Reflexivity and Chinese Anaphors: A Review of Reinhart and Reuland's Reflexivity

Valerie Baggaley
University of Calgary
Department of Linguistics

As a departure from Standard Binding Theory, Reinhart and Reuland (1993) argue that binding is about the reflexive properties and interpretation of predicates. This paper provides a summary of this theory of reflexivity and then applies it to Chinese data. Reinhart and Reuland's Condition A and B are applied to Chinese anaphors and, in several instances, fail to predict the correct results. The binding conditions are found to be too restrictive for they predict ungrammatical sentences, when in fact, the sentences are grammatical; hence reflexivity fails to capture the full range of reflexivity in Chinese.

1.0 INTRODUCTION

In this paper I will provide an examination of Reinhart and Reuland's (1993) (RR henceforth) theory of reflexivity and then apply this theory to Chinese data. I will demonstrate, that while reflexivity has a significant degree of empirical adequacy for Dutch, English and Norwegian, it has more limitations when applied to Chinese.

1.1 Definition of the Problem

Standard Binding, as set out in by Chomsky (1981, 1986), has a number of difficulties when applied cross-linguistically. In Reflexivity, RR react against these empirical inadequacies by proposing a very different approach to binding and reflexivity. They argue that, rather than being a property of anaphors, reflexivity is a property of predicates.
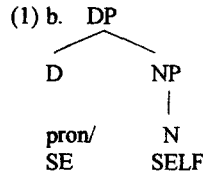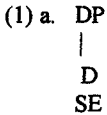
2.0 TWO TYPES OF ANAPHORS

RR differentiate two types of anaphors: simplex expressions (SE anaphors) and complex expressions (SELF anaphors). The two anaphor types differ in their distribution, morphology, and syntactic structure. SELF anaphors are always local (English himself, Dutch zichzelf) while SE anaphors are optionally long-distance, as in Italian sè and Dutch zich. Both types are referentially defective DPs[1] and do not refer to some entity in the world, so binding is seen as the " procedures assigning the content necessary for their referential interpretation" (Reinhart and

---

[1]Reinhart and Reuland refer to anaphors as NPs but I will assume the more current DP hypothesis, which complies with X bar theory, throughout my paper.

Reuland 1993: 658). SE anaphors lack number and gender features although, depending on the language, they may have person features. RR take this lack of phi^2 features to be responsible for their anaphoric nature. SELF anaphors, on the other hand, can be inflected for all the phi features.

Syntactically, SE anaphors (1)a pattern together with pronouns, as determiners, while SELF anaphors (1)b function as nouns, combining with pronouns or SE anaphors located in the determiner position. In today's terminology these structures would be represented as^3:

(1) a. DP
         |
         D
         SE

(1) b. DP
        /   \
       D   NP
              |
     pron/   N
     SE   SELF

The two types of anaphors differ substantially, according to RR, in their grammatical functions. Only SELF anaphors reflexive-mark their predicates; they impose coreference on the two arguments of a predicate. Thus SELF anaphors have a reflexivizing property.

SE anaphors, together with pronouns, lack this reflexivizer function altogether. RR note that SE anaphors and pronouns pattern together with respect to Standard Binding Condition B cross-linguistically. In example (2) either the SE anaphor or the pronoun is grammatical. RR attribute this to their similar syntactic structure (1)a.

(2)   Jan zag jou achter zich/hem staan
        Jan saw you behind SE/him stand
        Jan saw you stand behind SE/him.   (Dutch) (Reinhart and Reuland 1993:661)

3.0 CONDITIONS A AND B REFORMULATED

With the theory based on reflexivity, RR define reflexive predicates and then present their

---

^{2}Phi features are person, number and gender features.

^{3}Reinhart and Reuland assume that nouns, rather than determiners, head the noun phrase. Their analysis of the internal structure of SELF anaphors is:
(1)   [$_{NP}$ Pron/SE [$_{N'}$ self]]
and their analysis of SE anaphors is:
(2)   [$_{NP}$ SE [$_{N'}$...e...]]
However, throughout this paper we will assume the more current DP hypothesis, where the determiner is the head of the noun phrase, and this head projects to its maximal projection, DP.

reformulated binding conditions (Reinhart and Reuland 1993:670-671):

Definitions:
(3)   A predicate is *reflexive* iff two of its arguments are coindexed.
(4)   A predicate is *reflexive-marked* iff it is either lexically reflexive or one of its arguments is a SELF anaphor.

(5)   Condition A: A reflexive-marked predicate is reflexive.
(6)   Condition B: A reflexive predicate is reflexive-marked.

According to these conditions if two arguments of a predicate are coindexed, then the predicate must be lexically reflexive, or one of its arguments must be a SELF anaphor, for only SELF anaphors reflexive-mark their predicate. If the predicate is lexically reflexive, then it may have two coindexed arguments, neither of which has to be a SELF anaphor. This follows from the fact, that lexically reflexive predicates are already reflexive-marked and thus do not require a SELF anaphor. Turning to some data, we see how these conditions work.

(7) a. John shaves.
    b. John shaved himself.
(8)   John$_i$ hates himself$_i$.

Sentences (7) and (8) are both examples of reflexive predicates. <u>Shave</u> is lexically reflexive hence it is by definition reflexive-marked; in English, it may optionally take a coindexed argument as in (7)b.   In example (8), the predicate <u>hate</u> is not lexically reflexive. We see that it is reflexive-marked by the SELF anaphor, which is coindexed with the argument <u>John</u>. Hence both (7) and (8) comply with the reformulated Condition A and B. These conditions also make correct predictions in languages other than English. The following examples are from Dutch.

(9)   *Max$_i$ haat zich$_i$.
         Max hates SE.
(10)   Max$_i$ legt het boek achter zich$_i$.
         Max puts the book behind SE.

In example (9) we see that Condition B correctly rules out the SE anaphor, while in (10) the SE anaphor is permitted. As mentioned earlier, SE anaphors are not reflexivizers hence they are unable to reflexive-mark their predicates. Condition B states that reflexive predicates must be reflexive-marked. In example (9), there are two coindexed arguments, so by definition the predicate is reflexive. Since neither of the arguments is a SELF anaphor, nor is <u>haat</u> lexically reflexive, the reflexive predicate is unlicensed and Condition B is violated, hence the sentence is ungrammatical. In example (10), RR argue that no reflexive predicate is formed for <u>zich</u> is not an argument of the predicate <u>put</u>; rather it is embedded in the prepositional argument (Reinhart and Reuland 1993:665). In this example, Condition B correctly predicts that the sentence is grammatical since there is no violation of the binding condition.

Further refinement of Conditions A and B are made by RR as a result of data such as (11).

(11)   Lucie believes herself to be beyond suspicion.

As stated so far, herself and Lucie are not coarguments of the same predicate. Herself is an argument of the predicate in the lower clause, and thus reflexive-marks it; Lucie is an argument of the matrix clause predicate. As stated thus far, this sentence would be in violation with Condition A: herself is a SELF anaphor which reflexive-marks the lower clause predicate, yet the predicate is not reflexive. In order to escape problems such as this one, RR introduce a refinement to their binding conditions. Condition A, they claim, applies only to syntactic predicates and Condition B applies only to semantic predicates. They define syntactic and semantic predicates as:

(12)   Syntactic Predicate: is a head, all its syntactic arguments and an external argument (subject); syntactic arguments are the projections assigned a theta role or Case by the predicate.
(13)   Semantic Predicate: is the predicate and all its arguments at the relevant semantic level.

The refined and final version of the binding conditions are:

(14)   Condition A: A reflexive-marked syntactic predicate is reflexive.
(15)   Condition B: A reflexive semantic predicate is reflexive-marked.

Since verbs always have a subject, they form both semantic and syntactic predicates, falling under both Condition A and B, while subjectless nouns and prepositions form only semantic predicates and fall under Condition B alone.

In summary, RR's claim is that binding is about the interpretation of predicates. SELF anaphors can reflexive-mark their predicate while SE anaphors can not. In this next section, I will apply reflexivity to Chinese data.

4.0 CHINESE ANAPHORS

Chinese has two anaphors: ziji 'self' and pronoun+ziji. The second form, pronoun+ziji is morphologically complex and inflects for person (ta-ziji 'himself, herself', niziji 'yourself') thus by RR's definition is a SELF pronoun. The other anaphor, ziji, qualifies for RR's SE pronoun, for it is morphologically simple and lacks phi features. Like other SE anaphors cross-linguistically, ziji is able to have a long distance antecedent (Pan 1997:182).

(16) $John_i$ minglin $Bill_j$ gei ziji $guahuzi_{i/j}$.
        John order   Bill to self shave
        $John_i$ ordered $Bill_j$ to shave $self_{i/j}$.

4

In (16) we see that the SE anaphor, ziji can have a long-distance antecedent for it can be coindexed with the subject of either the matrix or the lower clause. Condition A states that a reflexive-marked predicate is reflexive. Since shave is lexically reflexive, it is indeed reflexive-marked. Thus Condition A is satisfied and the sentence is grammatical with either interpretation.

Many examples suggest that the SELF anaphor is local (Huang and Tang 1991:263).

(17).   Zhangsan$_i$ renwei [Lisi$_j$ hai-le ta-ziji$_{*i/j}$]
         Zhangsan think   Lisi hurt-ASP self
         Zhangsan$_i$ thought that Lisi$_j$ hurt himself$_{*i/j}$

In example (17), Conditions B and A correctly predict that the sentence is grammatical. The predicate hurt is reflexive as two of its arguments are coindexed. The SELF anaphor, ta-ziji, reflexive-marks the predicate so both conditions are met and the sentence is grammatical. The other interpretation is correctly predicted to be ungrammatical. Zhangsan is not an argument of the predicate hurt so it can not be coindexed with ta-ziji. Condition A correctly rules out this interpretation.

Now we look at two more complex examples to see how reflexivity accounts for them.

(18)a. John$_i$ shuo Bill$_j$ gei ta-ziji$_{*i/j}$ pai   de zhaopian mingtian hui paimai.
         John say   Bill for he-self take DE picture tomorrow will auction.
         John$_i$ said that pictures that Bill$_j$ took of himself$_{*i/j}$ will be on sale tomorrow.

   b.   John$_i$ shuo Bill$_j$ gei ziji$_{i/j}$ pai   de zhaopian mingtian hui paimai.
         John say   Bill for self take DE picture tomorrow will auction.
         John$_i$ said that pictures that Bill$_j$ took of himself$_i$ / him$_j$ will be on sale tomorrow.
                                                                    (Pan 1997:119, 134)
RR claim that take a picture is an idiom which "produces a Condition B effect inside the NP). An example taken from the article may clarify this (Reinhart and Reuland 1993:685):

(19)   *Lucie$_i$ took a picture of her$_i$.

RR explain this ungrammatical sentence by claiming that Lucie and her are coarguments of the verb take a picture, hence the predicate must be reflexive-marked. Since there is no SELF anaphor nor is the predicate lexically reflexive, the sentence is ungrammatical.

Applying this to sentence (18)a, we can claim that the verb take a picture requires a SELF argument in order to be reflexive-marked, thus licensed as a reflexive. On the interpretation where Bill is coindexed with the SELF anaphor, the predicate is reflexive-marked and reflexive, thus Condition B and A are satisfied, and the sentence is grammatical. When John is coindexed with the SELF anaphor, the predicate is reflexive-marked, but not reflexive since John is not an

5

argument of the predicate take a picture. As predicted by Condition B, this sentence is ungrammatical.

Looking at (18)b, we are only able to get the right results if we look at the sentence in a different light. Instead of claiming that take a picture is the predicate, we can claim that the predicate is take alone. Next we must recognize that [pictures op$_i$ that Bill took t$_i$ of self] is the subject NP of the lower clause. This NP is embedded in the sentential argument of the predicate say. With this in mind, Condition A predicts both interpretations to be correct and they are. When ziji is coindexed with Bill, it is a logophoric usage of the SE anaphor, for we could argue that Bill and ziji are not coarguments and there is no reflexive predicate, thus Condition A is adhered to. When the SE anaphor is coindexed with John, again, they are not coarguments and neither condition rules them out.

Although the above analysis works, it is inconsistent with the analysis provided for (18)a. In order to yield the correct results in (18)a, we analyse take a picture as an idiom, and in (18)b, we analyse it as a simple verb, rather than an idiom. This is inconsistent treatment of the same structure, thus providing the first indication that RR's reflexivity may not work well for Chinese.

Looking at further data yields further problems with the application of Conditions A and B to the Chinese data.

(20)a. John$_i$ yiwei Bill$_j$ xihuan ta-ziji$_{*i/j}$
     John think Bill like   himself.
     John$_i$ thinks that Bill$_j$ likes himself$_{*i/j}$.

   b. John$_i$ yiwei Bill$_j$ xihuan ziji$_{i/j}$.
     John think Bill like   himself.
     John$_i$ thinks that Bill$_j$ likes himself$_{i/j}$

(21)a. John$_i$ xihuan ta-ziji$_i$.
     John like   self
     John$_i$ likes himself$_i$.

   b. John$_i$ xihuan ziji$_i$.
     John like   self
     John$_i$ likes self$_i$ (Pan 1997:118, 134)

In these examples we see that ziji is able to have a long-distance antecedent while ta-ziji is not. Using RR's binding conditions, we see that Condition A and B correctly predict the grammatical sentence (20)a. The predicate like is reflexive-marked by the SELF argument, and it is indeed reflexive and grammatical, when ta-ziji and Bill are coindexed.

When ziji, a SE anaphor is coindexed with the matrix subject John in (20)b Conditions A and B

correctly predict the sentence to be grammatical. The arguments of think are John and the IP[Bill xihuan ziji], so ziji is not a coargument with John in (20)b. Since they are not coarguments, there is no reflexive and reflexive-marking is not required, hence the conditions are complied with. However, in Chinese it is also possible to coindex ziji and Bill in (20)b. This then, creates a violation of Condition A and this interpretation is wrongly predicted to be ungrammatical. When the two arguments, ziji and Bill, are coindexed, the predicate like is not reflexive-marked, hence the reflexive predicate is unlicensed. Yet the sentence is grammatical.

Like (20)a, (21)a obeys both binding conditions. It is a reflexive predicate which is reflexive-marked by the SELF anaphor, ta-ziji. Hence Conditions A and B correctly predict sentence (21)a to be grammatical.

Like (20)b, in (21)b Condition A makes the wrong predictions, predicting that the sentence should be ungrammatical. Like is not intrinsically reflexive, nor does it have a SELF argument; hence it is not reflexive-marked. It does, however, have two coindexed arguments. According to this theory, it is an unlicensed reflexive predicate. The sentence, though, is grammatical.

As we see, these examples pose problems to RR's theory of binding, for these sentences are indeed grammatical even though binding conditions have been violated. From this small sample of Chinese data, we see that the binding conditions make incorrect predictions about the data. In the areas explored in this paper, the binding conditions are too restrictive for they predict ungrammatical sentences when, in fact the sentences are perfectly grammatical.

5.0 CONCLUSION

As we have seen, RR's theory of reflexivity takes the view that binding is about the interpretation of predicates, rather than the standard view that it is about the distribution of NPs. Although their theory is superior to Standard Binding Theory in capturing the nature of the otherwise unexplained anaphors in English, Dutch and Norwegian, it fails to capture the full range of reflexivity in Chinese. From this small sample of Chinese data, we see that the reformulated Conditions A and B do not completely cover all cases; they are too restrictive, for the binding conditions incorrectly predict ungrammatical sentences when, in fact, the sentences are grammatical. Further research into the Chinese data may provide some insight into how RR's binding conditions may be expanded in order to better capture all of the data.

7

REFERENCES

Huang, C.T. James and Tang, C.C.Jane. 1991. The local nature of the long-distance reflexive in Chinese. In Long-distance anaphora, ed. Koster, Jan and Eric Reuland. 263-282. Cambridge: Cambridge University Press.

Huang, Yan. 1994. The syntax and pragmatics of anaphora. Cambridge: Cambridge University Press.

Lidz, Jeffery. 1995. Morphological reflexive marking: evidence from Kannada. Linguistic Inquiry 26:705-710.

Pan, Haihua. 1997. Constraints on reflexivization in Mandarin Chinese. New York: Garland Publishing.

Reinhart, Tanya and Eric Reuland. 1993. Reflexivity. Linguistic Inquiry 24:657-721.

Valerie Baggaley
901 Harris Place NW
Calgary, AB
T3B 2V4
email: vrbaggal@acs.ucalgary.ca

8