

# The Multiple Mechanisms for Mandarin Sluices

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**1. Overview:** This paper is concerned with the syntax of sluicing-like construction (SLCs) in the *wh*-in-situ language Mandarin with the different optionality of *shi*. An example is provided in (1) and (2). “Simple *wh*-arguments” like *shui* ‘who’ and *shenme* ‘what’, require the presence of *shi*, in (1). With “complex *wh*-phrases”, like *zainali* ‘where’ *shi* is optional, in (2).

- (1) Zhangsan kanjian-le mouren, dan wo bu zhidao \*( **shi** ) shui  
Zhangsan see-ASP someone, but I NEG know SHI who  
‘Zhangsan saw someone, but I don’t know who.’ (obligatory *shi*)
- (2) Zhangsan zai moudi kanjian-le Lisi, dan wo bu zhidao ( **shi** ) zainali  
Zhangsan at somewhere see-ASP Lisi, but I NEG know SHI where  
‘Zhangsan saw Lisi somewhere, but I don’t know where.’ (optional *shi*)

On the basis of the distribution of *shi*, we propose that Mandarin employs two different movement-based strategies to derive SLCs and that the availability of each strategy is a function of the identity of the remnant.

**2. Background:** The variable presence of the element *shi* is a well-known property of Mandarin SLCs and descriptively is a function of the identity of the remnant (see Adams & Tomioka 2012). For Adams & Tomioka (2012) and others, the presence of *shi* provides significant evidence that Mandarin SLCs do not employ movement, but instead involve embedded copular constructions: [<sub>CP</sub> it is *wh*]. However, the question of why *shi* is optional and why its presence is conditioned by the identity of the remnant constituent is a puzzle for any theory of Mandarin SLCs that has received relatively little attention (though see Wei 2004 and Wang & Wu 2006 for proposals).

**3. The analysis:** We argue that the distribution of *shi* follows from the claim that (i) Mandarin employs two different movement-based strategies to derive SLCs and (ii) these strategies are differentially available to the remnant constituent on the basis of its independent ability to appear clause-initially.

We propose that the presence or absence of *shi* betrays which of the following two strategies were employed to generate a Mandarin SLC. An SLC without *shi* is derived by *Focus-Sluicing* in (3), movement of the remnant out of an elided IP (e.g., Wang & Wu 2006, Song & Yoshida 2017). An SLC with *shi* is derived by *shi-de-Sluicing* in (4), a species of pseudosluicing whereby the remnant is formally related to a position in an elided relative-like clause (see Potsdam 2007 on Malagasy; cf. Wang & Wu 2006 and Song 2016 on Mandarin).

- (3) *Focus-Sluicing (IP-Ellipsis)*  
... wo bu zhidao [<sub>CP</sub> zainali [<sub>IP</sub> Zhangsan-<sub>x<sub>T</sub></sub> kanjian-le Lisi ]]  
I NEG know where Zhangsan see-ASP Lisi
- (4) *shi-de-Sluicing (CP-Ellipsis)*  
... wo bu zhidao [<sub>CP</sub> *pro<sub>expl</sub>* **shi** zainali<sub>1</sub> [<sub>CP</sub> Zhangsan-<sub>x<sub>T</sub></sub> kanjian-le Lisi **de** ]]  
I NEG know SHI where Zhangsan see-ASP Lisi DE

In light of this analysis, we further propose that the data in (1) and (2) reveal that remnants have differential access to each of these two SLC strategies. This is reflected in the following empirical generalization:

(5) If an XP independently appears clause-initially, *shi* is optional in an SLC with that XP as its remnant. This generalization captures the correlation between the inability to front simple *wh*-phrases, as in (6) below, and the necessity of *shi* in (1). Conversely, complex *wh*-phrases can be fronted, as in (7) below, and optionally permit *shi* in (2). (See Song 2017 for a similar observation.)

(6) \*shui [ Zhangsan kanjian-le  $x_1$  ]?  
 who Zhangsan see-ASP

(7) zainali<sub>1</sub> [ Zhangsan  $x_1$  kanjian-le Lisi ]?  
 where Zhangsan see-ASP Lisi

The necessity of *shi* in (1) now follows from the fact that simple *wh*-phrases cannot be remnants in a Focus-Sluicing derivation because they cannot appear clause-initially under general circumstances. Instead, they must be generated through *shi-de*-Sluicing and must appear with *shi*. Complex *wh*-phrases, on the other hand, can be generated via *Focus-Sluicing* given that they can appear clause-initially. It is in this type of construction that they are a remnant in the variant of (2) without *shi*. However, these same constituents can also be the remnants of *shi-de*-Sluices and, therefore, may appear in the variant of (2) with *shi*.

Initial evidence for this analysis comes from the fact that, while only complex *wh*-phrases independently appear clause-initially, both classes of remnant can appear in unelided *shi-de*-clefts; see (8) and (9).

(8) ... wo bu zhidao \*(shi) shui<sub>1</sub> Zhangsan kanjian-le  $x_1$  \*(de)  
 I NEG know SHI who Zhangsan see-ASP DE

(9) ... wo bu zhidao \*(shi) zainali<sub>1</sub> Zhangsan  $x_1$  kanjian-le Lisi \*(de)  
 I NEG know SHI where Zhangsan see-ASP Lisi DE

It is necessary for both *shi* and *de* appear in the clefts that leads us to expect their necessity in *shi-de*-Sluices.

**4. Further support:** This analysis expects the Binding Connectivity effects observed by Song & Yoshida (2017). Moreover, because both Focus-Sluicing and *shi-de*-Sluicing are clause reduction mechanisms, the disjoint reference effect in (10) is predicted to persist independently of the presence of *shi*.

(10) \*Ta<sub>2</sub> gen san-ge Lisi de pengyou qu kanle dianying, dan wo bu zhidao  
 he with three-CL Lisi GEN friend go watch-ASP movie, but I NEG know  
 [(shi) gen ji-ge Zhangsan<sub>2</sub> de pengyou]<sub>1</sub>  
 SHI with how.many-CL Zhangsan GEN friend  
 \*‘He<sub>1</sub> went to the movies with three of Lisi’s friends, but I don’t know with how many of Zhangsan<sub>1</sub>’s friends he<sub>1</sub> went to the movies.’

Second, if Focus-Sluices and *shi-de*-Sluices are indeed different constructions, we should expect that they might display different interpretive properties. The inability to interpret negation from the antecedent in the ellipsis site, specifically in the presence of *shi*, represents one such case in (11).

(11) Zhangsan zhi mei gen yi-ge ren chaojia, dan wo bu zhidao  
 Zhangsan only NEG with one-CL person argue, but I NEG know  
 (\*shi) gen shui [ Zhangsan mei—chao—de ]  
 SHI with who Zhangsan NEG argue DE  
 ‘Zhangsan didn’t argue with only one person, but I don’t know who he didn’t argue with.’

**5. The how-puzzle:** This analysis also provides a way to understand the otherwise puzzling fact that the *wh*-adverbial *zenyangde* ‘how’ generally resists appearing in Mandarin SLCs (Adams & Tomioka 2012). Similar to the discussion above, this is a reflection of the fact that this *wh*-element does not independently appear clause-initially (12-a) and (12-b), as we demonstrate, only selectively appears in *shi-de*-clefts (12-b).

(12) Zhangsan xiuru-le Lisi, dan ...  
 Zhangsan humiliate-ASP Lisi, but  
 a. \*... wo bu zhidao zenyangde<sub>1</sub> [ Zhangsan  $x_1$  xiuru-le ———— Lisi ]  
 I NEG know how Zhangsan humiliate-ASP Lisi  
 b. ? ... wo bu zhidao shi zenyangde<sub>1</sub> [ Zhangsan  $x_1$  xiuru-le ———— Lisi—de ]  
 I NEG know SHI how Zhangsan humiliate-ASP Lisi DE

As above, the mechanisms in (3) and (4) are differentially available for making *zenyangde* ‘how’ a remnant.

**Selected References:** Adams, W. & Tomioka, S. 2012. In *Sluicing: Cross-linguistic Perspectives*; Li, A. & T.-C. Wei. 2017 *Studies in Chinese Linguistics* 38:63–92; Song, W. 2016. In *Proceedings of the 39th Penn Linguistics Colloquium*; Song & Yoshida. 2017. In *Proceedings of WCCFL 34*; Wang, C.-A. & H.-H. Wu. 2006. In *Proceedings of the 29th Penn Linguistics Colloquium*.