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All structures great and small: on copular sentences with shì in Mandarin

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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.

¹In 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

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 predication 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. | <i>Predicational</i> |
| | b. My best friend is Dr. Jekyll. | <i>Specificational</i> |
| | c. That is Dr. Jekyll. | <i>Identificational</i> |
| | d. Dr. Jekyll is Mr. Hyde. | <i>Identity</i> |
- (Den Dikken & O'Neill 2017: 3)
- (3) A pyramid is what the Egyptians built to bury their pharaohs 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 morpho-syntactic properties. The semantic-based criteria mainly concern referentiality, subject and predicate, and information structure. The morpho-syntactic-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。
<i>Zhāngsān shì Lǐsì de lǎoshī.</i>
Zhangsan COP Lisi SUB teacher
'Zhangsan is Lisi's teacher.' | <i>Predicational</i> |
| | b. | 李四的老师是张三。
<i>Lǐsì de lǎoshī shì Zhāngsān.</i>
Lisi SUB teacher COP Zhangsan
'Lisi's teacher is Zhangsan.' | <i>Specificational</i> |
| | c. | 罗老师 *(就) 是张三。
<i>Luó lǎoshī *(jiù) shì Zhāngsān.</i>
Luo teacher exactly COP Zhangsan
'Teacher Luo is Zhangsan.' | <i>Equative</i> |

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.

²In 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 be 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 predication 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 huáfuǒbǐng, Mài-ke 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*
Mài-ke mǎi le yī-bāo dōngxi, dàn wǒ bù zhīdào shì
 Mike buy PFV one-bag thing but 1SG NEG know SHI
shénme.
 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.

