

A FOCUS-MOVEMENT ACCOUNT ON CHINESE MULTIPLE SLUICING*

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1 Introduction

It is not surprising at all that multiple sluicing is possible in the multiple fronting languages. However, multiple sluicing is also found in some of the in-situ languages such as Japanese and Mandarin Chinese. In Mandarin Chinese (MC) multiple sluicing is generally prohibited as exhibited in (1).¹

- (1) *moren da-le womenban de ren, dan wo bu zhidao *(shi) **shei shei**
someone hit-Asp our class pos. person, but I not know be who who
'Someone hit a person of our class, but I don't know who whom'

Yet, when the second *wh*-remnant is replaced with a *wh*-adjunct, the sentence turns out to be good:

- (2) ..., danwo bu zhidao *(shi) **shei zai-nali**
..., but I not know be who at-where
'..., but I don't know who where'

This paper will explain the contrast between (1) and (2). We argue for the existence of overt syntactic movement that yields the multiple sluicing in Mandarin Chinese. The relevant phenomenon is derived by attributing the arguments and adjuncts to different syntactic operations as will be clear later. Section 2 observes further conditions on MC multiple Sluicing. Section 3 briefly reviews two approaches in dealing with Chinese sluicing to see how these two approaches may cope with the data observed in previous sections. Section 4 illustrates our solution. Section 5 concludes the study.

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¹ The *wh*-argument in Chinese sluicing obligatorily requires *shi*-support whereas the *wh*-adjunct does not. Since it is not our main focus in this paper, we will simply present the data without arguing for its status.

2. Further observation

In this section, we show further restrictions on MC multiple sluicing. First, the order of the *wh*-remnants is absolutely strict. The *wh*-adjunct must follow the *wh*-argument as the contrast exhibited in (3-4).

(3) a. *moren diao-le qian, dan wo bu zhidao *(shi) shei zai-nali*
 someone lost-Asp money but I not know *(be) who at-where
 'Someone lost money, but I don't know who where'

b. *..., *dan wo bu zhidao zai-nali *(shi) shei*
 ..., but I not know at-where be who
 '..., but I don't know where who'

(4) a. *Zhangsan da-le moren, dan wo bu zhidao *(shi) shei weishenme*
 Zhangsan hit-Asp someone, but I not know be who why
 'Zhangsan hit someone, but I don't know who why.'

b. *..., *dan wo bu zhidao weishenme *(shi) shei*
 ..., but I not know why be who
 '..., but I don't know why who'

Second, multiple sluicing in Chinese is possible only if the antecedents of the two *wh*-remnants are clausemate with each other. Consider the following:

(5) *moren gaosu Zhangsan [xuexiao you yi-chanyianjian],*
 someone tell Zhangsan school have one-CL lecture
*dan wo bu zhidao *(shi) shei zai-nali*
 but I not know *(be) who at-where

'Someone told Zhangsan that there is a lecture at school, but I don't know who where'

The *wh*-adjunct *zai-nali* 'where' here can only be associated with an implicit adjunct in the matrix clause, instead of the embedded one. We thus get a reading questioning *who told Zhangsan the news and where he told the news*. It is impossible to get an embedded reading questioning *where the speech would be held*.

The relevant accounts on the clausemate condition are also available in the literature (Nishigauchi 1998; Takahashi 1994). The example is as in (6). We will argue later that this condition follows from the phase theory in which *wh*-phrases in different phase domain could not be linearized together.

- (6) *Hanako -ga dareka -ni [Taro-ga nanika-o tabeta to] iituketa rasii ga,
 H. -nom smone. -dat T. -nom smthg. -acc ate C told seem but
 ‘It seems that Hanako told someone that Taro ate something, but . . . ’

Boku -wa [dare-ni nani-o (da) ka] wakara -nai
 I -TOP who-DAT what-ACC COP Q know -NEG
 ‘I don’t know to whom what.’

3. Possible accounts

In this section we briefly review two accounts of Chinese Sluicing, the null-*pro* approach and the focus movement approach, and see how these two accounts can cope with the observation thus far.

3.1 The null-*pro* approach

Wei (2004) proposes that the structure of sluicing in Mandarin Chinese involves a null-*pro* and a base-generated *wh*-remnant as illustrated in (7).

- (7) Zhangsan mai-le mo-ge-dongxi, dan wo bu zhidao [*pro* *(shi) sheme].
 Zhangsan buy-ASP some-CL-thing, but I not know be what
 ‘Zhangsan bought something, but I don’t know what.’

This analysis captures the in-situ nature of Chinese *wh*-elements and allows us to deal with the Island Repair phenomenon (cf. Chung 1995, Merchant 1999). Wei further characterizes the status of *pro* in his framework as subject *pro*, referring to certain nominal in the antecedent clause, and event *pro*, referring to the event denoted by the antecedent clause.

However, one of the fatal problems of the *pro* analysis is on the interpretation of the elided constituent. Sluicing structure displays a strict-sloppy ambiguity as in (8). The missing anaphor *taziji* ‘himself/ herself’ in the sluiced clause could be interpreted either as *why Lisi was scolded* or *why Zhangsan was scolded*. But when the subject preceding the copular is realized, the only interpretation is the strict reading (9). This approach then must explain how the sloppy reading in the sluicing structure (8) is possible.

- (8) Zhangsan zhidao taziji weisheme bei ma, Lisi yie zhidao (shi) weisheme.
 PN. know himself why past-scold, PN. also know LINK why.
 ‘Zhangsan knows why he was scolded, and Lisi also knows why’

- (9) Zhangsan zhidao taziji weisheme bei ma, Lisi yie zhidao zhe-jian-shi shi
 PN. know himself why past-scold, PN. also know this matter LINK
 weisheme
 why.

Second, one would suggest a coordination analysis where the multiple *wh*-remnants are conjoined by some implicit conjunction, say *he* ‘and’ or *yiji* ‘and’. This may endorse Wei’s (2004) account which treats the *wh*-remnants as base-generated (predicational) nominals.

- (10) ..., dan wo bu zhidao [*pro* *(shi) **shei** (he/yiji) **zai-nali**]
 ..., but I not know be who and/and at-where
 '..., but I don't know who and where.'

Yet, adopting this approach, we still do not know why two *wh*-arguments cannot co-occur with each other in Chinese multiple sluicing since in principle two arguments can be conjoined by some conjunction.

- (11) *..., dan wo bu zhidao [*pro* *(shi) [shei (he) shei]]
 ..., but I not know be who and whom
 '..., but I don't know who and whom.'

Third, the null-*pro* approach would not be able to account for the clausemate condition since the null-*pro* can be freely referring to entities/events of the matrix clause or the embedded clause. Take (5), repeated here:

- (5) moren gaosu Zhangsan [xuexiao you yi-chanyianjian],
 someone tell Zhangsan school have one-CL lecture
 dan wo bu zhidao *(shi) **shei zai-nali**
 but I not know *(be) who at-where

'Someone told Zhangsan that there is a lecture at school, but I don't know who where'

If we allow only one nominal-*pro* in the sluiced clause as in (12), it seems to be able to account for the clausemate condition because it questions *who is the person and where he is*, both of which are within the matrix clause, as required by the clausemate condition. However, upon closer inspection, one will find that the real reading is the one questioning *who told Zhangsan the news and where the event (of his telling the news) happened*, which is not predicted by the nominal-*pro* approach. Moreover, if the *pro* is an event-*pro*, we will get an ungrammatical sentence since the event represented by *pro* cannot be predicated by *who*. That is, it is simply ungrammatical to say *the event is who*.

For Mandarin Chinese, however, the adjunction account in Japanese still cannot explain why two *wh*-arguments cannot be adjoined together as already demonstrated in (1). In the following section we would like to propose our solution to the restrictions on MC multiple sluicing.

4. Solution

To propose a movement account of the *wh*-phrases in *wh*-in-situ language might seem to be unreasonable. But recently, some attention Richard (2001) Lasnik (2006) has been paid onto the repair phenomenon of ellipsis structures. The idea is rather straightforward. A *wh*-dependency is composed of a head and a trace, so the PF realization of an utterance needs an instruction on which part of the chain to be realized. In a feature driven theory of A-bar dependency, languages are divided into at least two types in relation to two different strengths of features. A strong-feature-driven movement demanded its head to be realized and a weak-feature-driven dependency would result in the in-situ *wh*. In the structure of ellipsis, the deletion of a constituent would repair the invalid realization by forcing the A-bar dependency to realize its head. The multiple focus movement is in line with such an idea. When more than one item is under focus, they must be somehow repaired in the ellipsis.

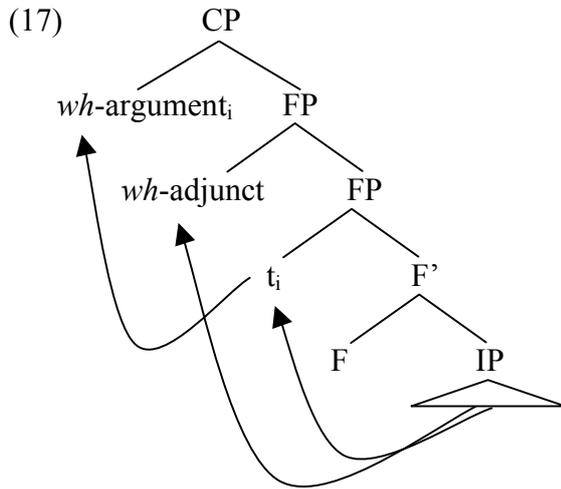
Before we present our solution, let's recapitulate the characteristics of multiple sluicing in Mandarin Chinese:

(16)

- a. **Number:** Multiple sluicing does not allow more than one *wh*-argument, whereas no such restriction required for *wh*-adjuncts.
- b. **Ordering:** *Wh*-adjuncts cannot precede any *wh*-argument.
- c. **Clausemateness:** The antecedents of the two *wh*-remnants must be clausemate with each other.

Base on the above observation, we propose that the *wh*-argument and *wh*-adjunct in MC multiple sluicing in effect undergo different syntactic operations. For the first property (16a), we suggest that there be only one Specifier position of FP to situate the *wh*-argument as the process of Substitution. *Wh*-adjuncts, on the other hand, can only adjoin to FP as adjunction. In this fashion, more than one adjunct can be derived on the sluice.

For the second property (16b), we propose that after the *wh*-argument is attracted to the Spec FP, it still needs to undergo further movement to some higher projection in CP to check the relevant D-linking feature due to its D-linking/specific property (cf. Yang 2006). Hence, the ordering between the *wh*-argument and the *wh*-adjunct is always fixed as illustrated in the following diagram.

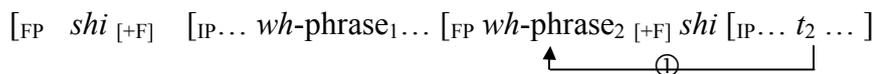


For the third property (16c), two proposals are in hand, i.e., Takahashi (1994) and Fox & Pesetsky (2003). For Takahashi's (1994) analysis, as is mentioned above we would have to add an additional constraint (15) regulating long distance adjunction. Also, further raising of the *wh*-argument from the amalgamated *wh*-complex to the Topic position is not possible since this amalgamated chunk is already fixed. For Fox & Pesetsky's (2003) approach, the ordering of the multiple *wh*-remnants may still be decided if both the *wh*-remnants undergo overt movement. Therefore, we will have to figure another way out. We hereby propose that the clausemate condition of sluicing is related to the phase theory and the Attract Closest (Boskovic 1997, Kitahara 1997, Richards 2001). Suppose before *wh*-movement and subsequent deletion the structure of multiple *wh*-construction is as (18). Now, when the matrix C-head Attracts the *wh*-phrase the check the relevant features, the closest *wh*-phrase, *wh*-phrase₁, is attracted by Attract Closet condition. When it comes to the second *wh*-phrase, *wh*-phrase₂, it has already been spelt out and cannot be attracted further. Subsequent deletion would wrongly delete the *wh*-phrase₂.

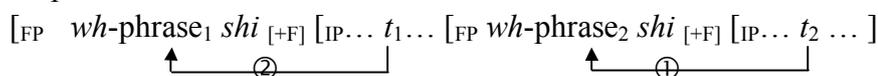


Even if the *wh*-phrase₂ can first move to the SpecCP position to avoid being spelt out early as in (19a), when the derivation comes to the matrix C-head, by Attract Closest it is the *wh*-phrase₁ that will be first attracted to the matrix SpecCP as illustrated in (19b). Assuming that Attract Closet will have to attract elements of the same clause, when it comes to (19c), further movement of the *wh*-phrase₂ to the matrix clause will not be acceptable.

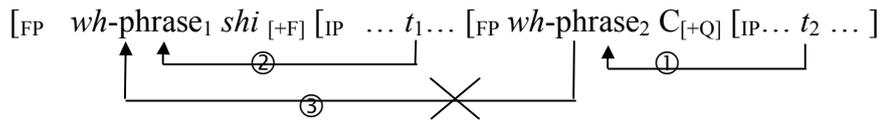
(19) a. Step 1



b. Step 2



c. *Step 3



5. Concluding Remarks

This article discusses an idiosyncratic paradigm of multiple sluicing where *wh*-argument/adjunct asymmetries are observed in both the number and the order of the *wh*-remnants. We argue that such a paradigm of MC multiple sluicing results from different syntactic operations on the focus projection, FP. Specifically, one and only one *wh*-argument is attracted to the [Spec, FP] to check the relevant feature [+Foc] as a process of Substitution while multiple *wh*-adjuncts may be adjoined to FP as Adjunction. The correct ordering is facilitated via further movement of the *wh*-argument to the Topic position of CP to check the relevant D-linking feature. Finally, the clausemate condition is accounted for with the help of Phase theory and Attract Closest.

References

- Adams, Perng Wang. 2004. The Structure of Sluicing in Mandarin Chinese, In *Penn Working Papers in Linguistics*, 10.1:1-16. University of Pennsylvania.
- Aoun, Joseph, and Yen-hui Audrey Li. 2003. *Essays on the Representational and Derivational Nature of Grammar*. Cambridge: MIT Press.
- Bošković, Željko 1998. On the Interpretation of Multiple Questions. *ms*. University of Connecticut.
- Bošković, Željko. 2002. On multiple *wh*-fronting. *Linguistic Inquiry* 33:351-383.
- Grewendorf, Günther. 2001. Multiple *wh*-fronting. *Linguistic Inquiry* 32:87-122.
- Huang, C.-T. James 1982. *Logical Relation in Chinese and the Theory of Grammar*, PhD Dissertation, MIT.
- Lasnik, Howard. 2006. Repair by Ellipsis, *ms*. University of Maryland.
- Merchant, Jason 1999. *The Syntax of Silence: Sluicing, Islands, and Identity in Ellipsis*, PhD Dissertation, University of California, Santa Cruz.
- Nishigauchi, Taisuke. 1998. 'Multiple sluicing' in Japanese and the functional nature of *wh*-phrases. *Journal of East Asian Linguistics* 7:121-152.
- Pesetsky, D. 1987 Wh-in-situ: Movement and Unselective Binding, in E. Reuland and A. Ter Meulen (eds.) *Representation of (In)definiteness*, MIT Press, Cambridge, MA.
- Richards, Norvin. 2001. *Movement in language: Interactions and architectures*. OUP: Oxford.
- Rizzi, Luigi. 1997. The Fine Structure of the Left Periphery, in L. Haegeman (eds.) *Elements of Grammar*, Kluwer, Dordrecht.
- Ross, John R. 1969. Guess who? In R. Binnick, A. Davison, G. Green, and J. Morgan (eds.), *Proceedings of CLS* 5:252-286.
- Simpson, Andrew and Tanmoy Bhattacharya. 2003. Obligatory overt *wh*-movement in a *wh*-in-situ language. *Linguistic Inquiry* 34:127-142.
- Shyu, Shu-Ing. 2001. Remarks on object movement in Mandarin SOV Order. *Language and Linguistics* 2. 93-124.

- Takahashi, Daiko. 1993. Movement of Wh-Phrase in Japanese. *Natural Language and Linguistic Theory* 11, 655-678.
- Takahashi, Daiko. 1994. Sluicing in Japanese. *Journal of East Asian Linguistics* 3:265-300.
- Tsai, Wei-Tien Dylan 1994 On Nominal Islands and LF Extraction in Chinese. *Natural Language and Linguistic Theory* 12, 121-175.
- Tsai, Wei-Tien Dylan. 1999. *On Economizing the Theory of A-bar Dependencies*, Garland, New York.
1994 PhD Dissertation, MIT
- Chung, Sandra, William Ladusaw, and James McCloskey. 1995. Sluicing and Logical Form. *Natural Language Semantics* 3: 239-282.
- Wang, Chyan-an Arthur. 2002. On Sluicing in Mandarin Chinese, Master Thesis, National Tsing Hua University, Taiwan.
- Wang, Chyan-an Arthur. 2005 On Sluicing in Mandarin Chinese. *ms.*
- Wang, Chyan-an Arthur. and Wu, Hsiao-hung Iris. 2005. Sluicing and Focus Movement in Wh-in-situ Languages. *To appear in Penn Working Papers in Linguistics, 2006:12.1*
- Wei, Ting-chi. 2004. Predication and Sluicing in Mandarin Chinese. PhD Thesis, National Kaohsiung Normal University.
- Yang, Barry C.-Y 2006. A Note on Island Repair. *ms.* National Tsing Hua University.