Towards a Syntactic Focus Movement Account of the Sluicing-Like Construction in Chinese

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Abstract

There have been two camps on the analysis of the ellipsis construction dubbed sluicing by Ross (1969) in Mandarin Chinese. The pseudosluicing analyses argue that Chinese sluicing involves a copular clause with a null pro, whereas the focus movement analyses propose that it is derived from focus movement plus TP-deletion. In this paper I provide evidence for the second view by showing parallels between sluicing and the wh-fronting construction in Chinese. Three parallel behaviors involve the distribution of shi, exhaustive identification, and the (im)possibility of the how family.

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1 Introduction

Sluicing refers to an ellipsis construction in which a *wh*-phrase appears in the place where we expect a full clause.

(1) a. John met someone, but I don't remember who.
    b. John met someone, but I don't remember who John met.

This sort of construction in *wh*-moving languages has been argued to involve overt *wh*-movement plus TP-deletion (Ross 1969, Merchant 2001). Mandarin Chinese (henceforth Chinese), a *wh*-in-situ language (Huang 1982), has a sluicing-like construction (SLC), shown in (2) below.[1]

(2) Zhangsan yudao-le   mouren, dan wo bu   jide   **shi** shei.
    Zhangsan meet-PERF someone but 1SG NEG   remember SHI who
    'Zhangsan met someone, but I don't remember who.'

Note that a major difference between sluicing in English and SLC in Chinese is the presence of *shi*. The morpheme *shi* is a multi-function element in Chinese. Two primary functions include linking subject and complement in copula constructions and marking focus in focus constructions.

There are two camps on the analysis of SLC in Chinese. Adams (2004), Wei (2004), Adams and Tomioka (2012), and Li and Wei (2014) argue that the sluiced clause in SLC is a copular clause with a null *pro*, whereas Wang (2002), Wang and Wu (2006), Chiu (2007), Wang (2012), and Murphy (2014) propose that SLC is derived from focus movement followed by TP-deletion.

This paper provides evidence supporting the second view. Section 2 summarizes previous accounts and points out some problems with the non-movement analyses. Section 3 presents evidence for a focus movement account. Crucial evidence comes from parallels between SLC and the *wh*-fronting construction in Chinese. Three parallel behaviors involve the distribution of *shi*, exhaustive identification, and the (im)possibility of the *how* family. Section 4 concludes this paper.

2 Current Analyses

2.1 Pseudosluicing Analyses

Pseudosluicing, first named and discussed by Merchant (1998), refers to a kind of reduced cleft construction in which the pivot is a *wh*-phrase. This is shown in (4) below.

(3) John met someone, but I don't remember who~i~ [~~John met t~i~~].   (sluice)
(4) John met someone, but I don't remember who~i~ [~~it was t~i~ (that John met)~~].   (pseudosluice)

Adams and Tomioka (2012) and Li and Wei (2014) argue that SLC is not genuine sluicing, but rather an instance of pseudosluicing. They propose that SLC involves a simplex structure, which includes a null *pro*, a copula *shi*, and a *wh*-phrase. This is exemplified in (5) below.

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[1]The abbreviations used in this paper are glossed as follows: 1SG = first person singular, 2SG = second person singular, 3SG = third person singular, cl = classifier, EXP = experiential aspect marker, GEN = genitive marker, NEG = negative marker, PERF = perfective aspect marker, PROG = progressive aspect marker, Q = question marker, REL = relative marker.

(5) Zhangsan yudao-le   mouren, dan wo bu   jide   [CP ***pro*** shi   shei].
    Zhangsan meet-PERF   someone but 1SG NEG remember   SHI   who
    'Zhangsan met someone, but I don't remember who.'

Adams and Tomioka (2012) claim that the pseudosluicing analyses can account for the fact that SLC with a *wh*-argument requires an overt inner antecedent, because implicit arguments cannot serve as the licensor for pronouns in the subsequent discourse (cf. Heim 1982). Compare the instance of normal sluicing in (6) with the sprouting example in (7), while the overt inner antecedent *mouwu* "something" is required in Chinese SLC with the *wh*-argument *shenme* "what", the presence of the overt inner antecedent *something* is optional in the English counterpart.

(6) Zhangsan zai   yuedu **mouwu**,   dan wo bu   zhidao shi shenme.
    Zhangsan PROG read   something but 1SG NEG know   SHI what
    'Zhangsan is reading something, but I don't know what.'
(7) *Zhangsan zai   yuedu, dan wo bu   zhidao shi shenme.
    Zhangsan PROG read   but 1SG NEG know   SHI what
    Intended 'Zhangsan is reading, but I don't know what.'

Interestingly, SLC with a *wh*-adjunct does not require an overt inner antecedent. Consider (8), the presence of the overt inner antecedent *zai moudi* "somewhere" is optional in both Chinese SLC and English sluicing.

(8) Zhangsan (**zai moudi**)   yudao Lisi, dan wo bu   zhidao shi zai nali.
    Zhangsan in   somewhere meet Lisi but 1SG NEG know   SHI in   where
    'Zhangsan met Lisi (somewhere), but I don't know where.'

According to Adams and Tomioka (2012), this is not surprising in that the null *pro* in (8) is an instance of sentential anaphora, and any overt sentence can serve as the antecedent of such a sentential *pro*, irrespective of the presence of an overt inner antecedent.

However, this claim seems to be problematic in an embedded context like (9) below.

(9) [CP Zhangsan tingshuo [CP Lisi   jiehun-le]   ],
        Zhangsan hear   Lisi   get.married-PERF
    dan wo   wangji shi   zai shenmeshihou.
    but 1SG   forget SHI   in   what.time
    'Zhangsan heard that Lisi has got married, but I forgot when.'

In (9), without any overt inner antecedent, the *wh*-adjunct *zai shenmeshihou* "when" ambiguously refers to either the time of the matrix event or the time of the embedded event.

In contrast, with the overt inner antecedent *zai moushi* "sometime" in either the matrix clause in (10a) or the embedded clause in (10b), the *wh*-adjunct *zai shenmeshihou* "when" unambiguously refers to the time of the event denoted by the clause with the overt inner antecedent.

(10) a. [CP Zhangsan **zai moushi**   tingshuo [CP Lisi   jiehun-le]   ],
            Zhangsan in   sometime hear   Lisi   get.married-PERF
        dan wo   wangji shi   zai shenmeshihou.
        but 1SG   forget SHI   in   what.time
        'Z. heard sometime that L. has got married, but I forgot when (Z. heard that L. has got married).'
     b. [CP Zhangsan tingshuo [CP Lisi   **zai moushi**   jiehun-le]   ],
            Zhangsan hear   Lisi   in   sometime get.married-PERF
        dan wo   wangji shi   zai shenmeshihou.
        but 1SG   forget SHI   in   what.time
        'Z. heard that L. has got married sometime, but I forgot when (L. has got married).'

The contrast between (9) and (10) indicates that the presence of an overt inner antecedent in SLC with a *wh*-adjunct has an effect on the interpretation of the sentential *pro*, at least in the embedded context. Under the pseudosluicing analyses, this contrast cannot be captured by the sentential *pro*. In addition, this approach also faces some problems explaining apparent sloppy readings in SLC.[2]

2.2 (Pseudo)Cleft Analyses

Another approach to SLC in *wh*-in-situ languages is (pseudo)cleft analyses. Kizu (1997) claims that sluicing in *wh*-in-situ languages is uniformly derived from clefts. It is thus worth examining if the (pseudo)cleft analyses can be extended to Chinese. There are two types of cleft constructions in Chinese. (11) is considered a cleft sentence (Huang 1982), and (12), a pseudocleft sentence (Huang 1988). The pivot in each (pseudo)cleft sentence is bracketed for ease of exposition.

(11) **Shi** [Zhangsan] zai Beijing   xuexi   zhongwen (**de**).   (cleft)
    SHI   Zhangsan   in   Beijing   study   Chinese   DE
    'It was Zhangsan that studied Chinese in Beijing.'

(12) Zhangsan   zai Beijing   xuexi   **de**   **shi**   [zhongwen].   (pseudocleft)
    Zhangsan   in   Beijing   study   REL   SHI   Chinese
    'What Zhangsan studied in Beijing was Chinese.'

There are two major problems with a cleft analysis. First, the distribution of *shi* in cleft sentences is restricted to the pre-verbal domain. Note that *shi* in (13) cannot appear before the post-verbal object *zhongwen* "Chinese", whereas *shi* in (14) can appear before the *wh*-remnant *na-zhong yuyan* "which language" that is co-indexed with the object *mou-zhong yuyan* "some language" in the antecedent clause.

(13) *Zhangsan   zai   Beijing   xuexi   **shi**   [zhongwen]   (**de**).
    Zhangsan   in   Beijing   study   SHI   Chinese   DE
    Intended 'It was Chinese that Zhangsan studied in Beijing.'

(14) Zhangsan   zai   Beijing   xuexi   mou-zhong   yuyan$_i$,
    Zhangsan   in   Beijing   study   some-CL   language
    dan   wo   bu   zhidao   shi   na-zhong   yuyan$_i$.
    but   1SG   NEG   know   SHI   which-CL   language
    'Zhangsan studied some language in Beijing, but I don't know which language.'

Second, the cleft analysis incorrectly predicts that SLC with a *wh*-adjunct is derived from a quasi-stripping discontinuous deletion of the subject, the lexical verb, and the object.

(15) Zhangsan zai   moudi   xuexi   zhongwen,
    Zhangsan in   somewhere   study   Chinese
    dan   wo   bu   zhidao   [~~Zhangsan~~   **shi**   zai   nali   ~~xuexi   zhongwen   (de)~~].
    but   1SG   NEG   know   Zhangsan   SHI   in   where   study   Chinese   DE
    'Zhangsan studied Chinese somewhere, but I don't know where.'

As for a pseudocleft analysis of SLC, a fatal problem involves categorial restrictions on the pivot. Note that adjuncts cannot serve as the pivot in pseudocleft sentences. The ungrammaticality of (16) below is in conflict with the grammaticality of SLC with a *wh*-adjunct like (15) above.

(16) *Zhangsan   xuexi   zhongwen   **de**   **shi**   [zai   Beijing].
    Zhangsan   study   Chinese   REL   SHI   in   Beijing
    Intended '(The place where) Zhangsan studied Chinese was Beijing.'

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[2]Wei (2009) carefully showed that sloppy readings in SLC favors the PF-deletion analysis over the *pro* sluice analysis based on three essential properties of sloppy identity, including c-commanding, lexical identity between a *wh*-correlate and a *wh*-remnant, and the *na* "that" effect.

Finally, multiple (pseudo)clefts in Chinese are not possible, whereas multiple sluicing cases in Chinese are allowed, shown in (17) below.[3]

(17) Mouren   zai huochezhan   diu-le   yi-ge   dongxi,
      someone   in   train.station lose-PERF   one-CL   thing
      dan wo bu   zhidao **shi** shei **shi** shenme.
      but 1SG NEG   know   SHI   who   SHI   what
      'Someone lost one thing at the train station, but I don't know (lit.) who what.'

This contrast also cannot be properly explained under (pseudo)cleft analyses. Consider the aforementioned problems, neither the cleft sentence nor the pseudocleft sentence can be the underlying structure of the sluiced clause in SLC.

2.3 Focus Movement Analyses

Focus movement is yet another approach to SLC and has been promoted by Wang (2002), Wang and Wu (2006), Chiu (2007), Wang (2012), and Murphy (2014). Under such analyses, SLC is derived from focus movement of a *wh*-phrase to the left periphery plus deletion of the rest of TP. This is instantiated in (18) below.

(18) Zhangsan   yudao-le   mouren.
      Zhangsan   meet-PERF   someone
      dan wo   bu   jide   [$_{CP}$ shi [$_{FocP}$ shei$_i$ Foc [$_{TP}$ ~~Zhangsan   yudao-le   t$_i$~~].
      but 1SG   NEG remember SHI   who   Zhangsan   meet-PERF
      'Zhangsan met someone, but I don't remember who.'

In this paper I will be arguing for a focus movement account. Crucial evidence comes from parallels between SLC and the *wh*-fronting construction in Chinese.

While Chinese is considered a *wh*-in-situ language, it has been noted that a *wh*-phrase can be fronted to the sentence-initial position (Hoh and Chiang 1990, Tsai 1994, Cheung 2008, 2014). This is exemplified in (19) below.

(19) Shi shei$_i$ Zhangsan   zui   xihuan t$_i$ (ne)?
      SHI who   Zhangsan   most like   Q
      'Who is it that Zhangsan likes the most?'

Cheung (2008, 2014) argues that *wh*-fronting in Chinese is a strategy for licensing Identificational Focus (sometimes also called contrastive focus or narrow focus, henceforth IdentF) in the sense of É. Kiss (1998), and *wh*-phrases in the *wh*-fronting construction undergo movement to Spec-FocP in the left periphery. Assuming Cheung's analysis, the parallels between SLC and the *wh*-fronting construction provide motivations for a focus movement account. In the next section, I present three parallel behaviors that involve the distribution of *shi*, exhaustive identification, and the (im)possibility of the *how* family.

3 SLC and the *Wh*-Fronting Construction

3.1 The Distribution of *Shi*

It is generally agreed that the distribution of *shi* in SLC is sensitive to the complexity of *wh*-phrases (Adams and Tomioka 2012, Li and Wei 2014, Murphy 2014), rather than their argument-adjunct status (cf. Wang 2002, Wang and Wu 2006). Note that while the presence of *shi* is obligatory with simplex *wh*-phrases in (20), it is optional with complex *wh*-phrases in (21–24). I leave out overt inner antecedents in (24) for ease of exposition.

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[3]Multiple sluicing, dubbed by Takahashi (1994), refers to sluicing with more than one *wh*-remnant.

(20) Simplex *Wh*-arguments
    a. Lisi xihuan mouren, dan wo bu   zhidao shi **shei**.
       Lisi like   someone but 1SG NEG know SHI who
       'Lisi likes someone, but I don't know who.'
    b. Lisi diushi mouwu,   dan wo bu   zhidao shi **shenme**.
       Lisi lose   something but 1SG NEG know SHI what
       'Lisi lost something, but I don't know what.'
(21) Complex *Wh*-arguments
    a. Lisi xihuan mouren-de   che, dan wo bu   zhidao (shi) **shei-de   che**.
       Lisi like   someone-GEN car but 1SG NEG know SHI   who-GEN   car
       'Lisi likes someone's car, but I don't know whose car.'
    b. Lisi diushi   mou-ge dongxi, dan wo bu   zhidao (shi) **shenme dongxi**.
       Lisi lose   some-CL thing   but 1SG NEG know SHI   what   thing
       'Lisi lost some thing, but I don't know what thing.'
(22) D-linked *Wh*-arguments
    Lisi yudao mou-ge xuesheng, dan wo bu   zhidao (shi) **na-ge   xuesheng**.
    Lisi meet some-CL student   but 1SG NEG know SHI   which-CL   student
    'Lisi met some student, but I don't know which student.'
(23) Prepositional *Wh*-phrases
    Lisi song hua   gei mouren, dan wo bu   zhidao (shi) **gei shei**.
    Lisi give flower to   someone but 1SG NEG know SHI   to   who
    'Lisi gave flowers to someone, but I don't know to whom.'
(24) Adverbial *Wh*-adjuncts
    Lisi da-le   Wangwu, dan wo   bu   zhidao.
    Lisi hit-PERF Wangwu   but 1SG   NEG   know
    a. …(shi) **zai nali**.
       SHI   in   where
    b. …(shi) **zai shenmeshihou**.
       SHI   in   what.time
    c. …(shi) **weishenme**.
       SHI   for.what
    'Lisi hit Wangwu, but I don't know where/when/why.'

    Importantly, the distribution of *shi* in SLC patterns the same as that in the *wh*-fronting construction. This is shown in (25–29) below. Note that the presence of *shi* in these *wh*-fronting sentences is obligatory with simplex *wh*-phrases and optional with complex *wh*-phrases.

(25) Simplex *Wh*-arguments
    a. Shi **shei$_i$** Lisi zui   xihuan t$_i$ (ne)?
       SHI   who   Lisi most   like   Q
       'Who is it that Lisi likes the most?'
    b. Shi **shenme$_i$** Lisi bu   xiaoxin diushi-le t$_i$ (ne)?
       SHI   what   Lisi NEG   careful lose-PERF   Q
       'What was it that Lisi lost by accident?'
(26) Complex *Wh*-arguments
    a. (Shi) **shei-de   che$_i$** Lisi zui   xihuan t$_i$ (ne)?
       SHI   who-GEN   car   Lisi most like   Q
       'Whose car is it that Lisi likes the most?'
    b. (Shi) **shenme dongxi$_i$** Lisi bu   xiaoxin diushi-le t$_i$ (ne)?
       SHI   what   thing   Lisi NEG   careful lose-PERF   Q
       'What thing was it that Lisi lost by accident?'
(27) D-linked *Wh*-arguments
    (Shi) **na-men   kecheng$_i$** Lisi zui   xihuan t$_i$ (ne)?
    SHI   which-CL   class   Lisi most like   Q
    'Which course is it that Lisi likes the most?'

(28) Prepositional *Wh*-phrases
    (Shi) **gei shei$_i$** Lisi zhiqian song-guo hua t$_i$ (ne)?
    SHI to who Lisi before give-EXP flower Q
    'To whom was it that Zhangsan gave flowers before?'

(29) Adverbial *Wh*-adjuncts
    a. (Shi) **zai nali$_i$** Lisi t$_i$ da-le Wangwu (ne)?
        SHI in where Lisi hit-PERF Wangwu Q
        'Where was it that Lisi hit Wangwu?'
    b. (Shi) **zai shenmeshihou$_i$** Lisi t$_i$ da-le Wangwu (ne)?
        SHI in what.time Lisi hit-PERF Wangwu Q
        'When was it that Lisi hit Wangwu?'
    c. (Shi) **weishenme$_i$** Lisi t$_i$ da-le Wangwu (ne)?
        SHI for.what Lisi hit-PERF Wangwu Q
        'Why was it that Lisi hit Wangwu?'

This parallel with respect to the distribution of *shi* between SLC and the *wh*-fronting construction is best analyzed as a result of focus movement.[4]

3.2 Exhaustive Identification

According to É. Kiss (1998), IdentF expresses exhaustive identification. *Wh*-fronting in Chinese, a strategy for licencing IdentF, exhibits exhaustivity (Cheung 2008, 2014). Note that (31b) cannot be used to answer (30) because it violates exhaustive identification.

(30) (Shi) **shenme dongxi$_i$** ni mai-le t$_i$ (ne)?   (Cheung 2008)
      SHI what thing 2SG buy-PERF Q
      'What thing was it that you bought?'

(31) a. Shi **maozi**.
       SHI hat
       'It was a hat.'
    b. #Shi **maozi**, haiyou shi **waitao**.
       SHI hat also SHI coat
       'It was a hat, and (lit.) it was a coat, too.'

Interestingly, Murphy (2014) observes that SLC with factive verbs also exhibits exhaustivity, as evidenced by (32) and (33) below. It is odd to utter (32) and (33) in a continuous manner because (33) contradicts the exhaustivity expressed by (32).

(32) Zhangsan mai-le yi-yang dongxi, Lisi zhidao (shi) shenme dongxi.
    Zhangsan buy-PERF several-CL thing Lisi know SHI what thing
    'Zhangsan bought several things, and Lisi knows what things.'

(33) … #dan Lisi bu zhidao Zhangsan hai mai-le waitao.
       but Lisi NEG know Zhangsan also buy-PERF coat
    '…#but Lisi doesn't know Zhangsan also bought a coat.'

Assuming É. Kiss's (1998) study that exhaustive identification is an essential property of IdentF, this parallel behavior indicates that SLC involves focus movement at some point in the derivation.

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[4]The distribution of *shi* in SLC has been attributed to the predicational force of *wh*-phrases (Wei 2004), Case requirement (Wang and Wu 2006), and the minimal/maximal status of *wh*-phrases (Wang 2012, cf. Murphy 2014). In this paper, I follow Cheung (2014) in treating *shi* as a focus marker selected in the numeration. Given the fact that the presence or absence of *shi* does not lead to any interpretive difference except for emphatic effects, I posit that the optionality of *shi* before complex *wh*-phrases in SLC is a PF phenomenon. This assumption seems to be plausible, because Cheung (2014) notes that *shi* is more likely to be omitted by speakers in fast speech than in normal rate speech, and Wang and Wu (2006) observes that *shi* is not even required for SLC with simplex *wh*-phrases to some Beijing dialects speakers of Chinese.

3.3 The *How* Family

It has been noted that the *wh*-phrase *zenmeyang* "how", which denotes the instrument and manner of an event (Tsai 1999, 2008), is not allowed in SLC (Adams 2004). This peculiar behavior of *zenmeyang* "how" is shown in (34).

(34) a. *Ta   qu-le   Beijing, dan wo bu   zhidao (shi) **zenmeyang**. (instrumental)
        3SG go-PERF   Beijing but 1SG NEG know   SHI   how
        Intended 'He went to Beijing, but I don't know by what means.'
     b. *Ta   ma-le   ni, dan wo bu   zhidao (shi) **zenmeyang**. (manner)
        3SG scold-PERF   2SG but 1SG NEG know   SHI   how
        Intended 'He scolded you, but I don't know in what manner.'

Interestingly, while *zenmeyang* "how" is allowed in the *wh*-in-situ construction in (35), it is not allowed in the *wh*-fronting construction in (36).

(35) a. Ta   **zenmeyang**   qu-le   Beijing?   (instrumental)
        3SG   how   go-PERF   Beijing
        'By what means did he go to Beijing?'
     b. Ta   **zenmeyang**   ma-le   ni?   (manner)
        3SG   how   scold-PERF   2SG
        'In what manner did he scold you?'
(36) a. *(Shi) **zenmeyang$_i$** ta   t$_i$ qu-le   Beijing?   (instrumental)
        SHI   how   3SG   go-PERF   Beijing
        Intended 'By what means did he go to Beijing?'
     b. *(Shi) **zenmeyang$_i$** ta   t$_i$ ma-le   ni?   (manner)
        SHI   how   3SG   scold-PERF   2SG
        Intended 'In what manner did he scold you?'

Wang and Wu (2006) argue that the impossibility of *zenmeyang* "how" in (34) and (36) supports a focus movement account, and this parallel behavior indicates that *zenmeyang* "how" cannot feed focus movement.
    However, Adams and Tomioka (2012) observe that *zenme* "how", the simplex form of *zenmeyang* "how", can be fronted to the sentence-initial position, though it is not permitted in SLC, shown in (37).

(37) a. **Zenme**   Laowu   xiuru   Lisi   (ne)?   (Adams and Tomioka 2012)
        how   Laowu   insult   Lisi   Q
        'How come Laowu insulted Lisi?'
     b. *Laowu   xiuru   Lisi, dan wo   bu   zhidao (shi) **zenme**.
        Laowu   insult   Lisi but 1SG NEG know   SHI   how
        Intended 'Laowu insulted Lisi, but I don't know by what means/in what manner.'

(37) seems to pose a problem to the focus movement account, but I argue that the two *zenme*s in (37) are two distinct members of the *how* family. Compare the sentence-medial *zenme* "how" in (38) below with the sentence-initial *zenme* "how" in (37a) above.

(38) Laowu   **zenme**   xiuru   Lisi   (ne)?
     Laowu   how   insult   Lisi   Q
     'By what means/In what manner did Laowu insult Lisi?'

While the sentence-medial *zenme* "how" has an instrumental or manner reading, the sentence-initial *zenme* "how" in effect has a causal reading. Note that *zenme* "how" in (37b) is the instrumental or manner *zenme* "how", rather than the causal *zenme* "how". The instrumental or manner *zenme* "how" in (37b) as an alternative to *zenmeyang* "how" cannot feed focus movement, explaining the ungrammaticality of (37b).

According to Tsai (2008), the instrumental and manner *how*s are vP-level modifiers, whereas the causal *how*s are CP-level modifiers. As Tsai argues, vP-level *how*s are subject to locality constraints and intervention effects. Assuming that *zenmeyang* and the sentence-medial *zenme* are vP-level modifiers with the instrumental and manner readings, it is likely that they are subject to locality principles preventing focus movement. This also explains the impossibility of the instrumental and manner *how*s in SLC and the *wh*-fronting constructions.

4 Conclusion

This paper briefly summarizes previous accounts of SLC and presents evidence supporting a focus movement account. Crucial evidence comes from the parallels between SLC and the *wh*-fronting construction in Chinese.

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