

## Long-distance Anaphora in Mandarin, the PCC, and Cyclic Agree

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Mandarin contains a reflexive form, *ziji*, that can function as a local reflexive. However, *ziji* can also take an antecedent outside its local domain. As shown in (1a-e), *ziji* can be bound by the closest subject or the matrix subject (Cole, et al., 2006 and references therein). Such long-distance binding is constrained by a *blocking effect*, such that subject DPs that differ in person features appear to block higher subject DPs from binding *ziji*. However, a difference in person features is not a sufficient condition for the blocking effect. Instead, we see that subjects in a 1>3 configuration allow long-distance antecedents but subjects in a 3>1 configuration block long-distance antecedents. Thus, the interference pattern that emerges in the blocking effect is *not* symmetrical (see examples (1a-g)).

Strikingly, this interference pattern replicates a pattern of intervention that is known as the *person-case constraint*. Anagnostopoulou characterizes the PCC such that “[i]n a combination of a weak direct object and an indirect object [clitic, agreement marker, or weak pronoun], if there is a third person it has to be the direct object” (2005, p. 203). Compare Tables 1 and 2.

Following an analysis in Cole, *et al.* (2006), I propose that long-distance binding of *ziji* is the result of covert head movement and that *ziji* is sensitive to person hierarchies as conceived in Bejar and Rezac (2009). These two facts restrict the configurations that license the long-distance binding of *ziji*.

2) [IP Zhangsan [<sub>I</sub> *ziji*<sub>i</sub>] [<sub>VP</sub> yiwei [<sub>IP</sub> Lisi [<sub>I</sub> t'<sub>i</sub>] [<sub>VP</sub> piping-le t<sub>i</sub>] ] ] ]

Zhangsan self think Lisi criticize-Perf

In (2) above, each I<sup>0</sup> agrees with its specifier and *ziji* must therefore agree with the subject upon adjunction to I<sup>0</sup>. However, if *ziji*'s  $\phi$ -features are structured so they are sensitive to the person hierarchies of Bejar and Rezac (2009, see Table 3 below) we can generate the blocking effect and its asymmetrical structure.

Let us assume that *ziji* is a partially articulated probe that searches for [participant] and therefore seeks to check [3][2]. In 1/2 > 3 configurations movement of *ziji* to the lowest I<sup>0</sup> checks the [3] segment of the anaphor therefore allowing *ziji* to be valued by I<sup>0</sup>. However, this leaves an unchecked [2]. Thus, the unchecked [2] on the anaphor licenses further movement of *ziji* to the higher I<sup>0</sup> in search of a [+participant] argument. If the higher I<sup>0</sup> has obtained [+participant] features through agreement with the subject, then *ziji* can adjoin to the higher I<sup>0</sup> and valuation can take place. Thus, a higher argument can be [+participant] and a lower argument can be [-participant]. However, the converse does not hold. If *ziji* first adjoins to an I<sup>0</sup> that is [+participant] both of *ziji*'s person features ([3] and [2]) will be checked leaving no residue that would license further movement (unless the higher I<sup>0</sup> agrees for [+participant]). Thus, a higher [3] argument is inaccessible because the anaphor has been marked as [+participant] and the higher I<sup>0</sup> is [-participant].

The proposed analysis has some welcome consequences. Firstly, it explains the blocking effect. Secondly, it provides a principled explanation of the asymmetry in the blocking effect that is not explained by the head movement approach alone. Thirdly, it

demonstrates that AGREE based approaches to binding offer principled empirical coverage and can help explain some of the more recalcitrant phenomena of binding theory.

1)

- a) Zhangsan<sub>i</sub> zhidao Lisi<sub>j</sub> bu xihuan ziji<sub>i/j</sub>  
Zhangsan know Lisi not like self  
'Zhangsan knew that Lisi did not like me/himself'
- b) Wo<sub>i</sub> zhidao Lisi<sub>j</sub> bu xihuan ziji<sub>i/j</sub>  
I know Lisi not like self  
'I knew that Lisi did not like me/himself'
- c) Wo<sub>i</sub> zhidao Ni<sub>j</sub> bu xihuan ziji<sub>i/j</sub>  
I know you not like self  
'I knew that you did not like me/yourself'
- d) Ni<sub>i</sub> zhidao Wo<sub>j</sub> bu xihuan ziji<sub>i/j</sub>  
You know I not like self  
'You knew that I did not like you/myself'
- e) Ni<sub>i</sub> zhidao Lisi<sub>j</sub> bu xihuan ziji<sub>i/j</sub>  
You know Lisi not like self  
'You knew that Lisi did not like you/himself'
- f) Lisi<sub>i</sub> zhidao Wo<sub>j</sub> bu xihuan ziji<sub>i/j</sub>  
Lisi know I not like self  
'Lisi knew that I did not like \*him/myself'
- g) Lisi<sub>i</sub> zhidao Ni<sub>j</sub> bu xihuan ziji<sub>i/j</sub>  
Lisi know you not like self  
'Lisi knew that you did not like \*him/yourself'

INDIRECT OBJECT	DIRECT OBJECT	PCC
1	3	✓
1	2	✓
2	1	✓
2	3	✓
3	1	✗
3	2	✗

**Table 1** – Interference pattern for PCC

HIGHEST SUBJECT PERSON	LOWEST SUBJECT PERSON	Ziji LDR
1	3	✓
1	2	✓
2	1	✓
2	3	✓
3	1	✗
3	2	✗

**Table 2** – Interference pattern for ziji

Person specifications					
A: Person specifications			B: Shorthand 1>2>3		
3rd	2nd	1st	3rd	2nd	1st
[π]	[π]	[π]	[3]	[3]	[3]
	[participant]	[participant]		[2]	[2]
		[speaker]			[1]

**Table 3** – Bejar and Rezac person hierarchy / articulated probe

## References

- Anagnostopoulou, E. (2005). Strong and weak person restrictions: A feature checking analysis. In L. Heggie and F. Ordonez (Eds.), *Clitics and Affixation* (pp. 199-235). Amsterdam: John Benjamins.
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