

## Long-distance indexicals

**I. AN INDEXICAL IN ANAPHORIC CLOTHING.** Recent cross-linguistic work has suggested that shiftable indexicals – indexicals sensitive to modal quantification – are among us (Amharic, Schlenker 2003; Navajo, Speas 1999; Slave & Zazaki, Anand & Nevins 2004). This paper claims that the (Taiwanese) Mandarin long-distance anaphor *ziji* ‘self’ should be added to the list, given that it i) is subject-oriented (Li & Thomspon 1980) (1); ii) interpreted *de se* (Pan 1997) (2); and iii) refers to the speaker outside of modal contexts (Li 1991) (3). That is, ***ziji* is Amharic ‘I’**. Moreover, long-distance *ziji* obeys the shifting co-dependency conditions active for Zazaki indexicals. Adopting the operator-theoretic approach of Anand & Nevins (2004), we propose that **long-distance binding of *ziji* indicates the presence of a diagonalizing operator** over contexts, thus allowing *ziji*’s reference to shift. The infamous Blocking Effect – that *ziji* cannot be long-distance bound across an intervening 1<sup>st</sup>/2<sup>nd</sup> subject (Y.-H. Huang 1984) – is argued to actually be a **prohibition on 1<sup>st</sup>/2<sup>nd</sup> elements in the scope of a diagonalizing operator**, thus giving rise to conventional, non-shiftable indexicals in a language with shifting operators. This analysis predicts that moving an XP containing a 1<sup>st</sup>/2<sup>nd</sup> at LF should ameliorate the blocking effect, as is shown to be true for *de re* ascription of DPs containing 1<sup>st</sup>/2<sup>nd</sup> elements.

**II. *ZIJI* IS A SHIFTABLE INDEXICAL.** Let us assume that *ziji* is a shiftable 1<sup>st</sup> person indexical. Then when unembedded, it will denote the utterance author, as attested (3), and *contra* attempts to assimilate *ziji* to logophoric pronouns (e.g., Huang & Liu 2001), which do not receive a default interpretation outside of logophoric domains. In modal environments, it will continue to denote the utterance author unless in the scope of a diagonal operator; thus the optionality in LD-binding is reduced to the presence of a diagonalizer, which obligatorily forces *ziji*s in its scope to be read *de se* (4). These properties follow naturally, and are correctly predicted to be island-insensitive, a thorny problem for classic movement-based theories (Pica 1987, Battistella 1989, *et seq.*). This system also naturally predicts that **clausemate long-distance *ziji*s must co-refer**, as they will always be dependent on the same context (Anand & Nevins’ SHIFT TOGETHER constraint); this is true (Pan 1997) (5). Long-distance *ziji* also obeys Anand & Nevins’ NO CROSSING DEPENDENCIES condition: if one *ziji* shifts, lower *ziji*s cannot “unshift” and be dependent on a context above the shifted context (6). As both of these are immediate consequences of an operator-theoretic approach to indexical shift, that *ziji* obeys them both justifies treating *ziji* as a shifting indexical and argues in favor of the cross-linguistic generality of operator-theoretic approaches.

**III. REVISITING THE BLOCKING EFFECT.** Still, an operator-theoretic approach must contend with the obvious problem that the “real” indexicals of Mandarin (e.g., *wo* ‘I’, *ni* ‘you’) cannot shift. However, “real” indexicals and long-distance *ziji* are subject to the peculiar Blocking Effect, often rendered as the inability of *ziji* to be bound across an intervening 1<sup>st</sup>/2<sup>nd</sup> subject. Note, though, that blocking elements need not be subjects – they can be within an embedded clause (7a) or a *ziji*-clausemate DP (7b); this is clearly a problem for phi-featural mismatch explanations of the blocking effect (Cole *et al.* 1990, *et seq.*). We propose that the Blocking Effect is instead a polarity-like prohibition on 1<sup>st</sup>/2<sup>nd</sup> elements in the scope of a diagonalizing operator. Assuming that **indexicals are immovable** in Mandarin/Zazaki/Slave (lest SHIFT-TOGETHER crumble), this theory correctly predicts i) that **LDR-binding by a 1<sup>st</sup> person antecedent is always allowed**, even across a 2<sup>nd</sup> person subject, as no diagonalizing operator is necessary (8a), and ii) that **the Blocking Effect is cancelled by covert movement of a DP containing an indexical** out of the scope of a diagonalizer, as when a *de dicto* reading of an otherwise blocking DP impossible (8b).

**IV. OUTLOOK.** While the consonance between Zazaki indexicals and *ziji* argues for unification within an operator-theoretic view of indexical shift, the approach taken here for the Blocking Effect suggests that at least some of the action for indexical shift must lie with indexicals themselves – namely, which kind of operators they can appear under. Further work is necessary to understand how such a theory can cope with the full array of cross-linguistic phenomena. Thus, for example, Japanese does not show a Blocking Effect (Kuno 1978) in intensional environments, even when *zibun* must be interpreted *de se*. One tempting line of explanation would be to allow Japanese “real” indexicals to move, and hence escape the scope of a diagonalizer, as *de re* DPs in Chinese seem to be able to, as well as, perhaps, the indexicals of Amharic (Schlenker 2003).

- (1) Zhangsan<sub>i</sub> cong Lisi<sub>j</sub> chu tingshuo Wangwu<sub>k</sub> bu xihuan ziji<sub>i/\*j/k</sub>  
 Zhangsan from Lisi place hear Wangwu<sub>k</sub> NEG like self  
 ‘Zhangsan<sub>i</sub> heard from Lisi<sub>j</sub> that Wangwu<sub>k</sub> doesn't like him<sub>i/\*j</sub>/himself<sub>k</sub>.’ (Pollard & Xue 2001)
- (2) long-distance *ziji* is interpreted *de se* (Pan 1997)  
 C<sub>1</sub>: Zhangsan says, “That thief stole my purse!” C<sub>2</sub>: Zhangsan says, “That thief stole someone's purse!”  
 Zhangsan shuo pashou tou-le ziji de pibao  
 Zhangsan say pickpocket steal-PERF self<sub>DE</sub> purse  
 ‘Zhangsan said the thief stole his purse.’ (✓C<sub>1</sub>, #C<sub>2</sub>) (Huang & Liu 2001)
- (3) *ziji* has a "discourse-dependent" referent: the speaker (Li 1991)  
 lingdao de biaoYang dui ziji shi yi-ge bianche  
 leader<sub>DE</sub> compliment to self COP one-CL impetus  
 ‘The leader's compliment was an encouragement to me.’ (Pollard & Xue 2001)
- (4)a.  $[[ziji]]^{c,i} = AUTH(c) = [[I]]^{c,i}$   
 b.  $[[OP_{AUTH} \alpha]]^{k,k'} = [[OP_{AUTH} \alpha]]^{<A, H, t, w>, <A', H', t', w'>} = [[\alpha]]^{<A', H', t', w'>, <A, H, t, w>}$  (Anand & Nevins 2004)  
 c.  $[[say OP_{AUTH} [... ziji ...]]]^{c,i} = \lambda x_e. \forall j = \langle A_j, H_j, t_j, w_j \rangle$  compatible with what *x* says in *w<sub>i</sub>* at *t<sub>i</sub>*,  
 $[[OP_{AUTH} [... ziji ...]]]^{c,j} = [[... ziji ...]]^{i,j} = 1$ .
- As  $[[ziji]]^{i,j} = AUTH(j) = A_j$ , it will pick up the individual *x* takes himself to be in *w<sub>j</sub>* at *t<sub>j</sub>*, i.e., the *de se* self.
- (5) long-distance *ziji* obeys SHIFT-TOGETHER (Pan 1997) [of 9 possible combinations, 2 bad]  
 Zhangsan renwei Lisi zhidao Wangwu ba ziji de shu song-gei-le ziji de pengyou  
 Zhangsan think Lisi know Wangwu BA self<sub>DE</sub> book give-to-PERF self<sub>DE</sub> friend  
 ‘Zhangsan thinks that Lisi knows that Wangwu gave {\*ZS's books to WW's friends, \*WW's books to ZS's friends}.’
- (6) long-distance *ziji* obeys NO CROSSING DEPENDENCIES  
 John xiwang Mary renwei [ziji de mama shuo-guo [ziji shi yi-ge chengshi de ren ] ]  
 John hope Mary think [self<sub>DE</sub> mother say-EXP [self COP one-CL honest<sub>DE</sub> person] ]  
 \*‘John hoped that Mary would think that **his** mother said that **she** is an honest person.’  
 \*‘John hoped that Mary would think that **her** mother said that **he** is an honest person.’
- (7)a. further embedded 1<sup>st</sup>/2<sup>nd</sup> blocks LDR  
 Zhangsan<sub>i</sub> zhidao Mali<sub>j</sub> gen ziji<sub>i/\*j</sub> shuo-guo ni xiang qu Taiwan  
 Zhangsan know Mary with self say-EXP you want go Taiwan  
 ‘Zhangsan knows that Mary told {\*him, herself} that you want to go to Taiwan.’ (Cole et al. 2001)  
 b. non-intervening 1<sup>st</sup>/2<sup>nd</sup> blocks LDR  
 John<sub>i</sub> renwei wo<sub>j</sub> de jiao'ao hai-le ziji<sub>i/\*j</sub>  
 John think I<sub>DE</sub> arrogance hurt-PERF self  
 ‘John felt that my arrogance harmed {\*him, me}.’ (Huang & Tang 1991)
- (8)a. LDR by 1<sup>st</sup> always allowed, even across 2<sup>nd</sup>  
 wo<sub>i</sub> zhidao ni<sub>j</sub> xihuan ziji<sub>i/\*j</sub>  
 I know you like self  
 ‘I know that you like yourself/me.’  
 b. obligatory *de re* cancels blocking effect  
 C<sub>1</sub>: John says “Your book hurt you/me!” C<sub>2</sub>: John says “That book (by some guy) hurt you/me!”  
 John<sub>i</sub> shuo wo<sub>j</sub> de shu hai-le ziji<sub>i/\*j</sub>  
 John say I<sub>DE</sub> book hurt-perf self  
 ‘John said that my book hurt me.’ (✓C<sub>1</sub>, ✓C<sub>2</sub>)  
 ‘John said that my book hurt him.’ (#C<sub>1</sub>, ✓C<sub>2</sub>)

Anand & Nevins 2004. Shifty operators in Changing Contexts. *SALT 14*. Cole, Hermon, & Sung 1990. Principles and Parameters of Long-distance Reflexives. *LI 21*. Cole, Hermon, & Lee 2001. Logophoric Conditions on Long Distance Reflexives and Pronouns. *Syntax & Semantics 33*. Kuno 1978. *Danwa no Bunpo* [Grammar of Discourse]. Huang & Liu 2001. Logophoricity, Attitudes, and *ziji* at the Interface. *S&S33*. Huang 1984. *Reflexives in Chinese*. Studies in Eng. Lit. and Ling. 10. Li 1991. *Perspective-taking in Mandarin Discourse*. SUNY diss. Speas 1999. Person and Point of View in Navajo. *WCCFL 18*. Pan 1997. *Constraints on Reflexivization in Mandarin Chinese*. Pollard & Xue 2001. Syntactic and Non-Syntactic Constraints on Binding. *S&S33*. Schlenker 2003. A Plea for Monsters. *L&P*.