Mandarin *shi* clefts and the syntax of discourse congruence
Michael Yoshitaka Erlewine, draft April 2020
Comments welcome: mitcho@nus.edu.sg

This paper investigates the syntax and semantics of the Mandarin Chinese morpheme *shi* in its focus particle use. *Shi* associates with an in-situ focus and expresses cleft semantics. I argue that *shi* is a sentential focus particle subject to a requirement to adjoin as low as possible. This makes Mandarin *shi* notable as it expresses cleft semantics without separating the focused phrase from the rest of the clause, as is cross-linguistically common in the expression of clefts.

I then show that *shi* is disallowed in certain reduced clauses, unlike ‘only.’ I propose that this restriction on the distribution of *shi* is due to its semantics, together with a particular proposal for the syntax of discourse congruence: the semantics of *shi* makes reference to the Question Under Discussion (QUD), unlike ‘only,’ and access to the QUD is mediated by a functional head in the high CP periphery. *Shi* is thus unavailable in reduced clauses which do not project this high functional layer.

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1 Introduction

This paper concerns the use of the Mandarin Chinese morpheme shì as a focus particle in examples such as (1). Previous descriptions of this type of shì describe it as a marker of “emphasis” (Shi, 1994) or “contrastive focus” (Cheng, 2008), or as a cleft construction (Teng, 1979; Huang, 1982a,b; Shyu, 1995). I will give English it-cleft translations here and will defend this choice below.1

(1) The Mandarin focus particle shì:
      shì  Zhang San  drink-PFV wine  
      ‘It’s Zhang San that drank the wine.’
   b. Zhāng Sān shì hē-le [hóngjiǔ]F.  
      Zhang San  shì  drink-PFV wine  
      ‘It’s wine that Zhang San drank.’

I concentrate here on the use of shì as in (1) which Cheng 2008 and Paul and Whitman 2008 have dubbed the “bare shì” construction, in contrast to the more commonly discussed shì...de construction.2 I also note that shì is homophonous and homographous with the copular verb, which has frequently complicated its analysis and discussion.

The goals of this paper are to describe and explain the syntax of this particle shì and restrictions on its syntactic distribution. First, I consider what type of focus particle shì is. I argue that shì is a sentential focus particle — adjoining to the clausal spine and then hypothetically able to associate with any focus in its complement — but is subject to a requirement to be adjoined as low as possible while taking its focus associate in its scope. Such behavior is attested by sentential focus particles in Vietnamese (Erlewine, 2017b) and is a component of one approach to German focus particles (as in Jacobs, 1983, 1986; Büring and Hartmann, 2001). The fact that shì expresses cleft semantics but without movement or a biclausal syntax makes it typologically notable, and shows that its semantics need not be derived from the semantics of copular constructions, definite descriptions, or focus movement, as has been proposed in Percus 1997 and Büring and Križ 2013.

Second, I observe that shì is simply disallowed in certain reduced clauses, such as non-finite embeddings, relative clauses, and certain adjunct clauses. Other focus particles such as ‘only’

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1 Abbreviations: cl = classifier, cop = copula, de = possessive or relative clause marker de, exp = experiential perfect, F = F(ocus)-marked, neg = negation, PFV = perfective

2 See Cheng 2008, Li 2008, and Paul and Whitman 2008 for a range of behaviors that distinguish the bare shì construction from the shì...de construction. I do not discuss the shì...de construction in this paper.
are allowed in such environments. I propose that this aspect of *shi* is due to the cleft semantics of *shi* being parasitic on congruence with a Question Under Discussion (Roberts, 1996/2012), and that QUD congruence is evaluated in the extended CP periphery. This function of verifying QUD congruence is unavailable in various embedded clauses, due to the reduced organization of the clause.

I begin in section 2 by establishing the focus marker *shi* as expressing cleft semantics, and briefly comment on the use of the term “cleft” in comparative grammar. I also present a formal analysis for the semantics of clefts there, based on Velleman, Beaver, Destruel, Bumford, Onea, and Coppock 2012. In section 3, I will argue that *shi* is a sentential focus particle subject to a restriction on its adjunction position, and thus is synchronically distinct from the copular verb. I then discuss clauses that cannot host the focus particle *shi* at all, in section 4, and argue that this is related to the “truncation” of certain clause types.

2 *Shi* expresses cleft semantics

The *shi* focus construction has often been described as a “cleft” and translated into English *it*-clefts since at least Huang (1982a: ch. 4). In this section, I begin by briefly introducing the notion of a “cleft” and its history, and then provide evidence to support the description of the Mandarin *shi* construction as a cleft.

2.1 English *it*-clefts and their semantics

The term “cleft sentence” was introduced by Jespersen (1937: 73–74, 1954: 147–149) in his description of examples such as those in (2) below. In his words, “A cleaving of a sentence by means of *it* is (often followed by a relative pronoun or connective) serves to single out one particular element of the sentence and very often, by directing attention to it and bringing it, as it were, into focus, to mark a contrast” (Jespersen, 1954: 147–148).

(2) **English *it*-clefts from Jespersen 1954: 148:**

a. It is the wife that decides.

b. It was John (that) we saw.

The term “cleft” thus refers to two characteristic properties: a semantic function of putting one part of the sentence in exhaustive or contrastive focus and a syntactic form which “cleaves” (i.e. separates) the focus from the rest of the clause. Here I will first concentrate on the semantic definition of cleft-hood, and then return to the question of its associated syntax below.

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Huang (1982a) did not look at the *shi...de* construction. See Huang 1982a, section 4.4 footnote 22.
Clefts have a recognizable semantics which appears to be cross-linguistically stable, although challenging to articulate precisely. Clefts are widely recognized as expressing (at least) three different types of meanings: (a) the assertion of the prejacent, (b) an exhaustivity inference, and (c) an existence requirement. These three meaning components for the cleft in (2b) are informally paraphrased in (3a–c):

(3) **Components of cleft meaning, a first description:**

It is John that we saw. \[ f = \text{John}, \ P = \lambda x. \ \text{we saw } x \]

a. **Prejacent:** We saw John. \[ P(f) \]
b. **Existence:** We saw someone. \[ \exists x[P(x)] \]
c. **Exhaustivity:** We didn’t see anyone else. \[ \forall y[y \neq f \rightarrow \neg P(y)] \]

The description of these meaning components warrants some further discussion and refinement. First, we notice that the existence claim as in (3b) is itself entailed by the prejacent (3a), so its independent status is not immediately apparent. The existence requirement is however detectable under negation (Dryer, 1996; Rooth, 1999; a.o.):

(4) **Existence requirement projects out of negation:**

It’s not John that we saw. #We didn’t see anyone.

A negative cleft as in (4) expresses the negation of the prejacent — that, in this case, we did not see John — but we are still committed to there having been someone that we saw. The existence requirement in (3b) thus projects through negation and may be described as a presupposition.

Second, we turn to the exhaustivity claim in (3c). Exhaustivity is easily demonstrated by setting up a contradiction, with a continuation which is not a cleft (5b) or which is itself a cleft (5c). The baseline in (5a) shows that the corresponding non-cleft sentence We saw John does not express exhaustivity.

(5) **Demonstrating exhaustivity:**

a. We saw John. We also saw Chelsea.

b. It’s John that we saw. #We also saw Chelsea.

c. It’s John that we saw. #It’s (also) Chelsea (that we saw).

This exhaustivity claim of clefts appears to not be part of the assertion. We can see this particularly clearly by comparing clefts with corresponding only sentences under embedding. It is known since Horn 1969 that only sentences presuppose their prejacent and assert exhaustivity. Consider the contrasts in (6) and (7) below:
Only vs it-cleft under know: (Büring and Križ 2013: 2, based on Horn 1981)
a. ‘Bob knew she invited Fred, but he didn’t know she only invited Fred.
b. #Bob knew she invited Fred, but he didn’t know it was Fred she invited.

Only vs it-cleft under negation: (Büring and Križ, 2013: 2)
a. ‘She invited Fred, but she didn’t invite only Fred.
b. #She invited Fred, but it wasn’t Fred she invited.

Example (6a) with only is coherent, as Bob can know that she invited Fred but not that no others were invited; in other words, the exhaustivity claim of only that no others were invited is (part of) the content embedded under know. Similarly, negation can target the exhaustivity claim of only in (7a). We contrast this to the unnaturalness of (6b) and (7b). The meaning construed as embedded under know or negation appears to simply be the prejacent proposition, leading to a contradiction in each case. The exhaustivity claim of clefts must project out of such embeddings.

We conclude that clefts assert their prejacent proposition (3a) and presuppose existence and exhaustivity (3b,c). This neatly mirrors the behavior of only, which asserts the exhaustivity claim and presupposes the truth of its prejacent (Horn, 1969). I will introduce a formalization of this account based on Velleman et al. 2012 and discuss its syntax/semantics in a later section.

2.2 The Mandarin shì construction

With this background on the semantics of English clefts in place, we now turn to the semantics of Mandarin shì focus constructions. First and foremost, the addition of shì introduces exhaustivity, similar to the use of ‘only.’ Exhaustivity can be demonstrated by setting up contradictions, just as we did in the English (5) above. Example (8a) is a baseline showing that there is no exhaustivity associated with a sentence without ‘only’ or shì. In (8b) and (8c), the particle zhīyǒu ‘only’ or shì is in initial position and associates with the focused subject.

‘Only’ and shì expresses exhaustivity:
   Zhang San come-PFV Li Si also come-PFV
   ‘Zhang San came. Li Si also came.’

4 The basic description of the exhaustivity claim as in (3c) will, however, need to be revised. If the claim is simply ‘we didn’t see anyone that is not John,’ and this projects through negation, we predict it to lead to a contradiction when taken together with the negation of the prejacent (‘we didn’t see John’) and the existence presupposition (‘we saw someone’) in It’s not John that we saw (4). To avoid this problem, Büring 2011 proposes that the exhaustive claim of clefts is a conditional exhaustivity claim: for example, the cleft it’s John that we saw requires that ‘if we saw John, we didn’t see anyone else,’ instead of the simple exhaustivity claim in (3c).
only ZS come-PFV LS also come-PFV also only LS come-PFV
‘Only [Zhang San]F came. { # [Li Si]F also came. / # (Also) only [Li Si]F came. ’

shi ZS come-PFV LS also come-PFV also shì LS come-PFV
‘It’s [Zhang San]F that came. { # [Li Si]F also came. / # It’s (also) [Li Si]F that came. ’

As also previewed in the introduction, shì focus constructions do not require their focus to be in a dedicated, fronted position, as English it-clefts do. The focus in (8c) is in clause-initial position as that is the default position for subjects in Mandarin, but the focus of shì can also be in other preverbal and postverbal positions as well. The grammatical positions for shì and its possible focus associates will be the topic of section 3.

Paul and Whitman 2008 claim that there is a difference between shì in clause-initial position and shì in a clause-medial position, with the former but not the latter requiring exhaustivity. Their claim is based on the acceptability of the utterance in (9).

(9)  **Apparent counterexample to the exhaustivity of shì:**  (Paul and Whitman, 2008: 420)
Tā shì zài Běijīng xué-guò zhōngwén, (dàn) yě zài Shànghǎi xué-guò.
3sg shì at Beijing study-EXP Chinese  but also at Shanghai study-EXP
‘She studied Chinese in Beijing, but/and also studied Chinese in Shanghai.’

An issue with this example is that neither the discourse context nor position of focus is specified. As described in Hole and Zimmermann 2013: 307, shì in (9) could associate with the location Beijing, but it could alternatively associate with another focus such as the entire predicate that follows it.\(^5\) When we clarify that the first sentence in (9) is to be interpreted with narrow focus on the location Beijing, exhaustivity again rears its head:

\(^5\) The most natural confounding reading which makes (9) natural is a verum-like reading. Hole and Zimmermann (2013: 307) describe shì in (9) as being able to associate with other subparts of the verb phrase as well, such as the verb, object, or verb phrase alone, but this conflicts with the description in Chiu 1993: 162, where it is explicitly claimed that shì before a preverbal zài location cannot narrowly associate with an object focus downstream. Chiu’s description accords with my own description and proposal for patterns of focus association with shì, in section 3.
(10) **Exhaustivity effect of (9):**

#Tā shì zài [Běijīng] F xué-guò zhōngwén, dàn yě (shì) zài [Shànghǎi] F
3sg shì at Beijing study-exp Chinese but also shì at Shanghai
xué-guò (zhōngwén).

study-exp Chinese

‘It’s in [Beijing]F that she studied Chinese, but { she also studied (Chinese) in [Shanghai]F/ it’s (also) in [Shanghai]F that she studied (Chinese) } .’

Shì also requires that some alternative be true, if not the prejacent itself, and this existence requirement projects out of negation. For example, in (11), the negated shì construction still requires that someone came, much like the English *it*-*cleft in (4).*

(11) **Existence requirement of shì projects out of negation:**

 cf English (4)


NEG shì Zhang San come-PFV NEG-HAVE person come-PFV

‘It’s not Zhang San that came. #No one came.’

See also Liu and Yang 2017 for recent experimental evidence supporting the exhaustivity of the shì construction.

Let us now turn to the differences between the Mandarin counterpart of ‘only’ and shì, which I claim both express exhaustivity. Here we consider their behavior under ‘know’ and negation, modeled after the English examples in (6–7) above. When the ‘only’ sentences are embedded, its exhaustivity is targeted by ‘know’ (6a) and negation (7b), with the prejacent proposition presupposed, whereas with shì, the prejacent is targeted by ‘know’ (6b) and negation (7b) and the exhaustivity claim projects out.

(12) **‘Only’ vs shì under ‘know’:**

 cf English (6)


WW know ZS invite LS come, but NEG know 3sg only invite LS come

‘WW knows ZS invited LS to come, but didn’t know that he\textsubscript{i} invited only [LS]F.’

b. #WW zhídào ZS yāo LS lái, dàn bù zhídào tā shì yāo [LS] F (lái).

WW know ZS invite LS come, but NEG know 3sg shì invite LS come

‘WW knows ZS invited LS to come, but didn’t know that it’s [LS]F that he\textsubscript{i} invited.’

\footnote{The tonal realization of the negator bù changes to a rising tone when preceding a falling tone, explaining its appearance as bù preceding shì here.}
‘Only’ vs shi under negation: cf English (7)

a. √ZS yāo LS lái, dàn (ZS) bù zhǐ yāo [LS]_{F} (lái).
   ZS invite LS to come, but ZS NEG only invite LS to come
   ‘ZS invited LS to come, but he didn’t invite only [LS]_{F}.’

b. #ZS yāo LS lái, dàn (ZS) bù shì yāo [LS]_{F} (lái).
   ZS invite LS to come, but ZS NEG shi invite LS to come
   ‘ZS invited LS to come, but it’s not [LS]_{F} that he invited.’

This accords with the pattern we saw for English only versus it-clefts in (6–7) above: the semantics of the Mandarin ‘only’ particles zhǐ/zhǐyǒu pattern with English only, as previously observed in Tsai 2004, whereas the semantics of the shi construction patterns with the behavior of English it-clefts.8 Shi asserts its prejacent proposition and presupposes existence and exhaustivity. This motivates the use of it-cleft translations for shi sentences.

As reviewed above, we have seen that English it-clefts have a characteristic semantic signature: presupposing existence and exhaustivity and asserting its prejacent. Referring to these structures as “clefts” suggests that the syntax of “cleaving” — separating the focus from the rest of the clause — is a necessary condition for calling a construction a cleft, or perhaps even a necessary condition for expressing this particular semantics. These two issues should not be confused. The first is a definitional question, while the second is an empirical one.

I begin first with the empirical question: Can a language express the semantics associated with uncontroversial clefts without the syntax of cleaving? We have seen that the Mandarin shi construction is such a construction, expressing cleft semantics while leaving its focus in-situ.9 Further examples of shi’s ability to associate with an in-situ focused phrase will be presented in the following section 3.

As for the definitional question, some previous authors have opted to reserve the term

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7 The Mandarin ‘only’ particle appears as zhǐ in some environments but zhǐyǒu in others. This distinction will not be important for our current purposes, as we are primarily interested in the behavior of shi. See Erlewine 2015a for one approach.

8 In addition, Lee 2005: 89–91 shows that ‘only’ in Mandarin cannot associate with universal quantifiers whereas shi can. It is well known that ‘only’ in English cannot associate with universal quantifiers and other such items at the “top” of their scale. See Alxatib 2020 and references there for significant discussion. Additional differences between shi and ‘only’ will be discussed in section 4.

9 Huang (1982a) writes, “The situation with the Chinese sentence, however, is quite different. A cleft sentence differs from a non-cleft only in the presence vs. absence of the focus indicator, the copula shi” (p. 290). Similarly, Shyu (1995) writes, “The Chinese cleft construction with shi ‘be’ behaves like other focus adverbs or operators, in contrast to the cleft focus movement attested in English and Hungarian” (p. x). Huang and Shyu however do not provide evidence that shi constructions express cleft semantics as I do here.
“cleft” for structures which exhibit a biclausal syntax akin to that of the English *it*-cleft. For example, Paul and Whitman (2008) write, “The sentence-medial bare *shi* pattern lacks a biclausal structure and thus cannot be interpreted as a cleft” (p. 444). See also Hole 2011: 1709. *Pace* these authors, I advocate for the use of this term to refer to any construction that expresses cleft semantics, regardless of its syntactic shape. I therefore refer to the Mandarin bare *shi* construction as a cleft construction, despite it lacking the “cleaving” syntax associated with such meanings in languages such as English.

2.3 Formalizing cleft syntax/semantics

Before we dive into the syntax of *shi*, I will take a brief detour to introduce an approach to the formal semantics of clefts and the demands this places on its syntax. The key take-away here will be that the further consideration of cleft semantics itself does not lead us to expect a particular syntactic shape for these structures. In particular, the proposal reviewed here leads us to expect that cleft semantics can be introduced by a focus particle that associates with an in-situ focus, as I will propose to be the case with *shi*. Readers who are eager to proceed to the Mandarin facts may move on to section 3.

Here I will present a particular proposal for the semantics of English *it*-clefts and its relationship to *only* from Velleman, Beaver, Destrue, Bumford, Ona, and Coppock 2012, with a minor adjustment which will prove important below. We begin by defining two operators **max** and **min** in (14), which make referent to a contextually determined ordering $\rightarrow_S$ and a set of alternative propositions $C$.

\[
\min = \lambda p . \lambda w . \exists q \in C [ q(w) \land (q \geq_S p) ]
\]

“There’s a true proposition in $C$ that is at least as strong as $p$.”

\[
\max = \lambda p . \lambda w . \forall q \in C [(q >_S p) \rightarrow \neg q(w)]
\]

“No true proposition in $C$ is strictly stronger than $p$.”

For Velleman et al. 2012, following Beaver and Clark 2008 and Coppock and Beaver 2011, the alternative set $C$ is always the Current Question under discussion, but we can also think of it as the Roothian focus alternatives to the prejacent. I will return to this question of the identification of $C$ at the end of this paper.

The denotations of *only* and the cleft operator are both defined in terms of **min** and **max**. Notice that *only* and cleft mirror each other in a particular way: whereas *only* presupposes **min** and then asserts **max**, cleft presupposes **max** and asserts **min**.
The semantics in (15) accounts for the behaviors surveyed above, including the cleft’s presuppositions of existence and conditional exhaustivity, as well as the differences in embedding behavior between only and the cleft. See Velleman et al. 2012 for discussion of these points.

Let us now consider how this proposal interacts with the syntax of clefts. A defining characteristic of English it-clefts, highlighted by Jespersen’s own reference to “cleaving,” is its separation of a focus-containing phrase from the rest of the clause. However, the cleft operator (15b) takes a single propositional argument, the prejacent, e.g. ‘that we saw John.’ A simple way to conceptualize this would be to think of the fronted phrase as reconstructed at LF into the sole argument of cleft. This is schematized in (16).

(16) a. PF: It’s [John] \( F \) [CP that we saw ____] 
   
b. LF: CLEFT [CP we saw [John]_F ]

A prediction of this approach is that the cleft operator should in fact be sensitive to focus not only within the fronted phrase but also within the following clause. Evidence for this view comes from what Hedberg (1990, 2013) calls “vice versa” clefts, first described in Ball and Prince 1977:

(17) Vice versa cleft: (Ball and Prince, 1977)

It isn’t John that shot Mary; it’s Mary that shot John!

Such examples appear to counterexemplify the simple description, as in (3) above, of clefts as presupposing that some individual satisfies the predicate described by the cleft clause. For instance, we do not take the first sentence in (17) to presuppose that someone shot Mary. Instead, if both Mary and John are focused, both clefts presuppose that there is a true proposition of the form ‘\( x \) shot \( y \).’ This is indeed the presupposition predicted by the analysis in Velleman et al. 2012.

An important consequence of this work on cleft semantics is that the syntax of “cleaving” — partitioning the clause by extracting or otherwise setting apart the focus or focus-containing phrase — is not a requisite component of the semantics of clefts. For Velleman et al. 2012, cleft may just as well have an identical syntax as only, taking the prejacent proposition as its complement and associating with a focus within.
3 Shi is a sentential focus particle

We now turn to the syntax of shì. Focus particles come in broadly two varieties, depending on their adjunction position: *sentential* particles adjoin to the clausal spine, whereas *constituent* particles adjoin to a subsentential constituent such as a DP or PP. For example, English has both sentential and constituent *only*, realized identically in form. Both *only* associate with the object and express the same meaning in (18).

(18) **Two different only in English:**
   
   a. Laura *only* drinks [red wine]_F.  
   b. Laura drinks *only* [red wine]_F.

   That English *only* comes in two varieties can be verified through their association possibilities. *Only* in preverbal position as in (19) can associate with any constituent in its complement verb phrase, regardless of its linear or structural distance. In contrast, *only* preceding a DP or PP as in (20) must associate with a focus in that constituent.

(19) **Patterns of association with English only:**  
   (based on McCawley, 1996: 172)
   
   a. John *only* [put salt on the potatoes]_F.
   b. John *only* put [salt]_F on the potatoes.
   c. John *only* put salt on [the potatoes]_F.
   d. *[John]_F *only* put salt on the potatoes.

(20) a. John put *only* [salt]_F on the potatoes.
    b. *John put *only* salt on [the potatoes]_F.
    c. John put salt *only* on [the potatoes]_F.
    d. John put salt on *only* [the potatoes]_F.

   The patterns of possible association in (19–20) are explained by *only* in (19) being sentential *only*, adjoined to the clausal spine, and *only* in (20) being constituent *only*, adjoined directly to a DP or PP, together with the c-command requirement on association with focus (21).^{10}

(21) **The c-command requirement on association with focus:**

   (Jackendoff, 1972; Rooth, 1985; Tancredi, 1990; McCawley, 1996; Bayer, 1996; a.o.)

   A focus-sensitive operator must c-command its associate.

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^{10} English sentential and constituent *only* also vary in their scope-taking possibilities; see Taglicht 1984.
As a result, constituent particles such as *only* in (20) exhibit a type of adjacency requirement, not observed with sentential particles as in (19).

With this background in place, we now consider the possible patterns of association for *shì*. We first consider examples (22–24) below, which are modified and expanded from that in Huang (1982a: 290). These examples show *shì* in different preverbal positions in a simplex transitive clause with a preverbal adjunct.

(22) **Patterns of association with *shì* in different preverbal positions:**

- **Shì** wǒ zúotiān mǎi-le nèi běn shū.
  - 1sg yesterday buy-PFV that CL book
  - a. *It’s [that book]₁ that I bought yesterday.*
  - b. *It’s [buying]₁ that I did with that book yesterday.*
  - c. *It’s [buy that book]₁ that I did yesterday.*
  - d. *It’s [yesterday]₁ that I bought that book.*
  - e. *It’s [me]₁ that bought that book yesterday.*
  - f. *It’s that [I bought that book yesterday].*

(23) Wǒ **shì** zúotiān mǎi-le nèi běn shū.
  - 1sg **shì** yesterday buy-PFV that CL book
  - a. *It’s [that book]₁ that I bought yesterday.*
  - b. *It’s [buying]₁ that I did with that book yesterday.*
  - c. *It’s [buy that book]₁ that I did yesterday.*
  - d. *It’s [yesterday]₁ that I bought that book.*
  - e. *It’s [me]₁ that bought that book yesterday.*
  - f. *It’s that [I bought that book yesterday].*

(24) Wǒ zúotiān **shì** mǎi-le nèi běn shū.
  - 1sg yesterday **shì** buy-PFV that CL book
  - a. *It’s [that book]₁ that I bought yesterday.*
  - b. *It’s [buying]₁ that I did with that book yesterday.*
  - c. *It’s [buy that book]₁ that I did yesterday.*
  - d. *It’s [yesterday]₁ that I bought that book.*
  - e. *It’s [me]₁ that bought that book yesterday.*

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11 I note that some of these English translations, especially with clefting of the verb *buying* alone, is rather unnatural. I use this mode of presentation here in order to reinforce the point, from section 2 above, that Mandarin *shì* expresses a semantics akin to that of English *it*-clefts, without any displacement of the focus.
f. ‘It’s that [I bought that book yesterday].’

The possible patterns of association in (22–24) can be summarized as follows. Shi before the subject (22) or before the adjunct ‘yesterday’ (23) exhibit an adjacency effect, requiring its focus to be the immediately following phrase.\textsuperscript{12} However, shì in immediately preverbal position (24) is able to associate with the entire verb phrase or any subpart thereof. At first glance, then, we may be tempted to describe shì as ambiguous between a sentential particle, limited to immediately preverbal position, and a constituent particle. See also Chiu 1993: 124ff, Zhu 1997: 103–106, and Li 2008: 766–767 for extensive additional data which accords with my description of shì’s association possibilities.

However, there are also challenges for the view that shì has a life as a constituent particle. First, shì never appears in postverbal position. Example (25) is flatly ungrammatical. Object focus with shì requires shì to be in immediately preverbal position, as in (24) above.

\begin{equation}
\text{(25) No postverbal shì:}
\end{equation}

\begin{equation}
*Wǒ zúotiān mǎi-le shì nèi běn shū.
\end{equation}

\begin{equation}
1sg yesterday buy-Pfv shì that cl. book
\end{equation}

\begin{equation}
\text{Intended: ‘It’s [that book] that I bought yesterday.’}
\end{equation}

A possible solution may be to stipulate that the focus particle shì is somehow disallowed within the verb phrase. However, even outside of the verb phrase, if shì associates with a subpart of a preverbal constituent, it must precede the entire phrase. This is shown in (26) with a preverbal prepositional phrase.

\begin{equation}
\text{(26) No shì inside preverbal PP:}
\end{equation}

\begin{equation}
\text{Zhāng Sān (‘shì) [pp ììí (‘shì) [Li Sì] shì] rēng-le qiú.}
\end{equation}

\begin{equation}
\text{Zhang San shì to shì Li Sì throw-Pfv ball}
\end{equation}

\begin{equation}
‘It’s [Li Sì] that Zhang San threw a ball at.’
\end{equation}

A possible solution may be to stipulate that the focus particle shì is somehow disallowed within the verb phrase. However, even outside of the verb phrase, if shì associates with a subpart of a preverbal constituent, it must precede the entire phrase. This is shown in (26) with a preverbal prepositional phrase.

The facts above appear difficult to reconcile. On the one hand, the adjacency effects observed in (22–23) are straightforwardly explained if shì there are a constituent particle, directly

\textsuperscript{12} Such patterns have led some authors to describe shì as always immediately preceding their focus. For example, Huang (1982a: 290) states that “The simplest way of looking at cleft sentence formation, then, is to say that it inserts the marker shì directly in front of the constituent in focus.” Cheng (2008: 254) states the “the focused element in a bare-shì sentence is the constituent immediately following shì.” Similar statements are made in passing in Shi 1994 and Shyu 1995 as well. However, as we will see here, such descriptions are seriously misleading, especially when we consider the possibility of long-distance association.
adjoining to the focused subject or adjunct. On the other hand, the distribution of *shì* in (24–26) challenge the idea that *shì* could ever be a constituent particle.

Here I adopt the solution developed in Erlewine 2017b based on the study of focus particles in Vietnamese. I propose that *shì* is a sentential focus particle, adjoined to the clausal spine, in all of the cases above, and is additionally subject to the constraint in (27).\(^{13}\)

\[
\text{(27) A constraint on sentential focus particle placement:} \quad \text{(Erlewine, 2017b: 334)}
\]

Sentential focus particles (focus-sensitive sentential modifiers) must be as low as possible while c-commanding their focus associate, within a given phase.

This approach builds on previous work by Jacobs (1983, 1986) and Büring and Hartmann (2001) on German focus particles as sentential particles, but this approach for German has proved to be controversial; see Reis 2005, Meyer and Sauerland 2009, and Smeets and Wagner 2018. Erlewine 2017b shows this constraint to hold in Vietnamese, but it is not suggested that it is universal. Nonetheless, a version of this constraint has been claimed to hold of English (Francis, 2019: 57).

Vietnamese has both a sentential ‘only’ and a constituent ‘only’ like English, but unlike in English, the two differ in their surface form. The sentential ‘only’ is *chỉ* (28a) whereas the constituent ‘only’ is *mỗi* (28b). This allows us to unambiguously study the behavior of each type of particle separately.

\[
\text{(28) Two different ‘only’ in Vietnamese:} \quad \text{(Erlewine, 2017b: 331)}
\]

\[
\begin{array}{ll}
\text{a. Nam } \textbf{chỉ} \text{ mua [cuốn sách]}_F. & \textbf{sentential} \\
\text{Nam only buy cl. book} \\
\text{b. Nam mua } \textbf{mỗi} \text{ [cuốn sách]}_F. & \textbf{constituent} \\
\text{Nam buy only cl. book} \\
\text{‘Nam only bought [the book]’} \\
\end{array}
\]

I show in Erlewine 2017b that the sentential ‘only’ particle *chỉ* has a distribution precisely mirroring that of *shì* above: When preceding a preverbal phrase, *chỉ* must associate with focus on or within the adjacent phrase. When in immediately preverbal position, *chỉ* can associate with

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\(^{13}\) Yang 2012 states that focus-sensitive operators in Mandarin are “merged to the closest phase edge c-commanding the focus element” (p. 78). While this too is an “as low as possible” requirement, this characterization is incorrect. First, there is no independent evidence that the adjunction positions of focus particles are all phase edges; see for example the three positions in (22–24), which I believe to all be within the same phase. Second, it is unclear how this generalization would ever allow for a focus particle to be introduced in a higher clause, associating long-distance with an embedded clause constituent, as we will see in (30) below.
the following verb phrase or any subpart thereof. Unlike the constituent ‘only’ particle mō, it
does not appear in postverbal object positions or inside prepositional phrases.

The “as low as possible” logic predicts that, given a particular choice of focus associate (F-
marked constituent), the placement of shì will be deterministic. This is true of simplex clauses.
Let us return to the examples in (22–24) above. If our intended focus associate is the verb phrase
or a subpart thereof, the lowest adjunction position for shì will be just above the verb phrase.¹⁴
This blocks shì from adjoining in a higher position while associating into the verb phrase. If
the focus is the preverbal temporal adjunct, shì adjoins just above it to c-command it, but no
higher due to the “as low as possible” requirement (27). Finally, subject focus or broad focus
leads to shì in initial position. The same logic yields the same pattern for Vietnamese sentential
particles in Erlewine 2017b as well.¹⁵

This proposal also predicts the availability of shì not in immediately preverbal position to
also associate with focus into its following phrase phrases. This was already observed with the
prepositional object in (26) above. Just above the entire PP’s attachment is the lowest available
point for shì to adjoin to the clausal spine and associate with the prepositional object. Similarly,
as made clear in Xu 2010, shì can narrowly associate with a subpart of an adjacent subject,
as in (29). Note that shì in (29) must be on the matrix clausal spine, outside of the subject’s
relative clause, as reflected in the possible translations. This contrast is due to an independent
restriction against shì in restrictive relatives, which will be discussed in section 4 below.

(29) Shi associating with a focus inside the subject:  (Xu, 2010: 143)


Zhang San buy DE dog most cute

‘It’s [the dog that [Zhang San]F bought] that’s the cutest.’

* ‘The dog that it’s Zhang San that bought is the cutest.’

In all of our examples so far, the position of shì is fixed, given a choice of focus associate.
When the focus is in an embedded clause, though, we yield apparent optionality in the place-
ment of shì. With the focus in an embedded clause, shì can be in the higher or lower clause, as
seen in (30). These two variants of (30) with shì in the higher or lower clause differ in their
interpretation, as will be discussed in section 4 below.

¹⁴ More should be said about the lowest possible position for shì. See Chiu 1993, Zhang 1995, and Yang and Ku 2010
for some relevant observations.

¹⁵ I follow Erlewine 2017b in describing these possibilities as varying in the height and timing of adjunction, subject
to the restriction in (27), but alternative conceptions are possible. See Erlewine 2015b for discussion.
(30) **Higher and lower shì:**

Zhāng Sān (shì) shuō [CP Lí Sì (shì) dú-le [liǎng]F běn shū ].

Zhang San shì say Li Si shi read-prv two cl. books
literally: ‘Zhang San (shì) says [that Li Si (shi) read [two]F books].’

Note that, within each clause, the placement of shì must obey the “as low as possible” restriction (27). We can make sense of the apparent optionality in (30) by taking the “as low as possible” requirement to be relativized to hold only between different adjunction positions within a single syntactic domain. Example (30) shows that the embedded finite clause is its own domain for this purpose. Following Erlewine 2017b, I take the relevant domains to be phases in size.

A further argument for shì being a sentential focus particle comes from the availability of multiple focus association (Krifka, 1991). In such multiple focus constructions, all the intended foci must independently be c-commanded. For English, this results in a difference between sentential and constituent only. Consider the contrast in (31):

(31) a. ✓I only saw [the children]F ask [the adults]F to be quiet.
   b. *I saw only [the children]F ask [the adults]F to be quiet.

Only in example (31a) is a sentential only, c-commanding all of the embedded clause. This allows for the intended reading, where ⟨children, adults⟩ is the only pair such that the speaker saw the first ask the second to be quiet. In contrast, only in (31b,c) are constituent particles, preceding small clause subject or the matrix subject, and only c-command the immediately adjacent constituent.

Shì patterns with English sentential only in the availability of multiple focus association. This is illustrated in the following example from Cheng 2008, with her translation. The additional paraphrase of the intended meaning of the second clause is my own, based on the discussion in Krifka 1991. Notice that, in Hedberg’s terms, this example is a “vice versa” cleft, like the English (17) above.

(32) **Multiple focus with shì:**


shì son ask adult not noisy neg shì adult ask son not noisy
‘The son asked the adult not to make noise, not the adult asking the son.’

⟨the son, the adult⟩ is the only pair ⟨x, y⟩ such that x asked y not to make noise.

---

16 I thank Michael Wagner for suggesting this diagnostic.

17 Li and Cheung 2015: 366 also note the possibility of multiple association with shì.
The grammaticality of the multiple focus structure in (32) supports the view that shì is a sentential particle, taking the entire clause here as its complement. The fact that, in sentences with a single focus, shì when not immediately preverbal can only associate with the immediately following constituent must be due to the “as low as possible” requirement on its placement (27) rather than shì in such positions being a constituent particle that only c-commands the immediately following constituent.

I conclude this section with a brief note on the relationship between shì and other focus particles in Mandarin Chinese. As noted in Shyu 1995: 228–231 and Erlewine 2015a, the distribution of shì and its association possibilities appear to parallel that of zhǐ(yǒu) ‘only’ and shènzhì ‘even.’ (I set aside the lián ‘even’ particle which obligatorily moves to a dedicated preverbal position.) I propose in Erlewine 2015a that all three items have an identical basic syntax as sentential focus particles that are subject to the “as low as possible” generalization in (27). There are, however, some complications there, especially due to ‘only’ appearing as zhī in some positions but zhīyǒu in others.

4 The distribution of shì and the syntax of discourse congruence

I now turn to a further puzzle regarding the distribution of shì, and its implications for the syntax/semantics of discourse congruence. The proposal above, which describes shì as a sentential focus particle, by itself would lead us to expect shì to appear in a variety of different syntactic environments, just as many other, better studied focus particles such as only and even and their equivalents may appear in many languages. It turns out, however, that shì is banned in certain clause types, even though other focus particles such as zhǐ(yǒu) ‘only’ can appear in them. I propose that what these clause types have in common is that they are syntactically reduced, lacking higher, discourse-related layers of the clause, and this disallows them from making reference to the Question Under Discussion (QUD; Roberts, 1996/2012), which is an integral part of the semantics of shì.

4.1 Clauses which disallow shì

We begin with an empirical overview of the environments which do and do not allow shì.18 We have already seen in (30) above that shì can appear in an embedded clause complement of shuō

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18 To my knowledge, the contrasts that I will concentrate on here extend to interrogative clauses as well. Shì is generally available in interrogative clauses, although it interacts with wh-phrases, alternative disjunctions, and A-not-A verbs by giving rise to so-called intervention effects as in Beck 2006 and Beck and Kim 2006. See e.g. Huang 1982b: 377–378, Shi 1994: 86ff, Zhu 1997: 118, Yang 2008, 2012, Li and Cheung 2015, and Erlewine 2017a for data and discussion of these effects.
‘say.’ It is also available in the complement of other bridge verbs such as ‘think,’ factive verbs such as ‘know,’ and the false belief verb yǐwéi (see e.g. Glass, 2019). These complements can all be described as finite CPs, although unlike matrix clauses, they disallow high sentence-final particles expressing clause type or speaker attitude (see e.g. Paul, 2014).

(33) **Shi possible in finite complement clauses:**

*Zhāng Sān* { shuō / rènwéi / zhídào / yǐwéi } [CP *shì* [Lǐ Sì]F zuò-cuò-le ].

Zhang San say think know thought *shi* Li Si do-wrong-PFV

‘Zhang San (says/thinks/knows/thought wrongly) [that it’s Li Si that made a mistake].’

Shi is also grammatical in sentential subjects and in clauses introduced by the preposition *duì.* Li and Huang 2009 shows that these types of clauses in (34–35) differ from the complement clauses in (33) in behaving externally as a nominal argument, as evidenced by their ability to be conjoined by the nominal conjunctors hé and gēn.

(34) **Shi possible in sentential subject:**


this-time meeting *shi* Zhang San represent 1pl cop cl problem

‘[That it’s Zhang San that will represent us at this meeting] is a problem.’

(35) **Shi possible in clausal argument of preposition *duì :***


1sg towards this-time meeting *shi* Zhang San represent 1pl neg-have opinion

‘I have no objection to [it being Zhang San that will represent us at this meeting].’

Shi is also available in essentially all adverbial clauses that I have tested. This includes conditional clauses introduced by rúguǒ, reason clauses introduced by yīnwèi, and concessive clauses introduced by suīrán. Pan and Paul 2018 argues that, under some circumstances, s. The one exception, wèile purpose clauses, will be discussed below.

In contrast, shi is disallowed in control complements and small clauses, as in (36–38) below. This restriction for subject and object control verbs is noted in Chiu 1993: 134–135, 142. Note however that ‘only’ zhǐ(yǒu) is available in these same positions, indicating that there is not a problem with a focus particle in these positions or with focus on the intended arguments with F-marking.

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19 Huang (1982b: 374) reports that shi is disallowed in sentential subjects, but other speakers I have consulted have found Huang’s example acceptable, as well as other examples with shi in sentential subjects, such as this example.
(36) *Shì disallowed in subject control complement:*

Wǒ xiǎng [\{ *shì / 'zhǐ' \} hē [kāfēi]F].

1sg want shì / only drink coffee

* ‘I want [for it to be coffee that I drink].’
✓ ‘I want [to only drink [coffee]F].’

(37) *Shì disallowed in object control complement:*20

Wǒ yīshēng yào wǒ [\{ *shì / 'zhǐ' \} hē [kāi-shuǐ]F].

1sg doctor make 1sg shì / only drink boiled-water

* ‘My doctor makes it so that it’s boiled water that I drink.’
✓ ‘My doctor makes me [only drink [boiled water]F].’

(38) *Shì disallowed in small clause complement:*

Wǒ kàndào [\{ *shì / 'zhǐyǒu' \} [Zhāng Sān]F tōu nèi-tái mótuōchē].

1sg saw shì / only Zhang San steal that-cl motorcycle

* ‘I saw [it’s Zhang San that stole that motorcycle].’
✓ ‘I saw [only Zhang San steal that motorcycle].’

The contrasts in (36–38) above at first glance suggest that *shì* is disallowed in non-finite or equivalent reduced clauses, which is the conclusion that Chiu draws.21 However, there are other clause types which appear to be full finite clauses, but which nonetheless disallow *shì*. Two such environments I am aware of are restrictive relative clauses, as previously noted in Teng 1979, Huang 1982b, and Shi 1994: 86–87, 91, and *wèile* purpose clauses for many speakers:

(39) *Shì disallowed in restrictive relative clause:*

(based on Huang, 1982b: 374)


1sg like shì / only Zhang San read-exp de that-cl book

* ‘I like that book [that it’s Zhang San that bought].’
✓ ‘I like that book [that only Zhang San bought].’

---

20 The bracketing here gives the causee argument outside of the embedded clause, but this is a matter of analysis.

21 Whether Mandarin Chinese truly exhibits a finite/non-finite distinction is a subject of continued debate. See especially Grano 2017 and Huang 2018 for recent discussion.
Shi disallowed in wèile purpose clause for many speakers:

Wèile [zhè-cí bǐsài { %shi / ‘zhǐyǒu’ } [Zhāng Sān]F néng yíng],
for this-time competition shi / only Zhang San able win
wómen xiūgǎi-le guīzé.
1pl modify-PFV rule
% ‘So that [it’s Zhang San that can win in this competition], we modified the rules.’
✓ ‘So that [only Zhang San can win in this competition], we modified the rules.’

Interestingly, some speakers who disallow shi in the wèile purpose clause in (40) nonetheless accept shi in a postverbal yǐbiàn purpose clause, as in (41).

Shi allowed in postverbal yǐbiàn purpose clause:

Wǒmen xiūgǎi-le zhè-cí bǐsài de guīzé yǐbiàn [shi [Zhāng Sān]F néng yíng ].
1pl modify-PFV this-time competition de rule yǐbiàn shi Zhang San able win
‘We modified this competition’s rules so that [it’s Zhang San that can win].’

Some speakers also appear to draw a distinction between restrictive and non-restrictive relatives, allowing shi in the latter as in (42), cf (39) above.22

Shi in non-restrictive relative:

1sg shì at last-year met de Zhang San give 1sg write letter
‘Zhang San, who it’s last year that I met, wrote me a letter.’

The contrasts presented here show that shi is systematically disallowed from a range of clause types which otherwise allow focus particles such as ‘only.’ These clauses include control clauses and small clauses, which are known to be reduced and/or non-finite (see e.g. Grano, 2017; Huang, 2018), but also restrictive relatives and, for some speakers, wèile purpose clauses. Here I will pursue the core intuition that these environments are all somehow reduced or “truncated,” in lacking a particular layer of the CP domain associated with discourse congruence, and that this layer is necessary for calculating the semantics of shi.

4.2 Proposal

My proposal will build on two established ideas in prior literature, and one new observation. First is the idea that different types of clauses vary in the amount of high functional material

22 The existence and distribution of non-restrictive relatives in Mandarin has been controversial. See Constant 2011, Del Gobbo 2014, and Lin and Tsai 2014 for a review of the issues and positions.
that is projected. Such an idea has been particularly well motivated through the study of so-called Main Clause Phenomena (MCP) and/or root transformations, beginning with Emonds 1970 and subsequently extended through the study of various clause types in many languages. Work in this domain has shown that main or root clause status is not simply binary: it may be necessary to draw multiple grades of distinctions, even amongst finite clauses, depending on their type. An influential approach here has been the idea that clauses may be “truncated,” projecting different extents of the clausal functional sequence; see especially Haegeman 2002, 2006, 2012.

More specifically for Mandarin, it has been known that there is at least a clear binary division between matrix clauses and embedded clauses, in that matrix clauses can host clause-typing and attitude sentence-final particles, which are never embeddable except through quotation (see e.g. Paul, 2014). More detailed work on different clause types, especially recent work such as Pan and Paul 2018 and Wei and Li 2018, show that further distinctions are necessary even amongst embedded finite clauses. Of particular interest here is that Wei and Li 2018 show that restrictive relative clauses and wéile purpose clauses are structurally reduced compared to other finite clauses such as complement clauses.

The second idea that my proposal will build on is the “neo-performative” hypothesis, which claims that functional material associated with the speech act and its context are represented syntactically, in the higher layers of the clause. This line of work builds on an early intuition expressed in Ross 1970 and has been seriously developed in work such as Speas and Tenny 2003, Haegeman and Hill 2013, Witschko and Heim 2016, and Witschko 2017. This idea dovetails neatly with the literature on embedded MCP: an early intuition there, due to Hooper and Thompson 1973, was that MCP are generally available in clauses that express assertions, thereby tying the availability of these particular syntactic phenomena to the speech act potential of the clause. Some embedded clauses project these performative functional layers which give it assertion status, and MCP are allowed there, whereas other embedded clauses do not project these layers and consequently do not allow the MCP.\(^2\)

An example of MCP and its relation to speech act semantics is illustrated in (43) below. The adverb *frankly* comments on the speech act itself, rather than its content (see e.g. Ernst, 2002: 70–73). *Frankly* is available in non-restrictive relatives, but not. This accords with the intuition that non-restrictive relatives constitute a separate speech act (Emonds, 1979; see also Potts 2005).

(43) **Frankly in non-restrictive relative but not restrictive relative:** (Emonds, 1979: 239)

\[\text{a. The boys, who have } \textit{frankly} \text{ lost their case, should give up.}\]

\(\text{But see Heycock 2006 for critical discussion of Hooper & Thompson's characterization in terms of assertion.}\)
b. *The boys that have *frankly lost* their case should give up.

This contrast can also be given a syntactic characterization, where non-restrictive relatives project a higher, speech act functional layer that is not present for restrictive relatives. Such a structural explanation may yield even greater mileage in accounting for other MCP such as availability of neg-inversion, which we can relate straightforwardly to the presence or absence of an associated functional head, but which is less obviously tied to speech act semantics. Neg-inversion too is available in English non-restrictive relatives but not restrictive relatives:

(44) Neg-inversion possible in non-restrictive relative but not restrictive relative:

(Hooper and Thompson, 1973: 489)

a. This car, which only rarely did I drive, is in excellent condition.

b. *The car that only rarely did I drive is in excellent condition.

In particular, I propose that one such peripheral speech act projection has the function of providing access to the QUD. Here I will refer to the relevant head as Cong for “congruence,” although its label and precise identification is not critical for our purposes. Cong has access to the QUD, and it is Cong that is missing in all of the environments which disallow shì.24 I furthermore propose that the semantics of shì specifically makes reference to the QUD. Shi must Agree with Cong in its local clause (or phase) to value its alternative set C.

I first present evidence of shì’s dependence on the QUD, and then present my formal implementation. Here we will revisit example (30) above, also reproduced in (33), which showed that shì can be placed in the higher or lower clause while associating with a focus in the embedded clause. The examples below show that the placement of shì in the higher or lower clause does are felicitous in different discourse contexts. Shi in the embedded clause (45) requires that the embedded clause itself be congruent to the QUD, whereas shì in the higher clause (46) requires that the entire utterance with embedded focus be congruent to the QUD, which must be a long-distance constituent question.25

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24 In addition to having access to a value for the QUD, this head may also ensure congruence between the clause and the QUD, and thereby being responsible for functions such as question-answer congruence. Antomo 2012, 2016 proposes that MCP is available in clauses whose content is “at-issue,” based on the behavior of German embedded V2 and English topicalization. Since at-issue status has been argued to be directly related to the relation of the clausal content to the QUD(s) in the discourse (Simons, Tonhauser, Beaver, and Roberts, 2010), this too may be thought of as reflecting a link to the QUD(s).

25 A similar interaction between the active QUD and the placement of the German discourse particle denn is reported in Bayer, Häussler, and Bader 2016.
Embedded clause congruent to QUD ⇒ low shì:

A: (Shàng ge xuéqī,) Lǐ Sì dú-le jǐ běn shū?
   How many books did Li Si read (last term)?

B: I don’t know, but...
   Zhāng Sān (♯shì) shuō [Lǐ Sì (‘shì) dú-le (liǎng)F běn shū].
   Zhang San says Li Si read two books
   ‘Zhang San says that it’s two books that Li Si read.’

Matrix clause congruent to QUD ⇒ high shì:

A: Zhāng Sān shuō [Lǐ Sì dú-le jǐ běn shū]?
   How many books does Zhang San say Li Si read?

B: Zhāng Sān (‘shì) shuō [Lǐ Sì (♯shì) dú-le (liǎng)F běn shū].
   It’s two books that Zhang San says that Li Si read.

Formally, I encode this dependence on the QUD in the lexical entry for shì as in (47) below. The syntactic specification includes an unvalued [QUD] feature which must be valued by Agree.26 The semantics for shì specifies that its alternative set C is set to the value of its [QUD] feature, and otherwise follows the Velleman et al. 2012 analysis for the cleft operator, presented in section 2.3 above.

Proposal for Mandarin cleft shì: cf (15b), based on Velleman et al. 2012: 452

[PHON : shì
SYN : [uQUD : ]]
SEM : \[\lambda p . \lambda w : C = \Box \land MAX_C(p)(w) . MIN_C(p)(w)\]

Cong is the unique head which bears a [QUD] value. If shì fails to Agree with Cong in the local clause to value its [QUD] feature, the result will be ungrammatical and uninterpretable.

Syntactically encoding a dependence on a peripheral syntactic head is a common strategy in the analysis of particles with MCP-like distribution. For example, Wei and Li 2018 proposes that certain discourse particle uses of the adverbs yòu and yě in Mandarin (see pages 197–199, 209–213) must be licensed by a local Force head (p. 219). Similarly, Bayer 2012 and Coniglio 2012

26 Here I abstract away from whether Agree is initiated by shì or the Cong head. See e.g. Bjorkman and Zeijlstra 2019 for recent discussion. What is clear, however, is that valuation of the [QUD] value is downward in this Agree relation.
propose that German modal particles must Agree with a local Force head.\footnote{Bayer refers to the head as C, without distinguishing between distinct heads in a split CP.} What is unique in this proposal is the semantic motivation of this syntactic dependency from the interpretation of \textit{shi} itself.

In contrast, I propose that 'only' does not quantify over a QUD as its alternative set, \textit{pace} Beaver and Clark 2008 and Coppock and Beaver 2011.\footnote{Kadmon and Sevi 2011 also present more direct arguments against the idea that focus particles such as \textit{only} necessarily quantify over a QUD as its alternative set. See also discussion in Roberts 2011 and Büring 2019.} 'Only' therefore does not bear this syntactic dependency on Cong for access to the QUD. The semantics of 'only' in Mandarin instead quantifies over the Roothian focus alternatives of its complement, represented in (48) by $\text{Alt}(p)$. More specifically, for \textit{only} with sister $\alpha$, $p = [\alpha]^\circ$ and $\text{Alt}(p) \equiv [\alpha]^\gamma$ in the notation of Rooth 1992.\footnote{Setting C with Alt stands in for using Rooth’s (1992) squiggle operator ($\sim$), which I do not adopt due to concerns regarding how the adjunction position for $\sim$ should be restricted.}

\begin{equation}
\text{(48) Proposal for the semantics of Mandarin only:} \\
cf (15a), \text{based on Coppock and Beaver 2011: 199}
\]
\end{equation}

$$\text{only} = \lambda p . \lambda w : C = \text{Alt}(p) \land \text{MIN}_C(p)(w) \land \text{MAX}_C(p)(w)$$

\subsection*{4.3 The “one \textit{shi} per clause” restriction}

The proposed difference between \textit{shi} and 'only' in QUD sensitivity has the potential to explain an additional difference between \textit{shi} and 'only.' As noted by Huang (1982b: 375–376) and Chiu (1993: 129–130), only one \textit{shi} is allowed per clause. No such restriction holds of 'only.'

\begin{equation}
\text{(49) Only one \textit{shi} per clause:} \\
\] *\textit{Shi} [Zhāng Sān]$_F$ \textit{shi} dú-le [zhè-běn shū]$_F$. \\
\textit{shi} Zhang San \textit{shi} read-PFV this-cl book
\end{equation}

\begin{equation}
\text{(50) No such restriction on 'only':} \\
\] \textit{Zhǐyǒu} [Zhāng Sān]$_F$ \textit{zhǐ} dú-le [zhè-běn shū]$_F$. \\
\textit{only} Zhang San \textit{only} read-PFV this-cl book
\end{equation}

‘Only [Zhang San]$_F$ read only [this book]$_F.$’

There are in principle two possible approaches to ruling out structures of the form in (49). The first is syntactic. Suppose Cong is only able to Agree with and value one [uQUD] feature in its domain. Two \textit{shi} in the same domain of Cong will be immediately ungrammatical, for syntactic reasons. The second approach is semantic. Because each instance of CLEFT will quantify
over the same alternative set $C$, the clause’s QUD, its multiple applications in an example such as (49) will be vacuous. Authors such as Crnič (2011: 110) and Alxatib (2020) have independently proposed that the use of focus particles must not be vacuous; such a constraint on the use of *shì* would similarly rule out the structure in (49). In more complex examples with intervening quantificational material between the two *shì*, the multiple applications of **cleft** may not be vacuous, but other interpretational problems may arise. I will leave the full exploration of these possibilities, and its comparison to the syntactic approach to this constraint, for future work.

In contrast, multiple ‘only’ in a single clause is grammatical, as in (50). The semantics I propose for ‘only’ in (48) above straightforwardly yields the correct meaning for such examples. This is possible crucially because the alternatives considered by the low ‘only’ at the VP edge and the high ‘only’ at the top of the clause are distinct. Intuitively, the lower alternatives vary in the choice of object, while the higher alternatives vary only in the choice of subject. Note that this would not be possible if ‘only’ particles necessarily quantify over the QUD, requiring multiple particles within a single clause to quantify over a single QUD.

5 Conclusion

The focus particle use of *shì* has been a topic of substantial interest within contemporary Mandarin Chinese grammar. Here I have argued that the *shì* focus construction expresses cleft focus, much like that of the English *it*-cleft, but by adjoining to the clausal spine and associating with an in-situ focus. Apparent adjacency effects between *shì* and its focus are due to a restriction on the placement of sentential focus particles, as has been independently motivated in previous work on German (Jacobs, 1983; Büring and Hartmann, 2001) and Vietnamese (Erlewine, 2017b).

The existence of in-situ clefts has important consequences for theories of the compositional semantics of clefts, supporting proposals such as in Velleman et al. 2012 which simply model the cleft simply as a focus particle. Some previous authors have attempted to derive the semantics of clefts from syntactic ingredients observed in clefts in English and many other languages, such as copular predication, definite description formation, or relativization (Percus, 1997; Büring and Križ, 2013). The existence of constructions such as the Mandarin *shì* construction, which express cleft semantics without canonical cleft syntax, teaches us that these syntactic ingredients are not necessary for the expression of cleft semantics.

I furthermore have shown that the use of *shì* is dependent on congruence to a Question Under Discussion, but ‘only’ is not (pace Beaver and Clark 2008; Coppock and Beaver 2011).
Access to the QUD is provided by an Agree relation with functional head in the high, speech act-related layer of the clause. Certain reduced clauses lack this head and therefore disallow \textit{shi}, although other focus particles such as ‘only’ are allowed in them. Future work must pursue a more precise identification of this head, in relation to other functional heads proposed in the performative domain (see e.g. Speas and Tenny, 2003; Haegeman and Hill, 2013; Wiltschko, 2017) and the typology of truncated clause types in Mandarin, as explored in recent work such as Pan and Paul 2018 and Wei and Li 2018.

By way of conclusion, I return to an important remaining issue regarding \textit{shi}: that of the relationship between the focus particle \textit{shi} described here and the copular verb \textit{shi}. Under my proposal here, the focus particle \textit{shi} and the copular verb \textit{shi} are synchronically distinct lexical items, although there they clearly share a diachronic source. Jin (to appear) looks across the modern Sinitic family to show that copular verbs regularly also have a use as a cleft particle. He also discusses diachronic evidence which shows that a copular verb later gained a use as a focus marker at least three times in the history of Chinese languages, suggesting that this is a common path of grammaticalization.\footnote{Similar patterns are attested in other language families as well. See for example Nurse 2006: 195–197 and citations there for discussion of a focus or cleft marker with a copular source in many Bantu languages.}

Many previous authors have pursued the intuition that \textit{shi} in its focus particle use is more directly related to the verb \textit{shi}; see especially Huang 1988 but also Shi 1994 and Chiu 1993 who claim that the focus particle \textit{shi} has the syntax of a modal verb. In my view, an important fact which these approaches miss is the close parallels between \textit{shi} and other focus particles \textit{zhī(yǒu)} ‘only’ and \textit{shènzhī} ‘even’ in their focus association possibilities, which have been more straightforwardly analyzed as focus particles in the literature.

What may appear to be the most challenging for my approach, where the focus particle \textit{shi} has no verbal status, is the ability of the focus particle \textit{shi} to undergo A-not-A question formation. Mandarin Chinese has a polar question formation strategy which is often described as involving reduplication of a modal or lexical verb with negation (51). The availability of this question strategy applying to \textit{shi} as in (52) at first glance suggests that \textit{shi} here is itself a verb, as also suggested recently in Jin to appear.

\begin{enumerate}
\item \textbf{A-not-A polar question formation:} (Huang, 1991: 306)
\begin{align*}
\text{Tā } & \text{xǐhuān-bù-xǐhuān } \text{zhè-běn } \text{shū?} \\
3\text{sg } & \text{like-NEG-like } \text{this-cl. } \text{book} \\
\text{‘Does s/he like this book?’}
\end{align*}
\end{enumerate}
When we consider a wider range of examples, though, it becomes difficult to maintain that A-not-A question formation necessarily targets verbs. This process can target certain adverbs such as cháng ‘often’ in (53) and also the comparative standard marker bǐ in (54):

(53) **A-not-A applied to adverb ‘often’:**

(Ni cháng-bú-cháng lái?)

‘Does Akiu come often?’

(54) **A-not-A applied to comparative morpheme:**

(Ni bǐ-bú-bǐ tā gāo?)

‘Are you taller than him/her?’

I suggest that what we should take away from such data is that being a verb is not a prerequisite for being a target of A-not-A formation. The grammaticality of examples such as (52) does not lead us to immediately conclude that the focus particle shì is itself a verb.

**References**


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