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When is a Reflexive not a Reflexive?
Near-reflexivity and Condition R

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0. Introduction

Anaphors are standardly divided into two classes: local and long-distance. These anaphors are distinguished by the domain in which they must be bound; local anaphors require an antecedent within a smaller domain than long-distance anaphors do. This partitioning of anaphors is based strictly on syntactic behavior and the tacit assumption that anaphors form a single semantic class, i.e., the class of referentially deficient elements. In this paper I put this assumption into question, illustrating the existence of a semantic distinction among anaphor types which cross-cuts the local/long-distance partition. While it is true that all anaphors are referentially dependent, I will show that some anaphors require complete identity with their antecedents while others allow their referential identity to be determined from that of their antecedents without requiring extensional equivalence. Anaphors of the first class, which I call Pure-reflexives, identify the same entity in the world as their antecedents do. Anaphors from the second class, which I call Near-reflexives, do not require complete identity with their antecedents; the referent of a Near-reflexive can be loosely related to the referent of its antecedent by certain kinds of similarity to be made more precise below. This distinction between Pure- and Near-reflexives has consequences for the theory of reflexive predicates and in conjunction with this theory enables us to explain the existence of anaphors which appear to resist binding by a coargument. Antilocal anaphors are Pure-reflexives while any anaphor which can be bound by a coargument is a Near-reflexive. Near-reflexives are not exclusively locally bound, however. Some Near-reflexives can also be long-distance bound.

The paper is organized as follows. In section 1 I discuss the predicate-centered binding theory of Reinhart and Reuland (1993). In section 2 I show that some sentences which are predicted to be synonymous by this theory are not synonymous. In section 3 I explicate the notion of Near-reflexivity. In section 4 I introduce Condition R, which replaces the binding conditions of Reinhart and Reuland, and I show several places where it makes more accurate predictions than their binding conditions.

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1. **Predicate-centered Binding Theory**

The theory of reflexivity in generative grammar has traditionally been a theory of nominal types. NPs are identified as anaphors, pronominals or R-expressions on the basis of where in a given sentence elements which are coreferential with them can occur. The binding theory is thus a theory of the syntactic properties of referential dependence. Reinhart and Reuland (1993) (henceforth R&R) have recently argued against this strictly nominal approach to binding claiming instead that reflexivity is a property of predicates, that the role of reflexive pronouns in language is not to express coreference but rather to reflexivize predicates. The distribution of anaphors and pronominals is not determined by reference, a property of NPs, but by reflexivity, a property of predicates. From this predicate-centered perspective, an anaphor is still defined as an NP which is referentially deficient in the relevant respect, but the anaphors are broken into two types, those that reflexivize the predicates that they are arguments of and those that do not. This division is intended to capture the apparent antilocality of certain anaphors. That is, there are certain NPs which are referentially dependent but which require a long-distance antecedent and not a local one. For example, the Dutch anaphor *zich* must not be bound by a coargument, although it must be bound. The behavior of *zich* contrasts with that of *zichzelf*, which can be bound by a coargument but cannot be long-distance bound.

(1) a. *Max haat zich*  
   'Max hates self'  
   'Max hates himself'

b. Max haat zichzelf  
   'Max hates self/SELF'  
   'Max hates himself/SELF'

c. Max hoorde mij over zich praten  
   'Max heard me about himself'

d. *Max hoorde mij over zichzelf praten*  
   'Max heard me about himself/SELF'

While both *zich* and *zichzelf* are anaphors in the sense that they require a commanding antecedent, only *zichzelf* can reflexivize a predicate and so only *zichzelf* can be bound by a coargument. Technically, this is implemented through the following binding conditions:

(2) **Condition A**: A reflexive-marked predicate is reflexive  
**Condition B**: A reflexive predicate is reflexive-marked

These conditions depend on the following definitions:

(3) a. A predicate is reflexive iff it has two coreferential arguments  
b. A predicate is reflexive-marked iff  
   i) it is lexically reflexive; or  
   ii) one of its arguments is a SELF anaphor

(4) A SELF-anaphor is a morphologically complex anaphor
Returning now to the examples in (1), (Ia) is ungrammatical as a violation of Condition B. The predicate is reflexive (it has two coreferential arguments) but not reflexive-marked (it is not lexically reflexive and neither of its arguments is a SELF anaphor). Both conditions are satisfied in (lb); here the predicate is both reflexive and reflexive-marked (since one of its arguments is a SELF-anaphor). In the long-distance cases, (lc) trivially satisfies both conditions since there are no reflexive predicates and no reflexive-marked predicates, while (ld) violates Condition A because the embedded predicate is reflexive-marked (via the SELF anaphor) but not reflexive.

The intuition behind R&R's proposal is that there is a one-to-one correspondence between a particular formal property (reflexive-marked) and a particular semantic property (reflexive). It is important to note, however, that the definition of reflexive-marked is a disjunction; there are two ways for a predicate to be reflexive-marked. These two modes of reflexive-marking are required to explain the contrast in (5):

(5) a. *Max haat zich
   Max hates self
   'Max hates himself'

b. Max wast zich
   Max washes self
   'Max washes himself'

Here we see that the restriction against coargument binding of zich depends on the predicate. Since the syntactic relation between the anaphor and its antecedent is identical in (5a) and (5b), but the binding possibilities for the two cases diverge, we can conclude that it is the predicate which determines the availability of coargument binding for the anaphor zich. Under the predicate centered binding theory outlined above, the effect is achieved by saying that some predicates are inherently reflexive and, thus, inherently reflexive-marked. While (5b) would appear to violate Condition B since the predicate is reflexive but not reflexive-marked, in fact the condition is satisfied because the predicate is lexically reflexive and thus does not need overt reflexive-marking via the SELF anaphor.

Lidz (1995) extends the definition of lexically reflexive to include morphological reflexivity, i.e., to include those languages which have a morpheme which is required on reflexive predicates. In Kannada, for example, the anaphor tannu cannot be bound by a coargument in the absence of the verbal reflexive morpheme -koL:

1 Pierre Pica (personal communication) objects to this characterization of the distinction between (5a) and (5b), claiming that in (5b) zich is a clitic and that like all clitics it must be locally bound. According to Pica, it is the variable status of zich as a clitic or a full NP which gives rise to the distinction. The objection is wrongheaded in two ways. First, if it is true that clitics are obligatorily locally bound, then we still need an explanation for why the clitic zich is possible in (5b) but not (5a). Since the predicate is the only thing that varies, then Pica's explanation reduces to properties of the predicate, as above. Second, it is not true that all clitics must be locally bound. Even when zich is long-distance bound, it behaves like a clitic in resisting topicalization and in blocking movement of the PP containing it (Everaert 1986):

(i) *voor zich liet Jan Piet werken
   for self let Jan Piet work
   'For self, Jan let Piet work' (self=Jan)

(ii) *Zij liet mij voor zich een huis bouwen
    She let me for self a house build
    'She let me build a house for her
2. Against Reflexive-marked Predicates as a Natural Class

R&R's approach makes an interesting prediction with respect to the meaning of reflexive-marked predicates. As noted above, reflexive-marking can be realized lexically (sometimes through a verbal affix) or syntactically (through a SELF anaphor). The binding conditions themselves, however, make no reference to the manner of reflexive marking. The binding conditions require only that reflexive-marking, no matter how it is realized, corresponds to semantic reflexivity. As a consequence, the theory predicts that reflexive-marked predicates are semantically uniform. Since the binding conditions apply at LF and only make reference to reflexive-marking and not to the manner of reflexive-marking, it follows that these predicates are indistinguishable at LF. Semantically, reflexive-marked predicates should form a natural class. This prediction is not borne out, however. Predicates which are reflexive-marked by SELF anaphors have different semantic properties than predicates which are lexically reflexive-marked. That is, the one-to-one mapping between the semantic property of being reflexive and the formal property of being reflexive-marked breaks down when we examine the semantic properties of these two types of reflexive-marked predicate more closely.

Consider first the Madame Tussaud context first discussed in Jackendoff 1992. Here, a famous person goes into the wax museum which contains a statue depicting her and then looks into the mirror. If the speaker describing this situation says (7a), then we get the interpretation that the person saw her own reflection in the mirror. But, if the speaker says (7b), we get either the interpretation that the person saw her own reflection or the interpretation that the person saw a reflection of her statue (Reuland 1995):

(7) a. ze zag zich in een griezelige hoek staan
   she saw self in a creepy corner stand
   'She saw herself (=reflection, ≠statue) in a creepy corner stand'

b. ze zag zichzelf in een griezelige hoek staan
   she saw selfself in a creepy corner stand
   'She saw herself (=reflection or statue) in a creepy corner stand'

The fact that there is an additional reading available in the sentence in which the SELF anaphor occurs is not predicted by R&R's theory.

This set of facts is found also in Kannada. When the verb is lexically reflexive-marked (via the verbal reflexive), the statue interpretation is blocked. When the morphologically complex anaphor is present, however, this interpretation is available.
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(8) a. Hari tann-annel nod-i-koND-a
   Hari self-ACC see-PP-REFL.PST-3SM
   'Hari saw himself (=Hari, ≠statue)'

   b. Hari tann-annel-tanne nod-id-a
   Hari self-ACC-self see-PST-3SM
   'Hari saw himself (=Hari or statue)'

A second place where R&R's theory makes the wrong prediction is in comparative deletion constructions. Here again, all reflexive-marked predicates are predicted to behave alike but they do not. The lexically reflexive-marked predicate allows only a sloppy interpretation while the syntactically reflexive-marked predicate allows either a strict or sloppy reading (Sells, Zaenen and Zec 1987):

(9) a. zij verdedigde zich beter dan Peter
    she defended self better than Peter
    'She defended herself better than Peter defended himself'
    '*She defended herself better than Peter defended her'

   b. zij verdedigde zichzelf beter dan Peter
    she defended self itself better than Peter
    'She defended herself better than Peter defended himself'
    'She defended herself better than Peter defended her'

Similarly, for those speakers who allow comparative deletion in Kannada, when the verbal reflexive is present, only the sloppy reading is available:

(10) Rashmi Siita-ginta cheenage tann-annel singarisi-koLL-utt-aaLe
    Rashmi Sita-COMP better self-ACC beautify-REFL-NPST-3SF
    'Rashmi puts makeup on herself better than Sita puts makeup on herself'
    '*Rashmi puts makeup on herself better than Sita puts makeup on her'

Given that R&R's theory falsely predicts the semantic equivalence of the two types of reflexive-marked sentence, we need to find a way to capture their generalization that the antilocality of anaphors like zich and tannu is due to properties of the predicate without making the same false prediction. In order to do this, we must first characterize the difference between the interpretations allowed in the syntactically reflexive-marked sentences and those of the lexically reflexive-marked sentences.

3. Near-reflexives

What the Madame Tussaud examples illustrate is that SELF anaphors allow an interpretation in which the anaphor is referentially dependent on its antecedent but not necessarily identical with it. The anaphor can pick out an entity from the domain of discourse which is related to and similar to its antecedent. We will call such anaphors "Near-reflexives." The difference between Near-reflexive predicates (i.e., predicates which have a Near-reflexive as an argument) and semantically reflexive predicates is given in (11):

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2 Most Kannada speakers require the verb to be repeated in comparative constructions.
(11a) indicates that the two arguments of the predicate \( P \) are identical. In (11b), the second argument is a function of the first argument.\(^3\) These representations are formally distinct, although in most cases they are extensionally equivalent. That is, the Near-reflexive function does not prohibit the antecedent and the anaphor from being the same entity in the world, although in the semantic representation they are distinguished. On the other hand, in a Pure-reflexive sentence, the anaphor and its antecedent must be completely identical, both in the world and in the semantic representation.

Since lexically and morphologically reflexive predicates do not allow a non-identity interpretation, it follows that they are semantically reflexive, i.e., that they have the representation (11a). Predicates which are reflexive-marked via a morphologically complex anaphor do permit the non-identity interpretation, and so implicate the semantic representation (11b).

4. Condition R

Given that the coargument restriction on anaphors like \( \text{zich} \) and \( \text{tannu} \) is obviated in the presence of lexical/morphological reflexivity and that lexical reflexivity is semantic reflexivity (i.e., lexical reflexives never allow the Near-reflexive interpretation of the anaphor), the following principle suggests itself:

(12) Condition R:
\[
\lambda x \ [P(x,x)] \quad \leftrightarrow \quad (\theta_1 = \theta_2)
\]

The left side of this formula depicts the semantic representation of reflexivity. The right side depicts the representation of the theta-grid of a lexically reflexive predicate. The condition states that if a predicate is semantically reflexive, then it must be lexically reflexive. Similarly, if a predicate is lexically reflexive, then it must be semantically reflexive.

Let us now see how Condition R gives us the desired results. Consider the following:

(13) a. \( \text{*Hari tann-annu noDi-d-a} \)
Hari self-ACC see-PST-3SM
'Hari saw himself'

b. Hari tann-annu noDi-du-koND-a \( (=8a) \)
Hari self-ACC see-PP-REFL.PST-3SM
'Hari saw himself' (=reflection, \#statue)

c. Hari tann-annu-tanne noDi-d-a \( (=8b) \)
Hari self-ACC-self see-PST-3SM
'Hari saw himself' (=reflection or statue)

\(^3\) I leave open the exact content of the Near-reflexive function for the time being, though most likely this function is probably something like "representation of \( x \)." See Jackendoff (1978; 1992) and Fauconnier (1985) for some illuminating discussion.
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(13a) is ruled out in violation of the left-to-right implication of Condition R; the sentence is semantically reflexive (since tannu does not introduce the Near-reflexive function) but not lexically reflexive. In (13b), the sentence is both semantically and lexically reflexive. The Near-reflexive interpretation is ruled out because the predicate is lexically reflexive (as evidenced through the verbal reflexive) and so must be semantically reflexive, by the right-to-left implication of Condition R. Finally, in (13c) the anaphor introduces the Near-reflexive function and so the sentence is not semantically reflexive. The predicate is not lexically reflexive either and so Condition R is not operative.

4.1 Predictions

4.1.1 All Coargument-bound Anaphors are Near-reflexives

Condition R makes an interesting prediction: if an anaphor can be bound by a coargument (in the absence of lexical reflexivity), then that anaphor is a Near-reflexive. This prediction follows from Condition R because if a predicate is not lexically reflexive, then there is no way for it to be semantically reflexive. This prediction appears to be borne out in languages as diverse as English, Chinese and Russian. We consider these in turn.

4.1.1.1 English

It is well known that the English anaphor himself can be bound by a coargument:

(14) John hit himself

That this anaphor allows the Near-reflexive interpretation is clear (see Jackendoff 1992). Consider the situation in which there is a statue depicting John and he throws a football at it and hits it with the football. Here it is natural to say (15) and mean that John hit the statue that depicts him.

(15) John hit himself with the football

Of course, (15) does not force a statue-interpretation; it can be interpreted as John (the person) hitting John (the person) with the football. What this illustrates is that the entities picked out by the domain and the range of the Near-reflexive function can be identical even though they are distinguished in the semantic representation.

4.1.1.2 Chinese

Chinese has a morphologically simplex anaphor, ziji, which can be bound by a coargument, a prima facie counterexample to R&R's binding theory. Since only SELF anaphors can be locally bound and since SELF anaphors are defined as morphologically complex, R&R predict that ziji should be antilocal like zich and tannu. Of course, it is easy to imagine ways in which ziji can be construed as a SELF anaphor, either by altering the definition of SELF anaphor or by saying that ziji is covertly complex. Doing so, however, requires that there be two anaphors that are pronounced ziji, one a SELF anaphor and the other a SE anaphor. If there weren't two such anaphors, then we would expect either local binding all the time or long-distance binding all the time.

On the other hand, Condition R, being independent of morphological form, correctly predicts that this anaphor is a Near-reflexive. The availability of both local and long-distance binding poses no problem for this analysis since binding domain is determined syntactically while the availability of the Near-reflexive interpretation is
nonsyntactic in nature. Here imagine the situation where Mao Tse Tung goes into the wax museum and becomes enraged at seeing the statue depicting him. Here, we can say (16) to mean either that Mao committed suicide (shooting himself) or vandalism (shooting the statue):

(16) Mao Tse Tung ba ziji qiangbi le
    Mao Tse Tung BA self shoot ASP
    'Mao Tse Tung shot himself (=statue or Mao)'

We saw above that in Dutch, semantically reflexive sentences allow only a sloppy interpretation under Comparative Deletion while Near-reflexive sentences allow both a strict and sloppy interpretation. So, if ziji is a Near-reflexive, then it follows that it should allow both a strict and sloppy interpretation. The prediction is also borne out:

(17) Zhangsan bi Lisi wei ziji bianhu de hao
    Zhangsan than Lisi for self defend DE well
    'Zhangsan defended himself better than Lisi defended himself'

4.1.1.3 Russian

Russian is a further interesting example from this perspective because, like Kannada, it has both an affixal reflexive as well as a morphologically simplex anaphor. Unlike Kannada, however, the morphologically simplex anaphor can be bound by a coargument in the absence of the affixal reflexive. Since the affixal reflexive is taken to indicate lexical reflexivity, it follows that when the verbal reflexive is absent the predicate cannot be lexically reflexive and thus not semantically reflexive. So, sentences with the anaphor bound by a coargument must have a Near-reflexive interpretation. This prediction is borne out. Imagine the situation described above for Mao Tse Tung, but with Boris Yeltsin as the protagonist When the verbal reflexive is present, the Near-reflexive interpretation is blocked (as predicted by Condition R). When the anaphor is present, the Near-reflexive interpretation is available:

(18) a. Yeltsin zastrelil-sja
    Yeltsin shot-REFL
    'Yeltsin shot himself (=Yeltsin, ≠statue)'

b. Yeltsin zastrelil sebja
    Yeltsin shot self
    'Yeltsin shot himself (=Yeltsin or statue)'

Also as predicted by Condition R, in comparative deletion constructions when the verbal reflexive is present we get only the sloppy interpretation and when the anaphor is present we get both strict and sloppy interpretations:

(19) a. Ivan zashchishchal-sja lachshe chem Petr
    Ivan defended-REFL better than Peter
    'Ivan defended himself better than Peter defended himself'

I assume that the head-movement theory of reflexives (see Pica 1987; Cole, Hermon and Sung 1990 among others) can explain the availability of long-distance binding. What is at issue here is the availability of coargument binding, which is precluded by Condition R unless the anaphor is a Near-reflexive.
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b. Ivan zashchishal sebja lachshe chem Petr
   'Ivan defended self better than Peter'
   'Ivan defended himself better than Peter defended himself'
   'Ivan defended himself better than Peter defended him'

4.1.2 Variation in lexical reflexivity

A second prediction made by Condition R has to do with the extent of lexical reflexivity found in a given language. Dutch and Kannada differ in that in Kannada any verb can be made lexically reflexive through the affixation of the verbal reflexive, while Dutch allows only a small set of lexically specified verbs to be lexically reflexive. We might thus expect to find a language which allowed no predicates to be lexically reflexive. Such a language, if it had an anaphor which did not permit a Near-reflexive interpretation, might block binding by a coargument across the board. That is, in a language where there is no lexical reflexivity, we predict the existence of an anaphor which can never be bound by a coargument. Malayalam is such a language. The Malayalam simplex anaphor, tan, cannot be bound by a coargument whereas the complex anaphor tan-ne-tanne can (Mohanan 1982; Jayaseelan 1995):

   (20) a. *moohan tan-ne aaraDhik'k'uNNu
        mohan self-ACC worships
        'Mohan worships himself'
   b. moohan tan-ne-tanne aaraDhik'k'uNNu
        mohan self-ACC-self worships
        'Mohan worships himself'

This generalization holds even with verbs which are lexically reflexive in other languages (K.A. Jayaseelan, personal communication):

   (21) a. *raaman tan-ne kshauram ceytu
        raaman self-ACC shaving did
        'Raaman shaved'
   b. raaman tan-ne-tanne kshauram ceytu
        raaman self-ACC-self shaving did
        'Raaman shaved himself'

Note also that (21b) allows the Near-reflexive interpretation that Raaman shaved a portrayal of himself, as predicted by Condition R. We can conclude that Malayalam has no lexical reflexivity. The fact that tan can never be bound by a coargument indicates that this anaphor does not express Near-Reflexivity and follows from the combination of lexical properties of Malayalam with Condition R.

Under this conception, all variation in the behavior of reflexive forms found among the world's languages reduces to lexical variation. The syntactic binding theory is constant, as is Condition R. What varies is the extent of lexical reflexivity permitted by a language and the range of anaphors found in that language. The remaining question is what properties of the lexicon or of lexical items determines the extent of lexical reflexivity and whether a given anaphor allows a Near-reflexive interpretation. Note that although it is not clear at this point what linguistic property determines whether an anaphor introduces the Near-reflexive function, it should be trivial for a child learning the language to determine if an anaphor that he encounters does so. Assuming that the child knows which verbs are inherently reflexive and which verbs are not, then if the child sees an anaphor bound by a
coargument in the absence of lexical reflexivity, he can conclude that the anaphor is a Near-reflexive. Thus, the child needs have no exposure to sentences involving wax museums and heads of state to determine whether a given form is a Near-reflexive.

5. Conclusions

In this paper I have shown that there are two classes of anaphor: Pure-reflexives and Near-reflexives. A Pure-reflexive anaphor requires complete identity with its antecedent while a Near-reflexive anaphor can be related to its antecedent via the Near-reflexive function. The distinction between Pure- and Near-reflexives is independent of the distinction between local and long-distance anaphors. Further, those anaphors which have been characterized as antilocal in the past are really Pure-reflexives. Syntactically, they allow binding by a coargument; however, in the absence of lexical reflexivity these anaphors cannot be bound by a coargument without inducing Condition R, which requires semantically reflexive predicates to be lexically reflexive. Thus, we do not need a class of anaphors which are syntactically specified as being antilocalse since the antilocality of such anaphors can be attributed to their semantic representations in conjunction with Condition R. The head-movement theory of Pica (1987), Cole, Hermon and Sung (1990) and others, naturally accounts for the difference between local and long-distance reflexives. As far as these theories are concerned, there is no difference between the so-called antilocal anaphors and other long-distance anaphors, since the antilocality effect is due to Condition R, which is part of the interface between the semantic component and the lexicon. This approach is superior to that of Reinhart and Reuland on several counts. First, their approach falsely predicts synonymy across reflexive-marked predicates. The distinction between Pure- and Near-reflexives is predicted by their theory not to exist. Second, while the unavailability of long-distance binding for morphologically complex anaphors is captured by their theory, they also falsely predict that all local binding involves morphological complexity. That is, they predict all morphologically simplex anaphors to be antilocal. We have seen, however, that this prediction is too strong. What is true is that any anaphor (independent of morphological structure) which can be locally bound introduces the Near-reflexive function and thus averts Condition R. R&R's important observation that the behavior of antilocal anaphors is explained by properties of reflexive predicates and not by binding configurations is maintained in our approach. Condition R, however, has nothing to say about the behavior of anaphors that introduce the Near-Reflexive function. A characterization of these anaphors is still required. It seems clear that the distribution of these anaphors is best characterized in syntactic terms. Whether this is implemented through the classical binding theory of Chomsky (1981) or the chain-condition of Reinhart and Reuland (1993) remains to be seen. Finally, we note that a full account of the phenomena associated with anaphora and reflexivity in human language requires investigation of the syntactic, lexical and semantic components of the grammar and not any one of these alone.

References

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