╲
           Mod_epistemic                    TP
                │                      ╱        ╲
             kěnéng                 AdvP          TP
                                  ╱╲╲          ╱      ╲
                               céngjīng      T       shiP
                                                   ╱       ╲
                                                 shi        PredP
                                                  │        ╱      ╲
                                                 shì     NP1      Pred′
                                                                ╱      ╲
                                                              Pred    NP2
```

(69)   Non-copular structure[14]

$\text{Mod}_{epis}\text{P}$
- Mod_{epis}
  - *kěnéng*
- TP
  - AdvP
    - *céngjīng*
  - TP
    - T
    - Mod_{deo}P
      - Mod_{deo}
        - *bìxū*
      - $\text{Asp}_{outer}\text{P}$
        - Asp_{outer}
          - *zài/guo*
        - *v*P
          - *v*
          - Mod_{dyn}P
            - Mod_{dyn}
              - *néng*
            - $\text{Asp}_{inner3}\text{P}$
              - Asp_{inner3}
                - *le*
              - $\text{Asp}_{inner2}\text{P}$
                - Asp_{inner2}
                  - *zhe*
                - VP
                  - V
                    - *dāng/zuò*
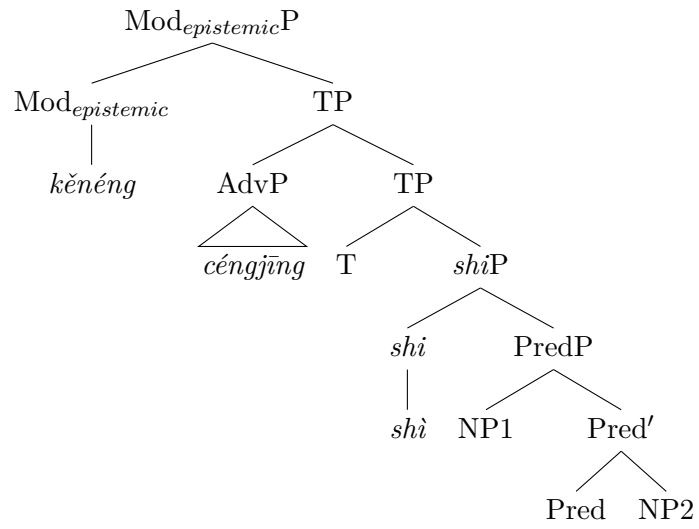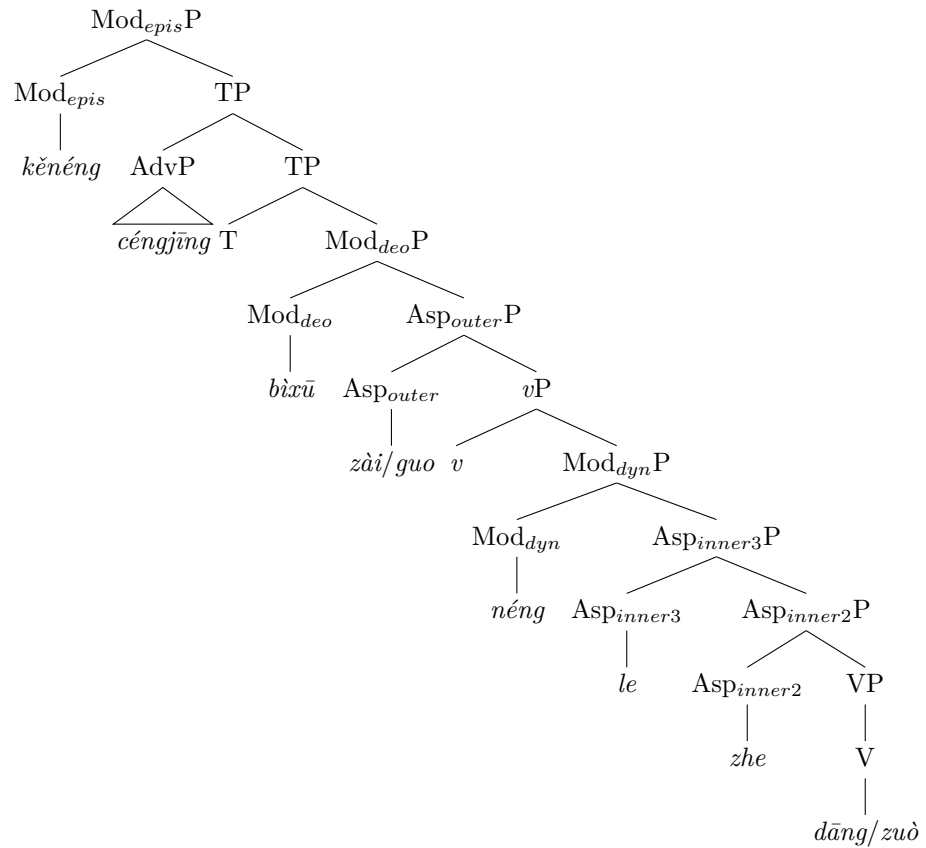
4.4   *Shì* as a pronominal copula

The previous sections in this chapter argue that Mandarin copula *shì* is not the spell-out of Pred, V, or T, but a functional head high in the structure. This section shows that this analysis is comparable to analyses of other pronominal copulas in various languages.

---

[14]The distinction between *inner aspect* and *outer aspect* follows Travis (2010) and Sybesma (2017a).

4.4.1 Pronominal copulas in the world's languages

C. N. Li and Thompson (1977) classify copulas in the world's languages into two groups: those that are full-fledged verbs and those that "fall short of being a true verb" (C. N. Li & Thompson 1977: 420). Copulas in most Indo-European, Finno-Ugric, and Altaic languages belong to the first group. Mandarin, Hebrew, Arabic, Wappo, Zway, almost all Austronesian languages, and many less familiar languages have non-verbal copulas. It has been shown in C. N. Li and Thompson (1977) that the non-verbal copulas either originate from or are still homophones of pronominal elements. For instance, Mandarin *shì* originates from a demonstrative meaning 'this' (C. N. Li & Thompson 1977; Xiao 2003; Y. Shi 2005; B. Ma & Cai 2006; Liang 2012; D. Shi & Han 2013). (70) is an example from the book *Zuǒzhuàn/The Tso Chuan* '*Commentary on Spring and autumn annals by Zuo Qiuming*', which was written in around 300 BCE. *Shì* in (70) is a demonstrative meaning 'this', and the sentence contains no (overt) copular element.

(70) 是良史也。   *Zuǒzhuàn*
      Shì   liángshǐ   yě.
      DEM good.historian SFP
      'This is a good historian.'

Hebrew, for another example, has both types of copulas.[15] *h.y.y.* is the verbal copula, and *hu* is its non-verbal counterpart.[16] The non-verbal copula can only be used in the present tense, whereas *h.y.y.* is obligatory in sentences in other tenses or when negated.

---

[15]In fact, Mandarin also has verbal copulas. For instance, *wéi* 为 originates from a verb meaning 'do'. However, in contemporary Mandarin, its use is very constrained. It is only used in specificational sentences but not in predicational sentences. More crucially, it can only be used in formal contexts. As mentioned in Chapter 1, it can be regarded as the remnant of a copula that was actively used in the past.

(i) 报名截止日期为 12 月 31 日。
     Bàomíng jiézhǐ   rìqī wéi 12 yuè   31 rì.
     register   cut.off date COP 12 month 31 day
     'The deadline for registration is December 31st.'

(71) a. *Dani yihye more   ba   universita.*
Dani will.be teacher in.the university
'Dani will be a teacher at the university.'

  b. *Dani (hu) more   ba   universita.*
Dani be   teacher in.the university
'Dani is a teacher at the university.'

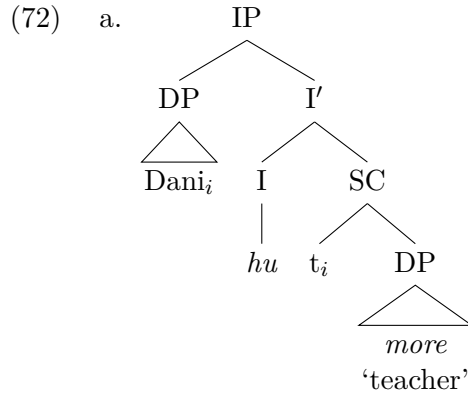<div align="right">(Doron 1983: 72)</div>

The next subsections will show that the current analysis of Mandarin *shì* is consistent with the previous analyses of Hebrew *hu* (Doron 1983; Rothstein 1995; Shlonsky & Rizzi 2018) and Polish *to* (Citko 2008; Shlonsky & Rizzi 2018). On the one hand, no verb and no *v*P structure is proposed for sentences containing *shì*, *hu*, or a single *to*. On the other, *shi*P in the structure in (68) is comparable to SUBJP, the projection that *hu* and *to* are proposed to head (Cardinaletti 2004; Rizzi 2015b; Shlonsky & Rizzi 2018). Taken together, the structure of pronominal copulas in different languages may share properties distinct from those of verbal copulas.

4.4.2 No VP structure

It has been proposed that a Hebrew sentence like (71b) has no verb and no *v*P structure (Doron 1983; Rothstein 1995; Shlonsky & Rizzi 2018), though the specific head *hu* is proposed to instantiate may vary. For instance, *hu* has been analysed as the spell-out of Infl (Rothstein 1995) or the lexicalisation of SUBJ (Shlonsky & Rizzi 2018).

---

[16]No present tense inflected form of *h.y.y.* exists in Hebrew. *Hu* is homophonous with the third person singular pronoun, masculine. The other forms of pronominal copulas are *hi* '3SG.FEM, *hem* '3PL.MAS', and *hen* '3PL.FEM'. In addition, note that although in the literature *hu* has been viewed as a copula in Hebrew, a recent study by Shor (2020) argues that *hu* is a second realisation of the subject referent. Sentence types previously regarded as "copular sentences" are viewed as cases of subject doubling in Shor (2020).

(72)   a.

```
                    IP
                 /      \
               DP        I′
               /\       /   \
           Daniᵢ        I     SC
                        |    /   \
                        hu  tᵢ    DP
                                  /\
                                 more
                              'teacher'
```

(adapted from Rothstein 1995: 39)

b.

```
                    SUBJ2P
                 /         \
               DP           SUBJ2′
               /\          /       \
           Daniᵢ      SUBJ2         SUBJ1P
                        |          /       \
                        hu     SUBJ1       PredP
                                 |        /     \
                                 ∅       tᵢ      Pred′
                                               /     \
                                            Pred      DP
                                                      /\
                                                     more
                                                  'teacher'
```
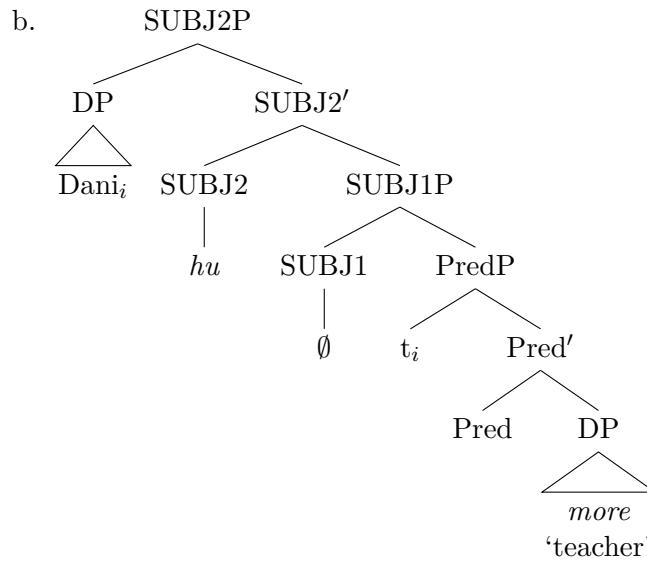
(adapted from Shlonsky and Rizzi 2018: 43)

Similarly, the structure proposed for Polish copular sentences containing a single *to* in Citko (2008) contains no VP, either.[17] Note crucially that in Polish, when *to* is used, the predicate can only be a DP regardless of whether the verbal copula appears in addition to *to*. However, AP and PP predicates can only occur in verbal copular sentences containing no *to* (Citko 2008).

---

[17]π is used as a different label for Pred.

(73)

```
            TP
          /    \
        T        πP
        |       /  \
       to     DP     π′
                    /  \
                   π    DP
```
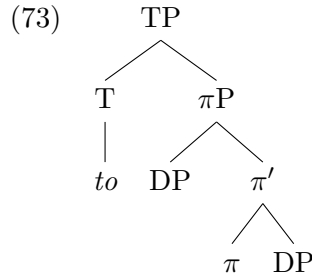
(adapted from Citko 2008: 290)

As discussed in the previous section, *shì* is incompatible with root modality, regardless of the word order between them, and aspectual marking, regardless of whether the semantic requirements can be fulfilled or not. These phenomena support the analysis that Mandarin copular sentences containing *shì* have a structure containing no VP. Again, for one thing, assuming that root modals and aspectual markers c-select a VP as their complement, the proposal that *shì* does not head VP accounts for the incompatibility of *shì* with root modals and the aspectual markers in a simple and principled way. Furthermore, as will be discussed in Chapter 5, *shì* takes PredP as its complement. The proposed structure is repeated below as (74).

(74)

```
          shiP
         /    \
      shi       PredP
              /      \
           NP1       Pred′
                    /    \
                 Pred     NP2
```
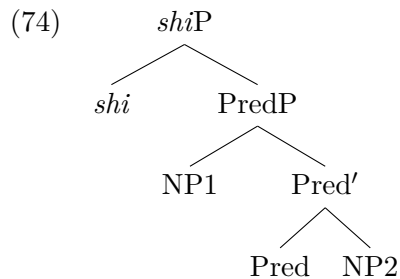
As a result, copular sentences containing a single pronominal copula in Mandarin, Hebrew, and Polish share a similar base structure. The functional projections headed by the copula project on top of the PredP, though these copulas in different languages may instantiate different functional heads in different analyses (T, SUBJ, or any other heads). Crucially, these structures contain no VP. The pronominal copulas do not instantiate V, and no VP intervenes between PredP and the functional projection headed by the copula.

4.4.3   SUBJP for pronominal copulas

This section proposes that *shi*P in the structure in (68) is in effect
identical to SUBJP, following Shlonsky and Rizzi's (2018) proposal for
Hebrew *hu* and Polish *to*. In Hebrew and Polish, the *hu* and the *to* are
situated very high in the structure. For instance, Hebrew *hu* precedes
polarity elements *lo/ken* 'NEG/AFF'. As shown in (75), *hu* precedes the
polarity elements, whereas the verbal copula *haya* must follow them, on
a par with lexical verbs. Similarly, as shown in (76), the pronominal
copula *to* in Polish precedes the negator *nie*, as well as the verbal copula
było (if *było* also occurs).

(75)   a.   *Xaver-i   ha tov   *(hu) (lo/ken) Dani.*
            friend-my the good 3SG.M NEG/YES Dani
            'My good friend is not/IS Dani.'

       b.   *Dani lo/ken   haya   xaver-i   ha tov.*
            Dani NEG/YES COP.PST friend-my the good
            'Dani was not/WAS my good friend.'

       c.   *Dani lo/ken   ohev xacalim.*
            Dani NEG/YES like   eggplants
            'Dani does not/DOES like eggplants.'

                                        (Shlonsky & Rizzi 2018: 43)

(76)   *Waterloo *<nie> to   <nie> było   zwycięstwo.*
       Waterloo NEG   COP NEG   COP.PST victory
       'Waterloo was not a victory.'

                                        (Citko 2008: 291)

Note that Mandarin *shì* is not situated as high as *hu* or *to* in the
structure. For instance, copula *shì* always follows the negator *bù*, as
shown in (77). Assuming negation is in the same position in the structure
in all three languages, *shì* must be situated lower than negation.

(77)   迈克 < 不 > 是 *< 不 > 小学生。
       *Màike <bù> shì *<bù> xiǎoxuéshēng.*
       Mike   NEG COP NEG   primary.school.student
       'Mike is not a primary school student.'

In fact, on the basis of her observations that a subject in Italian can
precede various adverbs, Cardinaletti (2004) proposes that subjects of a

particular language may occupy a number of positions in the structure. In structural terms, she proposes that either a SUBJP can be freely generated at the IP-edge or there are multiple SUBJPs in the structure. Her analysis is in line with Cinque's (1999) hierarchy in which adverbs present a rigid order within and across languages. Assuming that adverbs occupy the specifier position of the corresponding functional projections, the relative orders between a certain element in relation to different adverbs reflect the position the specific element occupies in the structure in relation to the adverbs. Similarly, as mentioned in Section 4.1.4, two distinct SUBJP projections are proposed for *hu* and the subject in different types of copular sentences (Shlonsky & Rizzi 2018) on the grounds of the same reasoning.

Additionally, variations between languages have also been observed. Cardinaletti (2004) addresses the differences between French and Italian. In French, unlike Italian, no adverb can intervene between a subject and a finite verb. Shlonsky and Rizzi (2018) also points out differences between Polish and Hebrew in that the subject in Polish does not exploit the lowest subject position, since the equivalent of Hebrew bare copular sentences (e.g. (71b) without an overt *hu*) is unavailable. The current study follows their reasoning of flexibility of the subject position in the structures, be it the case that a SUBJP can be flexibly generated at the IP-edge or that multiple SUBJPs are proposed in the structure. Specifically, subjects in different languages surface in different functional projections, i.e. the specifier of varied level(s) of SUBJP. Similarly, the copulas in different languages and/or in different structures may also lexicalise different instances of SUBJP in the structure. When it comes to Mandarin, *shì* lexicalises one of the lowest instances of SUBJPs, as opposed to *to* in Polish and *hu* in Hebrew, which lexicalise the higher/highest instances of SUBJPs.

Bearing in mind language variations in terms of the possible positions of SUBJP in the structure, it is crucial that the SUBJPs share core properties across languages (Cardinaletti 2004; Rizzi 2015b; Shlonsky & Rizzi 2018). Recall that it is the distinction between the "subject-of-predicate" feature checking and phi-feature checking that favours the multiple-layer cartography of subjecthood (Cardinaletti 2004). The idea has been developed in Rizzi (2015a, 2015b) and Shlonsky and Rizzi (2018) that SUBJP provides a Subject Criterion, in which a criterial

feature, [Subj], which expresses the "aboutness" semantics, is checked. Like *to* in Polish and *hu* in Hebrew, the context of use of *shì* complies with what has been proposed for SUBJP. On the one hand, *shì* is directly relevant to a subject–predicate relation. On the other hand, as will be discussed in the next chapter (Section 5.2), the precopular position in Mandarin is closely associated with information structural properties. The functional projection headed by *shì* can be viewed as the Subject Criterion in the sense of Rizzi (2015a, 2015b).

In a word, the pronominal copulas in Mandarin, Hebrew, and Polish share properties in terms of syntactic distribution. They are situated high in the structure (though different heights might be proposed). Furthermore, they are crucial for the features in relation to the predication relation other than other inflectional or agreement features such as tense or phi-features. Hence, following the cartography of the multiple-layer subjecthood, these pronominal copulas lexicalise one of the SUBJ heads. The choice of which SUBJ to instantiate is subject to language variation and the type of copular sentences (e.g. bare or not so bare, predicational or specificational).

4.4.4   Pronominal copulas and the Copular Cycle

This section provides a generalisation about the grammaticalisation of copulas, which may lend support to the analysis that pronominal copulas such as Mandarin *shì*, Hebrew *hu*, and Polish *to* lexicalise SUBJ, with the subject of a copular sentence occupying the specifier of SUBJP. The grammaticalisation path of pronominal copulas has been proposed as the "copular cycle" (Lohndal 2009; van Gelderen 2015), on the basis of the seminal work of C. N. Li and Thompson (1977). This proposal depicts two grammaticalisation paths for the two types of copulas. For verbal copulas such as English *be*, there is no categorical change in the course of the grammaticalisation. The copula originates from a lexical verb and ends up as an auxiliary. In contrast, the grammaticalisation of pronominal copulas involves a spec–head relation, which engages a categorical change. Specifically, the copula originates from a demonstrative or a pronoun, which occupies the specifier position of a functional projection. When it has developed to a copula, it instantiates the head of the functional projection (presumably, SUBJP). The pronominal copula might further develop into an affix-like grammatical marker. The whole

process can be schematized as in (78).

(78)

demonstrative/pronoun	>	copula	>	grammatical marker
specifier	>	head	>	affix

(Lohndal 2009: 218)

The generalisation of "copular cycle" particularly stipulates the spec–head relation associated with grammaticalisation of pronominal copulas. Crucially, the stipulation of SUBJP involves the spec–head relation. Although the two analyses are independently motivated, they converge on emphasising the same structural relation. The specific spec–head relation associated with pronominal copulas motivates analyses which propose that pronominal copulas head projections whose specifier is occupied by the subject. In proposals that do not assume SUBJP, Hebrew *hu* and Polish *to* have been analysed as T (Doron 1983; Rothstein 2004; Citko 2008). The subjects occupy the specifier position of TP. It has also been proposed in Tse (2016) that Mandarin *shì* should be analysed as T, taking into consideration the "copular cycle". However, as argued in Section 4.2.2, *shì* should not be taken as the spell-out of T. Instead, the current thesis proposes that *shì* heads one of the SUBJP projections, as discussed in the previous chapter. The subject of copular sentences occupy the specifier of the SUBJP, which is headed by *shì*.

Before closing the section, I briefly present the development of Mandarin *shì*, following the path sketched in (78). As mentioned in Section 4.4.1, *shì* originates from a demonstrative meaning 'this', and then develops into a copula. Nowadays, in Mandarin and other relevant varieties of Chinese, *shì* functions as the most frequently used copula. Interestingly, it has been reported in a recent cross-dialectal study that the copula can be used as a topic marker in some dialects in southern China (Jin 2020) (e.g. (79)). This phenomena that the copula has been grammaticalised to some other grammatical marker may lend support to the grammaticalisation path that proposed for pronominal copulas, as sketched in (78) .

(79)   a. Fuzhou Gan
Lau⁴⁵ wɔŋ²¹³ ɕi   ŋo⁴⁵ tsau⁴⁵kan¹¹ tsʰai²⁴ pʰʊŋ⁴¹tau¹¹
old   Wang COP_TOP 1SG morning   just   meet
kɛ⁴⁵.
3SG
'(Speaking of) Old Wang, I just saw him this morning.'

(Jin 2020: 96)

b. Wuyuan Hui
Lɔ³¹→²⁴ li³¹→²⁴ ɕi³¹   tsu³⁵ bu⁵¹⁵kəŋ¹⁵.
old   Li   COP_TOP do   carpenter.work
'(Talking about) Old Li, (he) makes a living as a carpenter.'

(Jin 2020: 98)

4.5 Conclusion

This chapter examined the position of *shì* in the structure, in the context that the position of copular elements in different languages shows great diversity. I argue that *shì* does not head Pred, V, or T. Instead, it instantiates a high functional head as one of the instances of SUBJ, which has been proposed for pronominal copulas in other languages. In addition, the last section shows that pronominal copulas such as Mandarin *shì*, Hebrew *hu*, and Polish *to* share properties distinct from verbal copulas in the world's languages. Hence, they can be analysed in the same way. For one thing, structures containing only a pronominal copula have no VP. Furthermore, these pronominal copulas supposedly lexicalise one of the SUBJ heads. A spec–head relation between the subjects of the copular sentences and the copulas is thus established. The next chapter will propose structures of canonical and inverse copular sentences in Mandarin.
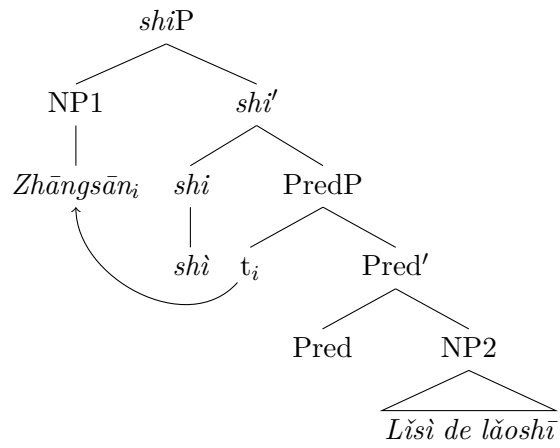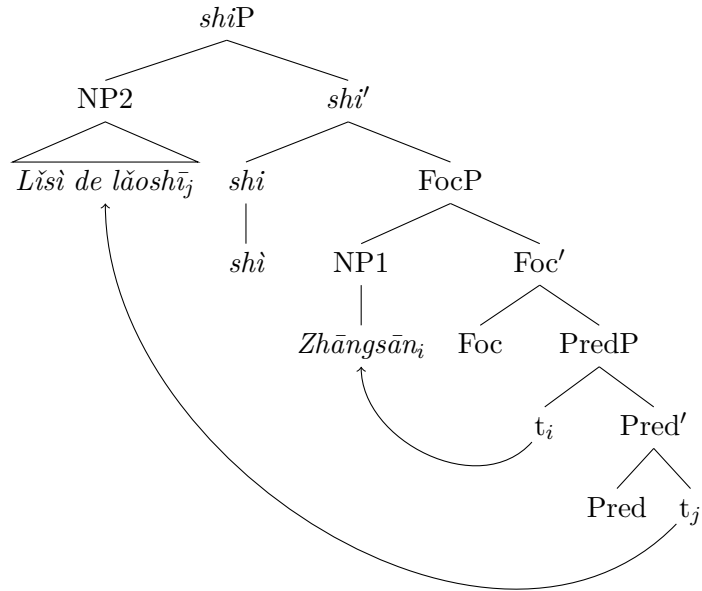
CHAPTER 5

The structure of Mandarin copular sentences

This chapter argues for a unified structural analysis of Mandarin predicational and specifcational copular sentences, aligned with Heggie (1988), Moro (1997, 2017), Mikkelsen (2005), Den Dikken (2006, 2017), and Shlonsky and Rizzi (2018). This analysis accounts for the relation between Mandarin predicational and specificational copular sentences and the distinctions between them discussed in Chapter 3. (1a) represents the structure of a canonical copular sentence, while (1b) represents the structure of an inverse copular sentence.[1]

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[1]Although I showed in Chapter 2 that both positions on either side of Pred can sometimes be filled with an AP, VP, or IP, here and henceforth I only use NPs for the sake of simplicity. Also, considering the fact that Mandarin is a language that lacks subject agreement, in this work, I will continue using *shi*P instead of SUBJP for the functional projection that *shì* heads.

(1)   a. *Predicational/Canonical*

```
                    shiP
                  /      \
               NP1        shi'
                |        /     \
          Zhāngsānᵢ    shi     PredP
                        |     /     \
                       shì  tᵢ      Pred'
                               /        \
                            Pred        NP2
                                      /_____\
                                   Lǐsì de lǎoshī
```

b. *Specificational/Inverse*

```
                      shiP
                    /      \
                 NP2        shi'
               /____\      /     \
        Lǐsì de lǎoshīⱼ  shi     FocP
                          |     /     \
                         shì  NP1      Foc'
                               |      /    \
                          Zhāngsānᵢ Foc    PredP
                                         /     \
                                       tᵢ      Pred'
                                              /    \
                                            Pred   tⱼ
```

In brief, the predicational core (or PredP, that is, an asymmetric structure for the predication relation that is mediated by a functional

head like Pred) is proposed as the base structure for both canonical and inverse sentences. The subject NP1 (i.e. the referential nominal) is the specifier of PredP, while the predicate NP2 (i.e. the predicative nominal) is the complement of Pred. Either nominal can raise to [Spec, *shi*P]. Besides, a low FocP is stipulated for inverse sentences for a number of reasons. This chapter will introduce the key elements of the structures step by step. Section 5.1 introduces the properties of the predicational core, the subject position, and the low FocP in the inverse structure. Section 5.2 discusses the motivation for predicate inversion of the inverse sentences. Section 5.3 describes the derivation of both canonical and inverse structures. Section 5.4 accounts for the canonical/inverse distinctions discussed in Chapter 3 on the basis of the proposed structures.

5.1 The structure

This section will discuss three key elements of the proposed structures in (1). Section 5.1.1 presents the idea that the predicational core is the base structure shared by both types of copular sentences in Mandarin. Section 5.1.2 argues that predicate inversion of Mandarin inverse sentences takes place in the manner of A-movement. Section 5.1.3 justifies the stipulation of a low FocP in the inverse structure.

5.1.1 The predicational core

The first key element of the proposed structure is "the predicational core" (Adger and Ramchand 2003: 325; Mikkelsen 2005: 166), which is the basic structure for the predicational relation.[2] Following Heggie (1988), Heycock (1995), Moro (1997, 2017), Adger and Ramchand (2003), Mikkelsen (2005), and Den Dikken (2006, 2017), the current study adheres to the assumption that both nominals in both types of copular sentences start from the predicational core and are Merged in a fixed order: the referential nominal (the subject) occupies the specifier of PredP, and the predicative one (the predicate) occupies the complement of Pred. The structure is shown in (2).

(2)   PredP
           ╱   ╲
      XP$_{Subj}$ Pred′
                    ╱   ╲
               Pred   XP$_{Pred}$
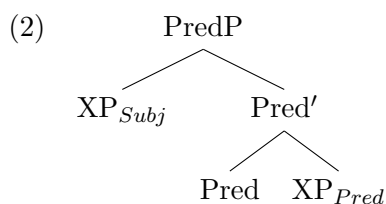
Ever since Bowers (1993), a functional projection has been proposed
to mediate the predicational relation in a unified way for both small
clauses and matrix clauses.[3] The functional head is labelled as "Pr" in
Bowers (1993) and then as "Pred" in Svenonius (1994), Bowers (2001),
Adger and Ramchand (2003), Mikkelsen (2005), and Arche, Fábregas,
and Marín (2019), among others.[4] The Pred head s-selects its argument
because the semantically predicative argument can be of any lexical cat-
egory (Mikkelsen 2005). Although the typical category of the referential
argument is DP, it can also be a CP or some other XP.

The supporting evidence for the fixed order (accordingly, an asym-
metrical structure) concerns small clauses under verbs such as *consider*
(Heggie 1988; Rothstein 1995; Moro 1997; Mikkelsen 2005). As shown
in (4) and as we have discussed in the previous chapters, when there
is a copula present in the embedded clause, both orders between the
referential and the non-referential nominals are available. In contrast,
when the copula is absent, only one order is available, namely with the
referential element preceding the predicative one, as shown in (3). As will
be discussed in later sections, the obligatory occurrence of the copula in
(4b) involves an extra layer of structure on top of PredP, which makes
the other order possible. When verbs such as *consider* takes PredP as its
complement, as in (3), only one word order is available for the embedded
clause: the referential nominal precedes the non-referential nominal. This
order is the merge order of the two nominal elements in PredP.

---

[2]It is also labelled "nexus" in Svenonius (1994) and "predicative nucleus" in Moro
(1997).

[3]See Matushansky (2019) for a recent analysis against the structure involving
a mediating projection such as PredP. As far as the current research is concerned,
it is crucial that the basic structure establishing the subject–predicate relation is
asymmetric. Whether or not there is a mediating projection and whether or not this
projection is PredP does not affect the current analysis.

[4]"[Pred] is less easily confused with P (for preposition) and Prt (for particle) [than
Pr]" (Svenonius 1994: 35).

(3)   a. I consider [[Susan] [my best friend]].

    b.   * I consider [[my best friend] [Susan]].

(4)   a. I consider [Susan to be my best friend].

    b. I consider [my best friend to be Susan].

Mandarin data show the same pattern as English in terms of the word orders available under verbs like *consider*. As shown in (5) (and as we have repeatedly seen in the previous chapters), only the canonical order, as in (5a), is allowed under *dāng* 'consider' without the copula. The embedded clause with the inverse order, as in (5b), leads to an ungrammatical sentence.

(5)   a. 你当 [张三傻子] 吗?
       Nǐ   dāng   [Zhāngsān shǎzi] ma?
       2SG consider Zhangsan idiot Q
       'Do you consider Zhangsan an idiot?'

    b.   * 你当 [傻子张三] 吗?
       Nǐ   dāng   [shǎzi Zhāngsān] ma?
       2SG consider idiot Zhangsan Q
       'Do you consider the idiot to be Zhangsan?'

The following set of examples further shows that the small clause can only have the predicative reading. (6) shows that when both nominals in both embedded small clauses are names, only one of them can be interpreted referentially. Specifically, the first nominals in both clauses have the referential reading, denoting the person Zhangsan (in (6a)) or Lisi (in (6b)). The second nominal must be interpreted predicatively, that is, having the prototypical characteristics of Lisi (in (6a)) or Zhangsan (in (6b)). It is impossible for the first nominal in either clause to have the non-referential reading, nor can the second nominal have the referential reading.

(6)   a. 你当张三李四吗?
       Nǐ   dāng   Zhāngsān Lǐsì ma?
       2SG consider Zhangsan Lisi Q
       'Do you think Zhangsan is the same as Lisi?'

b. 你当李四张三吗?
Nǐ   dāng   Lǐsì Zhāngsān ma?
2SG consider Lisi Zhangsan Q
'Do you think Lisi is the same as Zhangsan?'

In contrast, as was mentioned in Section 3.3.1.1 in Chapter 3, when *shì* occurs, it is possible for the precopular nominals to be interpreted predicatively while the postcopular nominals are referential, if proper contexts are available. In addition, if *jiù* occurs in addition to *shì* (or put differently, when *jiùshì* occurs in the embedded clause), the equative reading is available.

(7)   a. 你当张三是李四吗?
      Nǐ   dāng   Zhāngsān shì   Lǐsì ma?
      2SG consider Zhangsan COP Lisi Q
      'Do you think the person who behaves like Zhangsan is Lisi?'

    b. 你当李四是张三吗?
      Nǐ   dāng   Lǐsì shì   Zhāngsān ma?
      2SG consider Lisi COP Zhangsan Q
      'Do you think the person who behaves like Lisi is Zhangsan?'

(8)   a. 你当张三就是李四吗?
      Nǐ   dāng   Zhāngsān jiù   shì   Lǐsì ma?
      2SG consider Zhangsan exactly COP Lisi Q
      'Do you think Zhangsan is Lisi?'

    b. 你当李四就是张三吗?
      Nǐ   dāng   Lǐsì jiù   shì   Zhāngsān ma?
      2SG consider Lisi exactly COP Zhangsan Q
      'Do you think Lisi is Zhangsan?'

In sum, following Bowers (1993, 2001), Svenonius (1994), Adger and Ramchand (2003), and Mikkelsen (2005), the current thesis assumes that the basic structure for a predicational relation (or the "predicational core") involves an asymmetric structure, which is mediated by a functional projection, namely PredP. The subject and predicate in PredP are Merged in a fixed order; that is, the referential nominal occupies the specifier of PredP, and the predicative nominal occupies the complement of Pred. The word order of canonical copular sentences reflects the merged order of the two nominals. In Mandarin, the structures for both

types of copular sentences contain PredP. PredP can also be directly embedded under a small group of verbs including *dāng* 'consider'.

5.1.2 A-movement to the subject position

This subsection argues that the precopular elements in both canonical and inverse sentences undergo A-movement from the predicational core, targeting a derived subject position, the specifier of *shi*P. For canonical sentences, NP1 moves from [Spec, PredP] to [Spec, *shi*P]. For inverse sentences, NP2 moves from the complement of Pred to [Spec, *shi*P].

As discussed in Section 4.2.1 in Chapter 4, *shì* is not the spell-out of a Pred head. Instead, it takes PredP as its complement. The evidence, again, concerns the (non-)occurrence of *shì* in the embedded clauses under verbs such as *dāng* 'consider'. The most relevant examples are repeated below. In short, when *shì* is absent, only the canonical clause is available, as in (9). In contrast, when *shì* occurs, both canonical and inverse clauses are available, as in (10). If *shì* spells out Pred, the contrast between (9) and (10) is not expected. Additionally, negation and adverbs can only co-occur with the embedded clauses where *shì* is present, as in (11), which indicates that PredP cannot be directly negated or modified while *shi*P can.

(9)   a. 你当 [张三傻子] 吗?
        Nǐ dāng   [Zhāngsān shǎzi] ma?
        2SG consider Zhangsan idiot Q
        'Do you consider Zhangsan an idiot?'

        b. *你当 [傻子张三] 吗?
          **Nǐ dāng   [shǎzi Zhāngsān] ma?*
          2SG consider idiot Zhangsan Q
          Intended: 'Do you consider the idiot to be Zhangsan?'

(10)   a. 你当 [张三是傻子] 吗?
        Nǐ dāng   [Zhāngsān shì shǎzi] ma?
        2SG consider Zhangsan COP idiot Q
        'Do you consider Zhangsan an idiot?'

        b. 你当 [傻子是张三] 吗?
        Nǐ dāng   [shǎzi shì Zhāngsān] ma?
        2SG consider idiot COP Zhangsan Q
        'Do you consider the idiot to be Zhangsan?'

(11)   a. 你当 [张三不 *(是) 傻子] 吗?
        *Nǐ   dāng   [Zhāngsān bù   *(shì) shǎzi] ma?*
        2SG consider Zhangsan NEG COP   idiot   Q
        'Do you consider Zhangsan not an idiot?'

        b. 你当 [张三只/也 *(是) 傻子] 吗?
        *Nǐ   dāng   [Zhāngsān zhǐ/yě   *(shì) shǎzi] ma?*
        2SG consider Zhangsan only/also COP   idiot   Q
        'Do you consider that Zhangsan is only/also an idiot?'

Assuming *shi* takes PredP as its complement and both nominals in copular sentences start out from PredP, one of the nominals must move to [Spec, *shi*P] so that the right word order of the sentences can be obtained. Presumably, the fronted nominal gets licensed there. It is straightforward that in canonical copular sentences the subject NP1 moves from [Spec, PredP] to [Spec, *shi*P], as shown in (12).

(12)   Canonical sentences
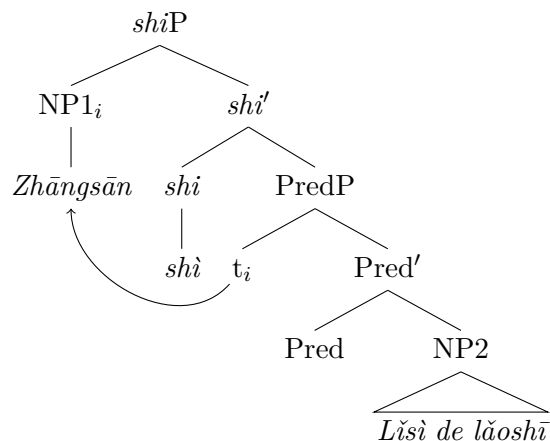
The subject can raise further to a higher subject position. In Mandarin, epistemic modal auxiliaries are assumed to be raising verbs (C.-T. J. Huang 1988; J.-W. Lin & Tang 1995; T.-H. J. Lin 2012; Chou 2013). (13) shows that the subject nominal *Zhāngsān* can undergo subject-to-subject raising, landing in the subject position of the modal auxiliary *kěnéng* 'be likely to'.[5]

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[5]Recall that it was discussed in chapter 4 that *kěnéng* 'be likely to' is a modal auxiliary rather than an adverb.

(13) 张三 *ᵢ* 可能 tᵢ 是李四的老师。
      Zhāngsānᵢ kěnéng   tᵢ shì Lǐsì de   lǎoshī.
      Zhangsan be.likely.to t COP Lisi SUB teacher
      'Zhangsan is likely to be Lisi's teacher.'

When it comes to inverse sentences, NP2 undergoes predicate in-
version (Moro 1997; Mikkelsen 2005), moving from the complement of
Pred to [Spec, *shi*P], as shown in (14).[6] The remainder of this subsection
will argue that the landing position of NP2 in inverse sentences is
an A-position and that NP2 moves in the manner of A-movement, in
accordance with Moro (1997, 2017), Mikkelsen (2005), and Den Dikken
(2006, 2017), but contra Rothstein (2004), who treats that position as
an A′-position and the relevant movement as A′-movement.

(14)   Inverse sentences
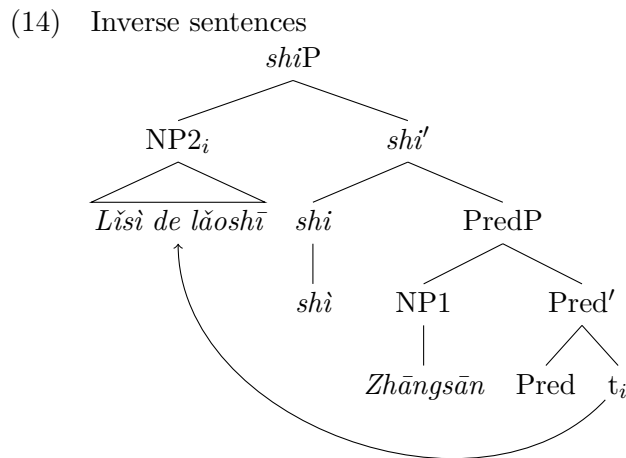
I resort to the reconstruction effect with respect to anaphor binding
as the diagnostic for A-movement of NP2. Assuming that A′-movement
(such as topicalisation) reconstructs for the purposes of binding while
A-movement does not, the fact that we do not observe reconstruction in
inverse copular sentences indicates that the NP2 moves in the manner
of A-movement and that the landing position of the inverted NP2 is an
A-position. As shown in (15), in a canonical sentence, the postcopular

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[6]The low FocP we saw in (1) is omitted in this structure for the sake of simplicity.
It will be introduced to the structure after it is discussed in the following subsection.

anaphor *tā-zìjǐ* 'himself' can be bound by the subject. However, when occurring in the precopular position in an inverse sentence, the anaphor can no longer have the same index as the subject, as shown in (15b). In other words, no reconstruction effect is observed. Hence, it is A-movement that we are dealing with here rather than A′-movement.

(15)   a. 张三 $_i$ 是他自己 $_i$ 的老师。
         Zhāngsān$_i$ shì tā-zìjǐ$_i$ de   lǎoshī.
         Zhangsan COP 3SG-self SUB teacher
         'Zhangsan is the teacher of himself.'

        b. 他自己 $_{*i}$ 的老师是张三 $_i$。
         Tā-zìjǐ$_{*i}$ de   lǎoshī shì Zhāngsān$_i$.
         3SG-self SUB teacher COP *Zhāngsān*

In contrast, reconstruction can be observed when the postcopular NP2 is topicalised. This is expected because topicalisation is supposed to involve A′-movement. As shown in (16), the topicalised anaphor can still be bound by the subject.

(16)   ?? 他自己 $_i$ 的老师，张三 $_i$ 是。[7]
        ??Tā-zìjǐ$_i$ de   lǎoshī, Zhāngsān$_i$ shì.
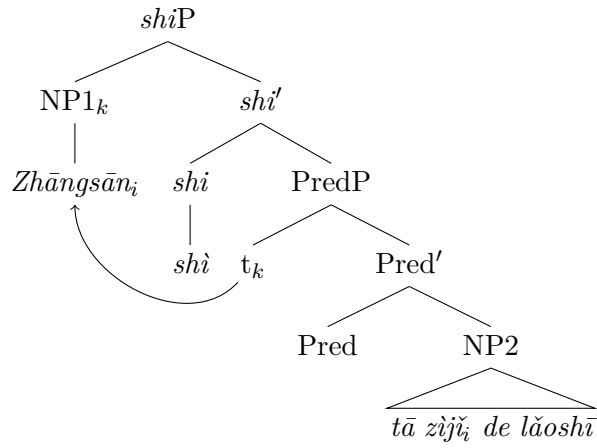   3SG-self SUB teacher Zhangsan COP

The structure of the sentences in (15) and (16) is presented in a simplified version below in (17). Assuming that these three sentences (namely, (15a), (15b), and (16)) share a unified underlying structure and that (15b) and (16) are derived by movement of NP2, the contrast in relation to the co-indexation relation indicates the different manners in which NP2 moves, and accordingly the different properties of its landing

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[7]As mentioned in Section 3.4.3 in Chapter 3, the oddness of (16) should be due to independent reason(s). The sentence improves greatly if a modal or a sentence-final particle is added, as shown in (i).

(i)   a. 他自己 $_i$ 的老师，张三 $_i$ 是的 (呀)。
        Tā-zìjǐ$_i$ de   lǎoshī, Zhāngsān$_i$ shì de (ya).
        3SG-self SUB teacher Zhangsan COP DE SFP

       b. 他自己 $_i$ 的老师，张三 $_i$ 可能是 (的)。
        Tā-zìjǐ$_i$ de   lǎoshī, Zhāngsān$_i$ kěnéng shì (de).
        3SG-self SUB teacher Zhangsan possibly COP DE

sites – predicate inversion involves A-movement and NP2 ends up in an A-position, whereas topicalisation of NP2 involves A′-movement and NP2 ends up in an A′-position.

(17)　　a.　Canonical sentences

*shi*P
NP1$_k$　　　*shi*′
Zhāngsān$_i$　*shi*　　PredP
shì　t$_k$　　Pred′
Pred　　NP2
tā zìjǐ$_i$ de lǎoshī

　　　b.　Inverse sentences

*shi*P
NP2$_j$　　　*shi*′
tā zìjǐ$_{*i}$ de lǎoshī　*shi*　　PredP
shì　NP1　　Pred′
Zhāngsān$_i$　Pred　t$_j$
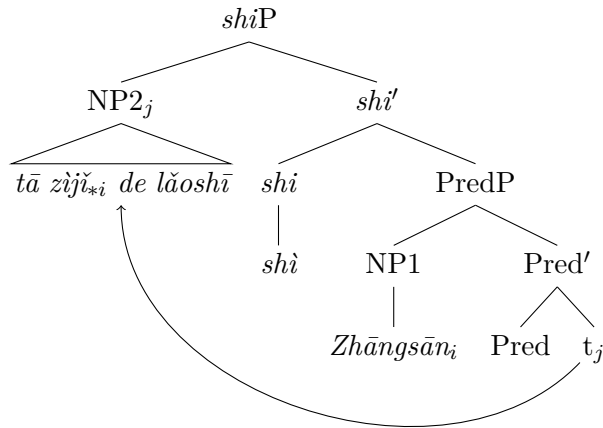
c. Canonical sentences with topicalising NP2
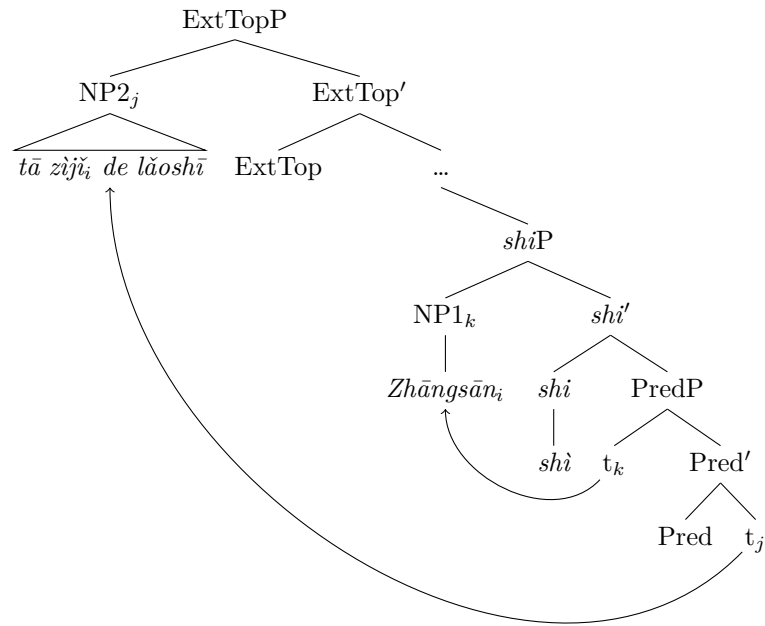
Moreover, similar to the precopular nominal in a canonical sentence, the precopular nominals in an inverse sentence can also undergo subject-to-subject raising to the subject position of the epistemic modal auxiliary *kěnéng* 'be likely to', as shown in (18).

(18)   李四的老师 *i* 可能 t*i* 是张三。
       *Lǐsì de   lǎoshī*i *kěnéng   t*i* *shì   Zhāngsān.*
       Lisi SUB teacher be.likely.to t COP Zhangsan
       'Lisi's teacher is likely to be Zhangsan.'

In sum, assuming that *shì* takes PredP as its complement, NP1 in a canonical sentence and NP2 in an inverse sentence move from inside PredP to [Spec, *shi*P]. Crucially, [Spec, *shi*P] is an A-position. The movement of the nominals under discussion is A-movement.

5.1.3 A low FocP and the freezing effect

This subsection proposes a low FocP in the inverse structure. A low FocP has been proposed to be relevant for the focalised interpretation and the "freezing effect" of the postcopular constituent in inverse copular sentences (Rizzi 2015a, 2015b). I will first present Rizzi's analysis of the freezing effect observed in both the subject position and the postcopular position in inverse copular sentences. Then I will show that the freezing effect in relation to the low FocP is crucial for the numeration of Mandarin inverse copular sentences, an issue that will be addressed in the following sections.

The "freezing effect" is first noted to relate to subject–object asymmetry in terms of extraction. For instance, as shown in (19) and (20), in the same embedding contexts, an object can be extracted whereas a subject cannot. In other words, subjects are "frozen" in these positions and can no longer be extracted.

(19)   a.   * Who$_i$ do you think [that [t$_i$ will come]]?

       b.   Who$_i$ do you think [that [Mary will meet t$_i$]]?

(20)   a.   * Which mechanic$_i$ do you wonder [whether [t$_i$ could fix the car]]?

       b.   ? Which car$_i$ do you wonder [whether [the mechanic could fix t$_i$]]?

<div align="right">(Rizzi 2015b: 27)</div>

Rizzi (2015a, 2015b) proposes that when a subject moves to the [Spec, SUBJ] position and satisfies the Subject Criterion, it is frozen there and can no longer be extracted. Recall that, as was introduced in Section 4.1.4 in Chapter 4, criterial features are features that express properties of scope–discourse semantics such as topics, focus, or Q. The subject feature is also one of the criterial features. A criterial configuration is proposed by Rizzi to solve labelling problems of the newly created node when two phrases (e.g. the subject DP and another functional phrase) merge – they agree in terms of a criterial feature and the node created by Merge is labelled by the criterial feature. In effect, the criterial positions provide necessary "halting sites" for subject movement. In other words, "criterial freezing" takes place when the

subject moves to a criterial configuration: the subject does not move further.

In line with SUBJP and other discourse-related projections in the left periphery, the low focus projection proposed in Belletti (2004) is also identified as a criterial configuration in Rizzi (2015b) and in Shlonsky and Rizzi (2018). Belletti (2004) argues that the postverbal subject in a VOS-order sentence in Italian occupies a low focus position in the structure. It is called as a "low" FocP because it follows low adverbs such as *completamente* 'completely'. The postverbal subject can be interpreted as a new information focus. As shown in (21), to answer questions like A, the subject must be postverbal. Furthermore, the postverbal subject domain is not extractable (see (22)).

(21)   A: *Chi ha parlato*?
             who has spoken

        B1: *Ha parlato Gianni.*
             has spoken Gianni.

        B2: # *Gianni ha parlato.*
              Gianni has spoken.

                                                          (Belletti 2004: 21)

(22)   a. *Ha   telefonato il   direttore del   giornale   al*
            has   phoned   the   director   of   the.newspaper to
            presidente.
            the.president
            'The director of the newspaper has phoned to the president.'

        b. ?? *Il   giornale   di cui   ha telefonato il   direttore al*
              the   newspaper of which has phoned   the director to
              presidente.
              the.president

                                                          (Belletti 2004: 20)

Rizzi (2015b) and Shlonsky and Rizzi (2018) apply the low FocP to the analysis of inverse copular sentences in Italian and Hebrew. For one thing, as has been observed in various languages, the postcopular nominal in inverse copular sentences is in focus (Bresnan 1994, Heycock 1995, Mikkelsen 2005, Den Dikken 2006, Rizzi 2015, Shlonsky and Rizzi 2018, and also Section 3.4.1 in Chapter 3 of this thesis). Also, the postcopular

nominal cannot be extracted (Heycock 1995, Moro 1997, Den Dikken 2006, Rizzi 2015, Shlonsky and Rizzi 2018, and also Section 3.4.3 in Chapter 3 of this thesis), which can be explained by assuming that the low FocP is a criterial configuration – [Foc], the criterial feature, is checked there. Furthermore, Rizzi (2015b) and Shlonsky and Rizzi (2018) argue that focalising the subject in the low FocP avoids a Relativized Minimality violation in the course of inverting the predicate nominal over its subject.

Taking into consideration the properties of the postcopular nominal in Mandarin inverse copular sentences, a low FocP is also stipulated for inverse sentences in the current analysis. Again, as described in Chapter 3, the postcopular nominals in inverse copular sentences are always in focus. Also, they are not extractable. The focus motivates the subject NP1 to move from [Spec, PredP] to [Spec, FocP]. Assuming Rizzi's (2015a, 2015b) idea that the low FocP also creates a criterial configuration, the moved NP1 gets frozen there and cannot be extracted. As I will discuss in Section 5.4.2, this structural analysis can account for the observation that the postcopular nominal in an inverse sentence cannot be topicalised, as opposed to the postcopular nominal in canonical sentences, which can be topicalised. (23) presents the relevant part of the proposed structure of inverse sentences containing the low FocP. The movement of the subject NP1 from [Spec, PredP] to [Spec, FocP] is also illustrated.

(23)
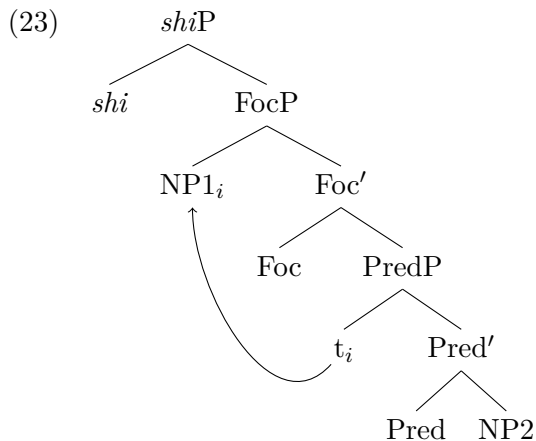
5.2 Motivation for Predicate Inversion in Mandarin

Various reasons have been proposed for the motivation of predicate inversion in different languages. There are two major lines of reasoning: one resorts to information-structural drives (Bresnan 1994; Mikkelsen 2005), while the other sticks to mechanisms within the narrow syntax (Moro 2000; Den Dikken 2006). This section will show that Mandarin data lend support to the former approach (while differing a bit from both Bresnan and Mikkelsen) that predicate inversion is motivated by focus associated with the subject nominal and also regulated by the topic/focus feature in relation to the subject position of the sentence.

5.2.1 Previous studies

5.2.1.1 Information structural approach

The first approach, espoused by Bresnan (1994) and Mikkelsen (2005), assumes that information structure may impinge on the syntactic derivation of copular sentences. In brief, their analyses follow the functional generalisation across languages that the subject is in principle the unmarked discourse topic and that the focus tends to associate with the postverbal constituent (see Andrews 1985, as cited from Bresnan 1994; Prince 1992; Birner 1996). When the referential NP1 is the focus, it cannot stay in the preverbal/precopular position, a position reserved for topics. Meanwhile, as the predicative NP2 is discourse-old, it should aim at the preverbal/precopular position instead of the postverbal/postcopular position. As a result, the NP2-preceding-NP1 order (derived via predicate inversion) is expected, which accords with the topic–focus information structure.

Bresnan (1994) bases her analysis on Lexical Mapping Theory. According to that theory, the subject function is by default assigned to the most prominent semantic role in the argument structure. Note crucially that the majority of the examples Bresnan discusses are labelled as locative inversion constructions and do not contain *be*, but she does not, in fact, distinguish the copula *be* from motion verbs in constructions containing a locative expression and a referent theme. In other words,

she does not seem to differentiate predicate inversion from locative inversion.[8] The trigger for both types of inversion constructions appears to be the same for her.

In locative constructions Bresnan (1994) mainly concentrates on, in neutral contexts, themes in locative constructions are more prominent than locatives and a theme will be mapped onto the subject, while a locative will be mapped onto an oblique. A *theme*-preceding-*locative* order is expected. Meanwhile, the semantic roles are assumed to be lexically underspecified for the possible surface syntactic functions they can assume, themes can be alternatively mapped onto subjects or objects, and locatives can alternate between subjects and obliques. Hence, it is permissible for the locative to be mapped onto the subject while the theme is mapped onto an object. Assuming that information structure can impinge on the syntactic derivation, when the theme has presentational focus and the locative expresses the scene that is set in

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[8]Predicate inversion is often discussed in relation to locative inversion for many languages (for instance, Bresnan 1994, Den Dikken 2006 Chapter 4 and references therein). However, Mandarin copular sentences and locative inversion structures (if they exist at all) may be derived via different structures. First, as introduced in Chapter 2, Mandarin copular sentences standardly do not permit a PP predicate. (1c), repeated here as (i), is ungrammatical if *shì* is present.

(i) 迈克（*是）在家。
    *Màike (*shì) zài jiā.*
    Mike COP   at home
    'Mike is at home.'

In addition, the so-called locative inversion structure in Mandarin may not involve inversion at all. Here is one crucial piece of evidence. The occurrence of a preposition such as *zài* 'at' is obligatory in the postverbal position but is rejected in the sentence-initial position (for more evidence see Paul, Lu, and Lee (2020); cf. C.-T. J. Huang 1982; T.-H. J. Lin 2001; and Xu and Pan 2019; among others).

(ii)   a. 主席团坐 *(在) 台上。
       *Zhǔxítuán zuò *(zài) tái-shang.*
       committee sit at   stage-on
       'The committee members are sitting on the stage.'
       b. (* 在) 台上坐着主席团。
       *(*Zài) tái-shang zuò zhe   zhǔxítuán.*
       at   stage-on sit PROG committee
       'On the stage sit the committee members.'

the discourse, the *locative*-preceding-*theme* order satisfies both Lexical Mapping Theory and the requirements of the information structure. As a result, a locative inversion construction is generated.

Mikkelsen (2005) implements the idea by stipulating feature checking between the interpretable topic feature on the moved DPs and the uninterpretable topic feature on T. The DP with the interpretable [Top] moves to [Spec, TP] for feature checking reasons, eliminating the uninterpretable feature on T.[9] The core idea can be schematised in (24). The structures are simplified from those in Mikkelsen (2005: Chapter 9).[10] In short, when NP1 bears [Top], it moves to [Spec, TP], giving rise to a canonical sentence. In contrast, when NP2 bears [Top], it is NP2 that moves to [Spec, TP] instead of NP1, giving rise to an inverse sentence.

(24)   a. Canonical sentences

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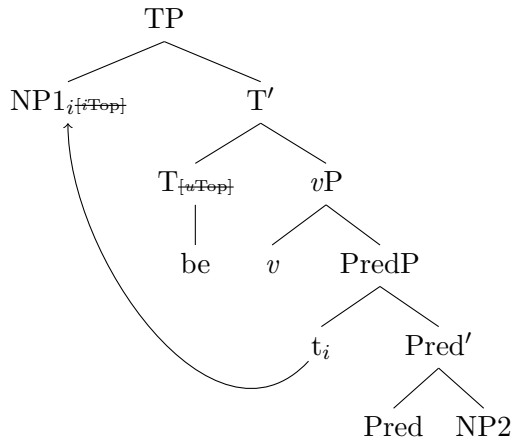
[9]Mikkelsen (2005) patterns this process with Adger's (2003) proposal that C in V2 languages bears an uninterpretable topic feature [*u*Top], forcing the XP with interpretable feature [*i*Top] to move to [Spec, CP].

[10]It is worth pointing out that though Mikkelsen's (2005) core idea in terms of topic feature checking is adopted in the current analysis, the structures proposed in this chapter differ from those presented in (24) in at least three respects. First, as argued in Chapter 4, *shì* does not instantiate T. Second, no *v*P is proposed for Mandarin copular sentences. Third, as discussed in Section 5.1.3, a low FocP is proposed for inverse sentences in Mandarin.

b. Inverse sentences
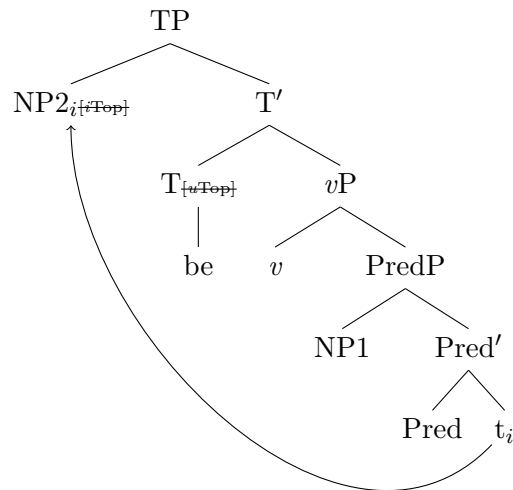
   Mikkelsen regards the specificational structure as the marked structure in comparison to the predicational structure, because in the seven possible numerations listed in (25) only one gives rise to specificational structures. She proposes that either the NP1 or the NP2 (DP_{ref} and DP_{pred} in her work) can have the interpretable [Top] feature. Meanwhile, T sometimes bears the uninterpretable [Top] feature and sometimes does not (depending on the discourse). When T bears the [uTop] feature, it attracts the (closest) NP/DP that bears the [Top] feature to its spec position so as to eliminate the uninterpratable feature. When the NP1/DP_{ref} bears the [Top] feature, it is attracted to [Spec, TP]. The result of the numeration (i.e. numeration 6) is a predicational sentence. When the NP2/DP_{pred} bears the [Top] feature, it is then attracted to [Spec, TP], yielding a specificational sentence (i.e. numeration 4). If both NP/DPs bear the [Top] feature, the closest one, that is NP1/DP_{ref}, is attracted to [Spec, TP]. The result is again a predicational sentence (i.e. numeration 8). If neither NP/DP bears the [Top] feature, the numeration (i.e. numeration 2) crashes. When T does not bear the [uTop] feature, the numerations (i.e. numerations 1, 3, 5, 7) always give rise to predicational sentences, since [Spec, TP] always attracts the closest NP/DP, namely, NP1/DP_{ref}.

(25)

Numeration	NP1	NP2	T	Clause
1	–	–	–	Predicational
2	–	–	uTop	*
3	–	Top	–	Predicational
4	–	Top	uTop	Specificational
5	Top	–	–	Predicational
6	Top	–	uTop	Predicational
7	Top	Top	–	Predicational
8	Top	Top	uTop	Predicational

Mikkelsen (2005: 176)

In sum, both analyses capture crucial properties in terms of the information structure of both types of copular sentences. As will be shown in Section 5.2.2, Mandarin data show some disparities from Mikkelsen's (2005) observation based on English and Danish. On the grounds of the topic–focus pattern observed in Mandarin, I will follow the information-structural approach. An analysis is proposed incorporating elements from both Bresnan's (1994) and Mikkelsen's (2005) analyses.

5.2.1.2　Syntactic approach

The idea that syntactic numeration can be regulated by information-structural properties is rejected in Den Dikken (2006). He insists that the pragmatic functions can only be determined at the level of discourse analysis. In addition, as has also been pointed out in Bresnan (1994), Den Dikken argues that languages always have alternative mechanisms to focalise the subject in addition to movement to an object position. Hence, it remains unexplained for Bresnan why other methods are not applied. In contrast to the approach from the information structure aspect, Den Dikken (2006) proposes that inversion takes place when an empty-headed predicate needs to be licensed. The same account applies to predicate inversion and canonical locative inversion, as well as to so-called "beheaded" locative inversion. I will briefly present his analysis of predicate inversion below.

In the spirit of Moro's (1997) analysis of *it* in the English *it*-cleft structure and Adger and Ramchand's (2003) proposal of the pronominal augement *e* in the Augmented Copular Construction (ACC) in Scottish Gaelic, Den Dikken (2006) analyses the precopular constituent in an

inverse sentence as a reduced free relative. For instance, the precopular constituent *the best candidate* in (26a) is analysed as the predicate of the small clause embedded in a reduced free relative clause, which serves as the predicate of the postcopular subject *Brian*, as shown in (27a).[11] In addition, equative sentences (defined in some other studies, such as Higgins 1979 and Heycock and Kroch 1999) are taken to be inverse sentences. The analysis of the precopular constituent *Cicero* in (26b) is presented in (27b). A free relative analysis is similarly proposed. Unlike *the best candidate* in (26a), *Cicero* in (26b) is analysed as the subject of small clause embedded in the reduced free relative clause, which also serves as the predicate of the postcopular subject *Tully*.

(26) a. The best candidate is Brian.

  b. Cicero is Tully.

(27) a. [NULL pro-predicate [$_{CP}$ Op$_i$ [C$_\emptyset$ [$_{RP}$ t$_i$ [Relator$_\emptyset$ the best candidate]]]]]

  b. [pro-predicate$_\emptyset$ [$_{CP}$ Op$_i$ [C$_\emptyset$ [$_{RP}$ Cicero [Relator$_\emptyset$ t$_i$]]]]]

  (Den Dikken 2006: 92, 95)

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[11]"R(elator)" in Den Dikken's (2006) system is to a certain extent equivalent to the Pred head. However, RP differs from PredP as it is supposed not to be a specific projection in the structure. Instead, Den Dikken (2006) proposes that any functional projection mediating the predication relation can be viewed as an instance of RP.

The structure analysis of the two sentences is shown in (28).

(28)   a.

```
                                TP
                     ┌───────────┴───────────┐
                  Pred_j                      T′
          ┌─────────┴─────────┐        ┌───────┴───────┐
  PRO-PREDICATE_∅            CP    T+RELATOR_k          RP
                      ┌───────┴───┐     │         ┌──────┴──────┐
                    Op_i          C′    be       DP            R′
                            ┌─────┴───┐                   ┌─────┴───┐
                           C_∅        RP              Brian  t_k   t_j
                                 ┌─────┴───┐
                                t_i        R′
                                     ┌─────┴─────┐
                                    R_∅          DP
                                              the best
                                              candidate
```

(Den Dikken 2006: 95)

b.

```
                                TP
                     ┌───────────┴───────────┐
                  Pred_j                      T′
          ┌─────────┴─────────┐        ┌───────┴───────┐
  PRO-PREDICATE_∅            CP    T+RELATOR_k          RP
                      ┌───────┴───┐     │         ┌──────┴──────┐
                    Op_i          C′    be       DP            R′
                            ┌─────┴───┐                   ┌─────┴───┐
                           C_∅        RP              Tully  t_k   t_j
                                 ┌─────┴───┐
                                DP          R′
                           ┌────┴───┐
                         Cicero   R_∅  t_i
```
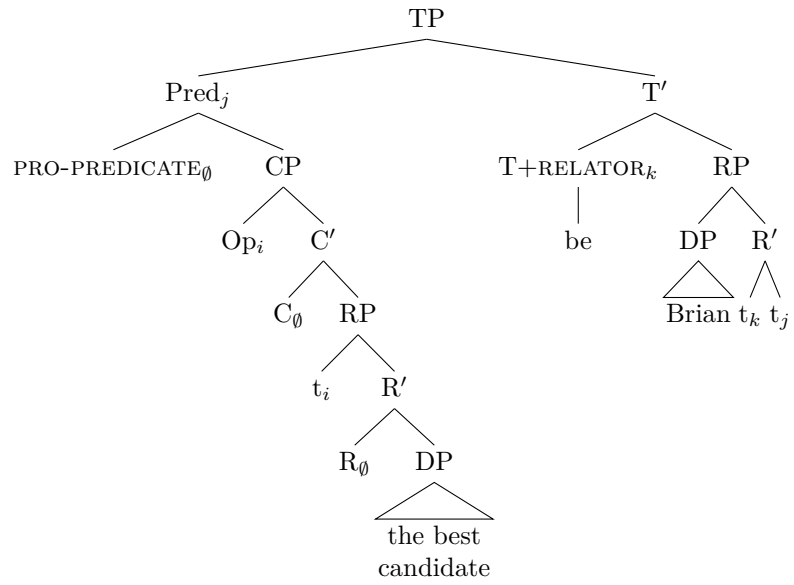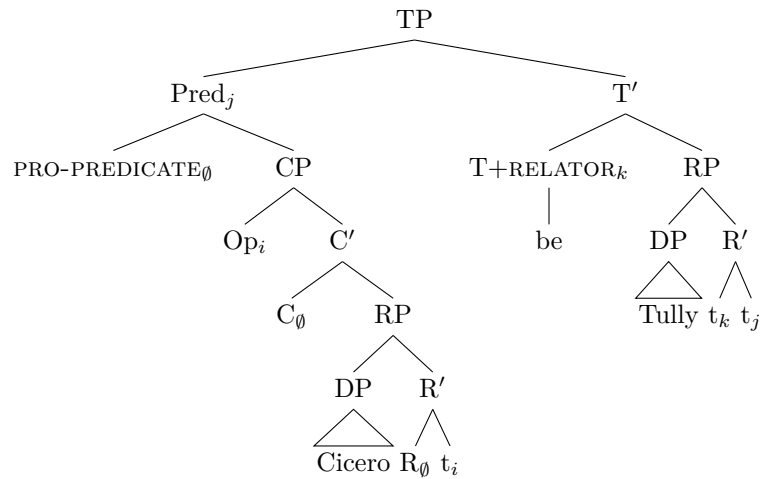
(Den Dikken 2006: 73)

Based on the analysis that the precopular constituent is a reduced free relative clause, headed by a null pro-predicate, Den Dikken argues

that the null head of the reduced free relative must invert its subject and raise to [Spec, TP] to get licensed. According to him, both canonical and "beheaded" locative inversion are triggered for the same reason that the empty-headed predicate must get licensed in [Spec, TP]. However, though appealing, Mandarin data do not show positive evidence in favour of his approach. Crucially, there is no empirical evidence for the existence of reduced free relatives in Mandarin.

Unlike Den Dikken's complicated analysis of inverse copular sentences, Moro (2000) provides a simple unified account for both canonical and inverse copular sentences, based on the assumption that copular sentences start from a symmetric bare small clause. However, the symmetry inside the small clause must be broken in the course of derivation of a copular sentence. Otherwise, Kayne's (1994) Linear Correspondence Axiom (LCA) will be violated. To this end, the subject and the predicate NP are equally driven to raise because the raising of either NP can break the symmetry. As shown repeatedly in the previous chapters, as well as in the previous sections in this chapter, the small clauses observed in Mandarin only permit the canonical order. Henceforth, the current study favours an asymmetric predicational core as the base for both types of copular sentences and will not adopt Moro's (2000) approach which may account for phenomena in other languages.

As a result, the current study adopts neither Moro's (2000) nor Den Dikken's (2006) analysis.

5.2.2 Information structure and inverse sentences

The current thesis will resort to the regulation of information structure, in the spirit of Bresnan (1994) and Mikkelsen (2005), but differ from them with regards to some details. First, I agree with Bresnan's (1994) view that identificational focus associated with the postcopular nominal is essential for inverse sentences. In addition, the proposed analysis also aligns with Mikkelsen (2005) that the topic feature checking is crucial for the numerations of both types of copular sentences. However, I will show that the Mandarin data suggest that, for one thing, the precopular position is associated with feature checking of not only topic but also information focus. Furthermore, the topic/focus feature in the precopular position does not motivate predicate inversion *per se*, but it

does play a decisive role for numeration.

To start with, as introduced in Section 3.4.1 in Chapter 3, Mandarin data show a comparable pattern with cross-linguistic data presented in Heycock (1995) and Mikkelsen (2005), among others, in terms of the pattern of focus in copular sentences. They observe that the postcopular element in an inverse sentence must be in focus while the precopular element must be discourse-old. When it comes to Mandarin, the same pattern can be observed when alternative questions are concerned. However, when wh-question answer pairs are taken into consideration, Mandarin present two crucial distinctions from English. First, the precopular wh-element cannot be the equivalent of *what*, i.e. *shénme* (see (45) on page 68). Second, the precopular nominal in an inverse sentence can be an information focus when the wh-element in the question is also precopular.

Note again that as Mandarin is a wh-in-situ language, a wh-element can occur on the either side of the copula. This complicates the pattern of interaction between the position of the wh-element and the position of the information focus in the answers. The full pattern of focus in both predicational/canonical and specificational/inverse sentences was presented in Section 3.4.1 in Chapter 3. Examples in relation to wh-question answer pairs are repeated below and their information structure will be further discussed.

(29) *Precopular wh-; canonical question*
  A: 谁是李四的老师?
     Shéi shì Lǐsì de   lǎoshī?
     who COP Lisi SUB teacher

     'Who is Lisi's teacher?'
  B1: 张三是李四的老师。   *Canonical answer*
     Zhāngsān shì Lǐsì de   lǎoshī.
     Zhangsan COP Lisi SUB teacher

     'Zhangsan is Lisi's teacher.'
  B2: 李四的老师是张三。   *Inverse answer*
     Lǐsì de   lǎoshī shì Zhāngsān.
     Lisi SUB teacher COP Zhangsan

     'Lisi's teacher is Zhangsan.'

(30) *Precopular wh-; inverse question*
A: 谁是张三?
Shéi shì   Zhāngsān?
who COP Zhangsan

'Who is Zhangsan?'
B1: 李四的老师是张三。   *Inverse answer*
Lǐsì de   lǎoshī   shì   Zhāngsān.
Lisi SUB teacher COP Zhangsan

'Lisi's teacher is Zhangsan.'
B2: ? 张三是李四的老师。   *Canonical answer*
?*Zhāngsān shì   Lǐsì de   lǎoshī.*
Zhangsan COP Lisi SUB teacher

'Zhangsan is Lisi's teacher.'

(31) *Postcopular wh-; canonical question*
A: 张三是谁?
Zhāngsān shì   shéi?
Zhangsan COP who

'Who is Zhangsan?'
B1: 张三是李四的老师。   *Canonical answer*
Zhāngsān shì   Lǐsì de   lǎoshī.
Zhangsan COP Lisi SUB teacher

'Zhangsan is Lisi's teacher.'
B2: * 李四的老师是张三。   **Inverse answer*
*Lǐsì de   lǎoshī   shì   Zhāngsān.
Lisi SUB teacher COP Zhangsan

'Lisi's teacher is Zhangsan.'

(32) *Postcopular wh-; inverse question*
A: 李四的老师是谁?
Lǐsì de   lǎoshī   shì   shéi?
Lisi SUB teacher COP who

'Who is Lisi's teacher?'
B1: 李四的老师是张三。   *Inverse answer*
Lǐsì de   lǎoshī   shì   Zhāngsān.
Lisi SUB teacher COP Zhangsan

'Lisi's teacher is Zhangsan.'

B2: * 张三是李四的老师。   *Canonical answer
    *Zhāngsān shì Lǐsì de   lǎoshī.
    Zhangsan COP Lisi SUB teacher

    'Zhangsan is Lisi's teacher.'

As shown in (29) and (30), when the wh-element in the question occupies the precopular position, the answer can have both orders. In contrast, when the wh-element in the question occupies the postcopular position, the new information in the answer must be postcopular, as shown in (31) and (32). The table summarising the pattern is also repeated below as Table 5.1.

Table 5.1: Types of question–answer pairs (with *wh*-questions)

Question / Answer	Precopular *wh-*		Postcopular *wh-*	
	Canonical	Inverse	Canonical	Inverse
Canonical	+	?	+	-
Inverse	+	+	-	+

+: felicitous; -: infelicitous; ?: marked

When the *wh*-elements occur in the postcopular position, as in (31) and (32), the order of the topic and information focus complies with the cross-linguistic generalisation that Bresnan (1994) mentions. That is, by default, the subject is the unmarked discourse topic and the object is the focus. The word order of the felicitous answers to these questions mimics that of the questions. The numerations of the answers are presented as in (33), following Mikkelsen's implementation of [Top] feature checking.[12]

---

[12]The low FocP is omitted in the structure in (33b) for simplicity. It also applies to (34b) and (35a).

(33) a.   see (31)B1

$$
\begin{array}{c}
\textit{shi}\text{P} \\
\diagdown \\
\text{NP1}_{i[i\text{Top}]} \quad \textit{shi}' \\
\diagdown \\
\textit{shi}_{[u\text{Top}]} \quad \text{PredP} \\
| \quad\quad \diagdown \\
\textit{shì} \quad \text{t}_i \quad \text{Pred}' \\
\diagdown \\
\text{Pred} \quad \text{NP2}_{[i\text{Foc}]}
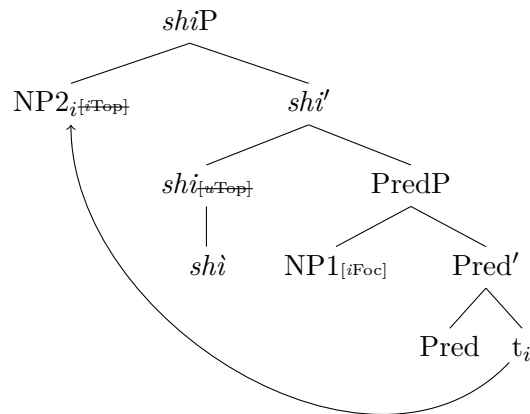\end{array}
$$

b.   see (32)B1

$$
\begin{array}{c}
\textit{shi}\text{P} \\
\diagdown \\
\text{NP2}_{i[i\text{Top}]} \quad \textit{shi}' \\
\diagdown \\
\textit{shi}_{[u\text{Top}]} \quad \text{PredP} \\
| \quad\quad\quad \diagdown \\
\textit{shì} \quad \text{NP1}_{[i\text{Foc}]} \quad \text{Pred}' \\
\diagdown \\
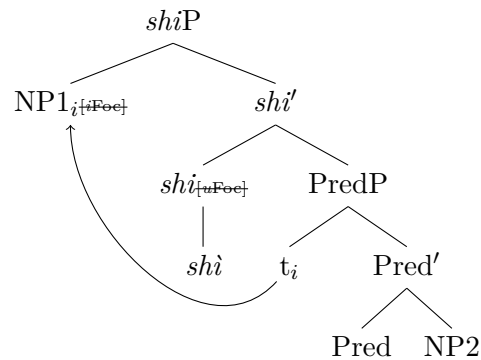\text{Pred} \quad \text{t}_i
\end{array}
$$
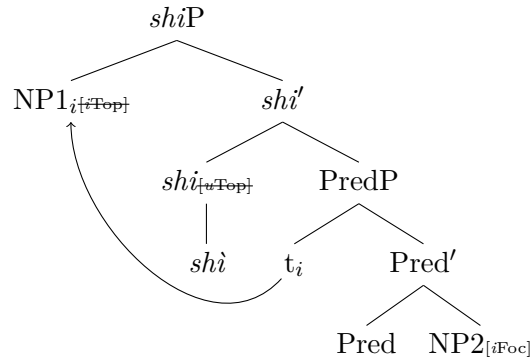
In contrast, when the *wh*-element appears in the precopular position, as in (29) and (30), the order between the new information and the old information is the opposite of the default order. The word orders in the answers can alternate between the two types of orders: i) information focus as the subject and old information expressed by the postcopular constituent, as in the two B1 answers; and ii) topic as the subject and information focus as the postcopular constituent, as in the two B2 answers. In other words, the precopular position in the reply sentences can be filled by either the topic or the information focus. That is, both the [Top] and the [Foc] feature can attract the NP that bears the corresponding feature to [Spec, *shi*P] for feature checking reasons.

Accordingly, the current thesis proposes that in addition to the [Top] feature as addressed by Mikkelsen (2005), the [Foc] feature can also regulate the derivation of Mandarin copular sentences. Note crucially that, first, the topic feature associated with the subject position is distinct from the topic feature associated with left-dislocation or hanging topics. As mentioned in footnote 4 on page 93 (Chapter 4), Rizzi (2015b) argues that subjects express pure aboutness whereas topics express both aboutness and discourse links. Second, the focus feature under discussion here is associated with information focus, and it is independent from the exhaustiveness understanding discussed in Section 3.4.1 in Chapter 3. The numerations of the relevant answers (i.e. those in (29) and (30))are respectively presented below in (34) and (35).

(34)   a.   see (29)B1

b. see (29)B2

```
                    shiP
            ┌─────────┴─────────┐
     NP2_{i[iTop]}             shi′
                        ┌───────┴───────┐
                   shi_{[uTop]}        PredP
                        │         ┌──────┴──────┐
                       shì    NP1_{[iFoc]}    Pred′
                                         ┌─────┴─────┐
                                        Pred        t_i
```

(35) a. see (30)B1

```
                    shiP
            ┌─────────┴─────────┐
     NP2_{i[iFoc]}             shi′
                        ┌───────┴───────┐
                   shi_{[uFoc]}        PredP
                        │         ┌──────┴──────┐
                       shì       NP1          Pred′
                                         ┌─────┴─────┐
                                        Pred        t_i
```
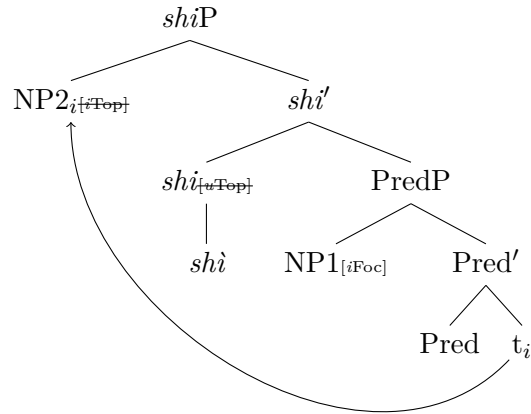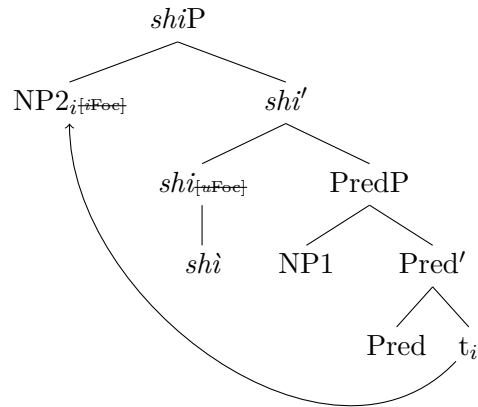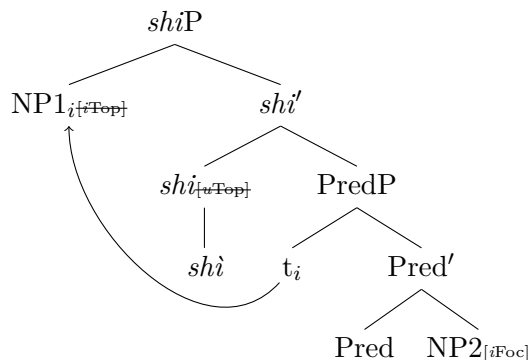
b.   see (30)B2

Interestingly, equative sentences behave differently from both predicational and specificational sentences. As shown in (36) and (37), when the wh-element occurs in the postcopular position, both orders of equative sentences can function as answers to the questions. This phenomenon can be accounted for by the analysis presented above. As discussed in Section 3.3.1.3 in Chapter 3, both nominals in equatives are discourse-old topics. In other words, both of them bear an interpretable topic feature, which can thereby be checked at [Spec, *shi*P].

(36) A: 张三是谁?
      Zhāngsān shì shéi?
      Zhangsan COP who

      'Who is Zhangsan?'

   B1: 张三就是那个人。
      Zhāngsān jiù   shì nà-ge   rén.
      Zhangsan exactly COP DEM-CLF person

      'Zhangsan is that person.'

   B2: 那个人就是张三。
      Nà-ge   rén   jiù   shì Zhāngsān.
      DEM-CLF person exactly COP Zhangsan

      'That person is Zhangsan.'

(37) A: 李四的老师是谁?
      Lǐsì de   lǎoshī shì shéi?
      Lisi SUB teacher COP who

      'Who is Lisi's teacher?'

B1: 李四的老师就是那个人。

Lǐsì de   lǎoshī jiù   shì nà-ge   rén.
Lisi SUB teacher exactly COP DEM-CLF person

'Lisi's teacher is that person.'

B2: 那个人就是李四的老师。

Nà-ge   rén   jiù   shì Lǐsì de   lǎoshī.
DEM-CLF person exactly COP Lisi SUB teacher

'That person is Lisi's teacher.'

In sum, the current analysis incorporates the proposal of Bresnan (1994) and Mikkelsen (2005). I propose that the focus on the referential nominal motivates its movement from [Spec, PredP] to [Spec, FocP]. As the low FocP is a criterial configuration in the sense of Rizzi (2015a, 2015b), the moved nominal gets frozen in FocP and cannot move further to [Spec, *shi*P]. The predicative NP must then move to [Spec, *shi*P] to satisfy the EPP. In addition, the uninterpretable [Top] or [Foc] feature on *shi* must also be eliminated. On the condition that NP2 bears the corresponding feature, the numeration succeeds, giving rise to a well-formed inverse structure. In contrast, if NP2 does not bear the corresponding feature, the numeration crashes. The derivation of canonical and inverse sentences will be presented at length in the next section.

Before moving to the derivation of canonical and inverse structures, I make a short remark again on the functional head that bears the uninterpretable topic/focus feature. In Mikkelsen's (2005) proposal, it is T that bears the uninterpretable topic feature, and the DP moves to [Spec, TP] for feature checking reasons. As the current study argues that *shì* does not instantiate T (see Section 4.2.2 in Chapter 4) and, moreover, since Chapter 6 will propose that T does not always appear in Mandarin copular sentences, I deviate from Mikkelsen's discussion about English in that in the Mandarin structures, it is not T that bears the topic/focus feature.

5.3   Deriving the structures

As introduced in the previous sections, the structure of Mandarin copular sentences is simple. The basic structure of both canonical and inverse

structures is the predicational core (PredP). The referential and predicative nominals are merged in a fixed order: the referential nominal occupies the specifier of PredP, and the predicative nominal is the complement of Pred. This PredP is taken as the complement of the head of *shi*P, a functional projection comparable to SUBJP proposed by Rizzi (2015b) and Shlonsky and Rizzi (2018), a functional projection for the Subject-Criterial feature checking. The head of *shi*P normally bears an uninterpretable [Top] or [Foc] feature and a standard EPP feature. Either nominal may raise to the [Spec, *shi*P] position to get licensed; meanwhile, the topic/focus and the EPP feature get checked there. Which nominal eventually raises up is regulated by the information-structural configuration. When the referential NP1 bears the corresponding [Top]/[Foc] feature, it is this NP that moves to [Spec, *shi*P] so that the [Top]/[Foc] feature can be checked. The corresponding uninterpretable feature on *shi* as well as the EPP feature can be eliminated. Meanwhile, the predicate NP2 remains put.

(38)   Canonical sentences

    a. 张三是李四的老师。
       Zhāngsān shì   Lǐsì de   lǎoshī.
       Zhangsan COP Lisi SUB teacher
   'Zhangsan is Lisi's teacher.'

    b.
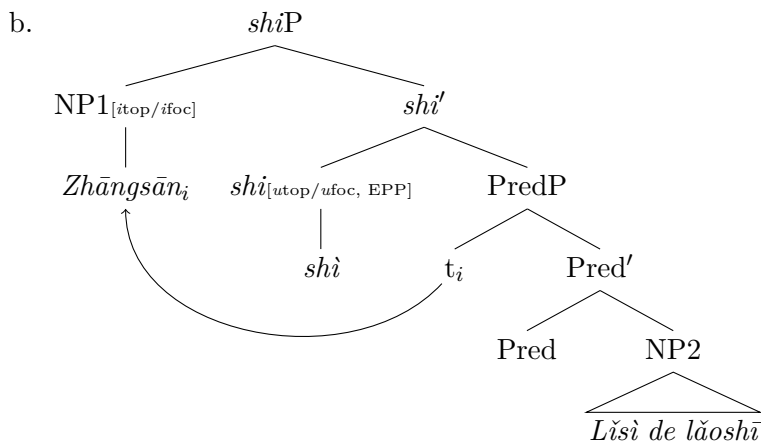
To derive the inverse structure, subject NP1, which is always associated with a focus, moves from [Spec, PredP] to [Spec, FocP]. It then gets frozen in FocP. Consequently, the EPP feature of the head of *shi*P

requires the predicative NP2 to move to the specifier of *shi*P to eliminate the EPP feature. Crucially, as *shi*P forms a criterial configuration, the nominal it can attract must have the same criterial feature as it. In other words, the NP2 must bear the corresponding [Top] or [Foc] feature; otherwise the derivation crashes. Note that, as argued in Rizzi (2015b) and Shlonsky and Rizzi (2018), focalising the subject in the low FocP also avoids a Relativized Minimality problem in the course of inverting the predicate nominal NP2 over its subject. The spell-out of such a structure is a canonical copular sentence, as shown in (38).

(39) Inverse sentences

   a. 李四的老师是张三。
      Lǐsì de   lǎoshī   shì   Zhāngsān.
      Lisi SUB teacher COP Zhangsan
      'Lisi's teacher is Zhangsan.'

   b.
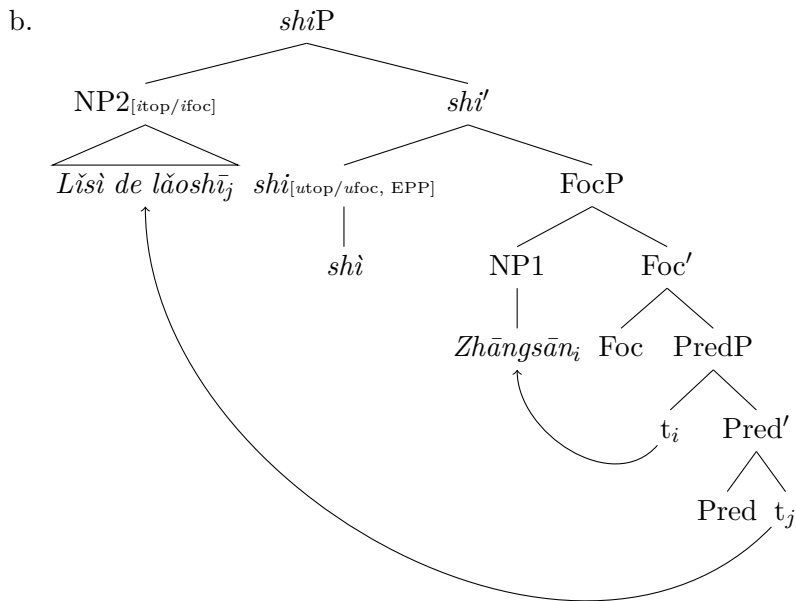
5.4 Accounting for the canonical/inverse distinctions

This section will account for the distinctions between canonical and inverse sentences discussed in Chapter 3 on the basis of the structures and derivation proposed in the previous sections in this chapter.

5.4.1 The pattern of focus

The reason that canonical and inverse sentences present different patterns of focus (Heycock1995, 2012, Rizzi 2015, and Shlonsky and Rizzi 2018; see also 3.4.1 in Chapter 3 of this thesis) is straightforward on the grounds of the discussion in the previous section. Recall that the postcopular nominal in an inverse sentence is always in focus, associated with the exhaustive interpretation. Arguably, it is exhaustivity that motivates the referential nominal to move to the low FocP.

In addition, as presented by examples (29) through (32) and the summary in Table 5.1, in Mandarin, canonical and inverse sentences show the same pattern for topic and information focus. These two features do not motivate displacement of the nominals. However, only the nominal bears the corresponding topic or focus feature, as the head of *shi*P can be attracted to [Spec, *shi*P] for feature checking reasons.

5.4.2 The extraction constraints

The restrictions on extraction of the postcopular nominal in inverse sentences have also been observed in many languages (Heycock 1995, Moro 1997, Den Dikken 2006, Shlonsky and Rizzi 2018; and see also Section 3.4.3 in Chapter 3 of this thesis). Specifically, in Mandarin, canonical copular sentences allow for topicalisation of the predicate NP2. In contrast, inverse sentences do not allow for topicalisation of the subject NP1. The relevant pairs of examples are repeated below as (40) and (41).

(40) a. 张三是李四昨天见到的那个人。
  Zhāngsān shì Lǐsì zuótiān jiàn-dao de nà-ge
  Zhangsan COP Lisi yesterday see-arrive SUB DEM-CLF
  rén.
  person
  'Zhangsan is the person Lisi met yesterday.'

  b. 李四昨天见到的那个人是张三。
  Lǐsì zuótiān jiàn-dao de nà-ge rén shì
  Lisi yesterday see-arrive SUB DEM-CLF person COP
  Zhāngsān.
  Zhangsan
  'The person Lisi met yesterday is Zhangsan.'

(41) a. 李四昨天见到的那个人啊，张三可能是。
  Lǐsì zuótiān jiàn-dao de nà-ge rén a, Zhāngsān
  Lisi yesterday see-arrive SUB DEM-CLF person TM Zhangsan
  kěnéng shì.
  be.likely.to COP
  'As for the person Lisi met yesterday, Zhangsan is likely to
  be him.'

  b. * 张三啊，李四昨天见到的那个人可能是。
  **Zhāngsān a, Lǐsì zuótiān jiàn-dao de nà-ge*
  Zhangsan TM Lisi yesterday see-arrive SUB DEM-CLF
  rén kěnéng shì.
  person be.likely.to COP

The constraints on extraction of and from the postcopular subject DP has been discussed in Moro (1997) in terms of barrierhood. On the one hand, extraction of the full DP violates the locality condition. On the other, extraction from the nominal violates the subjacency condition, since the full DP itself counts as a barrier, assuming that the copula is unable to L-mark the subject DP in the embedded small clause.[13]

---

[13]Heycock (1995) also ascribes the ban on extraction to an ECP violation with respect to the trace of NP1, which cannot be properly governed. Heycock and Kroch (1999) attribute the immobility of the postcopular element in inverse sentences to the issue of referentiality. They point out that Moro has overlooked the fact that the precopular element in an inverse sentence cannot itself be extracted or be extracted from. Admittedly, their argumentation may undermine Moro's analysis of English and Italian.

Den Dikken (2006) questions Moro's analysis because it cannot be carried over to the parallel extraction constraints in the postverbal DP in locative inversion constructions. Even if Moro is correct that the copula is unable to L-mark the subject DP, the motion verb in a locative inversion can. Consequently, the ban on extraction from the postverbal nominal in a locative inversion can no longer be accounted for using the subjacency condition violation, as the postverbal DP should not be viewed as a barrier. Den Dikken (2006) then turns to the freezing 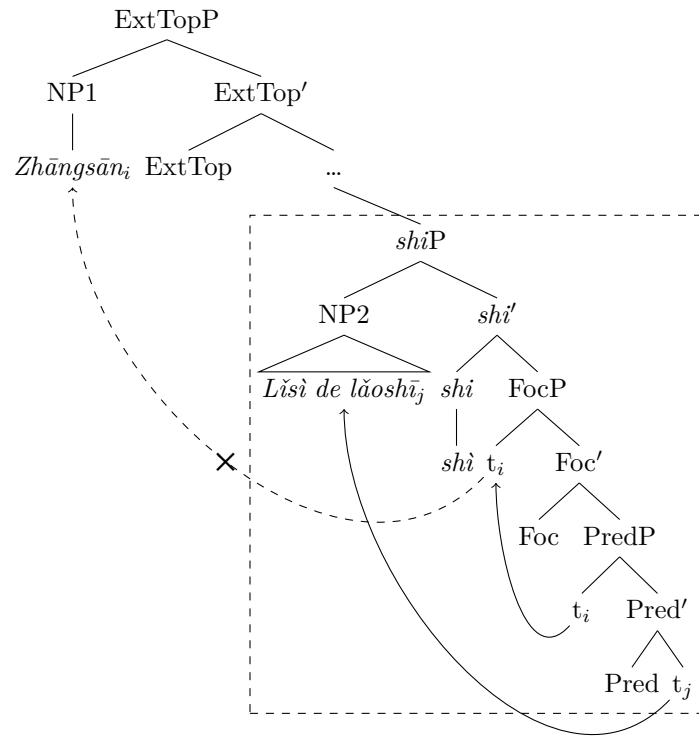effects in a focus position. His reasoning is simple: a focus cannot serve as input for topicalisation or relativisation operations, as that would lead to a pragmatic anomaly. Rizzi (2015b) and Shlonsky and Rizzi (2018) also resort to focushood. On the one hand, Rizzi and Shlonsky, in a way similar to Den Dikken, also incorporate the freezing effect into their analysis. On the other hand, unlike Den Dikken, they stipulate a FocP to instantiate focushood. Particularly, as they stipulate a lower FocP on top of PredP, they argue that the referent NP moves to FocP and gets frozen there since this FocP creates a criterial configuration.

As the structures proposed in the current study involve the low FocP for the interpretative and structural reasons discussed in the previous sections, I follow Rizzi (2015b) and Shlonsky and Rizzi's (2018) reasoning. Namely, when the subject NP1 moves to FocP, it gets frozen there. As a result, no extraction is then available. For instance, (42a) represents the structure of a canonical sentence with a topicalised predicative NP2. The fact that the subject NP1 raises to [Spec, *shi*P] position does not affect the extraction of NP2. In contrast, in the course of deriving an inverse structure like (42b), the subject NP1 of the small clause will move to [Spec, FocP] and get frozen there. Thus, it cannot be topicalised.

(42) a. Canonical sentences

```
                        ExtTopP
                   /              \
                NP2              ExtTop′
               /    \           /      \
        Lǐsì de lǎoshī_j    ExtTop      ...
                                      shiP
                                   /        \
                                 NP1        shi′
                                  |        /    \
                           Zhāngsān_i   shi    PredP
                                         |     /    \
                                        shì  t_i   Pred′
                                                   /   \
                                                Pred   t_j
```
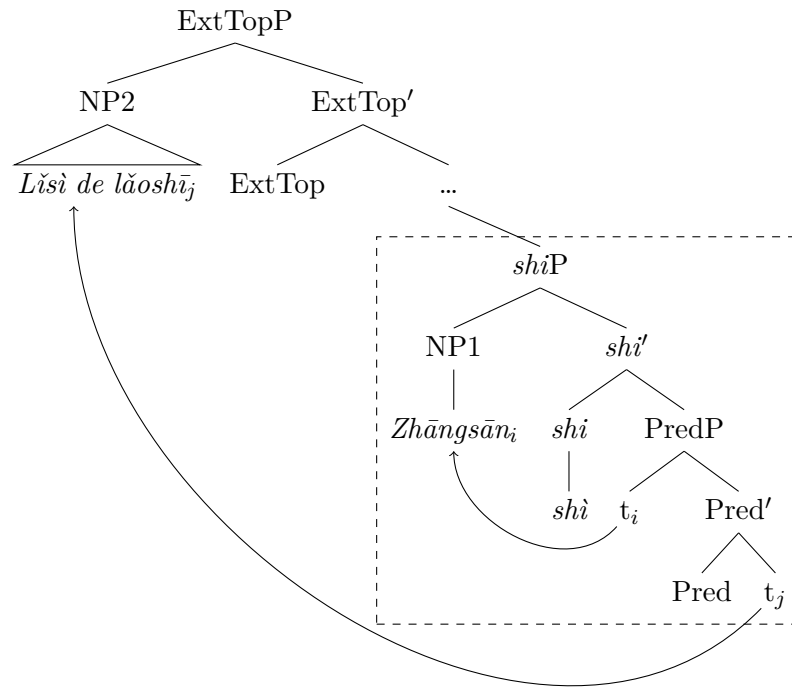
b. * Inverse sentences

5.4.3   The obligatoriness of *shì*

The last distinction regards the obligatoriness of *shì*. As introduced in Section 3.4.2 in Chapter 3, an omission of *shì* can sometimes be observed with a predicational structure, while *shì* is always obligatory in specificational copular sentences. The relevant examples are repeated here. Three contexts are concerned here. First, as shown in (43), the small clause under a verb meaning 'consider' sometimes allows for omission of *shì* for a canonical order. In contrast, the reversed order of the same two nominals in the embedding clause requires the presence of *shì*.

(43) a. 你当张三 (是) 傻子吗?
      Nǐ dāng Zhāngsān (shì) shǎzi ma?
      2SG consider Zhangsan COP idiot Q
      'Do you consider Zhangsan an idiot?'

   b. 你当傻子 *(是) 张三吗?
      *Nǐ dāng shǎzi *(shì) Zhāngsān ma?*
      2SG consider idiot COP Zhangsan Q
      'Do you consider the idiot to be Zhangsan?'

Second, a nominal predicate sentence without *shì*, such as (44a), is possible in Mandarin. However, an overt *shì* is obligatory in inverse sentences, as shown in (44b).

(44) a. 今天 (是) 星期日。
      Jīntiān (shì) Xīngqīrì.
      today COP Sunday
      'Today is Sunday.'

   b. 星期日 * (是) 今天。
      *Xīngqīrì *(shì) jīntiān.*
      Sunday COP today
      'Sunday is today.'

Lastly, as shown in (45), *shì* can gap in a canonical structure while it cannot gap if the word order reverses, even when the contexts remain the same.

(45) a. 张三是数学老师，李四（是）物理老师，赵六（是）化学老师。
      Zhāngsān shì shùxué lǎoshī, Lǐsì (shì) wùlǐ lǎoshī,
      Zhangsan COP math teacher Lisi COP physics teacher
      Zhàoliù (shì) huàxué lǎoshī.
      Zhaoliu COP chemistry teacher
      'Zhangsan is a maths teacher, Lisi a physics teacher, and Zhaoliu a chemistry teacher.'

b. 数学老师 *(是) 张三, 物理老师 *(是) 李四, 化学老师 *(是) 赵六。
*Shùxué lǎoshī *(shì) Zhāngsān, wùlǐ lǎoshī *(shì) Lǐsì,*
math teacher COP Zhangsan physics teacher COP Lisi
*huàxué lǎoshī *(shì) Zhàoliù.*
chemistry teacher COP Zhaoliu
'The maths teacher is Zhangsan, the physics teacher is Lisi, and the chemistry teacher is Zhaoliu.'

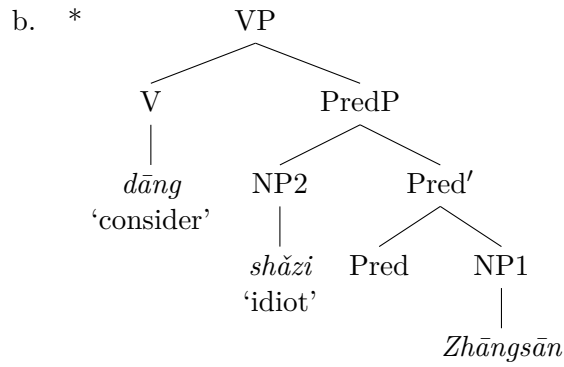Assuming that *shì* is obligatory when the structure contains *shi*P, I propose that clauses allowing for the absence of *shì* only contain a bare PredP. In contrast, clauses containing *shì* have a larger structure than PredP, such as *shi*P. For instance, when *shì* does not occur, the structure of the embedded clause under *dāng* 'consider' in (43) is PredP. As introduced in Section 5.1.1, PredP is merged in a fixed order; only the predicational structure is allowed. When *shì* does occur, *dāng* actually takes a full-fledged sentence containing *shi*P as its complement. The occurrence of *shi*P in the structure provides a landing site for the fronted NP2. Hence, both orders are available. The relevant part of the structures is shown in (46) through (49).

(46) a. 你当张三傻子吗?
Nǐ dāng Zhāngsān shǎzi ma?
2SG consider Zhangsan idiot Q
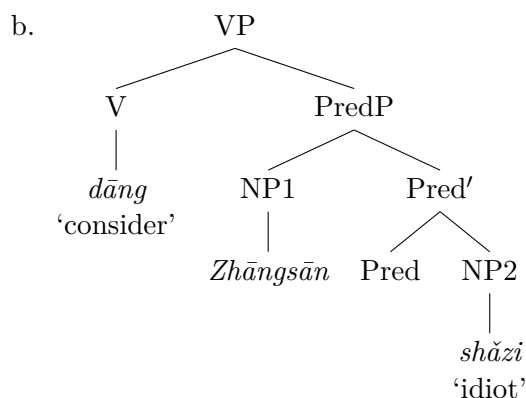
b.
```
            VP
           /  \
          V    PredP
          |    /    \
        dāng  NP1    Pred′
      'consider' |   /   \
              Zhāngsān Pred  NP2
                            |
                          shǎzi
                          'idiot'
```
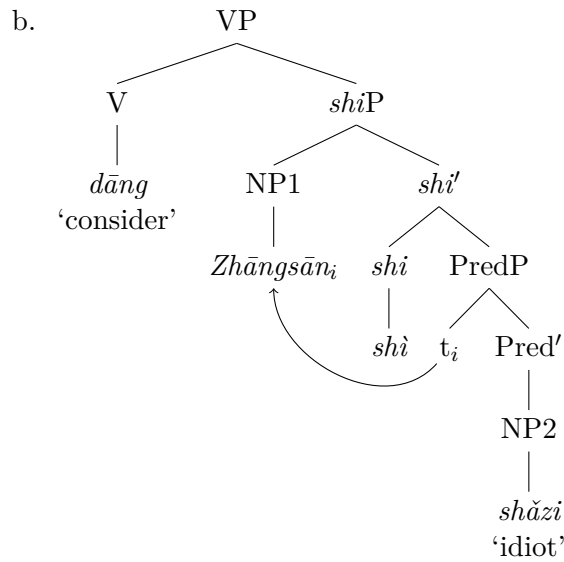
(47)   a.   * 你当傻子张三吗?
           **Nǐ   dāng   shǎzi Zhāngsān ma?*
           2SG consider idiot Zhangsan Q

     b.   *

```
                    VP
                   /  \
                  V    PredP
                  |    /    \
                dāng  NP2    Pred′
             ‘consider’ |    /    \
                      shǎzi Pred  NP1
                     ‘idiot’       |
                               Zhāngsān
```

(48)   a.   你当张三是傻子吗?
         Nǐ   dāng   Zhāngsān shì   shǎzi ma?
         2SG consider Zhangsan COP idiot Q

     b.

```
                      VP
                     /  \
                    V    shiP
                    |    /    \
                  dāng  NP1    shi′
               ‘consider’ |    /    \
                     Zhāngsān_i shi  PredP
                            |   /   \
                          shì  t_i  Pred′
                                     |
                                    NP2
                                     |
                                   shǎzi
                                  ‘idiot’
```

(49)   a. 你当傻子是张三吗?
        Nǐ   dāng   shǎzi shì   Zhāngsān ma?
        2SG consider idiot COP Zhangsan Q

    b.
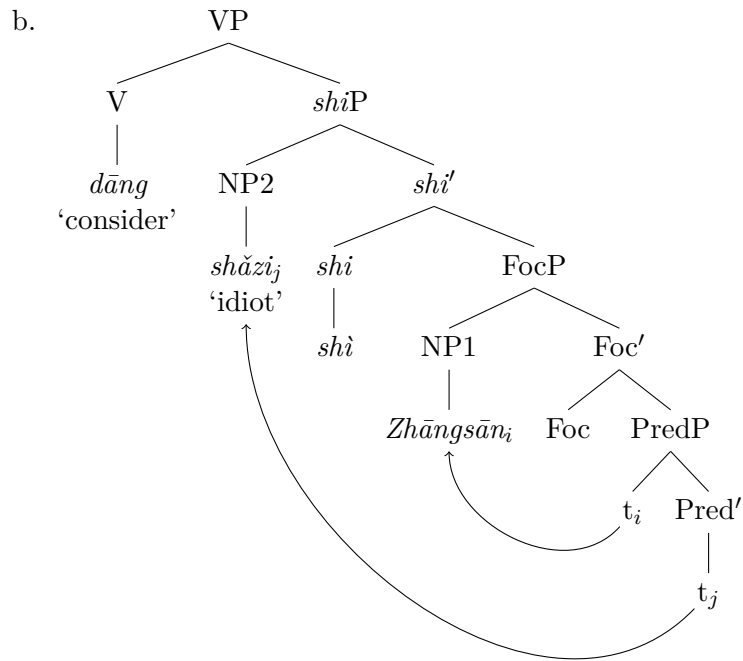
       Similarly, the nominal predicate sentences can be viewed as PredPs while standard copular sentences involve a larger structure.[14] Also, when *shì* gaps, what we see is actually coordination of PredP. Again, as PredP is merged in a fixed order, gapping is only observed with predicational copular sentences, and not with specificational copular sentences.

5.5   Conclusion

This chapter has argued for a unified analysis towards the structure of Mandarin canonical and inverse copular structures. First of all, the two

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[14]It remains unclear to me how nominal predicate sentences are licensed to stand alone if they can be regarded as structures containing only PredP.

types of sentences share the same base structure: the predicational core. It is an asymmetric structure mediated by a functional head Pred. The two NPs flanking *shì* are merged in a fixed word order. The referent nominal is the specifier of PredP, and the predicative nominal is the complement of the Pred head. *Shì* is not the spell-out of the Pred head but a higher functional head that takes PredP as its complement. Both of the nominals can raise to [Spec, *shi*P] via A-movement. In addition, a low FocP on top of PredP is proposed for the inverse structure. Stipulation of this FocP on the one hand accounts for the fact that the postcopular nominal in an inverse sentence is always in focus. On the other hand, it accounts for why the postcopular nominal in an inverse sentence cannot be topicalised.

The derivation of copular sentences is regulated by information-structural rules. Predicate inversion is motivated by the focus on NP1 which attracts it to [Spec, FocP] from [Spec, PredP]. In addition, the precopular nominal must bear the corresponding [Top]/[Foc] feature as a *shi* head. Specifically, when the referential NP1 bears the corresponding [Top]/[Foc] feature, it is this NP that moves to [Spec, *shi*P] so that the [Top]/[Foc] feature can be checked. The corresponding uninterpretable feature on *shi* as well as the EPP feature can be eliminated. Meanwhile, the predicate NP2 remains put. The spell-out of such a structure is a canonical copular sentence. When the subject NP1 has the identificational focus, it moves to the low FocP on top of PredP. As NP1 gets frozen in FocP, the EPP feature of the head of *shi*P requires that the predicative NP2 move to the specifier of *shi*P to eliminate the EPP feature. Crucially, as *shi*P forms a criterial configuration, the nominal it attracts must have the same criterial feature as it. In other words, the NP2 must bear the corresponding [Top] or [Foc] feature; otherwise the derivation crashes.

The proposed structures account for the distinctions between predicational and specificational copular sentences in Mandarin, such as the ban on the topicalisation of the postcopular nominal in an inverse sentence, the distinctions regarding the optionality of *shì* in the two types of sentences, and the pattern of focus. The next chapter will investigate the temporal interpretation of copular sentences.

Is there a TP in Mandarin copular sentences?

The previous two chapters examined both the position of *shì* in the structure and the structure below *shi*P. The question now is what structure(s) we have on top of *shi*P. This chapter investigates in particular whether copular structures contain TP. I propose that copular sentences with individual-level predicates (ILP henceforth) contain no TP in the structure while copular sentences with stage-level predicates (SLP henceforth) do. Copular sentences pattern with non-copular sentences. As the individual-level/stage-level (IL/SL henceforth) distinction between predicates plays a pivotal role in the ensuing investigation, Section 6.1 will first discuss the ILP/SLP-distinction in Mandarin. It will show that Mandarin copular sentences also manifest the IL/SL dichotomy. Section 6.2 will present crucial properties of ILP sentences (copular or non-copular) that are different from Mandarin SLP and ILP sentences in other languages. A hypothesis that Mandarin sentences with ILPs do not have syntactic tense will be hence put forth in Section 6.3, accounting for the properties of the ILPs as well as the ILP/SLP-distinctions observed. Section 6.4 provides a piece of supporting evidence for the no-TP hypothesis for ILP copular sentences from the realm of anaphorbinding. Section 6.5 provides an additional example of sentences with *shì* that possibly contain no T.

6.1   IL/SL-distinction in Mandarin

By definition, "stage-level properties are properties of stages, and individual-level properties are properties of individuals" (Kratzer 1995: 126). The IL/SL-distinction can be tested and used to account for various phenomena in many languages. Mandarin, however, does not show such a clear distinction as other languages. Of all the syntactic diagnostics for the IL/SL-distinction identified in the literature, only a few can be applied to Mandarin data. This section will first present an overview of robust diagnostics for other languages and then turn to a discussion of their application to the Mandarin IL/SL-distinction.

6.1.1   Previous studies

Chierchia (1995) identifies six key properties as criteria for characterising individual-level predicates, as compared to stage-level predicates. First of all, ILPs express stable stativity, while SLPs express "transient" or "episodic" properties. The compatibility of temporal adverbials manifests this contrast. For instance, *being drunk* is typically a stage-level property, while *being tall* is supposed to be individual-level. As shown in (1), when uttered in isolation, the SLP is compatible with different types of temporal adverbials while the ILP is incompatible with them. Note that when some special contexts are set up, the predicates commonly regarded as ILPs can have the transient interpretation and be compatible with temporal adverbials, as shown in (2).

(1)   a. ?? John was tall yesterday/last month/a year ago.

      b. John was drunk yesterday/last month/a year ago.

(2)   John was intelligent on Tuesday, but a vegetable on Wednesday.
                                                        (Chierchia 1995: 177)

Second, locative adverbials are subject to even tighter restrictions on the co-occurrence with ILPs than temporal adverbials. It is generally impossible to modify ILPs with locative adverbials, as the properties of ILPs are supposed to hold everywhere, in contrast with SLPs, which are located in space.[1] As shown in (3), without particular contexts, it is infelicitous to claim that someone is intelligent in France, but it is

appropriate to say someone is sick in France.

(3)   a. ?? John is intelligent in France.
      b. John is always sick in France.

<div align="right">(Chierchia 1995: 178)</div>

The restrictions on the compatibility with temporal and locative modification is also observed in German. As discussed in Kratzer (1995), the sentence in (4a) with a stage-level predicate is ambiguous, but the one in (4b) with an individual-level predicate only has one reading.

(4)   a. ... weil fast alle Flüchtlinge in dieser Stadt
          ... since almost all refugees in this city
          umgekommen sind.
          perished are
          '... since almost all of the refugees in this city perished.'
          Or '... since almost all of the refugees perished in this city.'
      b. ... weil fast alle Schwäne in Australien schwarz sind.
          ... since almost all swan in Australia black are
          '... since almost all of the swans in Australia are black.'

<div align="right">(Kratzer 1995: 127)</div>

The third property is that, an ILP cannot occur within the small clause complement of a perception verb, as shown in (5).

(5)   a. ?? I saw John tall.
      b. I saw John drunk.

<div align="right">(Chierchia 1995: 178)</div>

The fourth property was first pointed out in Milsark (1974). As shown in (6), the *there*-construction excludes ILPs and only allows for SLPs.

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[1]ILPs can, in fact, co-occur with locatives in some contexts. The locatives are regarded to provide temporal locations. See Maienborn (2004), Husband (2012), and Ernst (2016), among others, for discussion.

(6)   a. ?? There are two men intelligent/white/altruistic ....

     b. There are two men drunk/sick/available ....

(Chierchia 1995: 179)

The fifth property concerns bare plurals, which play a crucial role in Carlson (1977a, 1977b) and Husband (2012). Specifically, the bare plural subject in (7a) receives a universal interpretation, while the subject in (7b) can be interpreted either existentially or universally.

(7)   a. Firemen are altruistic.

     b. Firemen are available.

(Chierchia 1995: 179)

The last property discussed in Chierchia (1995) is associated with adverbs of quantification. This phenomenon is also noted by Kratzer (1995). In brief, when a sentence contains an adverb of quantification, an ILP requires an indefinite or bare plural subject, which is not required for SLPs. Kratzer (1995) notes the pattern with *when*-clauses, as shown in (8) and (9). Chierchia (1995) further points out that the pattern can also be observed in the absence of a *when*-clause, as shown in (10) and (11).

(8)   a. ?? When Mary knows French, she knows it well.

     b. When a Moroccan knows French, she knows it well.

     c. When Mary knows a foreign language, she knows it well.

(9)   When Mary speaks French, she speaks it well.

(Kratzer 1995: 129)

(10)   a. ?? John always knows French.

     b. A Moroccan always knows French.

     c. Moroccans always know French.

(11)   John always speaks French.

(Chierchia 1995: 181)

In addition to Chierchia's (1995) list, Kratzer (1995) provides two additional IL/SL-distinctions in German with regards to syntactic behaviour. The first distinction involves so-called "quantifier split". Specifically, quantifier split is possible with SLPs but impossible with ILPs.

As shown in (12) and (13), the (a) sentences present unsplit quantifier phrases, and the (b) sentences involve quantifier split with the verb moving to the V2 position. Following Diesing (1992), Kratzer (1995) argues that the contrast between (12b) and (13b) corroborates the view that the subject of an SLP is base-generated in [Spec, VP], whereas that of an ILP is base-generated in [Spec, IP].

(12)   a. ... weil das viele Lehrer   wissen.
          ... since this many teachers know
          '... since many teachers know this.'

       b. * Lehrer   wissen das viele.
             teachers know   this many
             Intended: 'As for teachers, many of them know this.'

(13)   a. ... weil uns viele Lehrer   geholfen haben.
          ... since us   many teachers help   have
          '... since many teachers helped us.'

       b. Lehrer   haben uns viele geholfen.
          teachers know   this many help
          'As for teachers, many of them helped us.'

                                              (Kratzer 1995: 133)

The other IL/SL-distinction in German that Kratzer (1995) mentions is relevant to the first one. Subjects of SLPs permit extraposition of a relative clause while subjects of ILPs do not, as shown in (14).

(14)   a. * ... weil zwei Bücher teuer   waren, die   niemand lesen
               since two books expensive were   that nobody read
             wollte.
             wanted
             '... since two books were expensive that nobody wanted to
             read.'

       b. ... weil   zwei Kinder   hier waren, mit   denen niemand
              since two   children here were,   with whom nobody
          spielen wollte.
          play   wanted
          '... since two children were here with whom nobody wanted
          to play.'

                                           (Kratzer 1995: 134-135)

Before moving to the discussion of diagnostics for IL/SL-distinction in Mandarin, it is worth pointing out that Husband (2012) argues that there are no individual-level stative verbs or stage-level stative verbs. Instead, the full VP should be taken into consideration when discussing IL/SL-distinction. Particularly, the definiteness of the internal argument of the verb is also decisive for the type of predicates in addition to the properties of the verbs. For instance, the (a) sentences in (15) and (16) respectively have the same verbs as the two (b) sentences. The only difference lies in the definiteness of the internal arguments of the verbs. However, the subjects of the two (a) sentences in (15) and (16) only have the universal reading while the subjects of the (b) sentences can possibly have an existential reading. As Husband (2012) takes the interpretation of subject bare plurals as the key diagnostic for IL/SL-distinction in statives, the predicates in the (a) sentences are analysed as ILPs, whereas those in the (b) sentences are taken to be SLPs. Though interesting, I will not delve into this issue in this thesis but leave it for future research. Being aware of the potential influence of the definiteness of the internal arguments, I will try to consistently make sentences with indefinite nominals.[2]

(15)   a. Monkeys live in trees.

        b. Monkeys live in that tree.

(16)   a. Students know answers.

        b. Students know this answers.

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[2]Taking Husband's (2012) observations as inspiration, it is also worth exploring whether certain properties of subjects may influence the IL/SL-distinction of predication. In other words, the IL/SL-distinction involve a distinction at the sentence level rather than at the VP level. For instance, intuitively speaking, (ia) describes a transient state. In contrast, the state depicted by (ib) is more individual-level-like. In fact, lifetime effects (see the next section) can also be observed in (ib). To be specific, when the sentences are in the past tense, (iia) indicates that the cat left the corner but may be still alive. In contrast, (iib) suggests that Building 20 has already been demolished. To put it in a figurative way, the building is dead.

(i)   a. A cat is at the corner.

        b. Building 20 is at the corner.

(ii)   a. A cat was at the corner.

        b. Building 20 was at the corner.

6.1.2 IL/SL-distinction in Mandarin non-copular sentences

Not all of the above-mentioned diagnostics are applicable to Mandarin. For instance, perception verbs do not take a small clause complement in Mandarin. Also, the question as to which structures can be viewed as existential sentences in Mandarin is a complex issue. C.-T. J. Huang (1987) proposes five types of existential sentences. However, it seems that different types of existential sentences have different preferences with respect to the types of predication. In addition, diagnostics associated with quantifier split or the extraposition of relative clauses cannot be carried over to Mandarin, either. This subsection will show that the three diagnostics can be carried over to Mandarin non-copular sentences. Then, the subsection that follows will present the application of these diagnostics (with some revisions) to Mandarin copular sentences.

First, as has already been mentioned in the previous section, ILPs are generally incompatible with temporal modification, as opposed to SLPs. In addition, ILPs cannot co-occur with spatial modification (see also L. Chen and Pan 2008; L. Chen 2016).

(17) Individual-level predicate

    a. 迈克很高。
       Màike hěn gāo.
       Mike   very tall
       'Mike is tall.'

    b. ＊迈克昨天/今天/明天很高。
       ＊Màike zuótiān/jīntiān/míngtiān hěn gāo.
       Mike   yesterday/today/tomorrow very tall
       lit. 'Mike was/is/will be tall yesterday/today/tomorrow.'

    c. ＊迈克在学校很高。
       ＊Màike zài xuéxiào hěn gāo.
       Mike   at   school   very tall
       lit. 'Mike is tall at school.'

(18) Stage-level predicate

    a. 迈克很高兴。
       Màike hěn gāoxìng.
       Mike   very happy
       'Mike is happy.'

b. 迈克昨天/今天/明天很高兴。
    Màike zuótiān/jīntiān/míngtiān   hěn gāoxìng.
    Mike   yesterday/today/tomorrow very happy
    'Mike was/is/will be happy yesterday/today/tomorrow.'

c. 迈克在学校很高兴。
    Màike zài xuéxiào hěn gāoxìng.
    Mike   at school   very happy
    'Mike is happy at school.'

Also, the distinction between ILPs and SLPs with respect to adverbs of quantification can also be observed in Mandarin. The Mandarin equivalents of (8) to (11) show a pattern parallel to them.

(19)   a. * 当玛丽会法语的时候，她会很精通法语。   (cf. (8a))
              **Dāng Mǎlì huì   Fǎyǔ   de   shíhou, tā   huì   hěn*
              when Mary know French SUB time   3SG will very
              jīngtōng Fǎyǔ.
              excel.in French
              Intended: 'When Mary knows French, she knows it well.'

       b. 当一个摩洛哥人会法语的时候，她通常很精通法语。
                                                        (cf. (8b))
           Dāng yī-ge   Móluògērén huì   Fǎyǔ   de   shíhou, tā
           when one-CLF Moroccan   know French SUB time   3SG
           tōngcháng hěn jīngtōng Fǎyǔ.
           always   very excel.in French
           'When a Moroccan knows French, she knows it well.'

       c. 当玛丽会一门外语的时候，她通常很精通这门语言。
                                                        (cf. (8c))
           Dāng Mǎlì huì   yī-mén wàiyǔ   de   shíhou, tā
           when Mary know one-CLF foreign.language SUB time   3SG
           tōngcháng hěn jīngtōng zhè-mén   yǔyán.
           always   very excel.in DEM-CLF language
           'When Mary knows a foreign language, she knows it well.'

(20) 当玛丽说法语的时候，她通常说得很好。 (cf. (9))
Dāng Mǎlì shuō Fǎyǔ de shíhou, tā tōngcháng shuō de
when Mary speak French SUB time 3SG always speak DE
hěn hǎo.
very well
'When Mary speaks French, she speaks it well.'

(21) a. *玛丽通常会法语。 (cf. (10a))
*Mǎlì tōngcháng huì Fǎyǔ.
Mary always know French
lit. 'Mary always knows French.'

b. 一个摩洛哥人通常会法语。 (cf. (10b))
Yī-ge Móluògērén tōngcháng huì Fǎyǔ.
one-CLF Moroccan always know French
'A Moroccan always knows French.'

c. 摩洛哥人通常会法语。 (cf. (10c))
Móluògērén tōngcháng huì Fǎyǔ.
Moroccan always know French
'Moroccans always know French.'

(22) 玛丽通常说法语。 (cf. (11))
Mǎlì tōngcháng shuō Fǎyǔ.
Mary always speak French
'Mary always speaks French.'

And finally, as observed in L. Chen and Pan (2008) and L. Chen (2016), the different interpretations of subject bare nouns between ILPs and SLPs can also be found in Mandarin. The bare noun *píngguǒ* has the generic reading in (23a), while it has the definite specific reading in (23b). Note that the interpretative distinctions between the subjects in (23) are not the same as what has been observed in English. Crucially, the subject bare noun in an SLP sentence such as (23b) must be interpreted as a definite rather than as an existential. In other words, *píngguǒ* 'apple' in (23b) is interpreted as 'the apple(s)' instead of 'some apples'.

(23) a. 苹果富含维生素 A。
Píngguǒ fùhán wéishēngsù-A.
apple be.rich.in vitamin.A
'Apples are rich in Vitamin A.'

b. 苹果熟了。
   Píngguǒ shú le.
   apple   ripe PFV.
   'The apples are ripe.'

<div align="right">(L. Chen & Pan 2008: 64)</div>

A number of other diagnostics have also been proposed to distinguish Mandarin ILPs and SLPs. For instance, Yeh (1993b) points out that the compatibility with the progressive marker *zhe* may distinguish SLPs from ILPs. Paris (1994) argues that the availability of object fronting in the *de*-construction reflects the IL/SL-distinction in Mandarin. L. Chen and Pan (2008) resorts to the choice of negator (*bù* vs. *méi*) for differentiating ILPs and SLPs. Liu and Han (2015) notes that although gapping is restricted in Mandarin, sentences tend to be good if the verbal constituent of the first clause is also omitted. This rescuing strategy, however, only applies to ILP sentences and not to SLP sentences. Unfortunately though, as has been discussed in L. Chen and Pan (2017), counterexamples that undermine these proposals are not difficult to find. Hence, these diagnostics will not be taken as diagnostics for the IL/SL-distinction in the current study.

6.1.3 IL/SL-distinction in Mandarin copular sentences

Previous studies on the IL/SL-distinction in Mandarin mainly address non-copular sentences. Given that Mandarin copular sentences show a number of distinctive syntactic properties from that of non-copular sentences, and that, accordingly, in this thesis a structure is proposed for copular sentences that is different from that of non-copular sentences (namely, copular structures lack the VP), it is essential to investigate whether or not Mandarin copular sentences have the IL/SL-distinction on a par with non-copular sentences. The three diagnostics (with revisions) discussed in the previous subsection will be applied to copular sentences. As a result, Mandarin copular sentences will be found to also have IL/SL-distinctions.

To start with, conceptually speaking, a person's region of origin does not normally change. In contrast, 'being a secondary school student' is normally a temporary property. Thus, the predicate in (24a) tends to be individual-level, while that in (24b) is more stage-level.

(24) a. 迈克是德州人。
     Màike shì Dézhōu rén.
     Mike COP Texas   people
     'Mike comes from Texas.'

    b. 迈克是中学生。
     Màike shì zhōngxuéshēng.
     Mike   COP secondary.school.student
     'Mike is a secondary school student.'

As shown in (25) that the (a) sentence and the (b) sentence differ in terms of compatibility with temporal modification. A sentence containing an individual-level-like predicate, as in (25a), is incompatible with the adverb *qùnián* 'last year' while one containing a stage-level predicate, as in (25b), is compatible with the same adverb.

(25) a. *迈克去年是德州人。   *Individual-level*
     **Màike qùnián   shì Dézhōu rén.*
     Mike   last.year COP Texas   people

    b. 迈克去年是中学生。   *Stage-level*
     Màike qùnián   shì zhōngxuéshēng.
     Mike   last.year COP secondary.school.student
     'Mike was a secondary school student last year.'

Note that, unlike non-copular sentences, copular sentences are in general incompatible with locative modification irrespective of being ILPs or SLPs, as shown in (26).[3]

(26) a. *迈克在美国是德州人。   *Individual-level*
     **Màike zài Měiguó shì Dézhōu rén.*
     Mike   in the.US COP Texas   people

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[3]There are a few exceptions in which copular sentences co-occur with locatives, such as (i), which indicates that the subject individual has multiple identities at different places. Presumably, the properties expressed by copular sentences are commonly independent from particular locations regardless of whether they are individual-level or stage-level.

(i) 乔伊斯在学校是好老师，在家是好母亲。
    Qiáoyīsī zài xuéxiào shì hǎo lǎoshī, zài jiā   shì hǎo mǔqīn.
    Joyce   at school COP good teacher at home COP good mother
    'Joyce is a good teacher at school, and she is a good mother at home.'

    b. *迈克在美国是中学生。⁴   *Stage-level*

       *Màike zài Měiguó shì zhōngxuéshēng.

       Mike in the.US COP secondary.school.student

In addition, the different interpretations of subject bare nouns between ILPs and SLPs can also be found in copular sentences. As shown in (27), *Móluògē rén* 'Moroccans' in (27a) has the generic interpretation, whereas the same noun in (27b) has the definite interpretation. The bare noun *Móluògē rén* 'Moroccans' in (27b) must refer to certain Moroccans identified in the discourse. Inclusion of the demonstrative will make the sentence more natural.

(27)   a. 摩洛哥人是非洲人。   *Individual-level*

          Móluògē rén   shì Fēizhōu rén.

          Morocco people COP Africa   people

          'Moroccans are Africans.'

    b. (那几个) 摩洛哥人是中学生。   *Stage-level*

          (Nà-jǐ-ge)   Móluògē   rén   shì

          DEM-some-CLF   Morocco   people   COP

          zhōngxuéshēng.

          secondary.school.student

          'The Moroccans are secondary school students.'

Lastly, the distinction associated with adverbs of quantification can also be applied to copular sentences.⁵ For one thing, as shown in (28), copular sentences pattern with non-copular sentences in that the use of adverbs of quantification requires indefinite subjects in ILP sentences. Interestingly, (28b) is infelicitous if it is interpreted as an individual-level sentence. However, it will be felicitous if it is interpreted as a stage-level sentence. That is, if Mary frequently dyes her hair different colours, *having black hair* is a stage-level property for Mary. As a result, (29) is acceptable. Note crucially that, as Chierchia (1995) has pointed out, some SLPs pattern with ILPs in that they are incompatible with

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    ⁴This sentence can be felicitous in a specific context where different education systems are under discussion. For instance, taking Mike's age and the level of education he has received into consideration, he counts as a secondary school student in the US education system. However, he might be viewed as a final-year primary school student if he is going to attend another school in a foreign country.

adverbs of quantification, as shown in (30). Chierchia ascribes such incompatibility to the lack of iterability of the predicates.

(28) Individual-level

　　a. 摩洛哥人通常是黑头发。
　　　　Móluògē rén　　tōngcháng shì　hēi　tóufa.
　　　　Morocco people usually　　COP black hair
　　　　'Moroccans usually have black hair.'

　　b. # 玛丽通常是黑头发。
　　　　#Mǎlì　tōngcháng shì　hēi　tóufa.
　　　　Mary usually　　COP black hair

(29) Stage-level

　　玛丽通常是黑头发。
　　Mǎlì　tōngcháng shì　hēi　tóufa.
　　Mary usually　　COP black hair
　　'Mary usually has black hair (but she sometimes colours her hair).'

(30) a. *摩洛哥人通常是中学生。
　　　　*Móluògē rén　　tōngcháng shì　zhōngxuéshēng.
　　　　Morocco people usually　　COP secondary.school.student

　　b. *玛丽通常是中学生。
　　　　*Mǎlì　tōngcháng shì　zhōngxuéshēng.
　　　　Mary usually　　COP secondary.school.student

In sum, IL/SL-distinction can also be observed in Mandarin copular sentences. The following sections will focus on one property of Mandarin ILPs that has rarely been noticed. Investigation of this property on ILPs and their differences from SLPs will lead to a discussion of whether Mandarin copular sentences have T or not. Before closing off this section, I need to point out that as the current thesis will not explore criteria of IL/SL-distinctions further, being aware of the potential controversy, I will use the least controversial examples in this study. Crucially, I will focus on predicates that are widely acknowledged to be ILPs or SLPs in the literature. They pass the diagnostics for the IL/SL-distinction

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[5]I will not adopt the *when*-test proposed in Kratzer (1995). Following what will be argued in the later sections, copular sentences under *when*-adverbials should all be viewed as SLP sentences.

discussed in the current section. Additionally, the internal arguments of the verbs are indefinite, and the subjects will be restricted to animate nominals, especially human beings, since the "lifetime effects" are the locus of the ensuing discussion.

6.2 More on Mandarin ILPs: no past/present contrast

It was shown in the previous section that, cross-linguistically speaking, ILPs are in general incompatible with temporal adverbials while SLPs are compatible with temporal modification. This section will delve into other properties in relation to the temporal interpretations of Mandarin ILPs, as opposed to SLPs. In brief, Mandarin ILP sentences show no past/present contrast. Furthermore, whether the subjects are alive or dead does not affect the felicity of sentences when uttered in isolation. Crucially, Mandarin ILPs behave differently from other languages. That a past-tensed ILP sentence uttered in isolation indicates that the subject is dead has been attested in many languages, a phenomenon discussed as "lifetime effects". Section 6.2.1 will first introduce previous studies on "lifetime effects" on ILPs in other languages. Section 6.2.2 investigates the Mandarin data.

6.2.1 Lifetime effects

Lifetime effects were first noticed in Kratzer (1989/1995). When uttered in isolation, a past-tensed sentence with an individual-level predicate imposes restrictions on the lifetime of the subject, unlike sentences with stage-level predicates. For instance, (31), a sentence with a typical individual-level predicate, indicates that Henry is dead at the time of utterance if the sentence is uttered out of the blue. In contrast, (32) can be true when Henry is alive, as the sentence contains a stage-level predicate, *happy*. When the contexts are appropriate, (31) can have a stage-level reading and accordingly be true even if Henry is alive. For instance, it is perfectly acceptable if Henry has changed his nationality from French to Dutch and he is still alive at the utterance time.

(31)   Henry was French.   *Individual-level predicate*
                                                  (Kratzer 1995: 155)

(32)   Henry was happy.   *Stage-level predicate*

The same effects have also been noticed in other languages, such as in German (Kratzer 1995), Polish (Citko 2008), and Russian (Pereltsvaig 2007). To account for such effects on ILPs, at least two approaches have been proposed. The first type of account is typically Davidsonian. Individual-level predicates are supposed to have no Davidsonian argument (an additional argument *e* in relation to the event of the verb (Davidson 1967)), in contradistinction to stage-level predicates, which do (Diesing 1992; Kratzer 1995). Assuming the tense predicate is a predicate for a Davidsonian argument, the past tense can accordingly apply to the Davidsonian argument of an SLP. In contrast, as ILPs lack the Davidsonian argument, the past tense must apply to their unique argument, the subject. The contrast is sketched below.[6] (33) represents the individual-level interpretation of (31) that Henry was a Frenchman and that he was dead. He never changed his nationality. The past tense applies to the subject argument *Henry*. (34) represents the stage-level interpretation of both (31) (when the context is appropriate) and (32). That is, Henry was happy at some time interval; and Henry used to be a Frenchman but changed his nationality. The past tense applies to the Davidsonian argument. In a word, the distinction between the individual-level interpretation and the stage-level interpretation depends on which argument – the Davidsonian argument or the external argument – can be bound by the tense operator (Kratzer 1995).

(33)   *Individual-level interpretation*
       [before-now(Henry)] & [French(Henry)]   cf. (31)

(34)   *Stage-level interpretation*
       a. [before-now(l)] & [Happy(Henry,l)]   cf. (32)
       b. [before-now(l)] & [French(Henry,l)]   cf. (31)

---

[6]The formulas in (33) and (34) are adapted from Kratzer (1995: 156). '*before-now*' corresponds to the past tense. '*l*' is defined as a variable over spatial–temporal locations in Kratzer (1995), which is more or less equivalent to *e*, which represents the event/Davidsonian argument.

The other type of account applies pragmatic conversational implicature to the lifetime effects. Musan (1997) assumes a presuppositional condition of lexical entries for both ILPs and SLPs on their argument's being in existence or alive. Therefore, a sentence in the present tense confronts a case of presupposition failure if the subject has passed away, as in (35). In addition, assuming that a predicate in the past tense asserts that a situation is over, irrespective of the manner in which the situation came to an end, the situation described by an individual-level predicate is naturally terminated along with the death of the individual. In contrast, whether a situation described by a stage-level predicate is over or not is independent from whether the subject individual is living or dead. A past-tensed sentence with a stage-level predicate fails to include a description of the state of the subject at the time of utterance, which gives rise to the "Maxim of Quantity" (Grice 1975) violation of not being informative enough, as in (36).

(35)   *Context*: Henry died and never changed his nationality.
    a. Henry was French.   *Felicitous*
    b. # Henry is French.   *Infelicitous: presupposition failure*

(36)   *Context*: Henry is alive, and he is happy.
    a. Henry is happy.   *Felicitous*
    b. # Henry was happy.
                                  Infelicitous: Maxim of Quantity violation

Husband (2012) questions the pragmatic approach because the constituent that introduces the world knowledge is unspecified in Musan's (1997) analysis. He returns to the semantic base, aligning with Carlson (1977a), Diesing (1992), Kratzer (1995), and Chierchia (1995). First of all, incorporating his proposal on the compositional nature of states, Husband takes homogeneity as the pivot of the ILP/SLP-distinction. Specifically, he argues that, on a par with events, states also vary systematically in their aspectual interpretation. Different types of states display a homogeneous/quantized contrast, a distinction comparable to the telic/atelic distinction of events. ILPs are supposed to be homogeneous while SLPs are quantized. The contrast in terms of homogeneity between ILPs and SLPs can in turn explain the lifetime effects. Husband assumes that lifetime effects arise when all the stages of an individual

are put in the past. As ILPs apply to homogeneous stages of the subject, which is the subject itself, when an ILP sentence is in the past tense, it must be the case that all the stages of the individual are put in the past. In other words, the subject has died. In contrast, SLPs only apply to a quantized stage of a subject, so when the SLP sentences are in the past tense, it is unclear whether the quantized stages cover all the stages of the individual (normally they do not). As a result, lifetime effects are expected to be observed with ILP sentences but not with SLP sentences.

6.2.2 Mandarin data

The Mandarin data partially deviate from what has been observed in English and other languages. On the one hand, when uttered in isolation, whether the subject is alive or dead also affects the felicity of different types of sentences. Crucially, ILPs differ from SLPs. On the other, the restrictions on the lifetime of the subject of ILP sentences in relation to the past tense are absent in Mandarin. Mandarin ILP sentences are always felicitous no matter whether the subject is dead or alive.

Here are some examples. (37) presents some examples of ILP sentences, while (38) presents examples of SLP sentences. The contrast between the two sets of sentences is clear. When they are uttered in isolation, (37a) is felicitous whether Mike is alive or dead, as long as it is true that Mike meets/met the standard of 'being tall' when he is/was alive. Similarly, (37b) is felicitous as long as Mike was born in Texas, irrespective of whether he is dead or still alive. In contrast, those in (38) can only be felicitous when Mike is alive and is happy or Mike is a secondary school student.

(37) Individual-level
   a. 迈克很高。
      Màike hěn gāo.
      Mike   very tall
      'Mike is/was tall.'
   b. 迈克是德州人。
      Màike shì Dézhōu rén.
      Mike   COP Texas   people
      'Mike comes from Texas.'

(38)   Stage-level

    a. 迈克很高兴。
       Màike hěn   gāoxìng.
       Mike   very happy
       'Mike is/*was very happy.'

    b. 迈克是中学生。
       Màike shì   zhōngxuéshēng.
       Mike   COP secondary.school.student
       'Mike is/*was a secondary school student.'

As SLPs are compatible with temporal modification, the sentences in (39) and (40) are well formed. Although it is debatable whether these sentences have tense or not, the sentences in (39) describe present states while those in (40) describe past states.[7] When uttered in isolation, Mike in (39) must be alive. In contrast, it is unclear whether Mike is dead or alive at utterance time on the basis of (40). Such behaviour in Mandarin SLPs patterns with that of English.

(39)   Present

    a. 迈克 (现在) 很高兴。
       Màike (xiànzài) hěn   gāoxìng.
       Mike   now   very happy
       'Mike is very happy.'

    b. 迈克 (现在) 是中学生。
       Màike (xiànzài) shì   zhōngxuéshēng.
       Mike   now   COP secondary.school.student
       'Mike is a secondary school student.'

(40)   Past

    a. 迈克当时很高兴。
       Màike dāngshí   hěn   gāoxìng.
       Mike   at.that.time very happy
       'Mike was very happy at that time.'

---

[7]This thesis takes the position that these sentences have syntactic tense. For more on this issue, see 6.3.1.

b. 迈克当时是中学生。
Màike dāngshí   shì   zhōngxuéshēng.
Mike   at.that.time COP secondary.school.student
'Mike was a secondary school student at that time.'

Mandarin ILP sentences are different both from SLP sentences and from English ILP sentences. As we have seen from (37), the sentences are felicitous regardless of whether Mike is dead or alive. More crucially, the ILP sentences show no past/present contrast at all. Since Mandarin does not show tense morphology, determining whether (37) should be interpreted as referring to past states or present states requires taking the temporal adverbials or context into account. However, as discussed in the previous section, ILPs in Mandarin (and in other languages) are not generally compatible with temporal adverbials.[8] As a result, when uttered in isolation, the sentences provide no clue for whether the states denoted by ILP sentences are past or present. That is, it is unclear whether (37) describes past events or present events.

More strikingly, Mandarin allows for coordination of a living person (e.g. Mike) and a dead person (e.g. Barbara) functioning as the subject of an individual-level predicate, as shown in (41). Also, in the stripping-like constructions in Mandarin, whether or not the subject is living can be different in the two clauses, as shown in (42).

(41)   a. 迈克和芭芭拉都很高。
Màike hé   Bābālā   dōu hěn gāo.
Mike   and Barbara all   very tall
'Mike is tall, and Barbara was tall.'

b. 迈克和芭芭拉都是德州人。
Màike hé   Bābālā   dōu shì   Dézhōu rén.
Mike   and Barbara all   COP Texas   people
'Mike is from Texas, and Barbara was from Texas.'

---

[8]A few exceptions do exist. For instance, ILPs can co-occur with adverbials that mean 'while alive', such as *shēngqián* 'before death' or *huó zhe de shíhou* 'the time when being alive'. The use of these adverbials explicitly indicates the death of the subject but does not influence the temporal relation of the subject and the properties denoted by the predicates. In fact, these adverbials are not often used unless the death needs to be emphasised.

(42)   a. 迈克很高，芭芭拉也是。
           Màike hěn gāo, Bābālā yě   shì.
           Mike   very tall Barbara also SHI
           'Mike is tall, and Barbara, too.'

       b. 迈克是德州人，芭芭拉也是。
           Màike shì Dézhōu rén,   Bābālā   yě   shì.
           Mike   COP Texas   people Barbara also SHI
           'Mike comes from Texas, and Barbara, too.'

In contrast, parallel sentences with SLPs, such as (43) and (44), are not felicitous if the same setting remains that Mike is alive while Barbara has died.

(43)   a. # 迈克和芭芭拉都很高兴。
           #Màike hé   Bābālā   dōu hěn gāoxìng.
           Mike   and Barbara all   very happy

       b. # 迈克和芭芭拉都是中学生。
           #Màike hé   Bābālā   dōu shì zhōngxuéshēng.
           Mike   and Barbara all   COP secondary.school.student

(44)   a. # 迈克很高兴，芭芭拉也是。
           #Màike hěn gāoxìng, Bābālā yě   shì.
           Mike   very happy   Barbara also SHI
           'Mike is/*was very happy.'

       b. # 迈克是中学生，芭芭拉也是。
           #Màike shì zhōngxuéshēng,   Bābālā yě   shì.
           Mike   COP secondary.school.student Barbara also SHI

The pattern in Mandarin and English can be summarised in Table 6.1.[9] The SLPs show a parallel pattern in the two languages. When uttered in isolation, the subject must be alive when the sentence describes a present state. The subject can either be alive or dead when the sentence describes a past state. However, Mandarin ILPs behave differently from SLPs and from ILPs in English. For one thing, Mandarin ILP sentences can always be felicitous irrespective of whether the subject is dead or alive. For the other, there is no obvious past/present distinction for ILP sentences.

Table 6.1: Dead/living and ILP/SLP correspondence

		Past	Present
English	ILP	dead	alive
	SLP	dead/alive	alive
Mandarin	ILP	no past/present distinction	
	SLP	dead/alive	alive

The Mandarin data cannot be fully accounted for by any of the analyses of "lifetime effects" in English introduced in Section 6.2.1. Particularly, Mandarin ILP sentences show no past/present distinction and are insensitive to the living/dead status of the subject. Since past/present tense plays a crucial role in those accounts for the restrictions on the lifetime of subjects of ILPs in English, they cannot be carried over to Mandarin. The next section will propose that Mandarin ILP sentences (copular and non-copular) have no TP in the structure, in contrast to SLP sentences.

6.3 No-TP hypothesis for Mandarin ILP sentences

6.3.1 Previous studies on TP in Mandarin

The term "tense" can be defined from different perspectives. This thesis only concerns *syntactic tense* and puts aside discussions about *morphological tense* and *semantic tense*. Differently put, the question at issue is whether TP exists on the spine of the Mandarin clause and functions to express the relation between Topic Time and Utterance Time (for terms see Klein 1994), although Mandarin does not have tense morphology.[10] It has long been controversial whether Mandarin has TP in the sentence structure. The current subsection will not provide an extensive overview of the debates. I will only present the most representative studies to set

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[9]Note crucially that, the past/present distinction in Table 6.1 does not mean exactly the same for English and Mandarin. For English, it concerns morphological marking of past/present tense. For Mandarin, the tense of the sentences is not morphologically marked. The past/present contrast for SLPs presented in the table regards the time reference denoted by the temporal adverbials in the sentences.

the scene for the current discussion. See Sybesma (2017b) for a review on this issue and references therein for details.

A certain line of research argues against the existence of TP (J.-W. Lin 2003, 2006, 2010; Smith & Erbaugh 2005). These studies argue for the view that the temporal interpretation of Mandarin sentences is derivable from "default aspect" on the basis of the properties of predicates (e.g. bounded/unbounded, telic/atelic) (Bohnemeyer & Swift 2004). In brief, states and activities have a default present reading, while accomplishments and achievements have a default past reading (J.-W. Lin 2006). Or, unbounded situations are located in the present while bounded situations are located in the past (Smith & Erbaugh 2005). Additionally, temporal adverbs, modal elements, and discourse and world knowledge may override the default temporal interpretation.

Matthewson (2002) argues that T would be postulated if linguistic entities can manipulate the temporal interpretation of sentences. Sybesma (2007) provides corresponding evidence from Mandarin that temporal interpretations of Mandarin sentences can only be manipulated by linguistic elements such as temporal adverbs, particles, or linguistic contexts (as opposed to non-linguistic or pragmatic contexts). For instance, when uttered in isolation, (45a) has a present tense reading. When the temporal adverb referring to a past time point is added to the sentence, it has a past tense reading, as shown in (45b). Crucially, the change of temporal interpretation from (45a) to (45b) is ascribed to the use of the adverb, which is a linguistic element. In contrast, the change of a non-linguistic element, for instance, the dead/living status of Zhangsan cannot give rise to a past tense interpretation of (45a). The sentence instead turns infelicitous, like other stage-level predicate sentences we saw in the previous sections.

(45)   a. 张三住在这儿。
           Zhāngsān zhù zài zhèr.
           Zhangsan live at here
           'Zhangsan lives here.'

---

[10]It is arguable that *de* 的 in some sentences, especially cleft relevant constructions, is a past tense marker.

b. 张三 1989 年住在这儿。
Zhāngsān 1989 *nián zhù zài zhèr.*
Zhangsan 1989 year live at here
'Zhangsan lived here in 1989.'

(Sybesma 2007: 581)

The current thesis is in favour of the existence of TP in Mandarin. Detailed argumentation against the view that Mandarin has no TP see Sun (2014) and T.-H. J. Lin (2015). I am particularly interested in two issues. First, does TP exist in Mandarin copular structures? Most of the previous discussions have not paid attention to the temporal interpretation and the temporal structure of copular sentences.[11] Investigation into this issue is necessary. Second, is it possible that, within a single language, sentences vary in terms of the presence of TP? In other words, is it possible that some sentences have TP while others do not?[12]

6.3.2 No-tense hypothesis

This thesis proposes that sentences containing individual-level statives in Mandarin do not have syntactic tense (or TP), as opposed to sentences containing stage-level statives, which do have TP. This hypothesis goes one step further from Sun's (2014) proposal that Mandarin non-statives have both TP and AspP while statives only have TP. The gist of the hypothesis is given in Table 6.2.

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[11]J.-W. Lin (2010) touches upon the connection between TP and copular sentences. He views copulas as carriers of tense morphology. Accordingly, he assumes that languages without TP allow for the absence of an obligatory copula. As *shì* in Mandarin is sometimes omissible in matrix clauses (see Section 2.2 in Chapter 2), TP does not exist in Mandarin. Obviously, this argument cannot be correct since, as discussed in Chapter 2, *shì* is obligatory in most copular sentences. According to J.-W. Lin's (2010) reasoning, on the contrary, Mandarin should have TP in the structure. See also T.-H. J. Lin (2015) and Law and Ndayiragije (2017) for arguments against J.-W. Lin (2010) on this point.

[12]Progovac (2006) argues that the (non-)existence of TP distinguishes sentences from non-sentential clauses. However, I will not regard Mandarin ILP sentences as non-sententials.

Table 6.2: Eventualities and temporal projections

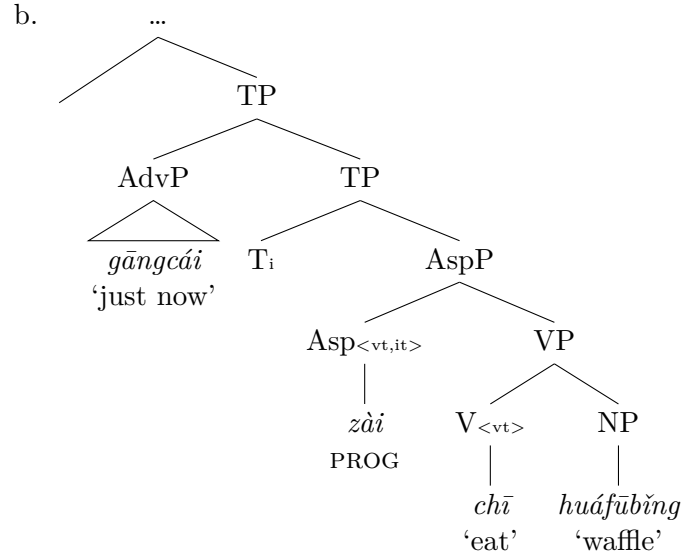|	TP	AspP
IL-statives	-	-
SL-statives	+	-
non-statives	+	+

I follow Dowty (1979), Katz (1995, 2003), Kratzer (1998), and Sun's (2014) assumption that stative predicates are properties of times and eventive predicates are properties of events. In addition, T has a time interval as its semantics, which serves as Reference Time (to use Reichenbach's 1947 term) or Topic Time (Klein's 1994 term) for anchoring the eventuality described by the sentence. Following Katz (1995, 2003), Sun (2014) proposes that in Mandarin, stative VPs can directly combine with T, while eventive VPs must combine with an aspect first and then with T. The simplified structures are presented below in (46) and (47).[13] An eventive VP sentence such as (46a) requires an overt aspect; otherwise, the sentence crashes (or has only the generic reading).[14] In contrast, a stative VP sentence such as (47a) cannot contain an aspectual marker. In structural terms, AspP relates VP and TP in (46b), while TP combines directly with VP in (47b). Temporal adverbials adjoin to TP in both sentences. Superstructures containing functional projections such as FinP and other discourse-related projections project on top of TP, which are left out in the structures given below.

(46)   Eventive VP

    a. 小十一刚才 *(在) 吃华夫饼。
       *XiǎoShíyī   gāngcái *(zài) chī huáfūbǐng.*
       little.Eleven just.now PROG eat waffle
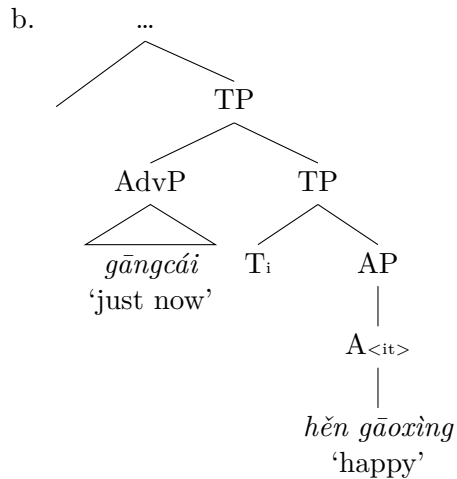   'El was eating waffles just now.'

---

[13]The generic reading is only possible when the temporal adverbial in (46a) is absent.

[14]*i* stands for "interval", *t* stands for "truth value", and *v* stands for "event".

b.

```
                ...
               /  \
              /    \
             /     TP
            /     /  \
          AdvP   /    \
          /\    TP
         /__\  /  \
      gāngcái Tᵢ   AspP
     'just now'   /   \
                 /     \
              Asp<vt,it>  VP
                 |       /  \
                 |      /    \
                zài   V<vt>   NP
                PROG    |      |
                        |      |
                       chī   huáfūbǐng
                      'eat'   'waffle'
```

(47)   Stative VP

    a. 小十一刚才很高兴。
        XiǎoShíyī   gāngcái hěn gāoxìng.
        little.Eleven just.now very happy
        'El was happy just now.'

    b.

```
                ...
               /  \
              /    \
             /     TP
            /     /  \
          AdvP   /    \
          /\    TP
         /__\  /  \
      gāngcái Tᵢ   AP
     'just now'    |
                   |
                 A<it>
                   |
                   |
               hěn gāoxìng
                 'happy'
```

Sun (2014) does not distinguish IL-statives from SL-statives. As we saw in the previous section, Mandarin ILP sentences and SLP sentences present distinctive patterns in terms of temporal structure and

interpretation. Again, ILPs do not co-occur with temporal adverbials, while SLPs do. Furthermore, when uttered in isolation, the subject of an SLP sentence must be alive, while that of an ILP sentence can be either alive or dead. This thesis proposes that the structure in (47b) proposed by Sun (2014) only works for stage-level statives but not for individual-level statives. The structure for individual-level statives is proposed as (48b). In other words, the predicate stands alone, and does not combine with any time interval. The truth value holds forever. Higher projections will be responsible for subject licensing, finiteness, and other discourse-related properties.

(48)   a. 迈克很高。
           Màike hěn gāo.
           Mike   very tall
           'Mike is tall.'

        b.   …

           AP
           |
           A<t>
           |
           hěn gāo
           'tall'
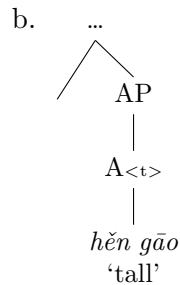
The same structures apply to Mandarin copular sentences. Responding to the question raised at the beginning of this chapter: some copular sentences have TP in the structure while others do not. Specifically, copular sentences with ILPs have no TP while those with SLPs do.

(49)   a. Stage-level

```
            …
          /  \
            TP
          /   \
         T     shiP
             /    \
           shi     PredP
                  /    \
                NP1    Pred′
                       /  \
                     Pred  NP2
```

   b. Individual-level

```
            …
          /  \
            shiP
          /    \
        shi     PredP
               /    \
             NP1    Pred′
                    /  \
                  Pred  NP2
```
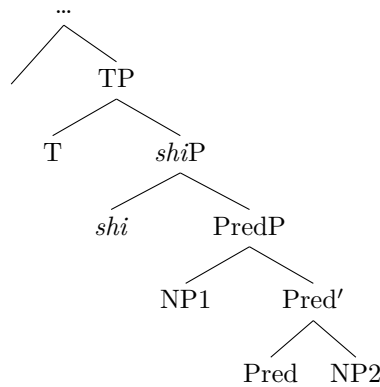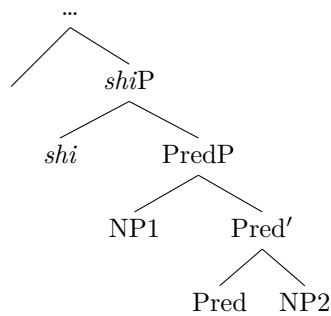
These structures in (48b) and (49b) immediately explain the fact that ILPs do not co-occur with temporal adverbials, assuming temporal adverbials adjoin to TP. As mentioned in the previous sections, when the contexts are appropriate, a sentence with an individual-level predicate can have a stage-level reading. Crucially, when the sentence has a stage-level interpretation, temporal modification is possible. For instance, normally, the colour of one's hair does not change (admittedly, it turns grey at a certain point). *Hēi tóufa* '(having) black hair' can be regarded as an individual-level predicate. In this sense, it cannot be modified by a temporal expression. However, if Mary frequently dyes her hair, *hēi tóufa* '(having) black hair' is a stage-level property for her. On that circumstance, (51) is felicitous. Structurally speaking, when the predicates function as SLPs, TP occurs in the structure, which makes adjunction of a temporal expression possible.

(50) 玛丽是黑头发。
      Mǎlì shì hēi   tóufa.
      Mary COP black hair
      'Mary has black hair.'

(51) 玛丽上周是黑头发。
      Mǎlì shàngzhōu shì hēi   tóufa.
      Mary last.week COP black hair
      'Mary had black hair last week.'

6.3.3 No-tense hypothesis and ILP sentences

The properties of Mandarin ILP and SLP sentences discussed in Section 6.2.2 can also be accounted for by the paradigm presented in Table 6.2.

First, assuming no TP, that ILP sentences have no past/present distinction is expected. In addition, in line with the Kratzer (1995) and Husband's (2012) reasoning, the question as to whether the subjects are alive or dead does not affect the felicity of ILP sentences is also expected. Assuming the tense operator needs to bind an argument, a sentence without TP does not have the tense operator. Hence, nothing in the sentence must be bound by the operator. No restriction is in turn imposed on the lifetime of the subject. In other words, the subject can be either alive or dead.

Moreover, sentences without TP always have a tenseless interpretation. The truth value of the sentences holds forever, including the utterance time, intervals preceding the utterance time, and intervals following the utterance time. Whether the subject is alive or dead is only a function of world knowledge. Whether the speaker knows that or not will not invalidate the assertion. For instance, as pointed out by Musan (1997), if George is dead, (52a) is infelicitous. One may tend to correct the utterance by saying something like "No, he WAS from America. He died last year." Conversely, if George is still alive, uttering (52b) is infelicitous. One may tend to correct it by saying something like "No, he IS from America. He is still alive." In contrast, Mandarin speakers of (53) will never receive similar corrections as the other speaker will not know if s/he knows what has happened to George by simply judging from this sentence. If George recently died, and the other speaker assumes that the person uttering (53) may not be aware of his death, s/he may respond to

(53) by saying something like "Speaking of George, do you know that he died recently?" In short, the superficial past/present distinction of ILP sentences, which results from the living/death contrast, is completely hypothetical in Mandarin. It does not lead to any syntactic or semantic differentiation in the sentences.

(52)   a. George is from America.

        b. George was from America.

(53)   乔治是美国人。
        Qiáozhì shì Měiguórén.
        George COP American
        'George is/was American.'

Also, by assuming no tense in ILP sentences, the coordination of a living and a dead subject (assuming Mike is alive while Barbara has died) or co-occurrence of them in stripping-like constructions do not lead to a problem. For the subject coordination cases (e.g. (54)), there is no TP that needs to mediate between two temporal references. For the stripping constructions (e.g. (55)), there is no TP to copy from the antecedent to the elided clause.

(54)   迈克和芭芭拉都是德州人。
        Màike hé Bābālā dōu shì Dézhōu rén.
        Mike and Barbara all COP Texas people
        'Mike is from Texas, and Barbara was from Texas.'

(55)   迈克是德州人，芭芭拉也是。
        Màike shì Dézhōu rén, Bābālā yě shì.
        Mike COP Texas people Barbara also SHI
        'Mike comes from Texas, and Barbara, too.'

For SLP sentences, the coordination of a living and a dead subject or co-occurrence of them in stripping-like constructions is infelicitous. For sentences like (56), the two states, that is, *Mike being a secondary school student* and *Barbara being a secondary school student*, have different temporal references that cannot be encoded in a single T. Also, in stripping-like constructions, when TP is copied to the second clause, the feature value of T cannot be changed.

(56)   # 迈克和芭芭拉都是中学生。
       #*Màike hé   Bābālā dōu shì zhōngxuésheng.*
        Mike   and Barbara all   COP secondary.school.student

(57)   # 迈克是中学生，芭芭拉也是。
       #*Màike shì zhōngxuésheng,   Bābālā yě shì.*
        Mike   COP secondary.school.student Barbara also SHI

In fact, habitual sentences pattern with ILP sentences. For instance, although the predicates of the sentences in (58) are stage-level, whether Zhangsan's grandfather is alive or dead makes no difference for the truth value of the assertions. The parallel properties of lifetime effects correspond to Chierchia's (1995) proposal that individual-level predicates are inherently generics. Or, following Krifka et al. (1995), individual-level predicate sentences together with generic/habitual sentences as shown in (58) are all taken as characterising sentences.

(58)   a. 张三的爷爷总是很累。
           Zhāngsān de   yéye   zǒngshì hěn lèi.
           Zhangsan SUB grandfather always very exhausted
           'Zhangsan's grandfather is/was always very exhausted.'
       b. 张三的爷爷每个月都去北京。
           Zhāngsān de   yéye   měi-ge   yuè   dōu qù Běijīng.
           Zhangsan SUB grandfather every-CLF month all   go Beijing
           'Zhangsan's grandfather goes/went to Beijing every month.'

6.3.4 Alternative analyses

Capturing the property that Mandarin sentences lack the past/present distinction, Sun (2014) argues for the existence of a covert semantic tense NON-FUT in Mandarin on the basis of observations that some Mandarin sentences can be truthfully uttered when their subjects are the coordination of a dead individual and a living one but contain only one predicate, as in (59a) and (59b). The NON-FUT tense limits the time span for the eventualities to intervals that precede or include the utterance time (Matthewson 2006). Particularly, as opposed to a Past/Non-past tense system, the NON-FUT/FUT tense system does not distinguish the past and present tenses. Hence, the NON-FUT proposal nicely explains why

it is possible in Mandarin to describe plural eventualities with more than one temporal location (past and present) with one single predicate.

(59) a. 牛顿和霍金都对物理感兴趣。 [15]
       Niúdùn hé   Huòjīn   dōu duì wùlǐ   gǎnxìngqu.
       Newton and Hawking all   to   physics interest
       'Both Newton and Hawking are interested in physics.'

     b. 古龙和莫言都抽烟。 [16]
       Gǔ Lóng hé   Mò Yán dōu chōuyān.
       Gu Long and Mo Yan all   smoke
       'Both Gu Long and Mo Yan smoke.'

                                                          (Sun 2014: 205)

The NON-FUT proposal is further supported by the obligatory occurrence of a future modal. For instance, the modal element *huì* 'will' must occur in (60).

(60) 张三明天 *（会）很沮丧。
      *Zhāngsān míngtiān *(huì) hěn jǔsàng.*
      Zhangsan tomorrow will   very frustrated
      'Zhangsan will be frustrated tomorrow.'

Note that it is attested in other languages such as English and French that present-tensed sentences can be used to describe future-oriented events when the events have been scheduled or planned in advance. This phenomenon has been analysed as "futurate" constructions (Copley 2008, 2011). (61) presents the English example of a futurate construction provided in Copley (2008), and (62) presents their Chinese equivalents taken from Sun (2014). Since which team will play at what time is normally scheduled in advance but the result cannot be planned, the (a) sentences are felicitous, while the (b) sentences are infelicitous when uttered in isolation (unless there is match manipulation). As shown by the (c) sentences, a modal element is required.

---

[15] Steven Hawking was still alive in the year 2014, when Sun's work was done.

[16] Both Gu Long and Mo Yan are Chinese novelists. Gu Long died in 1985. Mo Yan is still alive.

(61)   a. The Red Sox play the Yankees tomorrow.

        b. # The Red Sox defeat the Yankees tomorrow.

        c. The Red Sox will defeat the Yankees tomorrow.

                                            (Copley 2008: 261)

(62)   a. 中国队明天比赛。
           Zhōngguó duì   míngtiān bǐsài.
           China   team tomorrow play
           'The Chinese team plays tomorrow.'

        b. # 中国队明天赢。
           #Zhōngguó duì   míngtiān yíng.
             China   team tomorrow win
             Intended: 'The Chinese team will win tomorrow.'

        c. 中国队明天能赢。
           Zhōngguó duì   míngtiān néng yíng.
           China   team tomorrow can   win
           'The Chinese team can win tomorrow.'

                                            (Sun 2014: 218)

However, this NON-FUT proposal is not unproblematic. Examples discussed by Sun (2014) that contain the conjoined subject of a living individual and a dead individual always either have individual-level predicates or are generic sentences. However, when the predicates are stage-level, the sentences with the same subjects turn infelicitous, comparing (63) to (59).

(63)   a. # 古龙和莫言都很沮丧。
           #Gǔlóng hé   Mòyán dōu hěn jǔsàng.
             Gulong and Moyan all   very frustrated.
             Intended: 'Gu Long was frustrated, and Mo Yan is frustrated.'

        b. # 古龙和莫言都去了北京。
           #Gǔlóng hé   Mòyán dōu qù le   Běijīng.
             Gulong and Moyan all   go PFV Beijing
             Intended: 'Both Gu Long and Mo Yan went to Beijing.'

The contrast between the (a) sentences and (b) sentences in (64) and (65) points to a similar problem. Assuming Zhangsan's father is alive

while, unfortunately, his grandpa has passed away, the two (a) sentences are felicitous when uttered in isolation, whereas the (b) sentences are infelicitous, even though the (a) sentences and the (b) sentences have basically the same readings.
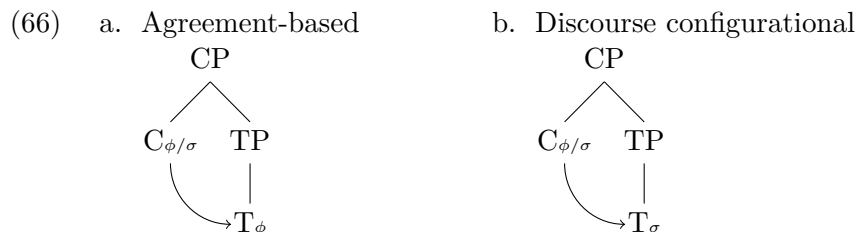
(64)   a. 张三的爸爸和爷爷都是物理老师。
          Zhāngsān de bàba hé yéye   dōu shì wùlǐ   lǎoshī.
          Zhangsan SUB dad and grandpa all COP physics teacher
          'Zhangsan's dad is a physics teacher, and his grandpa was a physics teacher.'

       b. # 张三的爸爸和爷爷都当了物理老师。
          #Zhāngsān de bàba hé yéye   dōu dāng   le   wùlǐ
          Zhangsan SUB dad and grandpa all serve.as PFV physics
          lǎoshī.
          teacher
          Intended: 'Zhangsan's dad is a physics teacher, and his grandpa was a physics teacher.'

(65)   a. 张三的爸爸是物理老师，张三的爷爷也是。
          Zhāngsān de   bàba shì wùlǐ   lǎoshī, Zhāngsān de
          Zhangsan SUB dad COP physics teacher Zhangsan SUB
          yéye   yě shì.
          grandpa too COP
          'Zhangsan's dad is a physics teacher, and his grandpa, too.'

       b. # 张三的爸爸当了物理老师，张三的爷爷也是。
          #Zhāngsān de   bàba dāng   le   wùlǐ   lǎoshī,
          Zhangsan SUB dad serve.as PFV physics teacher
          Zhāngsān de yéye   yě shì.
          Zhangsan SUB grandpa too COP
          Intended: 'Zhangsan's dad is a physics teacher, and his grandpa, too.'

The infelicity of the above sentences is unexpected by the NON-FUT proposal, as the original proposal of NON-FUT tense does not impose restrictions on predicate classes. In fact, the infelicity of (63) and the (b) sentences in (64) and (65) can be ascribed to presupposition failure based on Musan's (1997) pragmatic analysis. Assuming that predicates such as *being frustrated*, *went to Beijing*, or *serving as a physics teacher* must presuppose the existence of the entities denoted

by the subjects, the appearance of dead individuals accordingly yields to the presupposition failure. However, the contrasts in felicity between sentences with different types of predicates as well as the differences observed between languages (for instance, Mandarin and English) are unexpected under Musan's original proposal.

6.4 Supporting evidence: blocking effects of anaphor binding

This section presents a phenomenon which may support the no-TP hypothesis for ILP copular sentences. It starts out from Miyagawa's (2010, 2017) proposal that there are two types of languages, namely, agreement languages and discourse-configurational languages. The former involves phi-feature agreement, while the latter involves topic/focus agreement. Adopting the idea of feature inherence, he further argues that both the phi-feature and the topic/focus feature starts out in the C region and can be inherited by T (or a functional head immediately on top of T). T in an agreement language will inherit the phi-feature (but not the topic/focus feature), whereas T in a discourse-configurational language inherits the topic/focus feature. The simplified schema of the two types of feature inherence is provided in (66).

(66)   a. Agreement-based   b. Discourse configurational
              CP   CP
             /\   /\
        $C_{\phi/\sigma}$ TP $C_{\phi/\sigma}$ TP
                    | |
              →T_{ϕ} →T_{σ}

(Adapted from Miyagawa 2017: 4)

With regards to Mandarin, Miyagawa (2010, 2017) shows evidence for phi-feature agreement in Mandarin and comes to the conclusion that it is an agreement language (like English, unlike Japanese). The main evidence comes from the phenomenon that the blocking effect for the reflexive anaphor *zìjǐ* in long-distance relation is absent with a third

person local subject (e.g. (67)) and can only be found when the local subject is a first- or second-person pronoun, as shown in (68)–(70) (C.-T. J. Huang 1984; C.-C. J. Tang 1989; Pan 2001; Giblin 2015).

(67) 张三 $_i$ 以为李四 $_j$ 对自己 $_{i/j}$ 没信心。
Zhāngsān$_i$ yǐwéi Lǐsì$_j$ duì   zìjǐ$_{i/j}$ méi xìnxīn.
Zhangsan think Lisi facing self   NEG confidence
'Zhangsan$_i$ thought Lisi$_j$ had no confidence in himself$_{i/j}$.'

(68) a. 我 $_i$ 以为李四 $_j$ 对自己 $_{i/j}$ 没信心。
Wǒ$_i$ yǐwéi Lǐsì$_j$ duì   zìjǐ$_{i/j}$ méi xìnxīn.
1SG think Lisi facing self   NEG confidence
'I thought Lisi had no confidence in myself/himself.'

b. 我 $_i$ 以为你 $_j$ 对自己 $_{*i/j}$ 没信心。
Wǒ$_i$ yǐwéi nǐ$_j$ duì   zìjǐ$_{*i/j}$ méi xìnxīn.
1SG think 2SG facing self   NEG confidence
'I thought you had no confidence in *myself/yourself.'

(69) a. 你 $_i$ 觉得李四 $_j$ 对自己 $_{?i/j}$ 没信心吗？
Nǐ$_i$ juéde Lǐsì$_j$ duì   zìjǐ$_{?i/j}$ méi xìnxīn   ma?
2SG think Lisi facing self   NEG confidence Q
'Did you think that Lisi had no confidence in ?yourself/himself.'

b. 你 $_i$ 以为我 $_j$ 对自己 $_{*i/j}$ 没信心吗？
Nǐ$_i$ juéde wǒ$_j$ duì   zìjǐ$_{*i/j}$ méi xìnxīn   ma?
2SG think 1SG facing self   NEG confidence Q
'Did you think that I had no confidence in *yourself/myself.'

(70) 张三 $_i$ 以为我 $_j$/你 $_k$ 对自己 $_{*i/j/k}$ 没信心。
Zhāngsān$_i$ yǐwéi wǒ$_j$/nǐ$_k$ duì   zìjǐ$_{*i/j/k}$ méi xìnxīn.
Zhangsan think 1SG/2SG facing self   NEG confidence
'Zhangsan thought I/you had no confidence in myself/yourself/*himself.'

The contrast between 1st/2nd and 3rd person in triggering the "blocking effect" is ascribed to the [participant] feature in Miyagawa (2017). Assuming that participant agreement has all the features of full agreement while the non-participant agreement does not, the 1st/2nd person pronouns have all the features for agreement while the 3rd person pronouns do not. Miyagawa's (2017) reasoning is based on a

non-movement account for the long-distance binding of *zìjǐ*. It has been observed that long-distance construal of *zìjǐ* is possible within islands(C.-T. J. Huang & Tang 1991; Cole, Hermon & Huang 2006), as shown in (71). Accordingly, Giblin (2015) proposes that the long-distance binding of Mandarin *zìjǐ* does not involve movement of the anaphor. Instead, the anaphor is assumed to be bound by an Agr head, following Progovac (1992).

(71)   a. 张三 $_i$ 说 [如果李四批评自己 $_i$]，他就不去。
             Zhāngsān$_i$ shuō [ruguǒ Lǐsì pīpíng zìjǐ$_i$], tā jiù bù qù.
             Zhangsan say   if   Lisi criticise self   3SG then NEG go
             'Zhangsan said that if Lisi criticised him, then he will not go.'

         b. 张三 $_i$ 不喜欢 [[那些批评自己 $_i$ 的] 人]。
             Zhāngsān bù xǐhuan [[nà-xiē pīpíng zìjǐ de] rén].
             Zhangsan NEG like   DEM-some criticise self SUB person
             'Zhangsan does not like those people who criticised him.'

                                                      (C.-T. J. Huang & Tang 1991: 171)

Miyagawa (2017) adapts the Agr head in Giblin's (2015) analysis of Mandarin long-distance construal of *zìjǐ* 'self' to be T. This T presumably has an anaphoric feature that is checked by a participant feature. Once the participant feature is checked, the T is no longer anaphoric to a higher T. In other words, the "blocking effect" takes place. If the participant feature is not checked, the T remains anaphoric to a higher T. Thus, the anaphor is able to be bound by a high antecedent. As 1st/2nd person has the [participant] feature, feature checking takes place, which blocks T from forming a link with a higher T. In contrast, as 3rd person does not have the [participant] feature, feature checking does not take place, and the blocking effect is absent.

Interestingly, however, copular sentences in Mandarin behave differently from non-copular sentences with respect to the blocking effect. For a group of Mandarin speakers I consulted, the "blocking effect" disappears in (73) to (75). For the remaining speakers, coindexation between *zìjǐ* and the matrix subject in sentences in (73) to (75) is marginally acceptable, as compared to that of (68) to (70), in which the coindexation in completely unacceptable.

(72) 张三 $_i$ 以为李四 $_j$ 是自己 $_{i/j}$ 的代言人。
   Zhāngsān $_i$ yǐwéi Lǐsì $_j$ shì zìjǐ $_{i/j}$ de dàiyánrén.
   Zhangsan think Lisi COP self SUB spokesman
   'Zhangsan $_i$ thought Lisi $_j$ was his $_{i/j}$ own spokesman.'

(73) a. 我 $_i$ 以为李四 $_j$ 是自己 $_{i/j}$ 的代言人。
      Wǒ $_i$ yǐwéi Lǐsì $_j$ shì zìjǐ $_{i/j}$ de dàiyánrén.
      1SG think Lisi COP self SUB spokesman
      'I thought Lisi was my/his own spokesman.'

   b. 我 $_i$ 以为你 $_j$ 是自己 $_{?i/j}$ 的代言人。
      Wǒ $_i$ yǐwéi nǐ $_j$ shì zìjǐ $_{?i/j}$ de dàiyánrén.
      1SG think 2SG COP self SUB spokesman
      'I thought you were ?my/your own spokesman.'

(74) a. 你 $_i$ 觉得李四 $_j$ 是自己 $_{i/j}$ 的代言人吗？
      Nǐ $_i$ juéde Lǐsì $_j$ shì zìjǐ $_{i/j}$ de dàiyánrén ma?
      2SG think Lisi COP self SUB spokesman Q
      'Did you think that Lisi was your/his own spokesman.'

   b. 你 $_i$ 觉得我 $_j$ 是自己 $_{?i/j}$ 的代言人吗？
      Nǐ $_i$ juéde wǒ $_j$ shì zìjǐ $_{?i/j}$ de dàiyánrén ma?
      2SG think 1SG COP self SUB spokesman Q
      'Did you think that I was ?your/his own spokesman.'

(75) 张三 $_i$ 以为我 $_j$/你 $_k$ 是自己 $_{i/j/k}$ 的代言人。
   Zhāngsān $_i$ yǐwéi wǒ $_j$/nǐ $_k$ shì zìjǐ $_{i/j/k}$ de dàiyánrén.
   Zhangsan think 1SG/2SG COP self SUB spokesman
   'Zhangsan thought I/you was/were my/your/his own spokesman.'

   As sentences in (67) to (70) are not minimal pairs with those in (72) to (75), I constructed the following sentences. Interestingly, all the speakers I consulted reported the "blocking effect" this time.

(76) 张三 $_i$ 以为李四 $_j$ 做了自己 $_{i/j}$ 的代言人。
   Zhāngsān $_i$ yǐwéi Lǐsì $_j$ zuò le zìjǐ $_{i/j}$ de dàiyánrén.
   Zhangsan think Lisi serve.as PFV self SUB spokesman
   'Zhangsan $_i$ thought Lisi $_j$ was his $_{i/j}$ own spokesman.'

(77) a. 我 $_i$ 以为李四 $_j$ 做了自己 $_{i/j}$ 的代言人。
   Wǒ$_i$ yǐwéi Lǐsì$_j$ zuò le zìjǐ$_{i/j}$ de dàiyánrén.
   1SG think Lisi serve.as PFV self SUB spokesman
   'I thought Lisi was my/his own spokesman.'

  b. 我 $_i$ 以为你 $_j$ 做了自己 $_{*i/j}$ 的代言人。
   Wǒ$_i$ yǐwéi nǐ$_j$ zuò le zìjǐ$_{*i/j}$ de dàiyánrén.
   1SG think 2SG serve.as PFV self SUB spokesman
   'I thought you were *my/your own spokesman.'

(78) a. 你 $_i$ 觉得李四 $_j$ 做了自己 $_{??i/j}$ 的代言人吗?
   Nǐ$_i$ juéde Lǐsì$_j$ zuò le zìjǐ$_{??i/j}$ de dàiyánrén ma?
   2SG think Lisi serve.as PFV self SUB spokesman Q
   'Did you think that Lisi was ??your/his own spokesman.'

  b. 你 $_i$ 觉得我 $_j$ 是自己 $_{*i/j}$ 的代言人吗?
   Nǐ$_i$ juéde wǒ$_j$ zuò le zìjǐ$_{*i/j}$ de dàiyánrén ma?
   2SG think 1SG serve.as PFV self SUB spokesman Q
   'Did you think that I was *your/his own spokesman.'

(79) 张三 $_i$ 以为我 $_j$/你 $_k$ 做了自己 $_{??i/j/k}$ 的代言人。
  Zhāngsān$_i$ yǐwéi wǒ$_j$/nǐ$_k$ zuò le zìjǐ$_{??i/j/k}$ de
  Zhangsan think 1SG/2SG serve.as PFV self SUB
  dàiyánrén.
  spokesman
  'Zhangsan thought I/you was/were my/your/??his own spokesman.'

If Miyagawa's analysis is on the right track, the contrast with regard to the appearance of the blocking effect between copular sentences and non-copular sentences suggests that copular sentences (e.g. (72) to (75)) do not show phi-feature (participant) agreement. Structurally speaking, there are two possibilities. First, these copular sentences do not have a T in the structure. Consequently, phi-feature agreement cannot take place. Second, T does exist in the copular structure, but this T does not inherit the phi-feature, unlike the T in non-copular sentences. The current study will propose the first option because, as shown below, when a temporal adverbial is used (irrespective of the position of the adverbials), the "blocking effect" is observed.

(80) 张三 $_i$ 以为 < 明天 > 李四 $_j$ < 明天 > 是自己 $_{i/j}$ 的代言人。
Zhāngsān $_i$ yǐwéi <míngtiān> Lǐsì $_j$ <míngtiān> shì zìjǐ $_{i/j}$ de
Zhangsan think tomorrow Lisi tomorrow COP self SUB
dàiyánrén.
spokesman
'Zhangsan $_i$ thought Lisi $_j$ was his $_{i/j}$ own spokesman.'

(81) a. 我 $_i$ 以为 < 明天 > 李四 $_j$ < 明天 > 是自己 $_{i/j}$ 的代言人。
Wǒ $_i$ yǐwéi <míngtiān> Lǐsì $_j$ <míngtiān> shì zìjǐ $_{i/j}$ de
1SG think tomorrow Lisi tomorrow COP self SUB
dàiyánrén.
spokesman
'I thought Lisi was my/his own spokesman.'

b. 我 $_i$ 以为 < 明天 > 你 $_j$ < 明天 > 是自己 $_{*i/j}$ 的代言人。
Wǒ $_i$ yǐwéi <míngtiān> nǐ $_j$ <míngtiān> shì zìjǐ $_{*i/j}$ de
1SG think tomorrow 2SG tomorrow COP self SUB
dàiyánrén.
spokesman
'I thought you were *my/your own spokesman.'

(82) a. 你 $_i$ 觉得 < 明天 > 李四 $_j$ < 明天 > 是自己 $_{*i/j}$ 的代言人吗？
Nǐ $_i$ juéde <míngtiān> Lǐsì $_j$ <míngtiān> shì zìjǐ $_{*i/j}$ de
2SG think tomorrow Lisi tomorrow COP self SUB
dàiyánrén ma?
spokesman Q
'Did you think that Lisi was *your/his own spokesman.'

b. 你 $_i$ 觉得 < 明天 > 我 $_j$ < 明天 > 是自己 $_{*i/j}$ 的代言人吗？
Nǐ $_i$ juéde <míngtiān> wǒ $_j$ <míngtiān> shì zìjǐ $_{*i/j}$ de
2SG think tomorrow 1SG tomorrow COP self SUB
dàiyánrén ma?
spokesman Q
'Did you think that I was *your/my own spokesman.'

(83) 张三 *i* 以为 < 明天 > 我 *j*/你 *k*< 明天 > 是自己 *∗i/j/k* 的代言
人。
*Zhāngsān*ᵢ *yǐwéi* *<míngtiān>* *wǒ*ⱼ/*nǐ*ₖ *<míngtiān>* *shì*
Zhangsan think tomorrow 1SG/2SG tomorrow COP
zìjǐ∗*i/j/k* *de* *dàiyánrén.*
self   SUB spokesman
'Zhangsan thought I/you was/were my/your/*his own spokes-
man.'

Therefore, the contrast in terms of the "blocking effect" in rela-
tion to anaphor binding between copular sentences (without temporal
adverbials) and non-copular sentences, as well as copular sentences modi-
fied by temporal expressions, lends support to the no-TP hypothesis (for
ILPs) this chapter argues for.

6.5 Additional data: temporally underspecified bare clauses

This subsection introduces another type of sentence with *shì* (though
sometimes covert) that possibly contains no T (H. Cheng 2021). These
sentences have bare predication and are felicitous only when describing
planned or scheduled events. Interestingly, the temporal interpretation
of these bare matrix clauses is free. The specification of the temporal rela-
tion regarding the utterance time is a function of background knowledge.
When interpreted in this way, they make reference to arrangements,
schedules, plans, and so forth provided by the context. For instance,
(84) is a conversation about the programme of a performance. Imagine a
dance gala on which three ballet dances are performed by three groups
of dancers at 8 p.m., 9 p.m., and 10 p.m. respectively. Assuming Nancy
dances The Nutcracker at 9 p.m., then Nancy's dancing is a present
event if the conversation takes place at 9 p.m. Similarly, Nancy's dancing
would be a past event if (84) is uttered at 10 p.m.; her dancing would
be a future event if (84) is uttered at 8 p.m. The understanding of the
dancing event as a present event, a past event, or a future event is not
fixed; it varies as the utterance time varies.

(84) A: 南希第几个节目？
    Nánxī dì-jǐ-ge   jiémù?
    Nancy sequence-which.number-CLF performance

    'Which performance is Nancy in?'
  B: 南希跳胡桃夹子。(while handing the programme to A)
    Nánxī tiào   Hútáojiāzi.
    Nancy dance The.Nutcracker
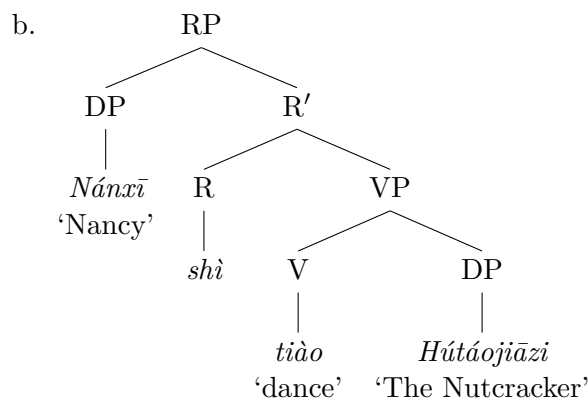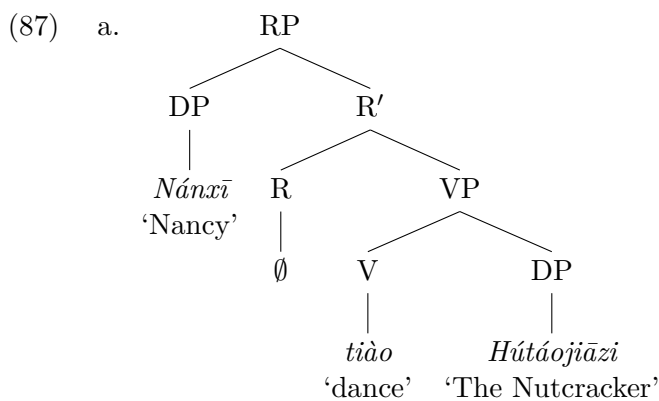
    lit. 'Nancy dance The Nutcracker.'[17]

H. Cheng (2021) argues that these bare clauses are in effect paired relations, pairing up the subject with an activity or constituent related to that activity. (85) is another example with multiple clauses in the sentence, which better exemplifies the nature of pairings. Crucially, these bare clause are used to establish a paired relation between a subject and a VP. For instance, in (85), Nancy pairs with dancing The Nutcracker and El pairs with Swan Lake. No temporal information is encoded in the sentences. That is, when they perform is unknown from the texts and entirely irrelevant.

(85) 南希跳胡桃夹子，小十一跳天鹅湖。
    Nánxī tiào Hútáojiāzi,   xiǎoShíyī   tiào   Tiān'éhú.
    Nancy dance The.Nutcracker little.Eleven dance Swan.Lake
    lit. 'Nancy finish dancing The Nutcracker, El finish dancing Swan Lake.'

In structural terms, I propose that the relation between the subject and the VP is mediated by a copula, which may or may not be overt. As shown in (86), *shì* can occur in the sentences without giving rise to interpretative consequences. The combination of the subject and the predicate does not include any TP or AspP: it is truly bare. In other words, the lack of temporal encoding is interpreted as the absence of TP in the structure, which accounts for the underspecification of temporal interpretation of the event denoted by the bare predicates. The structures for the clauses in (85) and (86) are given in (87).[18]

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[17]"*lit.*" indicates that the relevant verb in the English translation is given without inflection, which suggests that the temporal interpretation is unspecified or in any case not marked.

(86) 南希是跳胡桃夹子，小十一是跳天鹅湖。
  Nánxī shì tiào Hútáojiāzi, xiǎoShíyī shì tiào
  Nancy COP dance The.Nutcracker, little.Eleven COP dance
  Tiān'éhú.
  Swan.Lake
  '*lit.* Nancy dance The Nutcracker, El dance Swan Lake.

(87) a.

```
                 RP
               /    \
             DP      R′
             |      /  \
          Nánxī    R    VP
          'Nancy'  |   /  \
                   ∅  V    DP
                      |     |
                    tiào  Hútáojiāzi
                   'dance' 'The Nutcracker'
```

  b.

```
                 RP
               /    \
             DP      R′
             |      /  \
          Nánxī    R    VP
          'Nancy'  |   /  \
                  shì V    DP
                      |     |
                    tiào  Hútáojiāzi
                   'dance' 'The Nutcracker'
```

6.6 Conclusion

This chapter discussed whether TP exists in Mandarin copular struc-
tures. I propose that on a par with non-copular sentences, copular sen-

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[18]RP is used in H. Cheng (2021) and stands for RelatorP (Den Dikken 2006). RP
can be substituted with *shi*P.

tences with stage-level predicates have TP, while those with individual-level predicates have no TP in the structure. The difference in the structure accounts for a number of distinctive properties in relation to the temporal structure between ILPs and SLPs. In particular, SLP sentences can combine with temporal adverbials, but ILP sentences cannot. When uttered in isolation, SLP sentences can only be felicitous if the subject is alive. No such restriction is imposed on ILP sentences. More crucially, ILPs show no past/present contrast at all.

CHAPTER 7

Conclusion

7.1 General conclusions

This thesis has provided a study of Mandarin copula *shì* 是 and copular sentences containing *shì*, focusing on the most essential properties of the copula and the copular structures in Mandarin. In addition to descriptions of the basic properties of *shì* in Chapter 2, three main issues are addressed in the remaining chapters. First, what is the nature of *shì*? Second, how many types of copular sentences are there in Mandarin? How are they structurally related? Third, how are copular sentences temporally encoded?

The first question is discussed in Chapter 4. In previous studies, copulas in the world's languages have been proposed to instantiate various functional heads, including Pred, *v*/V, T, Fin, and SUBJ. I argue that *shì* cannot instantiate Pred or T. In addition, it does not head VP either. In fact, I propose that the copular structures do not contain VP at all. *Shì* is proposed to head a functional projection that is identical to SUBJP, a projection that has been argued for in Cardinaletti (2004), Rizzi (2015b), and Shlonsky and Rizzi (2018). The current analysis of Mandarin *shì* and the relevant structure is consistent with what has been

proposed for other pronominal copulas such as Hebrew *hu* and Polish *to*. Specifically, these types of copulas occupy a high position in the structure. These pronominal copulas are supposed to lexicalise one of the SUBJ heads in the structure. A spec–head relation between the subject of a copular sentence and the copula is established. Furthermore, a sentence containing only a pronominal copula contains no VP structure. Hence, in addition to their origins, pronominal copulas share semantic and syntactic properties and can thus be analysed in the same way.

The second question is addressed in Chapters 3 and 5. Chapter 3 provides an extensive description of properties of different types of copular sentences in Mandarin. On semantic grounds, a three-way taxonomy of Mandarin copular sentences can be observed: predicational, specificational, and equative. These three types show clear-cut distinctions in terms of types of nominals flanking *shì*. However, equative sentences in Mandarin always require an additional adverb: *jiù* 'exactly'. Furthermore, they present a number of other distinctions from both predicational and specificational copular sentences. For instance, they are independently reversible between the two word orders; both nominals flanking *jiù-shì* are referential and discourse-old; and the postcopular nominal of either order cannot be topicalised. Therefore, in structural terms, equative sentences should be analysed in a way different from the other two types of copular sentences.

Although predicational sentences and specificational sentences also have distinct properties, they are closely related. A unified structural analysis is proposed for them in Chapter 5, which accounts for the following distinctions between the two types of sentences. First, predicational and specificational sentences present different patterns of focus. The postcopular nominals in specificational sentences are always in identificational focus, which is associated with the exhaustive interpretation. Second, *shì* in predicational clauses can be omitted in a number of contexts, but *shì* in specificational clauses is always obligatory. Third, the postcopular nominals in predicational sentences can be topicalised, while those in specificational sentences cannot.

As for the structures of Mandarin copular sentences, this thesis proposes that the two types of sentences share the same base structure. It is an asymmetric structure mediated by a functional head Pred. The two NPs flanking *shì* are merged in a fixed word order. The referent nominal

is the specifier of PredP and the predicative nominal is the complement of the Pred head. *shi*P is on top of PredP. Both of the nominals can raise to [Spec, *shi*P] via A-movement. In addition, a low FocP on top of PredP is proposed for the inverse structure. The derivation of copular sentences is regulated by information-structural rules. Particularly, I argue that predicate inversion is motivated by the identificational focus on NP1. In addition, the precopular nominal must bear the [Top]/[Foc] feature corresponding to that of the *shi* head. Specifically, when the referential NP1 bears the corresponding [Top]/[Foc] feature, it is this NP that moves to [Spec, *shi*P] so the [Top]/[Foc] feature can be checked. The corresponding uninterpretable feature on *shi* as well as the EPP feature can be eliminated. Meanwhile, the predicate NP2 remains put. The spell-out of such a structure is a canonical copular sentence. When the subject NP1 has identificational focus, exhaustivity motivates it to move to the low FocP on top of PredP. As NP1 gets frozen in FocP, the EPP feature of the head of *shi*P requires the predicative NP2 to move to the specifier of *shi*P so as to eliminate the EPP feature. Crucially, as *shi*P creates a criterial configuration, the nominal it attracts must have the same criterial feature as it. In other words, the NP2 must bear the corresponding [Top] or [Foc] feature; otherwise the derivation crashes.

(1) and (2) below present the structures for predicational/canonical and specificational/inverse copular sentences, respectively.
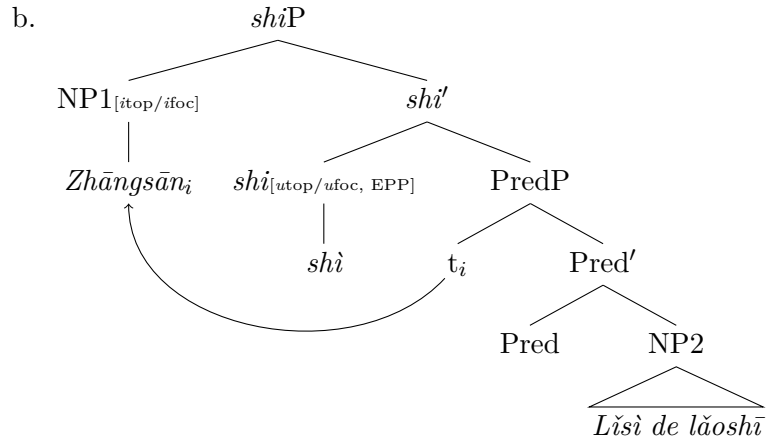
(1) Predicational/Canonical
    a. 张三是李四的老师。
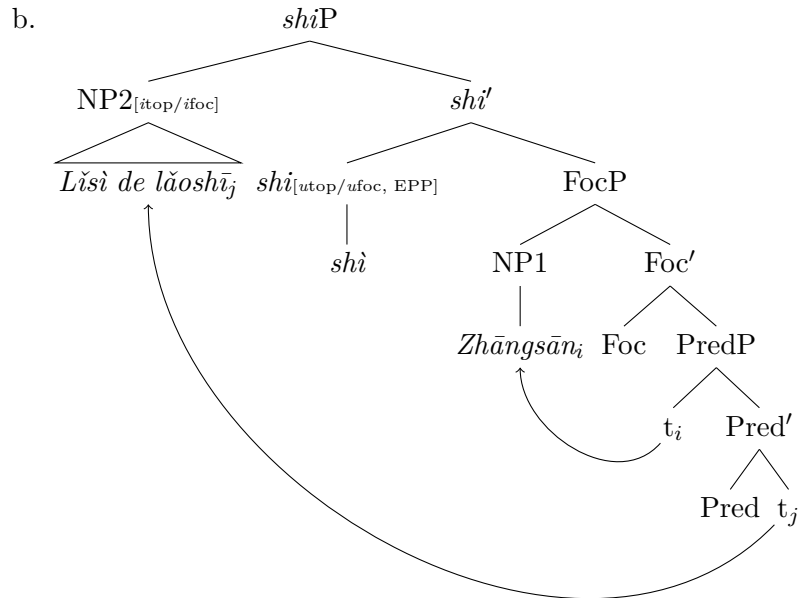   *Zhāngsān shì   Lǐsì de   lǎoshī.*
       Zhangsan COP Lisi SUB teacher
       'Zhangsan is Lisi's teacher.'

b.

```
                              shiP
                   ┌───────────┴───────────┐
              NP1[itop/ifoc]              shi′
                   │              ┌─────────┴─────────┐
              Zhāngsān_i   shi[utop/ufoc, EPP]      PredP
                                   │           ┌──────┴──────┐
                                  shì         t_i          Pred′
                                                      ┌──────┴──────┐
                                                    Pred          NP2
                                                               ╱──────╲
                                                         Lǐsì de lǎoshī
```

(2) Specificational/Inverse

a. 李四的老师是张三。
    Lǐsì de   lǎoshī   shì   Zhāngsān.
    Lisi SUB teacher COP Zhangsan
    'Lisi's teacher is Zhangsan.'

b.

```
                              shiP
                   ┌───────────┴───────────┐
              NP2[itop/ifoc]              shi′
                   │              ┌─────────┴─────────┐
           Lǐsì de lǎoshī_j  shi[utop/ufoc, EPP]     FocP
                                   │           ┌──────┴──────┐
                                  shì         NP1          Foc′
                                              │       ┌──────┴──────┐
                                        Zhāngsān_i  Foc          PredP
                                                           ┌──────┴──────┐
                                                          t_i          Pred′
                                                                  ┌──────┴──────┐
                                                                Pred           t_j
```

The third question is discussed in Chapter 6. In Mandarin, copular sentences and non-copular sentences do show individual-level and stage-level distinction, according to the diagnostics defined in this chapter. Crucially, ILP sentences and SLP sentences behave differently in terms of temporal interpretation. For one thing, SLPs can combine with temporal adverbials, while ILPs cannot. Moreover, when uttered in isolation, the subject of an SLP sentence (without a temporal expression) must be alive. In contrast, the subject of an ILP sentence can be either alive or dead. To account for this phenomenon, I propose that Mandarin ILP sentences do not have TP in the structure, in contrast to SLP sentences, which do.

7.2 Remaining questions and future research

In the course of working on the three core issues concerning Mandarin copula *shì* and copular sentences, many interesting questions arise. As solving all these questions is a task beyond the scope of a single thesis, they are left for future research.

7.2.1 Other copular elements in Chinese

Since this thesis focuses on *shì* and copular sentences containing *shì*, the other copular elements in Mandarin and other Chinese varieties are not touched upon. As mentioned in the introduction, Mandarin does have a number of other copulas, such as *wéi* 为 and *nǎi* 乃. Historically, these copulas were used frequently, but their use in contemporary Mandarin is constrained. For one thing, they are confined to formal contexts. Furthermore, they seem to be restricted to only one type of copular sentence. *Wéi* seems to occur only in specificational copular sentences, as in (3a), while *nǎi* seems to occur only in predicational sentences, as in (3b). At least two issues are worth exploring. First, were they restricted to the same distribution diachronically? Second, as *wéi* originates from a verb and *nǎi* originates from an adverb, how did they behave differently from pronominal copulas such as *shì* (when they were still frequently used)? Additionally, how did they pattern with other verb copulas or those with other origins?

(3) a. 最高价为 3000 元。
     Zuì gāo jià   wéi 3000 yuán.
     most high price COP 3000 RMB
     'The highest price is 3,000 RMB.'

   b. 此乃天上仙境也。
     Cǐ   nǎi tiānshàng xiānjìng yě.
     DEM COP sky   fairyland SFP
     'This is a fairyland!'

With regards to copulas in other Chinese varieties, H. Zhang and Deng (2011) note that *hai* in Cantonese and its variants differ from *shì* in Mandarin in terms of empty category licensing. They also ascribe the differences to the fact that *hai* is a verbal copula while *shì* is a pronominal copula. I am also interested in the distribution of *hai* in comparison to that of *shì* in relation to what has been discussed in Chapter 4.

In addition to copulas, research on other elements associated with the predication relation is also fascinating. For instance, Mandarin *zuò* 作 frequently occurs in small clause contexts, exemplified in (4). It originates from a verb meaning 'do'.[1] However, unlike *wéi*, *zuò* has never developed into a copula. In addition, *zuò* can combine with verbs such as *dāng* 'consider', *kàn* 'look, see', *xiě* 'write', and *chàng* 'sing'. At least three questions arise. First, how should *zuò* be analysed in both cases? Second, why *zuò* is obligatory in (4), and what role does it play? Third, does *zuò* in (5) also mediate a predication relation?

(4) 我们选迈克作组长。
    Wǒmen xuǎn Màike zuò zǔzhǎng.
    1PL   elect Mike as team.leader
    'We elected Mike team leader.'

(5) 我把迈克当作组长了。
    Wǒ bǎ Màike dāng-zuò   zǔzhǎng   le.
    1SG BA Mike consider-as team.leader PFV
    'I (mistakenly) took Mike as the team leader.'

---

[1]There are two characters pronounced as *zuò* with the interpretation of 'do' in Mandarin, namely, 做 and 作. 做 is mentioned a few times in Chapter 3 and Chapter 4 along with another verb, *dāng*. It cannot occur in contexts like (4) and (5). Conversely, the word 作 discussed here cannot function as the matrix verb.

7.2.2 Copular and non-copular differences

In the literature on Chinese syntax, copular sentences have long been overlooked. In fact, copular sentences may differ drastically from the non-copular sentences. Assuming copular sentences have distinctive structures from non-copular sentences in Mandarin, the two types of sentences may have distinct syntactic distributions. For instance, a number of behaviours distinct between copular and non-copular sentences have been reported in the previous chapters. I would like to highlight one case where a contrast is observed between copular and non-copular sentences.

As mentioned in a footnote in Chapter 3 (fn. 13 on page 65), alternative questions are actually blocked at the precopular position except when they are echo questions. The relevant examples are repeated here as (6).

(6) a. */?? 张三还是李四是你的老师?
     */??*Zhāngsān háishì Lǐsì shì nǐ de lǎoshī*?
     Zhangsan or   Lisi COP 2SG SUB teacher
     Intended: 'Is Zhangsan or Lisi your teacher?'

   b. * 你的老师还是你的学生是张三?
     **Nǐ de lǎoshī háishì nǐ de xuéshēng shì Zhāngsān*?
     2SG SUB teacher or   2SG SUB student COP Zhangsan
     Intended: 'Is Zhangsan your teacher or your student?'

In non-copular sentences, however, alternative questions about the subjects are acceptable.[2]

(7) 张三还是李四要去北京?
   Zhāngsān háishì Lǐsì yào qù Běijīng?
   Zhangsan or   Lisi will go Beijing
   'Will Zhangsan or Lisi go to Beijing?'

I close my thesis with this puzzle that associates with both copular/non-copular distinctions and predicational/specificational distinctions. I leave my mind open for more puzzles.

---

[2]Shao (1994) points out that the alternative questions about the subjects in non-copular sentences are not always good. The bottom line here is that some non-copular sentences can serve as good alternative questions about the subjects. In contrast, few predicational copular sentences and no specificational copular sentence can do so.

It is well-known that in Mandarin copula *shì* is only used in sentences such as (1) where the predicate is nominal (e.g. Pustet 2003). It is not allowed when the predicate is an adjective (see the ungrammaticality of (2)).

(1) 张三是老师。
   Zhāngsān shì   lǎoshī.
   Zhangsan COP teacher
   'Zhangsan is a teacher.'

(2) *张三是高。
   **Zhāngsān shì   gāo.*
   Zhangsan COP tall
   Intended: 'Zhangsan is tall.'

When nothing intervenes between the subject and a simple adjective, the sentence is either 'incomplete/ungrammatical' when the adjective is non-gradable (e.g. (3)) or can only have the comparative reading when the adjective is gradable (e.g. (4a)). As for sentences with gradable adjectives, it has been widely accepted that if the positive interpretation is intended, a degree adverb *hěn* is obligatory (e.g. (4b)) and the meaning

of this *hěn* is bleached if not pronounced with an extra stress.

(3)   * 这个答案错。
        *Zhè-ge   dá'àn   cuò.
        DEM-CLF answer wrong
        Intended: 'This answer is wrong.'

(4)   a. 张三高。
           Zhāngsān gāo.
           Zhangsan tall
           'Zhangasan is taller (than someone known from the context).'

        b. 张三很高。
           Zhāngsān hěn gāo.
           Zhangsan very tall
           'Zhangsan is tall.'   (Sybesma 1999: 27)

As observed in Fang (2017, 2018), the *hěn*-form like (4b) is only the default form for relative adjectives (i.e. adjectives corresponding to open scales). Absolute adjectives (i.e. adjectives corresponding to closed scales) in fact allow the use of *shì* when an extra sentence final *de* is also added (e.g. (5b)). Additionally, the *shì ... de* form is also the only predicative form of non-gradable adjectives (6a), since Mandarin non-gradable adjectives are incompatible with *hěn* (i.e. (6b)).[1]

(5)   a. 这个杯子是满的。
           Zhè-ge   bēizi shì   mǎn de.
           DEM-CLF cup COP full   DE
           'This cup is full.'

        b. 这个杯子很满。
           Zhè-ge   bēizi hěn mǎn.
           DEM-CLF cup very full
           'This cup is very full.'

(6)   a. 地球是圆形的。   (Fang 2018: 412)
           Dìqiú shì yuánxíng   de.
           Earth COP round.shape DE
           'The Earth is round.'

---

[1]The classification of adjectives follows Kennedy and McNally (2005).

b. * 地球很圆形。
Dìqiú hěn yuánxíng.
Earth very round.shape
Intended: 'The Earth is round.'

Sentences in (7)-(9) below present the combination of three subcategories of absolute adjectives and three different ways of predication. All (a) sentences are formed by adjectives with upper-closed scales; (b) sentences are formed by adjectives with lower-closed scales; and (c) sentences are formed by adjectives with totally-closed scales (Kennedy & McNally 2005). In (7), bare adjectives are the predicates and they have comparative interpretations. In (8), adjectives are combined with *hěn* and they have positive interpretations. Unlike (4b), *hěn* here actually has the intensify degree meaning. Lastly, in (9), adjectives are combined with *shì ...de* construction (which may be viewed as a copula *shì* plus a *de*), and they have positive interpretations.

(7) a. 这条路直。
Zhè-tiáo lù zhí.
DEM-CLF road straight
'This road is more straight.'

b. 这双袜子干。
Zhè-shuāng wàzi gān.
DEM-CLF socks dry
'This pair of socks is drier.'

c. 这个杯子满。
Zhè-ge bēizi mǎn.
DEM-CLF cup full
'This cup is fuller.'

(8) a. 这条路很直。
Zhè-tiáo lù hěn zhí.
DEM-CLF road very straight
'This road is very straight.'

b. 这双袜子很干。
Zhè-shuāng wàzi hěn gān.
DEM-CLF socks very dry
'This pair of socks is very dry.'

    c. 这个杯子很满。
     Zhè-ge   bēizi hěn mǎn.
     DEM-CLF cup very full
     'This cup is very full.'

(9)   a. 这条路是直的。
     Zhè-tiáo lù   shì zhí   de.
     DEM-CLF road COP straight DE
     'This road is straight.'

    b. 这双袜子是干的。
     Zhè-shuāng wàzi shì gān de.
     DEM-CLF   socks COP dry DE
     'This pair of socks is dry.'

    c. 这个杯子是满的。
     Zhè-ge   bēizi shì mǎn de.
     DEM-CLF cup COP full   DE
     'This cup is full.'

It is worth pointing out that what we have seen in the previous examples are all simple adjectives, according to Zhu's (1982) simple-complex adjective dichotomy. 'Simple' is defined in terms of the form that they are usually monosyllabic or disyllabic; whereas complex adjectives are all multi-syllabic. Complex adjectives are generally formed by reduplication of simple adjectives or the combination of modifiers and simple adjectives. Semantically speaking, simple adjectives are regarded as adjectives introducing inherent properties while complex adjectives describe the states. Crucially, one typical syntactic property of complex adjectives is the incompatibility with degree adverbs such as *hěn* (e.g. (10)), which is ascribed to their inherent degree meaning.

(10) a. * 这条路很笔直 (的)。
      *Zhè-tiáo lù   hěn bǐzhí   (de).
      DEM-CLF road very pen.straight DE
      Intended: 'This road is as straight as a pen.'

    b. * 这双袜子很干干 (的)。
      *Zhè-shuāng wàzi hěn gāngān (de).
      DEM-CLF   socks very dry-RED DE
      Intended: 'This pair of socks is very dry.'

c. * 这个杯子很满满 (的)。
     *Zhè-ge   bēizi hěn mǎnmǎn (de).
      DEM-CLF cup very full-RED DE
      Intended: 'This cup is very full.'

Complex adjectives are included here because they introduce the third type of predicative form of adjectives which only *de* is used, as shown in (11a). Note that *de* in (11) is obligatory while *shì* is not needed. In fact, the occurrence of *shì* in (12) changes the meaning (or perhaps the information structure) of the sentences.

(11)   a. 这条路笔直 *(的)。
          *Zhè-tiáo lù   bǐzhí   *(de).
           DEM-CLF road pen.straight DE
           'This road is as straight as a pen.'

       b. 这双袜子干干 *(的)。
          *Zhè-shuāng wàzi gāngān   *(de).
           DEM-CLF   socks dry-RED DE
           'This pair of socks is very dry.'

       c. 这个杯子满满 *(的)。
          *Zhè-ge   bēizi mǎnmǎn *(de).
           DEM-CLF cup full-RED DE
           'This cup is full.'

(12)   a. 这条路 (是) 笔直 *(的)。
          *Zhè-tiáo lù   (shì) bǐzhí   *(de).
           DEM-CLF road COP pen.straight DE
           'This road is as straight as a pen.'

       b. 这双袜子 (是) 干干 *(的)。
          *Zhè-shuāng wàzi (shì) gāngān   *(de).
           DEM-CLF   socks COP dry-RED DE
           'This pair of socks is very dry.'

       c. 这个杯子 (是) 满满 *(的)。
          *Zhè-ge   bēizi (shì) mǎnmǎn *(de).
           DEM-CLF cup COP full-RED DE
           'This cup is full.'

In sum, there are three predicative forms of adjectives in Mandarin, illustrated in the table below. Adding *hěn* is one way which is crucial to

relative adjectives. The use of *shì* (with the combination of *de*) is also crucial to non-gradable adjectives as it is actually the only predicative form for this type of adjectives. Furthermore, the use of *de* is especially pivot to non-gradable complex adjectives.

Table A.1: Types of adjectives and their predicative forms

				hěn+A	A+*de*	*shì*+A+*de*
non-gradable	simple			-	-	+
	complex			-	+	+
gradable	simple	absolute	upper	+	-	+
			lower	+	-	+
			totally	+	-	+
		relative		+	-	-

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English Summary

This dissertation is devoted to the Mandarin copula *shì* 是 and copular structures containing it. It concentrates on three core issues that are fundamental to predication and copular structures: (a) the nature of *shì*; (b) types of copular sentences in Mandarin and their structural relation; and (c) the temporal structure of copular sentences. The book consists of five main chapters.

The first two main chapters provides a comprehensive description of the use of *shì* and the properties of different types of copular sentences. Chapter 2 delineates the basic uses of *shì* in copular and non-copular sentences. Chapter 3 investigates the taxotomy of Mandarin copular sentences, based on a thorough examination of their syntactic and semantic properties. On semantic grounds, a three-way taxonomy of Mandarin copular sentences can be observed: predicational, specificational, and equative. These three types show clear-cut distinctions in terms of the semantic types of the nominals flanking *shì*. In structural terms, this dissertation proposes that predicational and specificational copular sentences are structurally related, while equative sentences should be analysed differently, as they present a number of crucial distinctions from the other two types of sentences. Particularly, Mandarin equative sentences always require an additional adverb, *jiù* 'exactly', which is not necessary in predicational or specificational sentences. Properties of predicational and specificational copular sentences are also investigated in Chapter 3.

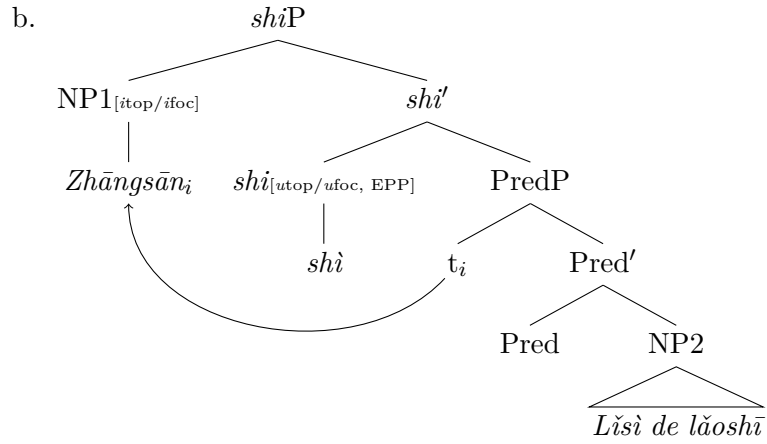The remaining three main chapters provide the structural analysis

of the abovementioned three core issues, respectively. On the basis of compatibility tests of *shì* with aspectual markers and modality and other tests, Chapter 4 argues that *shì* instantiates neither Pred, *v*/V, nor T. In line with the analysis of pronominal copular elements in other languages, it is proposed that *shì* also heads one of the SUBJPs, a functional projection that has been argued for in Cardinaletti (2004), Rizzi (2015), and Shlonsky and Rizzi (2018). In addition, the copular structure contains no VP.

Chapter 5 proposes a unified structure analysis for predicational and specificational copular sentences. The two types of sentences share the same base structure: an asymmetric structure mediated by a functional head Pred. The two NPs flanking *shì* are merged in a fixed word order: the referent nominal is the specifier of PredP, and the predicative nominal is the complement of the Pred head. The *shi*P is on top of PredP. Both of the nominals can raise to [Spec, *shi*P] via A-movement. The derivation of these two types of copular sentences is regulated by information-structural rules. Particularly, a low FocP on top of PredP is additionally proposed for the specificational structure. It is argued that predicate inversion resulting in the specificational structure is motivated by the identificational focus on the referent NP. With respect to the derivation, in the spirit of Mikkelsen (2005), this dissertation proposes that the precopular nominal must bear the [Top]/[Foc] feature corresponding to that of the *shi* head. The closest NP bearing the corresponding feature moves to [Spec, *shi*P] so that the uninterpretable feature on *shi* as well as the EPP feature can be eliminated. When the referent NP moves to the subject position, a predicational/canonical structure is derived; when the predicate NP moves to the subject position (while the referent NP moves to the low FocP), a specificational/inverse structure is derived.

(1) and (2) below present the structures for predicational/canonical and specificational/inverse copular sentences, respectively.
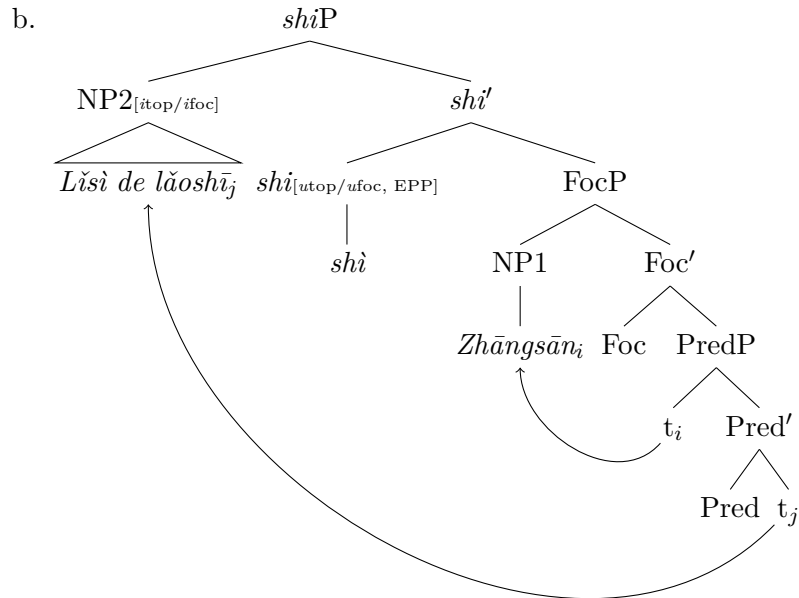
(1)   Predicational/Canonical
    a. 张三是李四的老师。
      Zhāngsān shì   Lǐsì de   lǎoshī.
      Zhangsan COP Lisi SUB teacher
      'Zhangsan is Lisi's teacher.'

b.

shiP
- NP1$_{[itop/ifoc]}$
  - $Zhāngsān_i$
- shi'
  - $shi_{[utop/ufoc, \text{EPP}]}$
    - $shì$
  - PredP
    - t_i
    - Pred$'$
      - Pred
      - NP2
        - $Lǐsì\ de\ lǎoshī$

(2) Specificational/Inverse

a. 李四的老师是张三。
   Lǐsì de   lǎoshī shì Zhāngsān.
   Lisi SUB teacher COP Zhangsan
   'Lisi's teacher is Zhangsan.'

b.

shiP
- NP2$_{[itop/ifoc]}$
  - $Lǐsì\ de\ lǎoshī_j$
- shi'
  - $shi_{[utop/ufoc, \text{EPP}]}$
    - $shì$
  - FocP
    - NP1
      - $Zhāngsān_i$
    - Foc$'$
      - Foc
      - PredP
        - t_i
        - Pred$'$
          - Pred
          - t_j

Chapter 6 investigates the question as to whether the copular structures contain a TP on top of the *shi*P. It is first shown that on a par with non-copular sentences, Mandarin copular sentences also show an individual-level vs stage-level distinction, according to the diagnostics defined in this chapter. The properties of the predicate NPs are decisive. This chapter also shows that, for both copular and non-copular sentences in Mandarin, sentences with a stage-level predicate (SLP) can combine with temporal adverbials, while sentences with an individual-level predicate (ILP) cannot. Moreover, when uttered in isolation, the human subject of an SLP sentence (without a temporal expression) must be alive. In contrast, the subject of an ILP sentence can be either alive or dead. To account for this phenomenon, it is proposed that Mandarin ILP sentences do not have a TP in the structure, in contrast to SLP sentences, which do.

Samenvatting in het Nederlands

Dit proefschrift gaat over het Mandarijnse koppelwerkwoord *shì* 是 en koppelwerkwoordstructuren met *shì*. De nadruk ligt op drie centrale vraagstukken die fundamenteel zijn voor predicatie en voor copulatieve structuren: (a) de aard van *shì*; (b) typen koppelwerkwoordzinnen en hun structuur; en (c) de temporele structuur van koppelwerkwoordzinnen. Het proefschrift bestaat uit vijf inhoudelijke hoofdstukken.

De eerste twee inhoudelijke hoofdstukken geven een omvattende beschrijving van het gebruik van *shì* en de eigenschappen van verschillende typen koppelwerkwoordzinnen. Hoofdstuk 2 beschrijft de belangrijkste gebruikswijzen van *shì* in copulatieve en niet-copulatieve zinnen. Hoofdstuk 3 onderzoekt de taxonomie van koppelwerkwoordzinnen in het Mandarijn, gebaseerd op een grondige analyse van hun syntactische en semantische eigenschappen. Op semantische gronden wordt een drieledige taxonomie opgesteld: predicatief, specificerend en gelijkstellend. Deze drie typen onderscheiden zich duidelijk in de semantiek van de naamwoorden die met *shì* gepaard gaan. Wat hun syntaxis betreft stelt dit proefschrift voor dat predicatieve en specificerende koppelwerkwoordzinnen structureel verwant zijn, terwijl gelijkstellende zinnen een andere analyse moeten krijgen. Gelijkstellende zinnen vertonen namelijk een aantal cruciale verschillen met de andere twee zinstypen. Er moet in Mandarijnse gelijkstellende zinnen namelijk altijd een extra bijwoord *jiù* 'precies' staan, wat niet nodig is voor predicatieve of specificerende zinnen. De eigenschappen van predicatieve en specificerende koppelwerkwoordzinnen worden in hoofdstuk 3 ook onderzocht.

De laatste drie hoofdstukken geven een syntactische analyse van de eerdergenoemde drie centrale vraagstukken. Op grond van acceptabiliteitstesten van *shì* met onder andere aspect- en modaliteitsmarkeerders, pleit Hoofdstuk 4 ervoor dat het Mandarijnse koppelwerkwoord shì geen Pred, v/V of T instantieert. In navolging van analyses van pronominale copulatieve elementen in andere talen stelt dit proefschrift voor dat shì het hoofd is van SUBJP, een functionele projectie die werd voorgesteld en verder bediscussieerd in Cardinaletti (2004), Rizzi (2015) en Shlonsky en Rizzi (2018). Daarnaast bevat de copulatieve structuur geen VP.

Hoofdstuk 5 stelt één syntactische analyse van predicatieve en specificerende zinnen met een koppelwerkwoord voor. Deze twee zinstypen delen dezelfde basisstructuur: een asymmetrische structuur met in het midden een functioneel hoofd Pred. De twee NPs waarmee *shì* gepaard gaat worden binnen een vaste woordvolgorde gemerged –het verwijzende naamwoord is de specificeerder van PredP en het predicatieve naamwoord is het complement van het Pred-hoofd. shiP bevindt zich boven PredP. Beide naamwoorden kunnen opklimmen naar [Spec, *shi*P] door A-verplaatsing. De afleiding van deze twee typen copulatieve zinnen wordt bepaald door regels die betrekking hebben op informatiestructuur. Specifiek wordt voor de specificerende structuur een bijkomende lage FocP voorgesteld die zich boven PredP bevindt. Daarbij wordt betoogd dat predicatieve inversie wordt gemotiveerd door de identificatiefocus van de verwijzende NP. Wat de derivatie betreft stelt dit proefschrift in navolging van Mikkelsen (2005) voor dat het naamwoord dat aan het koppelwerkwoord voorafgaat, het [Top]/[Foc]-kenmerk moet dragen dat met het *shi*-hoofd overeenstemt. Als de verwijzende NP verplaatst naar subjectpositie, levert dat een predicatieve structuur op in rechte volgorde; als de predicatieve NP naar subjectpositie verplaatst (en de verwijzende NP naar de lage FocP), levert dat een specificerende structuur op met inversie.

(1) en (2) hieronder laten de structuren zien voor respectievelijk predicatieve koppelwerkwoordzinnen in rechte volgorde en specificerende koppelwerkwoordzinnen met inversie.
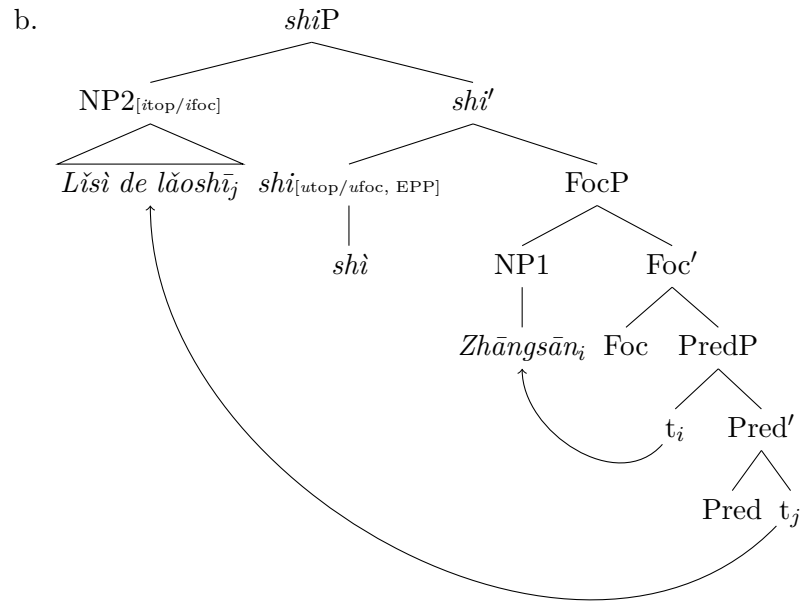
(1) Predicatief/Rechte volgorde

  a. 张三是李四的老师。
  Zhāngsān shì   Lǐsì de   lǎoshī.
  Zhangsan COP Lisi SUB teacher
  'Zhangsan is Lisi's leraar.'

  b.
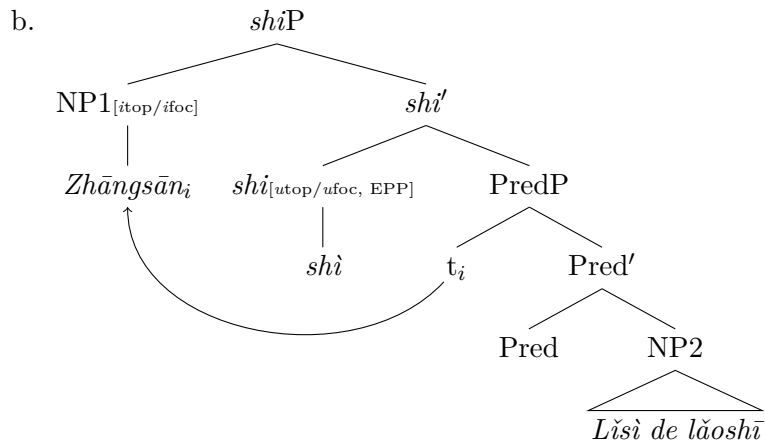
(2) Predicatief/Inversievolgorde

  a. 李四的老师是张三。
  Lǐsì de   lǎoshī   shì   Zhāngsān.
  Lisi SUB teacher COP Zhangsan
  'Lisi's leraar is Zhangsan.'

b.

$$\text{shiP}$$

NP2$_{[i\text{top}/i\text{foc}]}$ $\textit{shi}'$

$\textit{Lĭsì de lăoshī}_j$ $shi_{[u\text{top}/u\text{foc, EPP}]}$ FocP

$\textit{shì}$ NP1   Foc$'$

$\textit{Zhāngsān}_i$ Foc   PredP

t$_i$ Pred$'$

Pred   t$_j$

Hoofdstuk 6 onderzoekt de vraag of de copulatieve structuren TP bovenop shiP bevatten. Dit hoofdstuk laat eerst zien dat Mandarijnse copulatieve zinnen, net als niet-copulatieve zinnen, een onderscheid kennen tussen individual-level en stage-level, althans volgens de diagnostieken die in dit hoofdstuk worden beschreven. De eigenschappen van predicatieve NPs zijn hierbij doorslaggevend. Dit hoofdstuk laat ook zien dat in zowel copulatieve en niet-copulatieve zinnen in het Mandarijn, stage-level predicaten met temporele bijwoorden kunnen samengaan, maar individual-level predicaten niet. Bovendien moet in een SLP-zin (zonder temporele uitdrukking), wanneer deze in isolatie wordt beschouwd, het onderwerp in leven zijn. Het onderwerp van een ILP-zin kan daarentegen levend of dood zijn. Om dit fenomeen te verklaren, stelt dit proefschrift voor dat ILP-zinnen in het Mandarijn in hun structuur geen TP bevatten, in tegenstelling tot SLP-zinnen.

中文摘要

　　本论文讨论现代汉语普通话系词 "是" 和含 "是" 字系词句的语法特点及句法结构。论文首先对系词 "是" 的使用情况及系词句的句法语义属性进行了全面细致地描写，而后重点分析了与系词结构相关的三个核心问题：(a) "是" 的句法属性及其在句法结构中的位置；(b) 现代汉语系词句的分类及不同类型系词句间的结构关系；(c) 系词句的时间表达结构。全文包含五个主要章节。

　　论文第二章与第三章对含 "是" 字语句的用法及含 "是" 字系词句语法语义特点做了详尽的描写。第二章主要介绍 "是" 字系词句的基本特征，并梳理了 "是" 在现代汉语系词句及非系词句中的使用情况。第三章讨论现代汉语系词句的分类状况。基于 "是" 字两侧名词的语义类型及其他句法语义特性，现代汉语系词句可分为三类：谓语型 (predicational)，指示型 (specificationl)，等同型 (equative)。其中，谓语型和指示型系词句有紧密的结构关系，而等同型系词句与此二者具有不同的句法语义表现，如等同型系词句中系词 "是" 必须与副词 "就" 连用。故本文认为等同型系词句应采取不同的结构分析方式。

　　论文第四、五、六章分别讨论了上述三个问题。第四章首先通过与句中其他成分的共现情况及其他相关句法测试结果论证系词 "是" 不是 PredP, v/VP, TP 的中心语。本文将 "是" 字分析为 SUBJP 的中心语，处于句法结构中较高的位置；同时，本文主张 "是" 字系词句中不含 VP 结构。这一分析与前人文献中对其他语言中含代词性系词 (pronominal copula) 结构的分析一致，如对希伯来语 *hu* 和波兰语 *to* 的分析。
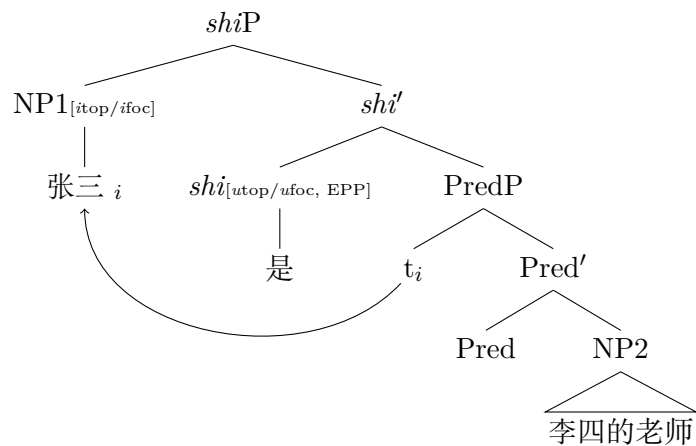
　　第五章重点讨论谓语型和指示型系词句的句法结构。本文提出谓语型系词句和指示型系词句具有统一的基础结构，二者间的差异来源于句法推导过程的区别。两类系词句的基础结构都是一个非对称性的谓语核

心结构 (predicational core)，有指名词 (referent NP) 生成于 PredP 的指示语位置，谓语名词 (predicate NP) 生成于 PredP 的补足语位置，*shi*P 投射于 PredP 之上。两类系词句的生成过程均受信息结构制约，有指名词或谓语名词移动到 *shi*P 的指示语位置完成 [Top]/[Foc] 和 EPP 的特征核查。当有指名词发生移位，最终生成谓语型系词句；当谓语名词发生移位，最终生成指示型系词句。在指示型系词句的生成过程中，带有指示型焦点 (identificational focus) 的有指名词从 PredP 补足语位置移动到额外的低 FocP 中。两类系词句的生成过程详见图示 (1) 和 (2)。
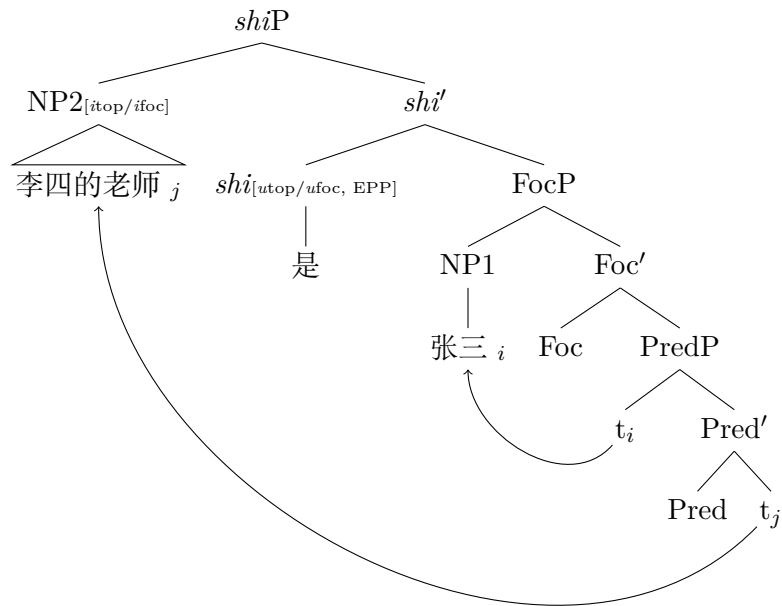
(1)　谓语型（Predicational/Canonical）
　　a. 张三是李四的老师。

　　b.

(2) 指示型（Specificational/Inverse）
　　a. 李四的老师是张三。

b.

shiP
— NP2$_{[i\text{top}/i\text{foc}]}$
　　李四的老师$_j$
— shi'
　　$shi_{[u\text{top}/u\text{foc, EPP}]}$
　　　是
　　FocP
　　　NP1
　　　　张三$_i$
　　　Foc′
　　　　Foc
　　　　PredP
　　　　　t$_i$
　　　　　Pred′
　　　　　　Pred　t$_j$

第六章讨论系词结构中是否含有 TP。本文指出现代汉语系词句与非系词句一样，也区分含个体性谓语 (individual-level predicate) 系词句和含阶段性谓语 (stage-level predicate) 系词句两类。含个体性谓语系词句不能与时间副词共现，且主语的存活状态不影响句子在孤立语境中的合理性。相反，含阶段性谓语系词句可以与时间副词共现，在孤立语境中句子的合理性受主语存活状态影响。因此，本文认为含个体性谓语系词句结构中不含 TP，含阶段性谓语系词句结构中包含 TP。论文进一步指出这一分析同样适用汉语非系词句中，提出现代汉语"个体性谓语句不含 TP"的假说。

Curriculum Vitae

Hang Cheng (程航) was born in Ma'anshan, Anhui province, in the People's Republic of China in 1990. She received her Bachelor's degree in Teaching Chinese as a Second Language from Beijing Language and Culture University in 2012. She continued her Master program in Linguistics and Applied Linguistics at the same university, specialising in second language acquisition. After obtaining her first Master degree in 2015, she moved to Leiden, the Netherlands, and pursued a second MA degree (*cum laude*), specialising in Chinese syntax. Hang was a PhD student at Leiden University Centre for Linguistics between 2016 and 2021, funded by the China Scholarship Council (CSC). The dissertation is the result of her research in this period.