

A New Perspective On Chinese *ZIJI**

Ping Xue

University of Alberta and University of Victoria

Carl Pollard

Ohio State University

Ivan A. Sag

Stanford University

1. Introduction

It has been rather widely assumed that the essential properties of the Chinese reflexive pronoun *ziji* ‘self’ are (i) subject orientation; (ii) long-distance (LD) binding, subject to the blocking effect of an intervening subject with agreement features distinct from those of the potential antecedent; and (iii) the possibility of subcommanding antecedents (i.e., subject antecedents properly contained within a *c*-commander of the reflexive—see, e.g., Cole, Hermon and Sung 1990; Huang and Tang 1991; Progovac 1992). Though varying with respect to the precise nature of the mechanism connecting *ziji* and its antecedent, most current analyses attempt to account for these putative properties of *ziji* in terms of a successive-cyclic association (e.g., via movement to Agr) with each of the *c*-commanding subjects between *ziji* and its antecedent.

In this paper, we will point out some facts which are problematic for accounts of this kind, and propose a new analysis of *ziji* binding which accounts for the problematic facts. Central to our analysis is the idea, proposed in various forms by Baker (1994), Pollard and Sag (1992a, 1992b, 1994), and Reinhart and Reuland (1991, 1993), that a fundamental theoretical distinction must be drawn between what we will refer to informally as syntactic reflexives and discourse reflexives. According to our analysis, the two different kinds of reflexives are subject to distinct pragmatic blocking effects. In addition, the syntactic reflexives are subject to a purely syntactic long-distance analogue of

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Principle A, which we will call Principle Z. However, Principle Z (as well as our version of Principle A) will not be couched in terms of the tree-configurational relation of c-command. Instead, they employ Polard and Sag’s notion of obliqueness-command (o-command), which is defined in terms of a universal hierarchy of grammatical relations.

2. Well-Known Facts and Current Analyses

Chinese *ziji* is morphologically invariant with respect to person and number (and gender is not a morphologically relevant feature in Chinese). The facts in (1)-(2) illustrate the property of *ziji* often referred to as subject orientation: its antecedent can be a subject but not a direct or oblique object:¹

- (1) Zhangsan_i gei-le Lisi_j yizhang ziji_{i/*j} de xiangpian.
 Zhangsan give-ASP Lisi one-CLA self DE picture
 ‘Zhangsan_i gave Lisi_j a picture of himself_{i/*j}.’
- (2) Zhangsan_i cong Lisi_j chu tingshuo Wangwu_k bu xihuan
 Zhangsan from Lisi place hear Wangwu not like
 ziji_{i/*j/k}.
 self
 ‘Zhangsan_i heard from Lisi_j Wangwu_k does not like
 him_{i/*j}/himself.’

As with a number of simplex reflexives cross-linguistically,² it is possible for the antecedent of *ziji* to be the subject of a higher clause. This LD property is shown in (2) above and in (3):

- (3) Zhangsan_i zhidao [Lisi_j renwei [Wangwu_k zui xihuan
 Zhangsan know Lisi think Wangwu most like
 ziji_{i/j/k}].
 self
 ‘Zhangsan_i knows that Lisi_j thinks that Wangwu_k likes self_{i/j/k}
 most.’

However, as pointed out by Tang (1989), a higher subject cannot be the antecedent of *ziji* if it or an intervening subject differs in person from the local subject of the clause containing *ziji*. This effect, which we will call unlike-person blocking, is illustrated in (4)-(5):³

¹The following abbreviations are employed in the glosses throughout this paper: CL (classifier); DE (attributive particle *de*); PL (plural); ASP (aspect); FOC (focus particle *shi*); and BEI (passive marker *bei*).

²But not all: see Progovac (1992) for discussion of Russian *se bja*.

³Although the blocking effect is often discussed in terms of agreement features, facts cited by Battistella and Xu (1990) suggests that neither number in the case of third-person NPs nor gender is involved in blocking.

- (4) Zhangsan_i zhidao [ni_j renwei [Wangwu_k zui xihuan
Zhangsan_i know you think Wangwu_k most like
zi_ji_{i/*j/k}]].
self
'Zhangsan_i knows that you think that Wangwu likes
himself/*you/*him_i most.'
- (5) Zhangsan_i shuo [wo_j zhidao [Lisi_k chang piping ziji_{i/*j/k}]].
Zhangsan_i say I know Lisi_k often criticize self
'Zhangsan_i said that I feel that Lisi often criticizes
himself/*me/*him_i.'

This complex of properties – subject orientation together with the potential for LD binding subject to unlike-person blocking has been widely regarded as evidence for a successive association between *ziji* (or simplex reflexives in general) and superordinate subjects. According to many such accounts (e.g. Battistella (1989); Cole et al. (1990); Reinhart and Reuland (1991, 1993)), the simplex reflexive, which is considered to be an X^o category devoid of inherent *phi*-features, must undergo head movement to the local I at LF, with possible successive-cyclic movement to a higher I. Because of Spec-head agreement between each I and its corresponding subject, it follows that no intervening subject can have *phi*-features distinct from those of the antecedent. According to one variant of this account, due to Progovac (1992, 1993), the successive relation is not head movement, but rather an Agr-chain; according to another (Huang and Tang 1991), the movement in question is not head movement but rather adjunction to IP.

These accounts do not all have identical consequences. For example, Huang and Tang note that subject orientation is not a consequence of their analysis, speculating – as our analysis will entail – that subject orientation and morphological simplicity of reflexives are independent properties. As they point out, Chinese complex reflexives such as *ta-ziji* 'himself/herself', which have inherent *phi*-features and preclude LD binding, are nevertheless subject-oriented:

- (6) Zhangsan_i songgei Lisi_j yizhang ta-ziji_{i/*j} de xiangpian.
Zhangsan give Lisi one-CLA he-self DE picture
'Zhangsan_i gave Lisi_j a picture of himself_{i/*j}.'
- (7) Zhangsan_i gaosu Lisi_j ta-ziji_{i/*j} de shenshi.
Zhangsan tell Lisi he-self DE life-story
'Zhangsan_i told Lisi_j the story of his_{i/*j} life.'

This point poses a challenge for I-to-I accounts, whether couched in terms of movement (e.g., Cole et al. 1990; Reinhart and Reuland 1991, 1993) or of chains (Progovac 1992, 1993).

Huang and Tang (1991) also point out that not all instances of *ziji* are bound by a c-commanding (or subcommanding) subject. Counterexamples include cases like (8), where the antecedent is a *psych*-verb experiencer:

- (8) *Ziji_i de xiaohai mei de jiang de xiaoxi shi Lisi_i hen nanguo.*
 self DE child not get prize DE news make Lisi very sad
 ‘The news of his_i child not getting a prize made Lisi_i sad.’

An important property of *ziji* is that it refers only to animate NPs and an inanimate NP cannot be the antecedent. As observed by Tang (1989) and Huang and Tang (1991), the antecedent need not c-command *ziji* as long as (i) it is contained in an inanimate subject which does, and (ii) no c-commanding animate subject intervenes. Such subcommanding antecedents are illustrated in (9)-(12):

- (9) [*Zhangsan_i de jiaobao*]_j hai-le *ziji_{i/*j}*.
 Zhangsan DE pride hurt-ASP self
 ‘Zhangsan_i’s pride harmed him_i.’
- (10) [*Zhangsan_i neiyang zuo*]_j dui *ziji_{i/*j}* buli.
 Zhangsan that-way do toward self not-beneficial
 ‘Zhangsan_i acting that way didn’t do him_i any good.’
- (11) [*Zhangsan_i de xin*]_j biaoming [*Lisi_k hai-le ziji_{i/*i/*j/k}*].
 Zhangsan DE letter indicate Lisi harm-ASP self
 ‘Zhangsan’s_i letter indicates that Lisi harmed himself/*him_i.’
- (12) [*Zhangsan_i de xin*]_j biaoming [[*neiben shu*]_k hai-le
 Zhangsan DE letter indicate that-CL book harm-ASP
*ziji_{i?i/*j/*k}*].
 self
 ‘Zhangsan’s_i letter indicates that that book harmed him_{?i}.’

Though Huang and Tang (1991) point out that binding cases with c-commanding antecedents and those with subcommanding antecedents must be clearly distinguished, they have no concrete proposal to account for this distinction, other than assuming that binding cases with subcommanding antecedents fall under a suitably formulated version of Principle A. We will argue against this assumption.

3. Problematic Facts about Unlike-Person Blocking

As noted in the preceding section, it follows from I-to-I analyses of LD binding that the unlike-person blocking effect should be triggered

only by intervening c-commanding subjects with *phi*-features distinct from those of the putative binder. Clearly problematic for such accounts, then, is the fact, pointed out by Huang and Tang (1991), that an intervening subcommanding NP with distinct *phi*-features can also induce blocking. This fact is illustrated by the contrast between the (a) and (b) examples in (13) and (14):

- (13) a. Zhangsan_i renwei Lisi_j de jiaoao hai-le ziji_{i/j}.
 Zhangsan think Lisi DE arrogance harm-ASP self
 ‘Zhangsan_i felt that Lisi’s_j arrogance harmed him_{i/j}.’
- b. Zhangsan_i renwei wo_j de jiaoao hai-le ziji_{*i/j}.
 Zhangsan think I DE arrogance harm-ASP self
 ‘Zhangsan_i felt that my arrogance harmed *him_i/me.’
- (14) a. Zhangsan_i renwei Lisi_j neiyang zuo dui ziji_{i/j}
 Zhangsan think Lisi that-way do toward self
 buli.
 not-beneficial
 ‘Zhangsan_i felt that Lisi_j acting that way didn’t do him_{i/j}
 any good.’
- b. Zhangsan_i renwei ni_j neiyang zuo dui ziji_{*i/j}
 Zhangsan think you that-way do toward self
 buli.
 not-beneficial
 ‘Zhangsan_i felt that your acting that way didn’t do
 him_{*i}/you any good.’

Observing (as noted in the preceding section) that subcommanding NPs can be antecedents of *ziji*, as can experiencer non-subject NPs, Huang and Tang contend that the blocking effect is a property of binding, rather than an effect of agreement. Specifically, Huang and Tang conclude that the set of potential LD blockers is contained in the set of potential *ziji* binders.⁴

While we are in sympathy with Huang and Tang’s view that the blocking effect is not related to subject-Infl agreement, the aforementioned conclusion is untenable. For example, as noted in (1)-(2), direct or oblique objects are not potential *ziji* binders. However, examples like those in (15)-(18) show that both direct and oblique objects can induce blocking, just as subjects can:

- (15) Zhangsan_i gaosu wo_j Lisi_k hen ziji_{*i/*j/k}.
 Zhangsan tell me Lisi hate self
 ‘Zhangsan_i told me Lisi hates *him_i/*me/himself.’

⁴In fact, this is entailed by most other current analyses as well.

- (16) Wo_i zhidao Zhangsan_j gaosu ni_k Lisi_i hen ziji_{*i/*j/*k/l}.
 I know Zhangsan tell you Lisi hate self
 ‘I know Zhangsan_i told you Lisi hates *me/*him_i/*you/himself.’
- (17) Zhangsan_i dui wo_j shuo Lisi_k chang piping ziji_{*i/*j/k}.
 Zhangsan to me say Lisi often criticize self
 ‘Zhangsan_i told me that Lisi often criticized *him_i/*me/himself.’
- (18) Zhangsan_i cong ni_j nar tingshuo Lisi_k chang piping
 Zhangsan from you there hear-say Lisi often criticize
 ziji_{*i/*j/k}.
 self
 ‘Zhangsan_i heard from you that Lisi often criticized
 him_{*i}/*you/himself.’

Facts such as these also pose a serious problem for analyses based on successive I-to-I relations and Spec-Infl agreement, which, as noted above, predict that only *c*-commanding subjects should exhibit the blocking effect.

A further difficulty for Huang and Tang’s account (and for any Agr-based analyses) is presented by examples like (19) and (20):

- (19) Zhangsan_i zhidao wo_j de xin biao ming Lisi_k hai-le
 Zhangsan know I DE letter show-clear Lisi harm-ASP
 ziji_{*i/*j/k}.
 self
 ‘Zhangsan_i knows that my letter makes it clear that Lisi
 harmed *him_i/*me/himself.’
- (20) Zhangsan_i tingshuo ni_j de wenzhang jielu Lisi_k hen
 Zhangsan hear-say you DE article reveal Lisi hate
 ziji_{*i/*j/k} de taitai.
 self DE wife
 ‘Zhangsan_i heard that your article revealed that Lisi_k
 hated *your/his_{*i/k} wife.’

Here, as expected on the basis of examples like (11), repeated below, the LD subcommander *ni* or *wo* is not a potential antecedent. Pretheoretically, this is because the local animate *c*-commanding subject *Lisi* intervenes, just as it does in (11); we will refer to this phenomenon as the animate blocking effect (for potential subcommanding antecedents).

- (11) [Zhangsan_i de xin]_j biao ming [Lisi_k hai-le ziji_{*i/*j/k}].
 Zhangsan DE letter indicate Lisi harm-ASP self
 ‘Zhangsan’s letter indicates that Lisi harmed himself.’

What is completely unexpected from the point of view of Huang and Tang’s account, however, is the fact that the LD subcommanders *wo* and *ni* in (19) and (20) respectively themselves block the superordinate c-commanding animate subject *Zhangsan* from functioning as the antecedent. Note that it is indeed the unlike-person LD subcommanding NP that triggers the blocking, not the inanimate NP containing it, for inanimate NPs are not blockers. Thus examples like (19) and (20) further counterexemplify Huang and Tang’s claim that blockers of LD binding must themselves be potential *ziji*-binders. On the basis of all the facts cited so far in this section, we reject any claim that unlike-person blocking is related either to Spec-Infl agreement or to the notion of potential binder. Indeed, given the fact (noted above in footnote 3) that only distinctness of person – but not of gender or number – appears to play a role in blocking, we consider it rather implausible that any syntactic basis for this effect exists.

4. Problematic Facts about subcommand and Animate Blocking

As noted above in (11) and (12), the antecedent of *ziji* can be a subcommanding NP, subject to the animate blocking effect. In particular, the intervention of a c-commanding inanimate subject degrades acceptability only slightly, even if it contains a subcommanding animate NP (though in this case the closer animate subcommander is the preferred antecedent, other things being equal). These facts were illustrated in (12), repeated here, and (21):

- (12) [Zhangsan_i de xin]_j biaoming [[neiben shu]_k hai-le
 Zhangsan DE letter indicate that-CL book harm-ASP
 Zlj^{l?}_{i/*j/*k}].
 self
 ‘Zhangsan’s_i letter indicates that that book harmed him_{?i}.’
- (21) [Zhangshan_i de hua]_j anshi [Lisi_k de xin]_l zai yingshe
 Zhangsan DE speech imply Lisi DE letter ASP allude-to
 Zlj^{l?}_{i/*j/k/*l}.
 self
 ‘Zhangsan’s_i words implied that Lisi’s_k letter was alluding to him_{?i}/himself_k.’

As with the unlike-person blocking effect, we consider animate blocking to be a pragmatic or discourse processing effect. To begin with, we are not aware of any independent evidence to suggest that the animate/inanimate distinction in Chinese is in any sense a syntactic one.

Moreover, as the following examples show, animacy blocking is ameliorated by focusing the putative blocker with *shi*. The analogous examples with intervening c-commanding inanimate NPs are also ameliorated by *shi* focusing, to the point of becoming fully acceptable:

- (22) Zhangsan_i de hua anshi shi Lisi_j de xin zai
 Zhangsan DE speech imply FOC Lisi DE letter ASP
 yingshe ziji_{i/j}.
 allude-to self
 ‘Zhangsan’s_i words imply that it was Lisi’s letter that was alluding to him_{i/j}.’
- (23) Zhangsan_i de xin anshi shi Lisi_j hai-le ziji_{?i/j}.
 Zhangsan DE letter imply FOC Lisi harm-ASP self
 ‘Zhangsan’s_i letter implies that it was Lisi who harmed him_{?i}/himself.’
- (24) Zhangsan_i de xin biao ming shi neiben shu
 Zhangsan DE letter show-clear FOC that-CL book
 hai-le ziji_i.
 harm-ASP self
 ‘Zhangsan’s_i letter makes it clear that it was that book that harmed him_i.’

For example, (22) is ambiguous; which interpretation is preferred in a given context depends not on syntax, but on what is presupposed (that someone wrote a letter alluding to Zhangsan, or that someone wrote a letter alluding to himself/herself).

There is further evidence that discourse or pragmatic considerations, not syntactic ones, figure prominently in the phenomenon of subcommanding antecedents. In the simplest subcommand examples, the antecedent is the highest subject or possessor in an inanimate subject that c-commands *ziji*, as in examples (9)-(10), repeated here, and in (25):

- (9) [Zhangsan_i de jiaobao]_j hai-le ziji_{i/*j}.
 Zhangsan DE pride hurt-ASP self
 ‘Zhangsan’s_i pride harmed him_i.’
- (10) [Zhangsan_i neiyang zuo]_j dui ziji_{i/*j} buli.
 Zhangsan that-way do toward self not-beneficial
 ‘Zhangsan_i acting that way didn’t do him_i any good.’
- (25) [[Zhangsan_i de] baba_j de qian] bei ziji_{*i/j} de pengyou
 Zhangsan DE father DE money BEI self DE friend
 touzou-le.
 steal-ASP

‘[Zhangsan’s_i father’s]_j money was stolen by his_{*i/j} friend.’
(Tang’s 1989 judgments)

On the basis of such examples, Tang (1989) proposed a syntactic account, whereby, in case a c-commanding subject fails to be animate, antecedency can pass to the highest subject (or possessor) contained within it. However, as noted by Wang (1990), Tang’s judgments seem to reflect only preferences, which may be overridden by pragmatic factors. Thus, example (25) above can occur in discourses like the one in (26):

(26) Zhangsan_i de baba de qian bei ziji_i de pengyou
Zhangsan DE father DE money BEI self DE friend
touzou-le.
steal-ASP
‘Zhangsan’s_i father’s money was stolen by his_i friend.’

Mama de shu ye bei ziji de pengyou touzoule.
mother DE book also BEI self DE friend steal-ASP
‘(His) mother’s book was also stolen by his friend.’

Ta ji-de ku qilai.
he worry cry start

‘He worried so much and started crying.’

Here it is clear that *Zhangsan*, not *Zhangsan de baba*, is the antecedent, counterexemplifying Tang’s claim. The second sentence of (26) is also of interest because it is another case where *ziji* need not have a c-commanding or subcommanding antecedent, even though a potential subcommanding antecedent *Mama* is available. And in example (27), there simply is no syntactic antecedent:

(27) Zhangsan_i de qian he Lisi_j de shu dou bei ziji_{i&j} de
Zhangsan DE money and Lisi DE book both BEI self DE
pengyou touzoule.
friend steal-ASP
‘Zhangsan’s_i money and Lisi’s_j books were both stolen by their_{i&j}
friend(s).’

Instead, *ziji* has a discourse (split) antecedent, viz. the aggregate entity consisting of Zhangsan and Lisi, an entity which is not referred to by any NP but rather must be inferred from the context.

Taking stock, the facts we have examined so far can evidently be summarized as follows:

- (28)
- i. An antecedent of *ziji* must be animate, and can never be a (local or superordinate) direct or oblique object.⁵
 - ii. A c-commanding animate subject can always be the antecedent of *ziji*, subject only to the unlike-person blocking effect.⁶
 - iii. subcommanding antecedents cannot be accounted for as a minimal syntactic generalization of binding by c-commanding subjects (e.g. by a version of Principle A). Instead they are a special case of discourse (nonsyntactic) binding, and are subject to the completely distinct (pragmatic) animate blocking effect, which in turn can be ameliorated pragmatically.

Thus, it appears that instances of *ziji* are of two distinct kinds: what we will call syntactic reflexives vs. discourse reflexives. Reflexives bound by c-commanding subjects are syntactic reflexives; all others are discourse reflexives.

5. O-Command vs. C-Command

What are sometimes called the core cases of *ziji*-binding, or what we are calling the syntactic instances, are those cases where *ziji* is coindexed with a local or superordinate animate subject, as in examples (1)-(5) above. It is almost universally assumed that in such cases, the syntactically relevant relationship between *ziji* and its binder is the tree-configurational relationship of c-command. Now as Huang and Tang (1991) have pointed out, binding of *ziji* by a superordinate subject can extend into relative clauses and adverbial clauses:

- (29) Zhangsan_i shuo [[ruguo Lisi_j piping ziji_{i/j}], ta jiu bu qu].
 Zhangsan say if Lisi criticize self he then not go
 'Zhangsan_i says that if Lisi criticizes him_i/himself, he won't go.'
- (30) Zhangsan_i bu xihuan [neixie [e_j piping ziji_{i/j}] de ren_j]]
 Zhangsan not like those criticize self DE person
 'Zhangsan_i does not like those people who criticize him_i/themselves.'

It should be observed that in such cases, *ziji* is always contained in an object or sentential complement which is a coargument of the binder.

⁵But see footnote 10.

⁶But in section 5, we exhibit some counterexamples, which our theory will explain.

However, it is interesting to note that, by contrast, the subject of a clause cannot always bind an instance of *ziji* which is contained in an adjunct of that clause and which is c-commanded by that subject. As shown in (31)-(32), this holds true whether the adjunct precedes or follows the clause to which it adjoins:

- (31) Zhangsan shuo_i [[ruguo Lisi_j piping ziji_{i/j/*k}, [Wangwu_k
Zhangsan say if Lisi criticize self Wangwu
jiu bu hui qu]].
then not will go
'Zhangsan_i says that if Lisi criticizes him_{i/*k}/himself, Wangwu_k
won't go.'
- (32) Zhangsan_i shuo [Wangwu_j bu hui qu, [yinwei Lisi_k mei
Zhangsan say Wangwu not will go because Lisi have-not
yaoqing ziji_{i/*j/k}]].
invite self
'Zhangsan_i says that Wangwu_j won't go because Lisi didn't
invite him_{i/*j}/himself.'

Example (32) is particularly telling, since, out of context, the binding by *Wangwu* would appear to be pragmatically favored, and yet it is unacceptable, in spite of the fact that binding by either a higher or lower subject is wholly acceptable. Binding cases involving relative clauses provide a further interesting contrast. Consider example (33), where the reflexive occurs in a relative clause:

- (33) Lisi_i zhidao [Zhangsan_j bu xihuan [neixie [e_k piping
Lisi know Zhangsan not like those criticize
ziji_{i/j/k} de ren_k]].
self DE person
'Lisi_i knows that Zhangsan_j doesn't like those people who
criticize him_{i/j}/themselves.'

Either the matrix subject or the subject of the clause immediately containing the relative clause, can be the antecedent of *ziji*, in contrast to examples in (31) and (32), where *ziji* occurs in an adverbial clause. The difference between relative clauses and adverbial clauses is that a relative clause is contained in a coargument of the subject, and hence an instance of *ziji* within the relative clause can take as its antecedent the subject of the immediate clause containing the relative clause. Facts such as these, which would appear to be difficult to square with c-command-based accounts, will be explained by our analysis.

6. Toward a New Analysis of *Ziji*

For English pronouns and anaphors, Pollard and Sag (1992a, 1992b, 1994) have developed an alternative to the standard binding theory of Chomsky (1986). We sketch here the essential features of that alternative theory. Of particular interest in the present connection is Principle A. First, it is assumed that the obligatory grammatical dependents of a verb (or more generally, any head) are linearly ordered by an abstract OBLIQUENESS relation as in (34); crucially, adjuncts do not participate in the obliqueness hierarchy.

- (34) The Obliqueness Hierarchy:
 SUBJECT \prec PRIMARY OBJECT \prec SECOND OBJECT \prec
 OTHER COMPLEMENTS

Second, all non-expletive NPs in English inherently belong to one of the following referential types: ANAPHORS (reflexives and reciprocals), P-PRONOUNS (pronouns other than anaphors), and NON-PRONOUNS.

Third, the relation of o-command is defined as in (35):⁷

- (35) O-Command:
 X o-COMMANDS Y just in case X is a less oblique coargument of some Z that dominates Y .
 In case $Z = Y$, X is said to LOCALLY o-command Y.

Fourth, o-binding is defined as in (36):

- (36) O-Binding:
 X (LOCALLY) o-BINDS Y iff X and Y are coindexed and X (locally) o-commands Y; Y is (LOCALLY) o-FREE if it is not (locally) o-bound.

With these definitions in place, Principle A is formulated as in (37):

- (37) Principle A for English:
 An anaphor must be locally o-bound if it has a referential (= nonexpletive) local o-commander.

⁷For expository purposes, we simplify slightly. The o-command relation actually holds not for constituents, but rather for the corresponding values of lexically specified valence features (See Pollard and Sag 1994, p. 253). Thus, this analysis, like that of Reinhart and Reuland (1991, 1993) relates syntactic binding directly to argument structure.

As Pollard and Sag argue, this formulation of Principle A, which makes no reference to such tree-configurational notions as government and c-command, accounts for the full range of standard English anaphor binding facts, as well as a wide array of longstanding counterexamples to the standard formulation of Principle A (Chomsky 1986).

Notice that this formulation of Principle A requires an anaphor to be o-bound only if it has a referential local o-commander; otherwise the anaphor is exempt from the binding theory and is subject only to semantic, pragmatic, and processing-based constraints. Now it is clear that this principle says nothing about LD anaphors like *ziji*, nor was it intended to. To fill this lacuna, following Pollard and Sag (1992a), we propose a fourth referential type, Z-PRONOUN, together with an additional binding principle, called Principle Z, given in (38):⁸

- (38) Principle Z:
Z-pronouns must be o-bound.

It should be noted that in Chinese, we must allow for the possibility that in some positions, either syntactic or discourse binding of *ziji* is possible (see examples in (13), (14) and (24)). We are now in the process of developing such an account. Provisionally, the main outlines of our current theory of *ziji* are as given in (39):

- (39) Analysis of *ziji*:
- i. *Ziji* is inherently animate, and ambiguous between a z-pronoun (syntactic *ziji*) and a discourse pronoun (discourse *ziji*).
 - ii. Syntactic *ziji* must be o-bound by a subject, subject to the pragmatic constraint of unlike-person blocking.⁹
 - iii. Discourse *ziji* is subject to the pragmatic constraint of animate blocking.

⁸This formulation differs slightly from that given in Pollard and Sag (1992a).

⁹Note that our formulation of subject orientation does not prevent *ziji* from being coindexed with an o-commanding object, as long as it is also coindexed with an o-commanding subject. Thus, examples like the following are not ruled out:

Zhangsan_i yao Lisi_j [PRO_j xiang xuesheng jieshao ziji_{i/j}.]
Zhangsan ask Lisi toward student introduce self

'Zhangsan_i asked Lisi to introduce him_i/himself to the students.'

Here PRO denotes not a constituent, but rather the value of the SUBJ feature of *jieshao*. See footnote 8.

Now together with the putative Chinese-specific requirement that *ziji*-binders must be animate subjects, this principle already accounts for many of the facts cited above: subject orientation, LD binding, and the possibility of subcommanding antecedents. In particular, the facts in (29)-(33) that were problematic for the c-command-based accounts are predicted to the letter, since the impossible binders are precisely those that fail to o-command *ziji*.

We close by reconsidering example (32), repeated here:

- (32) Zhangsan_i shuo [Wangwu_j bu hui qu, [yinwei Lisi_k mei
 Zhangsan_i say Wangwu_j not will go because Lisi_k have-not
 yaoqing ziji_{i/*j/k}]].
 invite self
 ‘Zhangsan_i says that Wangwu_j won’t go because Lisi_k didn’t
 invite
 him_{i/*j}/himself_k.’

Our account now runs as follows. First, *ziji* here can be a z-pronoun. In that case, either *Zhangsan* or *Lisi* (but not *Wangwu*) can bind it, since these are the only o-commanding subjects; as noted already, *Wangwu* only c-commands *ziji*, but does not o-command it. Second, suppose *ziji* here were a discourse pronoun. According to our theory, then, Principle Z does not apply. On purely syntactic grounds, then, there is nothing to rule out *Wangwu* as a discourse antecedent. But then, what rules it out?

The explanation, we suggest, lies with whatever pragmatic factors govern discourse binding. This suggestion is strongly supported by the following example:

- (40) Wangwu_j bu hui qu, [yinwei Lisi_k mei yaoqing ziji_{j/k}.
 Wangwu_j not will go because Lisi_k have-not invite self
 Wangwu_j won’t go because Lisi_k didn’t invite him_j/himself_k.’

Note that this is just the sentential complement of (32), and yet *Wangwu* is now a possible antecedent. It is difficult to imagine a syntactic account of this contrast in any framework we are familiar with. Rather, it would appear that removal of the matrix context eliminates whatever pragmatic factors, say discourse prominence, logophoricity, or point of view, that disfavored *Wangwu* as the antecedent in (32).

Modulo precise accounts of the pragmatic blocking effects, this theory accounts for all the facts we have cited, including the ambiguous examples in (13), (14), and (24), since nothing prevents o-commanded

ziji from being discourse bound. The ambiguity is an immediate consequence of the fact that *ziji* itself is ambiguous between a z-pronoun and a discourse pronoun.¹⁰

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¹⁰There is ample evidence that in certain literary or British varieties, discourse-bound reflexives are permitted in positions where local syntactic binding is also an option. See Zribi-Hertz (1989), Reinhart and Reuland (1993), and Baker (1994).

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