Long-distance Reflexives and Mandarin Comparatives

I-Ta Chris Hsieh, Rutgers University, ita.hsieh@rutgers.edu

Key words: Mandarin comparatives, comparative deletion, long distance reflexive, blocking effect

Synopsis: This paper addresses the debate regarding the derivation of Mandarin comparatives (see (1a); *bi* the comparative marker) by providing a new argument concerning the long distance reflexive *ziji* 'self'. In *Reduction Analysis* (henceforth, *RA*; Liu 1996, following Bresnan (1973); a.o.), an occurrence of the gradable predicate (in (1), *gao* 'tall') is elided at the surface (indicated by strikethrough) within the *bi*-constituent (see (1b)). In *Direct Analysis* (henceforth, *DA*; Lin 2009 (cf. Xiang 2005; Erlewine 2007)); in the spirit of Heim 1985) however, the size of the complement of *bi* is transparent at the surface and no ellipsis is involved in the derivation (see (1c)).

(1) a. Zhangsan bi Lisi gao
Zhangsan COMP Lisi tall
'ZS is taller than LS.'

b. *RA*: ZS_i [[$_{PP}$ bi [**LS ~~gao~~**] [t_i gao]] (Liu 1996)

c. *DA*: Zhangsan [$_{AP}$ [$_{DegP}$ [$_{Deg'}$ bi **[$_{DP}$ LS]**] gao] (Lin 2009)

This paper claims that while *RA* provides a straightforward account for the data concerning the long distance reflexive *ziji* (see (2)), these previously unnoticed data pose a serious challenge to *DA*. (2a) shows that a sloppy reading is obtained in a comparative where the gradable predicate contains *ziji* 'self'; (2b) shows that when (2a) is embedded, both a long-distance-reflexive (LDR) reading and a sloppy reading are available; (2c) shows that once the standard of comparison (i.e. the nominal preceded by *bi*) differs in person from the matrix subject and the target, the LDR-reading is unavailable.

(2) a. Zhangsan bi Lisi dui ziji hao **Sloppy**: 'ZS_i is better to himself$_i$ than LS_j is to himself$_j$.'
Zhangsan COMP Lisi to self good

b. Wangwu renwei Zhangsan bi **Lisi** dui ziji hao
Wangwu think Zhangsan COMP Lisi to self good
✓**LDR**: 'WW_i thinks that ZS is better to him$_i$ than LS is to him$_i$.'
✓**Sloppy**: 'WW thinks that ZS_i is better to himself$_i$ than LS_j is to himself$_j$.'

c. Wangwu renwei Zhangsan bi **wo** dui ziji hao (***LDR**; ✓**Sloppy)**
Wangwu think Zhangsan COMP I to self good

Mandarin Long-Distance Reflexive: The reflexive *ziji* 'self' may be indefinitely far from its antecedent (see (3a)). (3a) also shows that antecedents of *ziji* are limited to subjects; (3a, b) indicate that for *ziji* to receive a long distance reflexive interpretation, all the possible antecedents must agree in person. In addition, as shown in (3a), non-subjects do not block the long distance dependency of *ziji*. (3c) further shows that PP-complements can neither be the antecedent of *ziji* nor trigger the blocking effect.

(3) a. **Wangwu$_i$** renwei **Zhangsan$_j$** gei-le **Lisi$_h$/wo$_k$** yi-pian guanyu **ziji$_{i/j/*k/*h}$**-de wenzhang
Wangwu think Zhangsan give-PERF Lisi/I one-CL about self-POSS article
'Wangwu$_i$ said that Zhangsan$_j$ gave Lisi$_k$ an article about self$_{i/j/*k}$."

b. **Wangwu$_i$** renwei **wo$_j$** gei-le **Lisi$_k$** yi-pian guanyu **ziji$_{*i/j/*k}$**-de wenzhang
Wangwu think I give-PERF Lisi one-CL about self-POSS article

c. **Wangwu$_i$** renwei **Zhangsan$_j$** [$_{PP}$ dui **Lisi/wo$_k$**] zhanshi **ziji$_{i/j/*k}$** de zuopin
Wangwu think Zhangsan to Lisi/I exhibit self poss work
'Wangwu$_i$ thinks that Zhangsan$_j$ showed Lisi/me$_k$ the work of self $_{i/j/*k}$.'

One analysis proposed in the literature (Cole & Sung 1994; Huang & Liu 2001; a.o.) is that *ziji* undergoes cyclic LF-movement so that it may be locally c-commanded by its long-distance antecedent (see (4)); along this line (e.g., Cole & Sung 1994), the blocking effect in (3b) may be cast as the mismatch in person between *ziji*, which receives its value (indicated by superscriptions) from its closest possible antecedent, and other possible antecedents during the derivation.

(4) LF of (3a): [$_{TP}$ WW^3_i [… $ziji^3_i$ [$_{CP}$ … [$_{TP}$ ZS^3/Wo^1 …[t_i …[$_{CP}$ …[$_{TP}$ LS^3…… t_i]]]]]]]

(5)-(6) shows that the availability of the coreference of *ziji* in the embedded adjoined clause and the matrix subject depends on the person feature of the subject in the embedded adjoined constituent. The generalization that is crucial to the puzzle in (2), as shown in (5b) and (6b), is that the coreference of *ziji* in the embedded adjoined constituent and the matrix subject is blocked if the subject in the embedded adjoined constituent does not agree with the matrix subject in person.

(5) a. **Wangwu$_i$** renwei [ruguo **Zhangsan$_j$** dui **ziji$_{i/j}$** hao, Lisi$_k$ jiu hui dui ziji$_{i/k}$ hao]
Wangwu think if Zhangsan to self nice Lisi then will to self nice
b. **Wangwu$_i$** renwei [ruguo **wo$_j$** dui **ziji$_{*i/j}$** hao, Lisi$_k$ jiu hui dui ziji$_{i/k}$ hao]
Wangwu think if I to self nice Lisi then will to self nice
(6) a. **Wangwu$_i$** renwei [yinwei **Zhangsan$_j$** dui **ziji$_{i/j}$** hao, suoyi Lisi$_k$ yei dui ziji$_{i/k}$ hao
Wangwu think because Zhangsan to self nice so Lisi also to self nice
b. **Wangwu$_i$** renwei [yinwei **wo$_j$** dui ziji$_{*i/j}$ hao, suoyi Lisi$_k$ yei dui ziji$_{i/k}$ hao
Wangwu think because I to self nice so Lisi also to self nice

RA and LDR: In *RA*, both the target and the standard in (2a) are subjects, and the *bi*-constituent contains an elided occurrence of the gradable predicate. Assuming that the *bi*-constituent is a *v*P-adjunct (Liu 1996; I further assume that the target *ZS* is interpreted inside *v*P), each token of *ziji* is bound by a local antecedent, and hence the sloppy reading arises (see (7)).

(7) LF of (2a): [$_{TP}$…. [$_{vP}$ [bi LS$_i$ dui ziji$_i$ hao] [$_{vP}$ ZS$_j$ [$_{v'}$ v^0 [$_{AP}$ dui ziji$_j$ hao]]]]]

The generalization from (5)-(6) together with the Parallelism Constraint of Ellipsis (Rooth 1992; Fox 2000; a.o.) accounts for the contrast in (2b, c). Due to the Parallelism Constraint of Ellipsis, which requires that the elided constituent and its antecedent receive parallel interpretations, there are only two possible LFs for (2b/c) (see (8a, b)). In LF 1 ((8a)), both tokens of *ziji* are locally bound by the subject in the *bi*-constituent and the embedded main clause respectively; in LF 2 ((8b)), both tokens of *ziji* are remotely bound by the matrix subject. In (2b), given that the subject in the *bi*-constituent (the standard) agrees with the matrix subject in person, both LFs are available to (2b) and hence an ambiguity results.

(8) a. LF 1 of (2b/c): [$_{TP}$ **WW$_k$** …[$_{CP}$… [$_{vP}$ [bi **LS^3/wo^1$_i$** dui **ziji$_i$** hao] [$_{vP}$ **ZS^3$_j$** [$_{v'}$ v^0 [$_{AP}$ dui **ziji$_j$** hao]]]]]]
b. LF 2 of (2b/c): [$_{TP}$**WW$_k$** …[$_{CP}$… [$_{vP}$ [bi **LS^3/wo^1$_i$** dui **ziji$_k$** hao] [$_{vP}$ **ZS^3$_j$** [$_{v'}$ v^0 [$_{AP}$ dui **ziji$_k$** hao]]]]]]

On the other hand, as shown in (5)-(6), subjects in the embedded subordinated constituent that differ from the matrix subject in person block the long distance coreference of *ziji* in the embedded subordinate constituent; hence, LF 1, but not LF 2, is available to (2c), and (2c) carries only the sloppy reading.

DA and LDR: In *DA* (see (9)), the standard, unlike the target, is not a syntactic subject, and only one occurrence of the gradable predicate and hence only one token of *ziji* is involved in the derivation of (2a).

(9) *DA*: Zhangsan [$_{AP}$ [$_{DegP}$ [$_{Deg'}$ bi **[$_{DP}$ LS]**] dui ziji hao]

Given the single token of *ziji* in the derivation, the sloppy reading can only be accounted for semantically: with the denotation of *bi* in (10b) (cf. Heim 1985) and the assumptions that *ziji* is a reflexivization function (Reinhart and Reuland 1993) and hence *dui ziji hao* has the denotation in (10a), the sloppy reading in (2a) can be derived semantically, as shown in (11).

(10) a. ⟦dui ziji hao⟧=λd. λx. x is d-nice to x b. ⟦bi⟧= $\lambda x_e.\ \lambda f_{<d,<e,t>>}.\ \lambda y_e.\ \exists d'[f(d')(y) \text{ and } \neg f(d')(x)]$

(11) ⟦(2a)⟧=⟦bi⟧(⟦LS⟧)(⟦dui ziji hao⟧)(⟦ZS⟧)=1 iff ∃d'[⟦dui ziji hao⟧(d')(ZS) and ¬⟦dui ziji hao⟧(d')(LS)]
iff ∃d'[**ZS** is d'-nice **to ZS** and **LS** is not d'-nice **to LS**]

Assuming that *ziji* undergoes LF-movement out of the embedded clause and reflexivize the matrix predicate (Chomsky 1993; Huang & Liu 2001; a.o.), the LDR in (2b) is derived semantically as in (12b).

(12) a. LF of (2b): [$_{TP}$ WW …[ziji$_1$ [1 [$_{VP}$ renwei [Zhangsan bi Lisi dui t$_1$ hao]]]]

b. ⟦(2b)⟧=⟦ziji⟧(λx.λy. y thinks that ZS is nicer to x than LS to x)(⟦WW⟧)=1
iff [λx. xthinks that ZS is nicer to x than LS to x] (⟦WW⟧)

Nothing in such a semantic account, however, can exclude LDR in (2c) (see the LF (12)). Note that in *DA* no ellipsis occurs in the *bi*-constituent and the standard is treated on a par with the PP-complement or the indirect object; given that PP-complements and indirect objects (e.g., (3a, c)) do not block the long distance dependency of *ziji*, *DA* wrongly predicts that LDR is available in (2c). Any stipulation postulated in *DA* to account for the lack of LDR in (2c) would wrongly exclude the long distance dependency in (3a) and (3c), where the 1st person pronoun *wo* is the indirect object and the complement of PP respectively.

Conclusion: The long distance dependency of the bare reflexive *ziji* and the blocking effect in Mandarin comparatives suggest that the claim that the *bi*-constituent does not have a clausal-like structure is not conclusive as suggested by the proponents of DA.

Selected References: Cole & Sung (1994). *LI* 25.3. Heim (1985). *MS*. Huang & Liu (2001). *Syntax and Semantics* 33. Lin (2009). *NALS* 17.1. Liu (1996). *Studies in the Linguistic Sciences* 26.1/2. Reinhart & Reuland (1993). *LI* 24.