1. Introduction

Whatever the theory of coreference, one generalization comes out with respect to reflexive elements: they must have a local antecedent. In Binding Theory (BT, cf. Chomsky 1981, etc.), this is handled with the famous Principle A, which stipulates that anaphors must be bound in their governing category. In Desouvrey (2002), the locality follows from the tree representation of such elements: an anaphor must receive an R-node either from a pronoun or a referential expression by spreading, and since lines must not cross in the representation, it follows that the R-node assigner must be the closest pronoun or referential element.

However, both approaches to coreference are challenged by Chinese reflexive ziji 'self'. As is well-known, this referring element can be bound by local as well as long-distance antecedents. An impressive body of research has been devoted to account for this phenomenon. They usually rely on standard Binding Theory or some adapted version, plus the usual notions inherent to the Principle and Parameter Theory, including feature checking, governing category, c-commanding (cf. Cole, Hermon, and Sung 1993; Cole and Wang 1996; Pan 2000; Richards 1996; Xue et al. 1994; etc.). All these attempts admirably describe the semantics and the syntax of ziji by providing a wide range of information. The difficulty of this topic for BT can be measured with the increasing appeal to pragmatic notions at various degrees in recent research (cf. Huang and Liu 2001, and references therein).
I concede that pragmatic considerations may play a role in the use and distribution of *ziji*, but they are rather marginal. As I will show, the essential of the syntax of this element can be accounted for under an approach that pushes syntactic features to center stage, along the lines of Desouvre (2000, 2002, etc.). Once all the features of the interacting elements are known, their interaction will follow from the representation which is being used.

The next section introduces the basic tenets of the theory of coreference proposed in Desouvre (2002), pinpointing how it is apparently challenged by *ziji*. In section 3, the feature tree for *ziji* is discussed and it is proposed that this element is underspecified grammatical relations and for person, the node that anchors the reference feature in Chinese. In section 4, the consequences of person underspecification in Chinese grammar is drawn, and an account of the behavior of *ziji* with respect to local antecedent is proposed. Section 5, 6 and 7 examine further complexities arising from the representation of plural and some effects of the Obligatory Contour Principle (OCP) on long-distance antecedents. In section 8, I briefly conclude the paper.

2. Referential features

In Desouvre (2002), the three types of referring elements are defined as follows. Referential expressions (NP) refer to entities in the real world, which enter the syntax as features, for instance P, Q, S, etc. Such features, or R-features, are dependent of a class node R, or R-node, which is linked to the morpheme via a root node, x. A third person pronoun, which can refer only to an NP, lacks the R-feature, while an anaphor has a bare root node, i.e., neither a R-feature nor a R-node, as shown below.
These representations mean that an NP is interpretable on its own, a third person pronoun can be interpreted only if the NP that it refers to is known, while an anaphor must have either an NP or a pronoun as its antecedent in order to be interpretable. The relation of antecedence is realized by spreading, so that an NP can be the antecedent of a pronoun if it can assign it an R-feature. As for an anaphor, whatever element gives it an R-node is its antecedent. To put it another way, a R-feature (e.g. P) can only spread to an R-node (class node) and a bare root node can only be assigned an R-node. The spreading process is limited by the ban on line crossing, as seen in (2). Notice that the R-node of John is starred, which means it cannot spread to the anaphor by virtue of the no-crossing-line requirement (hereafter, NCL).

In (3) however, the matrix subject can be the antecedent of the pronoun, since R-features (P, Q, etc.), unlike R-nodes, are not in the same plane. (For more details, in particular why Q the embedded subject cannot be the antecedent of the
If this analysis were to apply to the Chinese anaphor *ziji*, it would run into problems, since both the matrix and the embedded subject can be a legitimate antecedent, as seen in (4) (Huang and Liu, 2001, their (3a)) (hereafter H&L). In effect, the ban on line crossing incorrectly predicts the ungrammaticality of the sentence, as shown in (5).

I maintain that the ban on line crossing is a well-formedness condition on the representation, independent of particular languages, and therefore is not expected to vary cross-linguistically. So I am led to take the view that the well-formedness of (5) has another explanation. Since in the present system, languages
vary only with respect to feature and morpheme inventory, the acceptability of (5) must be due to referring elements being endowed with different features from their English counterparts. Or if they possess the same types of features as English, those features must be construed differently in the system. In the next section, I take a closer look to feature-specification in Chinese.

3. Feature-tree structure

In order to track down the features of ziji, I have to consider its known descriptive properties. As mentioned in the literature, ziji is not locally sensitive to gender and number features; its local antecedent can be indifferently plural or singular, so long as it is a subject. So the fact that ziji is sensitive to the grammatical relation of an antecedent suggests that this function is present in its tree structure.

Since anaphor ziji can be the object of its clause, one may reasonably assume that it is underspecified for GR, otherwise one would have to assume the unlikely case that a grammatical complement is inherently specified for subject. The basic idea of under-specification, as discussed in Desouvrey (2000), is that if a given function can have three values, say A, B, and C, a grammar could specify A and B, and derive C as a default value for an element which is neither A nor B. With this in mind, suppose that there are two grammatical relations in Chinese, subject and object. One of them can be left underspecified, at least in some paradigms. Concretely, let's assume that (in Chinese) the GR of object appears in any object argument, while subject arguments bear no GR. Since ziji must agree in GR with its antecedent, it follows that it is unspecified for GR, too. An underspecified feature will be represented by digit 0. In addition, since ziji can refer to either first, second or third person, one may assume that it is not specified for person either. Ignoring gender and, for the time being, the representation of
number, the tree structure of *ziji* can be represented as seen in (6). This element does not have its own R-node, hence it is an anaphor in the sense of Desouvrey (2002). As an anaphor it has to get one R-node from a R-antecedent. Let’s assume that the R-node targets the unspecified person node.

(6)

```
    x
   / \  
GR   P
   / \
  0   0
```

Since *ziji* interacts with other elements, in particular R-elements (nouns and pronouns) the tree structures of the latter must include at least the features in (6). As for pronouns, it is obvious that they can’t be all underspecified for persons, since there are actually three different morphemes for each number and person. So let’s take 3-person pronouns to be underspecified for person. Thus, a Chinese pronoun can be specified as either [1], [2], or [0], as seen in (7).

(7)

```
    x
   / \  
GR   P
   / \
  OB  0/1/2
    |  \
    R
```

In my view, GR is included in the tree structure of arguments in Chinese.
Obviously it may not be the case that [OB] is specified in the lexicon, since this relation is interpreted according to position. I take the view that Chinese grammar enhances each element with relevant (and available) features prior to their assembling in the syntax. On this view, features in such a system can be said to be latent in the sense they are actualized when needed. In other terms, if an argument is a subject, it will enter the derivation with a [0] node in its tree structure, if it is an object it will have an object node [OB].

4. Feature interaction

As discussed in Desouvrey (2000), elements making the syntactic structure must be compatible. Compatibility, or agreement, is checked locally between each pair of merged elements, at the same time the structure is being built. Two elements are compatible if either (i) they have the same feature; or in the absence of (i), (ii) one bears a feature the other is underspecified for. If each element is specified for a different feature, there is no compatibility and such elements may not be merged. The missing feature in a tree is generally reanalyzed as a feature on its own. Thus since the grammatical relation of subject is not specified in Chinese and ziji is not specified for a GR, it follows that ziji will agree with a 0-GR antecedent and will clash with an OB-specified antecedent. On this view, the simple sentence Lisi hen ziji 'Lisi hates himself' can be represented as in (8a), where the vertical line linked the underspecified third person to the root node, and the oblique line, the underspecified GR to the root node.
Furthermore, in (8a) the line linking the R-node of the subject (*Lisi.*) to the 0-person node is missing, which is conveniently represented with a dash line, just like a spreading line. I take this state of affairs to follow from (9), which turns out to be central to the phenomenon of long-distance antecedent in Chinese. Whether it is a well-formedness condition on the representation, like NCL, is an empirical question, and I leave it for future research. On the other hand, the second person pronoun in (8b) is specified for person, and thus its R-node is attached to the person node with a solid association line. In both structures, the anaphor has an antecedent from spreading of the subject R-node to its 0-person node.

(9)  Missing node expansion  

No association line can attach to a missing node.

Notice that the anaphor can refer only to the subject, even when another argument is present, as seen in (10) (H&L, (3b)). We now know why: the 0-GR of *ziji* clashes with the ob-specified argument, which excludes the relation of coreference, as shown in (11).

(10)  Zhangsan, song (gei) Lisi, yi-zhang ziji de, xiangpian.  
Zh.  give (to) Lisi one-CL self’s picture
'Zh. gives Lisi a picture of himself.'

(11)  

Now, if the intervening object is a 2-pronoun, coreference is not expected by virtue of the NCL. However, this is not true; the anaphor still refers to the subject, as seen in (12), which represents (13) (H&L, (66)). Why is this the case? I suggest that in the local domain, *zijī* defines one plane with its antecedent. The 1-person object crucially is not included in the same plane, so that it does not interfere with the subject.

(12)  

(13)  

Zhangsan, gaosu wo, zijī de, fenshu.
‘Zhangsan told me about his own grade.’

To repeat, *ziji* can refer only to the subject, since both are underspecified for grammatical relation. Since it must receive an R-node, it makes up a plane with the element it agrees with in GR. Why the grammar should use this special procedure, instead of allowing a blocking effect in the local domain? As I will show in the next section, because of (9) *ziji* has a messy behavior to the extent it loses the main property of an anaphor, namely referential accuracy. In the present system coreference is a representational property of referring element, since it follows directly from the representation. There are no independent grammatical rules that determine the antecedent of an element, unlike BT, so that when an anaphor enters the syntactic structure, its antecedent is not known beforehand. Thus, if in the local domain other arguments were in the same plane as *ziji*, the derivation would not crash. Rather *ziji* would pick out the R-node of the object, since after all there GR relations are not the opposite to one another, the subject is just a better match. The consequence of this is that the grammar would be even more messy with respect to referring element: *ziji* would take any element, local or long-distance as an antecedent, and the idea of reflexivity would be more difficult to obtain.

We may further illustrate the local behavior of *ziji* with the sentences in (14) (cf. Xue et al., 1994, their (9) and (11) respectively). In (14a), *Zhangsan* is the antecedent of *ziji*, while in (14b) it can't be so.

(14)  

a. \[Zhangsan, de jiaoao]i hai-le ziji_{i}^{*j} \]  
    Zhangsan DE pride hurt-ASP self  
    'Zhangsan's pride harmed him.'

b. \[Zhangsan, de xin]i biaoming [Lisi hai-le ziji_{i}^{*i,j,k}] \]
Zhangsan de letter indicate Lisi hurt-ASP self

'Zhangsan's letter indicates that Lisi harmed himself.'

From the present perspective, the head noun jiaooao 'pride' is not animate, and therefore appears in a completely different plane, which makes it unaccessible to the anaphor (see Desouvrey 2002). Since ziji must have an antecedent, the sub-nominal Zhangsan, which does not bear a GR, is requisitioned, so to speak, as seen in (15a). In (14b), however, things are very different, the sub-nominal is not a clausemate of ziji, and therefore it can't be requisitioned, as seen in (15b). Therefore, only the local subject can be an antecedent for the anaphor.

(15) a. 

\[
\begin{array}{c}
\text{Zhangsan de jiaoao hai-le ziji} \\
\text{R} \\
\end{array}
\]

b. 

\[
\begin{array}{c}
\text{Zhangsan de xin biaoming [Lisi hai-le ziji]} \\
\text{R} \\
\end{array}
\]
To conclude, central to this analysis is the view that the normal antecedent of *ziji* is the clausemate subject. In the next section, it will become clear that any relationship that may arise with a non-clausemate subject is an accident, which is made possible under (9).

5. *Ziji and long-distance antecedent*

By virtue of (9), no association line can originate from an underspecified node. It follows that when *ziji* is in a complex sentence, every third person can be a legitimate antecedent, as long as the local subject is third person. Thus in (16) (H&L: (3)), the matrix subject also can be an antecedent for *ziji*, since there are no intervening association lines.

\[
\text{(16)} \quad \text{Zhangsan renwei [Lisi hen ziji]}
\]

If the local subject is a 1/2-pronoun, the clause is locked by an association line, and therefore no LD-antecedent is possible. More generally, any R-element that intervenes between a long-distance subject and the local subject is a blocker if its person node is specified. It does not matter whether that R-element is a subject or a direct object, since outside the local domain, every R-element appears in the same plane as *ziji*, as seen in (17), which is the representation of (18) (H&L: (8)). (Since it is clear that *ziji* can refer only to the subject, the GR-plane will be conveniently omitted.)
Let us turn now to another aspect of *ziji*. What we have just seen is that it is basically an anaphor, but underspecification in the grammar makes it accessible to a long-distance R-node. If there were not a blocking effect induced by non-floating R-node, one would construe *ziji* as a pronoun, and this would lead us to assume that there is no anaphor in Chinese. However, certain uses suggest that *ziji* can be also a pronoun with its own R-node. This is the case whenever it is the subject of its clause. In effect, as discussed in Desouvrey (2002), an anaphor must be free (i.e. alone) in its constituent-domain. Since syntactic domains are embedded in one another, the largest domain, namely the one including the subject, contains every element in the sentence, and therefore an element occupying the subject position cannot be alone. Assuming that Chinese does not differ from English in that matter, since constraints are universal, I take *ziji* to be a full pronoun in (19) (H&L, (74a)), and therefore it can receive an R-feature from the matrix subject. If *ziji* were an anaphor in this sentence, the intermediate first person object pronoun would prevent it from getting an R-node from the matrix subject. Actually, this is exactly what happens in (20), where the local subject prevents the matrix subject from referencing anaphor *ziji.*
(19) Zhangsan, dui wo shuo ziji, piping-le Lisi.
Zhangsan to me say self criticize-PERF Lisi
'Zhangsan, said to me that he, criticized Lisi.'

(20) *Zhangsan, shuo wo piping-le ziji.
Zhangsan say I criticize-PERF self
'Zhangsan, said that I criticized him.'

The representations for these sentences are given below for more clarity.
Recall that R-features like P, Q, and S are not in the same plane, unlike R-nodes.

(21)
\[
\begin{array}{cccc}
\text{Zhangsan dui wo shuo ziji piping-le} & \text{Lisi.} \\
\text{x} & \text{x} & \text{x} & \text{x} \\
0 & 1 & 0 & 0 \\
R & R & R & R \\
P & Q & R & S
\end{array}
\]

(22)
\[
\begin{array}{cccc}
\text{*Zhangsan shuo wo piping-le ziji} \\
\text{x} & \text{x} & \text{x} \\
0 & 1 & 0 \\
R & R & R
\end{array}
\]

Additional data from H&L lend further supports for this analysis. Consider the following sentences (H&L (41)). In (23a), ziji is embedded into the subject clause as an object, while in (23b) it is the object of the main clause. The
ungrammaticality of (23b) is straightforwardly accounted for; since *Lisi* has an object node, it does not fulfill the requirement to be the antecedent of the anaphor. In (23a), on the other hand, the sentence is grammatical, even though the antecedent of *ziji* is the direct object of its clause. How can we explain this? In fact, in (23a) it is not anaphor *ziji* that is used. Being underspecified for GR, and embedded into the subject clause, *ziji* appears as a pronoun and therefore it has its own R-node. Since pronouns are not subject-oriented, a well-formed sentence obtains.

\[(23)\]

a. \[[Zhangsan kuajiang \textit{ziji},] \textit{xia-le} \textit{Lisi}yi \textit{tiao}.\]

\textit{Zhangsan praise self scare-\textit{PERF} Lisi one jump}

'That Zhangsan praised himself, greatly surprised Lisi.'

b. \[*[Zhangsan kuajiang \textit{Lisi},] \textit{xia-le} \textit{ziji}; yi \textit{tiao}.\]

\textit{Zhangsan praise Lisi scare-\textit{PERF} self one jump}

'That Zhangsan praised Lisi, greatly surprised him.'

Summing up, as an anaphor *ziji* can refer only to an R-element which has a 0-GR node and it is intended to refer to the local subject. Since third person NPs lack a person node, their R-node are floating, which allows *ziji* to take a non-local antecedent. Non-local first or second person pronouns intervening between the anaphor and a potential antecedent induced a blocking effect, since their R-nodes are associated to the person node with an association line. This analysis just accounts for Pan’s descriptive generalization (see Pan 1998, fn. 2, for references), according to which the blocking effect is due to an asymmetry between first/second person (subject or object) and third person. In subject position, *ziji* behaves just like a pronoun, as expected under the requirement that anaphors cannot appear in such a position. Number induces blocking as well, a point we
turn to in the next section.

6. Number effect

So far the number of *ziji* has not been relevant. However, as pointed out by H&L a plural NP does not block a singular LD antecedent, but a local singular antecedent blocks a plural LD antecedent. This is illustrated in (24) and (25) respectively (H&L, (57) and (58)).

(24) Lisi, shuo tamen, chang piping ziji</i><sub><i>j</i></sub>
    Lisi say they often criticize self
    'Lisi said that they often criticized him/themselves.'

(25) Tamen, shuo Lisi, chang piping ziji</i><sub><i>i,j</i></sub>
    they say Lisi often criticize self
    'They said that Lisi often criticized himself/*them.'

Let's take a closer look to number in Chinese in order to account for this contrast. It is clear that *ziji* is locally compatible with both singular and plural antecedent, but it does not bear a special morphology. There are two ways to construe number in such a system: either there is no number at all or number exists but does not have a morphological manifestation on its own. Obviously the first approach must be rejected, since it will run into insuperable problems with examples like (24) and (25). I will show that the second alternative is the one valid.

Basically, I take number to be represented geometrically in the tree. If its local antecedent is singular in the sense it refers to one entity in the real world, *ziji* enters the derivation with only one 0-person node. If the antecedent refers to
N entities, N being an integer, it enters the derivation with N times 0-person nodes. On this view, if the local subject is a plural pronoun referring to two individuals, say *Lisi* and *Ping*, *ziji* must be represented as shown in (26a). Conveniently such a representation will be simplified as in (26b) for any value of N.

(26)  
\[ \begin{array}{c}  
 & ziji \\
\xbar & x  \\
P  & P  \\
0 & 0/0 \end{array} \]

As mentioned in the literature, *ziji* always agrees with its local antecedent. If the latter is a plural, it will be a plural accordingly. Thus locally association of an R-nodes to a person-node is one-to-one in the singular case. If the subject has N R-nodes, *ziji* must have as many R-nodes, so that in plural the association is N-to-N. Since singular is included in plural, a long distance singular antecedent can be associated with a plural anaphor, i.e. one R-node spreads to many person-nodes (one-to-many). However, many R-nodes may not spread to one person-node, since plural is not included in singular (*many-to-one). These logical relations straightforwardly account for (24) and (25), as seen in (27) and (28) respectively.
In fact, a local plural local antecedent can block a LD plural from being an antecedent, as seen in (29) (H&L, (59)). The question arises why N-to-N spreading is only possible locally. In the present perspective, agreement (or compatibility) between an anaphor and its antecedent is a local process. Therefore the grammar ensures that the anaphor has the same number of 0-person nodes as the local antecedent. If the latter has for instance 3 times 0-person nodes, the anaphor must have 3 times 0-person nodes, too. A long-distance plural may or may not have the same number of 0-person nodes. In any event, since the grammar does not have to check for a non-local process, agreement between ziji and the LD-plural antecedent is not warrant, and therefore such sentences are rejected.

(29) Tamen shuo tamen chang piping ziji
'they say they often criticize self
'They said that they often criticized *them/themselves,'
Interestingly, H&L point out that if the universal quantifier *dou* is used, blocking effect with singular and plural disappears altogether, as illustrated in (30) and (31). They further observe that when this universal quantifier is present only a distributive sense comes out: both *ziji* and its antecedent must be interpreted in a distributive way. In other words, one can say that the universal quantifier singularizes the plural pronoun. In my view, the plural pronoun must have N R-nodes, and all of them can't spread onto the single 0-person node of *ziji*, which has to agree with its local antecedent (*N-to-one*). The universal quantifier being a fully referential element, it spreads its R-feature (A) to the R-nodes of the pronouns (one-to-N), and at the same time it assigns an R-node to *ziji* (one-to-one), as seen in (32).

(30) Tamen 各 dou shuo Lisi chang piping *ziji*
they all say Lisi often criticize self
'Each of them said that Lisi often criticized him/himself.'

(31) Tamen 各 dou shuo tamen chang piping *ziji*
they all say they often criticize self
'Each of them said that they often criticized him/themselves.'

(32) Tamen 0 dou shuo Lisi 0 chang piping 0 ziji 0

\[ \begin{array}{cccc}
  x & x & x & x \\
  0/0 & 0 & 0 & 0 \\
  R & R & R & A \\
  & & & P \\
\end{array} \]
To conclude it turns out that plural in Chinese is realized by the multiplication of person-nodes. Hence the distributive reading mentioned in H&L. The blocking effect is due to the impossibility of either many-to-one spreading, more-to-less spreading or perhaps less-to-more spreading. This section ends the core case of the syntax of *ziji*. In the next section I will attempt to account for a further referential scheme where there are two occurrences of *ziji*.

7. OCP effects

In this section I turn to certain cases of coreference or non-coreference involving *ziji* and a long-distance antecedent. They are not in the core case of *ziji*, because the Chinese speakers I know of have various judgement on the sentences discussed in the literature. These types of sentences involve multiple occurrences of *ziji*. My claim is that the identity of the morphemes (two occurrences of *ziji*) induce an identity of the R-node, which causes an OCP effect. The latter is avoided by setting aside one of the long-distance R-node. The local R-node cannot be dismissed presumably because it is the licenser of the anaphors.

Consider sentence (33), which is discussed in (H&L, (13)). (Z, L and W stand respectively for Zhangsan, Lisi and Wangwu.) According to H&L, the referential scheme is as given in (34). Both occurrences of *ziji* can have the same antecedent, either Z, L or W (a, b, c); each can have a distinct antecedent, as long as one occurrence is linked to the local subject (d, e, f, g); ungrammaticality obtains if the local subject is not among the split antecedents (h, i).

(33)  Z renwei L zhidaow W ba ziji₁ de shu song-gei le ziji₂ de pengyou
Z think L know W BA self PERF book gave-to self DE friend

'Z thinks that L knows that W gave his own book to his own friend.'
(34) a. \( \text{ziji}_1 = \text{ziji}_2 = W \)
b. \( \text{ziji}_1 = \text{ziji}_2 = L \)
c. \( \text{ziji}_1 = \text{ziji}_2 = Z \)
d. \( \text{ziji}_1 = WW, \text{ziji}_2 = L \)
e. \( \text{ziji}_1 = WW, \text{ziji}_2 = Z \)
f. \( \text{ziji}_1 = ZS, \text{ziji}_2 = W \)
g. \( \text{ziji}_1 = LS, \text{ziji}_2 = W \)
h. \* \( \text{ziji}_1 = ZS, \text{ziji}_2 = L \)
i. \* \( \text{ziji}_1 = LS, \text{ziji}_2 = Z \)

From the present perspective, (a)-(g) do not show any problems: spreading of R-nodes to 0-person nodes is either one-to-many or one-to-one. This can be seen in (35), where irrelevant morphemes and nodes are conveniently omitted.
In (a)-(c), spreading is one-to-many, and one can say that the two other R-nodes are ignored. However, if the manner of spreading is one-to-one, there are three floating R-nodes, which must link to two identical morpheme. So let us suppose that the three R-nodes induced in this context an OCP problem. To avoid it, I suggest that one of the R-nodes has to be ignored, that is, it must be referentially disabled. Since the anaphor is intended to refer to the local antecedent, it makes sense to assume that the latter cannot be disabled. Therefore to avoid OCP, only a long distance antecedent can be ignored. On this view, (d)-
(g) can be accounted for by assuming that one of the LD-antecedent is ignored for OCP reasons.

Conversely, (h) and (i), represented below in (36), are ruled out, since the local antecedent must not be set aside in order to satisfy OCP.

\[
(36)
\]

\[
\begin{align*}
\text{a. } & \quad \begin{array}{ccc}
Z & L & [W, ziji, ziji] \\
0 & 0 & 0 & 0 & 0 \\
R & R & R & R & R \\
\end{array} \\
\text{b. } & \quad \begin{array}{ccc}
Z & L & [W, ziji, ziji] \\
0 & 0 & 0 & 0 & 0 \\
R & R & R & R & R \\
\end{array}
\]

In the sentence above, a one-to-one reading is possible under the circumstances just discussed. But what if there is one R-node for each occurrence of \textit{ziji}, as in (37), reported in Richards (1996)? Apparently, a one-to-one reading is not possible in this context. This is consistent with the suggestion made above. OCP reduces the R-stream of one unit. If there is only two R-nodes, only the LD one can be reduced, and it results in an impossibility of a one-to-one reading.

\[
(37)
\]

\[
\begin{align*}
\text{a. } & \quad \begin{array}{ccc}
\text{ Xiao Ming xiang Da Huaj zai ziji de fangjian zuo ziji de gongke} \\
\text{ 'Xiao Ming said that Da Hua was doing his homework in his room.'} \\
\text{b. } & \quad \begin{array}{ccc}
\text{ *Xiao Ming, said that Da Hua, was doing his, homework in his, room.} \\
\text{c. } & \quad \begin{array}{ccc}
\text{ *Xiao Ming, said that Da Hua, was doing his, homework in his, room.} \\
\end{array}
\end{array}
\end{array}
\]

Furthermore, as discussed in Desouvrey (2000, etc.), OCP can take
another aspect. Besides the movement it induces and the deletion case just discussed, it usually forbids the occurrence of a feature or a morpheme in between identical features, a process analogous to gemination effect. For instance, in the feature sequence F T F, the morpheme bearing T must move to another position. It turns out that in Chinese a similar process is in action with R-nodes. As reported in Richards (1996), referring to Huang and Tang (1991), in a sequence of three possible antecedents, the intermediate one is strongly disfavored by speakers, as in sentence (36). I interpret this result as another effect of OCP on the R-node tier.

(38) \[\text{Zhangsan, renwei Lisi zhidaow Wangwu bu xiangxin ziji}^*_i/j/k\]

'Zhangsan thinks Lisi knows that Wangwu does not like self.'

8. Conclusive remarks

Central to this analysis is the following. In the normal case, Chinese \textit{ziji} reflects a clausemate subject. If the antecedent of the anaphor appears to be a third person element, which lacks a person node, hence a physical association line, the local clause cannot be locked and a long-distance element can assign its R-node to \textit{ziji}. A first or a second person pronoun does not block the local subject, under the assumption that \textit{ziji} makes up a plane with its local antecedent, excluding potential blockers. Conversely, since \textit{ziji} is an anaphor, it need not have a non-local R, and therefore the grammar does not check for the availability of such element. As a result, any intervening non-local first of second person element appear in the same plane as potential antecedent, and therefore can induce a blocking effect.

Chinese \textit{ziji} can also be a pronoun but only when it is used as subject,
consistent with the analysis presented in Desouvrey (2002) for English. In such a case, it has to receive an R-feature. How can an element be both a pronoun and an anaphor? In the present perspective, it must be the case that a morphological rule assigns an R-node to an anaphor or erases an R-node from a pronoun. This sort of rule is apparently used in French, where some processes involving pronoun *en* 'of it' are explained under the assumption that this element is an anaphor under certain circumstances (see Desouvrey 2000).

The type of underspecification discussed in this paper, which allows an anaphor to refer to a non-local R-element presents advantages and difficulties to the grammar. It is a problem, since in the normal case use of an anaphor is more accurate than a pronoun, and in fact the grammar rules out the use of a pronoun whenever an anaphor is possible (see Desouvrey 2002). In normal speech, Chinese speakers avoid ambiguity with various strategies, including affixing its referent to *ziji*, finger pointing, pitch movement, etc. The advantages of such a system are purely pragmatic. A speaker may use it precisely to take advantage of its ambiguity. And in such a case, he or she may not be willing to provide any clue as to how to disambiguate the sentence. It is this kind of use that syntacticians are interested in, and which antecedent is then possible or impossible follows from principles of grammar, as seen above. This accounts does not rule out H&L pragmatic-based account. It is just fortunate that speakers are provided with multiple and complementary tools to acquire a complex system such as human language.

**References**


Cole Peter, Gabriela Hermon, and C.T. James Huang (2000). Long Distance


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