GRAMMATICAL RELATIONS AND ANAPHORA IN MALAYALAM

by

Karuvannur Puthanveettil Mohanan

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Signature of Author ___________________________ Department of Linguistics May 8, 1981

Certified by _______________________________ Ncam Chomsky Thesis Supervisor

Accepted by ________________________________ Samuel Jay Keyser Chairman, Departmental Committee
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KARUVANNUR PUTHANVEETTIL MOHANAN

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ABSTRACT

This thesis argues that principles governing the relation between anaphors and antecedents are best stated at a level that encodes grammatical relations such as subject of and object of. This level cannot be universally identified with the level of configurational structure.

The first section of the thesis presents a description of the behaviour of anaphors and pronouns in Malayalam, and identifies those properties of anaphora in this language that are of some theoretical interest. Section 2 shows that these properties recur in various other languages such as Kannada, Chinese, Yoruba, and Icelandic. Section 3 discusses the problems that these phenomena pose for the Government Binding Theory as developed by Chomsky (in press), and suggests possible revisions.

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GRAMMATICAL RELATIONS AND ANAPHORA IN MALAYALAM

0. INTRODUCTION

This thesis is concerned with one of the binding conditions in the G(overnment) B(inding) theory as developed in Chomsky (1979; in press). The principle is stated thus:

(1) Anaphors are bound in their governing category.

In Chomsky (in press), it is assumed that the condition applies at the level of s-structure to syntactic configurations. I shall argue that it must, instead, be assumed to apply to a nonconfigurational level of representation containing what Chomsky calls 'lexical VP's'. The level containing lexical VP's, which may be called the lexical structure, is the level that universally encodes grammatical relations like subject and object. I shall also argue that principle (1) should be revised to include certain parametric options so that it can account for anaphora in languages like Malayalam, Chinese, Yoruba, and Icelandic.

The first section of the thesis presents a description of the behaviour of anaphors and pronouns in Malayalam, and identifies the properties of anaphora in this language that are of some theoretical interest. Section 2 shows that these properties recur in various other lan-
guages, such as Kannada, Chinese, Yoruba, and Icelandic. In section 3, I shall discuss the problems that these phenomena pose for the binding condition in (1), and suggest possible solutions.

1. ANAPHORA IN MALAYALAM

1.1. Introductory Remarks

Malayalam is a 'free word order' language with the following flat (= VP less) clause structure: ¹

(2) S
    \[X X X \ldots V\]

The structure of (3a) is given in (3b) as an example:

(3)a. kuṭṭi  inna1e  aanaye  ṅullī.
    child-n yesterday elephant-a pinched²
    (The child pinched the elephant yesterday.)

b. S
    \[NP Adv. NP V\]
    \[kuṭṭi inna1e aanaye ṅullī\]

---

1. For detailed arguments to show that Malayalam does not have a VP node, see Mohanan (in press).

2. n = nominative, a = accusative, d = dative, and so on. The unmarked subject in Malayalam is in the nominative case, and in the dative case for a few special verbs and modals. Animate direct object is in the accusative case, and inanimate in the nominative. The indirect object is in the dative case.
The constituents directly dominated by S are order free in Malayalam. Thus, SOV, OSV, SVO, OVS, etc. are all possible word orders. This property reveals interesting characteristics of anapnorph-antecedent relations in the language.

There are three types of overt elements that participate in syntactically governed coreference relationships, i.e., elements that can take antecedents. I shall refer to them as pronouns, pronominal anaphors, and nonpronominal anaphors:

(4)a. Pronouns: awan 'he'; awal 'she'; awar 'they'...
   b. Pronominal anaphors: taan 'self'
   c. Nonpronominal anaphors: swa- 'self'

Pronouns and pronominal anaphors can take the entire range of cases. The nonpronominal anaphor swa-, on the other hand, can take only the accusative (swayam) and the genitive (swantam).

The relevant properties that distinguish these elements from one another, which is what this section is concerned with, may be summarised as follows:

(5)a. Backwards anaphora: Pronouns do not allow their antecedents to follow them. Pronominal and nonpronominal anaphors do not have this restriction.
b. Obligatoriness of antecedents: Antecedents in the same sentence are obligatory for pronominal and nonpronominal anaphors. Pronouns do not have this restriction.

c. Disjoint reference: Pronouns and pronominal anaphors cannot have their antecedents in the same minimal NP, S that contains them. Nonpronominal anaphors do not have this condition.

d. The c-command condition: The antecedents of pronominal and nonpronominal anaphors must c-command them. This does not apply to pronouns.

e. Subjecthood of antecedents: The antecedents of pronominal and nonpronominal anaphors must be subjects.

f. Subjecthood of anaphors: Both pronominal and nonpronominal anaphors allow long distance anaphora, i.e., they can find antecedents in higher up clauses. However, swa- is allowed to have long distance anaphora only when it is contained in the subject.

In the sections that follow, I shall demonstrate each of the properties listed in (5).
1.2. The Noncoreference Rule

One of the conditions governing the relation between pronouns and their antecedents in Malayalam is stated as follows:

(6) Pronominal Noncoreference (Malayalam)

Pronouns cannot precede their antecedents.  

This property sharply distinguishes pronouns from pronominal and nonpronominal anaphors. Whatever be the c-command relation between pronouns and antecedents, all and only those versions in which the pronoun follows the antecedent are grammatical, as shown by the following examples:

(7)a. moohan [awante bhaaryaye] nulli  
Mohan-n his wife-a pinched  
(Mohan pinched his wife.)

b. * awan [moohante bhaaryaye] nulli  

(8)a. [moohante bhaaryaye] awan nulli  
b. * [awante bhaaryaye] moohan nulli  

(9)a. [moohante bhaaryya] awane nulli  
(Mohan's wife pinched him.)

b. * [awante bhaaryya] moohane nulli

3. The intuitive meaning of the term 'antecedent' is obvious. In "Oscar thinks that he is brilliant", Oscar is the antecedent of he. For a formal characterisation, see Mohanan (1981).

4. Here, as in what follows, underlined NP's indicate the coreferent reading.
(10)a. moohanē awante bhaaryya ṇullī
   b. * awane moohante bhaaryya ṇullī

(11)a. [kutṭi aanaye ṇullī enna]₅ awan paraṇṇu
     child elephant pinched that he said
     (He said that the child pinched the elephant.)
   b. * [awan aanaye ṇullī enna]₅ kutṭi paraṇṇu

(12)a. kutṭi paraṇṇu ṇ [awan aanaye ṇullī enna]₅
     (The child said that he pinched the elephant.)
   b. * awan paraṇṇu ṇ [kutṭi aanaye ṇullī enna]₅

Note that pronouns can c-command their antecedents in Malayalam, as shown by (8a), (9a), and (11a). This property distinguishes Malayalam pronouns from English pronouns.

In contrast to the behaviour of pronouns, pronominal and nonpronominal anaphors can precede their antecedents:

(13)a. [tante / swantam bhaaryaye] moohan ṇullī
     self's
     (cf. 8b)
   b. [taan aanaye ṇullī enna] kutṭi paraṇṇu
     self
     (cf. 11b)

On the basis of these data, we conclude that pronouns, and not pronominal anaphors, obey the condition against following antecedents, as stated in (6).
1.3. **Obligatoriness of Antecedents**

I shall assume in this thesis that anaphors are universally characterised as those elements that require antecedents. Both pronouns and reflexives take antecedents, unlike names like John. The difference between them is that antecedents are optional for pronouns while they are obligatory for reflexives. A pronoun that does not have an antecedent in the sentence is a deictic pronoun, and a pronoun that does not, is a deictic one. Seen in this light, anaphors are a subclass of nominals which have no lexical reference, namely,

5. cf: An anaphor is "something lexically specified as needing an antecedent". (Chomsky 1979:16)

6. Pronouns and anaphors are not the only nominals that take antecedents. Definite noun phrases such as the boy (as opposed to a boy) can also have antecedents in the discourse, and one may argue that they can have antecedents even within sentences, as in (i):

   (i) A boy and a girl came in, and the boy took off his shoes immediately.

   I do not quite know how the antecedentship of definite NP's fits in with the general theory of antecedents.

   It must also be pointed out that not all pronouns take antecedents, only definite pronouns do. Thus, indefinite pronouns like one, someone, anyone, etc. do not take antecedents.
those that must find their antecedents in the same sentence (and not in the discourse, like pronouns). We may lexically encode this property with the feature [+ anaphoric] and give the following definition:

(14) $\alpha$ is [+ anaphoric] iff it is lexically required to have an antecedent in the same sentence. (If not, it is [-anaphoric].)

We found in 1.2. that the noncoreference rule groups pronominal anaphors and nonpronominal anaphors together, distinguishing them from pronouns. The property of obligatory antecedentship expressed by (14) offers yet another criterion for making exactly the same grouping: pronominal

7. Compare this definition with the one given in, say, Chomsky (in press), which gives a less intuitive notion of 'anaphor'. For Chomsky, anaphors are those elements which do not have inherent reference, and pronouns are those which have the feature of number, gender, and person. This raises the issue why reflexives like himself are not considered to be pronominal, since they too, like he and she have the features of number, gender and person. Perhaps, pronouns are those which are NOT araphors and have the features of number, gender, and person. But then, nominals like man also have these features, and to exclude them from being pronominal, one has to say that pronouns are nonanaphors which have ONLY the features of number, gender, and person. This, in turn, leads to further questions about pronouns which have other features such as nearness (e.g. Malayalam awan 'that he' vs iwan 'this he'). These problems, no doubt, are not insurmountable, but none of these problems arise with regard to the characterisation of anaphors given in (14).

Observe that (14) would lead us to conclude that PRO is [-anaphoric], as it is not necessary that PRO should have an antecedent in the same sentence. I see no serious problems arising out of this conclusion, except those raised by some of the assumptions that are theory internal to GB.
anaphors and nonpronominal anaphors, and not pronouns, are required to take antecedents:

(15)a. awan aanaye nulli
    he-n elephant-a pinched
    (He pinched the elephant.)

  b. *taan aanaye nulli
     self-n

(16)a. [awante aniyatti] uranji
    his sister-n slept
    (His sister has gone to sleep.)

  b. *[tante aniyatti] uranji
     self's

  c. *[swantam aniyatti] uranji
     self's

If (15b), (16b,c) are embedded in a matrix that contains an antecedent, the result is grammatical, thereby showing that taan and swa- are required to have an antecedent in the same sentence:

(17)a. [taan aanaye nulli enn] kutti parañnu
     that child said

  b. [tante/swantam aniyatti uranji enn] awan toonni
     that he-d felt

     (He felt that self's sister had gone to sleep.)

Given the definition of anaphors in (14), what we must do in order to account for this behaviour of taan and swa- is to stipulate that they have the feature [anaphoric].
1.4. Disjoint Reference

While noncoreference and obligatoriness of antecedents separate pronouns from pronominal and nonpronominal anaphors, the phenomenon of disjoint reference separates non-pronominal anaphors from pronouns and pronominal anaphors. The principle is the one that allows (18b, c) in English, while blocking (18a).

(18) a. *Oscar admires him.
   b. Oscar admires his wife.
   c. Oscar said Mary admired him.

The same phenomenon is found in Malayalam as well:

(19) a. *Mohan awane aافيةghik'k'unnu.
   Mohan-n him worships
   (Mohan worships him.)
   b. Mohan [awante bhaařyaye] aافيةghik'k'unnu
      his wife-a
   (Mohan worships his wife.)
   c. Mohan paraňnu [mǝtǝi awane aافيةghik'k'unnu enne]
      said Mary-n him that
   (Mohan said that Mary worshiped him.)

As in English, pronouns cannot have their antecedents in the same minimal NP or S that contains them. Now, we find the same behaviour in pronominal anaphors, but not in nonpronominal anaphors:

---

8. For the literature on Disjoint Reference and Noncoreference, see Reinhart (1976), Lasnik (1976), Chomsky (1980).
I shall assume that pronouns have the feature [+ pronominal], and that it is this feature that is responsible for disjoint reference. The principle of disjoint reference can then be stated as either (22a) or (22b):

(22)a. Pronominals are free in their minimal governing category.

b. Pronominals cannot have their antecedents within their minimal clause nucleus.

(22a) and (22b) will be respective formulations of disjoint reference in GB and lexical functional grammar, and they do not make the same empirical predictions. I shall not go into these issues here.

The classification of Malayalam pronouns, pronominal anaphors, and nonpronominal anaphors can now be given as follows:

(23)a. Pronouns : [-anaphoric, +pronominal]

b. Pronominal anaphors: [+anaphoric, +pronominal]
c. Nonpronominal anaphors: [+anaphoric, -pronominal]
d. Nouns : [-anaphoric, -pronominal]
It may be instructive to point out a contrast between English and Malayalam with respect to the phenomenon of disjoint reference in infinitival clauses. Thus, as is well known, (24a) and not (24b) is possible in English:

(24)a. John expects that he would win.
   b. * John expects him to win.

In Malayalam, on the other hand, the pronoun-antecedent relationship is possible in both finite and infinitival structures:

(25)a. moohan [awan buddhimaan aana epna] wicaaRiccu
   he-n intelligent is that thought
   (Mohan thought that he was intelligent.)
   b. moohan [awan buddhimaan aawaaan] aagrahiccu
   become-inf. desired
   (Mohan wanted him to become intelligent.)

Given the fact that moohan is not contained in the minimal S that contains awan, (22) and (23) together correctly predict the pronoun-antecedent relation in (25).

Some additional statement will have to be made about the contrast between (24a) and (24b) in English.

9. See the discussion of sentences like "John was surprised for him to be left out", and "It surprised John for him to be left out" in section 2.4.
1.5. The C-command Condition

We shall see in this section that *taan* and *swa-* in Malayalam, but not the pronouns, obey the following universal principle about the antecedents of anaphors:

(26) Anaphors must be c-commanded by their antecedents.

I have already shown that pronouns do not obey (26). In fact, as examples (8a), (9a), and (11a) demonstrate, the pronoun can asymmetrically c-command its antecedent in Malayalam. What I must now show is that *taan* and *swa-* must obey (26).

(27)a. *tante aniyattiye kutti nulli*
   self's sister-a child pinched
   (The child pinched self's sister.)

b.* kuttiyute aniyattiye taan nulli*
   child's self-n

(28)a. *[taan aanaye nulli enn]a kutti*
   self-n elephant-a pinched that child
   Faajaawinoota paraanh
   king-a said
   (The child told the king that self pinched the elephant.)

b.* *[kutti aanaye nulli enn]a taan Faajaawinoota*
   child-n self-n
   paraanh


It must be mentioned that there are certain possessive constructions in which the c-command restriction seems to be relaxed. Compare the following examples:

(31)a. moohante wiśwaasam taan dhiifanaaŋe enŋe aŋe
   Mohan's belief self brave is that is
   (Mohan's belief is that self is brave.)

b.* moohante makan taan dhiifanaaŋe enŋe paraŋnu
   Mohan's son self brave is that said
   (Mohan's son said that self is brave.)

The fact that (31b) is ungrammatical suggests that the relaxation of the c-command restriction in (31a) is a special property of nouns like wiśwaasam 'belief', abhipraayam 'opinion', tooppal 'feeling', etc., all of which are nouns that assert propositions.
Now, at some level of representation, we may say that "x's belief that S", "x's belief is that S", and "x believes that S" have parallel structures, namely, the one in which x is the subject of believe, and S its complement. The technical details that map "x's belief is that S" onto believe (x,S) are not quite clear to me, but if, at the relevant level of representation, "Mohan's belief is that..." is represented as having the same structure as "Mohan believes that...", we have an explanation for the contrast between (31a) and (31b).

Note that it is only when the head (belief) is predicative that its possessive (Mohan's) is allowed to be the antecedent of tāan.

Compare (31a) with (32):

(32) * moohante wiśwaasam tanne Fakṣiccu
Mohan's belief/faith self saved
(Mohan's faith saved self.)

One may, in fact, suggest that Mohan's belief but not Mohan's son is a clause nucleus (cf. Bresnan (in press)) or a lexical S (cf. the notion of lexical VP in Chomsky (in press)), even though configurationally, both are NP's. A clause nucleus may be defined, following Bresnan, as consisting of a predicate argument structure. Alternately, one may define a lexical S as consisting of a lexical VP
and the NP that is associated with it. Thus, the contrast between (31a) on the one hand, and (31b) and (32) on the other, may be represented at the "relational" or "lexical" level as follows:

(33)a. (= 31a)

\[\begin{split}
\text{clause} \\
\downarrow \\
\text{Mohan believe clause} \\
\downarrow \\
\text{self is brave}
\end{split}\]

b. (= 31b)

\[\begin{split}
\text{clause} \\
\downarrow \\
\text{Mohan's son say clause} \\
\downarrow \\
\text{self is brave}
\end{split}\]

c. (= 32)

\[\begin{split}
\text{clause} \\
\downarrow \\
\text{clause self save} \\
\downarrow \\
\text{Mohan believe x}
\end{split}\]

If the suggestion given above is correct, then the

10. See the discussion of lexical VP and lexical S in section 3. f-command and l-command may be thought of as notions parallel to c-command, except that they are defined at the levels of f(unctional) structure (in lexicalist functional grammar) and l(exical) structure (in GB) respectively.
condition of c-command in (26), which is a property of the categorial or configurational level, should be replaced by a condition of 'f-command' or 'l-command', which would be a condition at the level of f-structure (cf. Kaplan and Bresnan (in press)) or of lexical VP and lexical S. I shall not pursue these issues any further in this thesis.

1.6. Subjecthood of Antecedents

The aim of this section is to show that the following principle holds in Malayalam:

(34) Antecedents of anaphors must be subjects.

The principle is illustrated by the following examples:

(35)a. kutti tante/swantam anyattiyu nulli
    child-n self's sister-a pinched
    (The child pinched self's sister.)

b.* kuttiye tante/swantam anyattiyu nulli
    child-a self's sister-n pinched

In (35a), kutti is the subject, and in (35b), the object. Hence, (34) allows kutti in (35a) but not in (35b) to be the antecedent of tante or swantam.

The same point is illustrated by (36a, b):
(36)a. [tan aanaye nulli enp] faajaawε
self elephant-a pinched that king-n
mantriyooota paramnu
minister-d said
(The king told the minister that self (king/
*minister) pinched the elephant.)

b. [tan aanaye nulli enp] Faajaawinoota
king-d
mantri paraanu
minister-n said
(The minister told the king that self (minister/
*king) pinched the elephant.)

Is it possible to characterise the phenomenon illustrated in these sentences in terms of a condition on the case of the antecedent of the NP? The answer is no, if by 'case', what we mean is overt case. Thus, even though the antecedent NP in (35a) and (36) happens to be in the nominative case, this is not a requirement, as dative subjects can be antecedents of anaphors. Consider, for example, what happens when the modal -anam 'wants to' induces the dative case on the subject:

(37)a. joonī meeRiye tante/swantam wiiitil weccu
John-n Mary-a self's house-l at
umma weccu.
kiss placed
(John kissed Mary at self's (John's/*Mary's)
house.)
(37)b. jōniikkə meeṛiye tante/swantam wiittil wecca
John-d Mary-a self's house-l at
umma wekkanaṃ
kiss place-wants
(John wants to kiss Mary at self's (John's/
*Mary's house.))

Even though dative subjects can be antecedents of
anaphors, dative indirect objects cannot:

(38) jōni meeṛiikkə tante/swantam wiittil wecca
John-n Mary-d self's house-l at
oru pusṭakam koṭuṭtu
one book gave
(John gave Mary a book at self's (John's/*Mary's)
house.)

Therefore, we conclude that the condition governing
the antecedents of anaphors cannot be stated in terms of
a condition on the overt case of the antecedents. The next
question is: is it possible to state the condition in terms
of semantic roles such as agent and theme? Once again, the
answer is no. The crucial examples are to be found in the
interaction between anaphor binding and causativisation
and passivisation. I shall assume that passive is a rule
that promotes an object to subjecthood.\footnote{Consider the
effect of the shift of subjecthood on anaphors.}

\footnote{For the details of passivisation and causativisation
in Malayalam, see Mohanan (in press).}
(39)a. jooni meeRiye tante/swantam wiiṭṭil wecca ṇuḷḷi
John Mary-a self's house at pinched
(John pinched Mary at self's (John's/*Mary's) house.)

b. jooniyaal meeRi tante/swantam wiiṭṭil wecca
John-instr Mary-n self house-l at
 пуḷḷappettu
pinch-pass.-past
(Mary was pinched by John at Mary's/*John's house.)

Since the semantic roles of jooni and meeRi are presumably the same in (39a) and (39b), a condition on the semantic roles of antecedents will not be able to account for the contrast. The same point holds for causativisation, in which a new subject is introduced, and the original subject is either changed to an object or into an instrumental adjunct:

(40)a. kuṭṭi tante/swantam wiiṭṭil wecca uranṇi
child-n self's house-l at slept
(The child slept at self's house.)

b. amma kuṭṭiyē tante/swantam wiiṭṭil wecca urakki
mother child-a self's house at sleep-caused
(The mother made the child sleep at self's (mother's/*child's) house.)
(41a) auseppa jooniyekkonțe meeřiye tante/swantam ouseph-n John-a with Mary-a self's wiițil weccə umma weppiccu house-1 at kiss place-cause-past
(Ouseph made John kiss Mary at self's)
(Ouseph's/*John's/*Mary's) house.(cf.37a))

On the basis of these facts, we are justified in concluding that it is the subjecthood of antecedents, not their case or semantic role that governs the antecedent-anaphor relation.

1.7. Long Distance Anaphora

As the reader must have already noticed, anaphors in Malayalam can have antecedents which are not in the same clause (finite or nonfinite), in contrast to the situation in, say, English. Except in marginal cases like "They think that pictures of each other are on sale", anaphors in English do not cross clause boundaries. Thus, (42a) is ungrammatical, while the corresponding sentence in Malayalam, (42b), is perfectly grammatical:

(42)a. * John thought that himself was a fool.

b. taan wiįdhi aanə eppə joonį wicareccu self fool-n is that John thought

The antecedent can be removed from the anaphor by any number of clauses, as demonstrated by the following:
'Queen', 'king', and 'mother' are subjects, and therefore, the pronominal anaphor taan can be coreferential with any of them, but not with the direct object 'minister' or the indirect object 'father'.

With respect to the possibility of long distance anaphora, pronominal anaphors differ crucially from non-pronominal anaphors. The former can have long distance anaphora whatever be the grammatical function of the anaphor; the latter, on the other hand, is allowed to have long distance anaphora only when the anaphor is contained in the subject. If it is contained by a nonsubject, the nonpronominal anaphor must have its immediate subject (i.e., the subject of the same clause) as its antecedent.
(44)a. 

[[tante/swa_ntam suhratā anayе nulli enṇa] 
self's friend-n elephant pinched that 
amma acchanoota parañnu enṇa] raajaawing 
mother father-d said that king-d 
toonni enṇa] mantriye raani wiราวasippiccu 
felt that minister queen believe-caused
(The queen convinced the minister that the 
king felt that the mother told the father 
that self's (queen's/*minister's/king's/ 
mother's/*father's) friend pinched the ele-
phant.)

b. 

[[aana tante suhratīne nulli enṇa] amma 
elephant self's friend-a pinched that mother 
acchanoott a parañnu enṇa] raajaawing toonni 
father said that king felt 
enṇa] raani mantriye wiราวasippiccu 
that queen minister believe-caused
(The queen convinced the minister that the 
king felt that the mother told the father 
that the elephant pinched self's (queen's/ 
*minister's/ king's/ mother's/*father's/ 
elephant's) friend.)
c. \[\text{tuana swantam suhratine nulli enne}\]
elephant self's friend pinched that
amma acchanoota paranuu enne faajaawin\textcircled{e}
mother father said that king
toonni enne raani maantriye wiswasippiccu
felt that queen minister believe-caused
(The queen convinced the minister that the
king felt that the mother told the father
that the elephant pinched self's (*queen's/
*minister's/*king's/*father's/*mother's/
elephant's) friend.)

Note that in (44\textsuperscript{b}), the NP \textit{swantam suhratine} is the
object of the clause. Hence, \textit{swa}- is forced to find its
antecedent in the subject of its own clause. In (44\textsuperscript{a}), on
the other hand, since \textit{swantam suhratna} is the subject of
the clause, there is no such locality restriction on antecedentship. (44\textsuperscript{b}) shows that there is no restriction on
long distance anaphora for \textit{taan}.

The immediate technical problem that arises is the
exact formulation of the condition that allows long dis­tance anaphora for \textit{swa}-. In (44\textsuperscript{a}), where it shows long
distance anaphora, it is immediately dominated by the sub­ject. Immediate domination, however, cannot be the right
condition, as illustrated by (45):
(45) a. 

\[
\text{swantam suhr\-tinte bha\-ryayute amma}
\]

self's friend's wife's mother

aanaye nulli enne raajaawin\- toonni enne raani mantriye wi\-swasippiccu

(The queen convinced the minister that the king felt that self's (queen's/king's) friend's wife's mother pinched the elephant.)

b.

In (45), swa- is several nodes removed from the subject NP, and yet it shows long distance binding. Hence, immediate domination cannot be the condition permitting long distance binding. On the other hand, the condition that swa- be dominated by the subject is inadequate, as shown by (46):
(46)a. [swāntam suhrāttine nulliya] kuṭṭi] aanaye self's friend pinched-REL child elephant aticcu enne faajaawine tooṇni enne raani beat that king felt that queen manṭriye wiṣwasippiccu minister believe-caused

(The queen convinced the minister that the king felt that the child who pinched self's (child's/*queen's/*minister's/*king's) friend beat the elephant.)

What the contrast between (45) and (46) illustrates is that long distance anaphora is possible only if swa- is dominated by the subject with no intervening nodes which are not NP's. In (46), even though the subject dominates swa-, there is an intervening S node which makes swa- incapable of long distance anaphora.
The contrast between (45) and (46) can be accounted for by using the notion of 'NP-containment' defined thus:

(47) \( \alpha \) NP-contains \( \beta \) iff (i) \( \alpha \) is \( \beta \) or (ii) \( \alpha \) dominates \( \beta \) with no intervening non-NP nodes. \(^{12}\)

12. The notion of NP-containment, I think, is useful in other areas of grammar as well. Thus, in order to account for contrasts such as in (i) and (ii), the notion of 'weak c-command' (derived from Higginbotham (1980)) is proposed in Mohanan (1981):

(i)

a. Everyone is upset by his failures.
   b. (?) Everyone's failures upset him.
   c. (?) Everyone's father's failures upset him.
   d. * Failures of everyone upset him.

(ii)

a. Who is upset by his failures?
   b. (?) Whose failures upset him?
   c. (?) Whose father's failures upset him?
   d. * Failures of whom upset his mother?

The principles that account for the contrast are given below:

(ii) Strong Cross Over: Quantified antecedents must (weakly) c-command pronouns.

(iv) \( \alpha \) weakly c-commands \( \beta \) iff (a) \( \alpha \) c-commands \( \beta \)
     or (b) the node that directly dominates \( \alpha \) weakly c-commands \( \beta \).

Given the notion of NP-containment, (iv) can be reformulated as follows:

(v) \( \alpha \) weakly c-commands \( \beta \) iff the branching node that NP-contains \( \alpha \) dominates \( \beta \) and \( \alpha \) does not dominate \( \beta \).

The notion of NP-containment is also useful to account for the following contrast, pointed out in Mohanan (1981):

(vi)

a. ? His mother hates John.
   b. The professor on his committee hates John.

The relevant parametricised principle that accounts for the contrast is as follows:

(vii) Pronouns cannot (weakly) c-command their antecedents.
In (45), the subject NP-contains swa-, in (46), it does not. We can now formulate the principle governing long distance anaphora of swa- as follows:

(48) If swa- is not NP-contained by the subject, it must find its antecedent in its minimal clause nucleus.

1.8. General Properties of Anaphora in Malayalam

The special features of anaphora in Malayalam that deserve some theoretical attention can now be summarised as follows: First, anaphora in Malayalam does not exhibit the generalisation that "anaphors are bound where pronouns are free". That is to say, unlike what has been claimed for English, the domain in which the principle of disjoint reference operates is not identical to the domain in which anaphors are required to find their antecedents. The domain in which disjoint reference applies in Malayalam is the minimal S, NP containing the pronominal; the domain in which the anaphor is required to find its antecedent is the entire sentence. As a result, one finds that a pronoun and an anaphor in the same structural position can have the same antecedent:

(49)a. kuṭṭi ammayooṭa [taan/awan aanye nulli enṇe] child mother self he elephant pinched that paraṇṇu said

(The child told the mother that self/he pinched the elephant.)

b. kaḷḷana [swaṅtam/tante/awante naaya wiḍḍhi aṅaṇa thief-d self's his dog-n fool-n is enṇe] manassilaayi that understood

(The thief realised that self's/his dog is a fool.)

In both (49a) and (49b), the pronoun can have the subject of the matrix as its antecedent, which is what taan and swa- are required to do in these cases.

The second property illustrated by anaphora in Malayalam is that of long distance anaphora. Both taan and swa-, as shown in 1.7., can cross any number of finite clause boundaries to find an antecedent whether or not there are intervening subjects qualified to be antecedents themselves.

The third property, demonstrated in 1.6., is that the antecedents of anaphors in Malayalam are required to be subjects. We found that the notion 'subject' cannot be identified with unique configurational properties
such as NP of S, case features such as the nominative, or semantic roles such as agenthood. This raises an interesting question regarding the identification of antecedents in Malayalam anaphora.

The fourth property, found in the anaphor swa-, is that it shows long distance anaphora only when it is NP-contained in the subject. When NP-contained in the object, swa- must have its immediate subject as its antecedent, i.e., must find its antecedent in its minimal clause nucleus, as in the case of English reflexives and reciprocals.
2. ANAPHORA IN KANNADA, CHINESE, YORUBA, AND ICELANDIC

In this section, I shall show that the four properties of anaphora in Malayalam are not accidental language specific quirks, but are found to occur again and again in various other languages like Kannada, Chinese, Yoruba, and Icelandic. Therefore, an adequate universal theory of anaphora must incorporate the right properties which would derive principles of this kind in individual grammars.

2.1. Anaphora in Kannada

The anaphor *taanu* in Kannada, a sister Dravidian language, shows very much the same properties as the Malayalam *taan*, as shown by (50):

\[
S_S [S [\text{taanu aanayennu killiḍalenḍu}_S \text{ amma self elephant pinched-that mother}
\text{ magalige heeliḍalenḍu}_S \text{ raṇi ciṇṭisiḍalenḍu}_S \text{ daughter told that queen thought that}
\text{ aa heŋgasu nanna heṇḍaṭiyennu nambisiḍalu that woman my wife believe-caused}
\text{(That woman convinced my wife that the queen thought that the mother told the daughter that self (woman/*wife/queen/mother/*daughter) pinched the elephant.)}
\]

(50) shows that *taanu* must have a subject as its ante-

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14. I am grateful to Sreevas Mandalam for the data.
cedent, and that it allows long distance anaphora, i.e., it can find its antecedent across finite clause boundaries. The domain of disjoint reference in Kannada, as in Malayalam, is the minimal S, NP, as shown by (51):

(51)a. moohan [awanu malagaleṇḍu] praarthisiḍanu
   Mohan he to sleep prayed
   (Mohan prayed for him to sleep.)

b. * amma [raṇiyige awalu kIllalenḍu]
   mother queen she to pinch
   praarthisiḍalū
   prayed
   (Mother prayed for her to pinch the queen.)

c. amma [raṇiyige awalu kIllalenḍu] praarthisiḍalū
   mother queen she to pinch prayed
   (Mother prayed for her to pinch the queen.)

The following sentences demonstrate more clearly that in Kannada, as in Malayalam, it is not the case that anaphors are bound where pronouns are free:

(52) moohan {\begin{array}{l}
   \text{taanu} \\
   \text{self} \\
   \text{awanu} \\
   \text{he}
\end{array}
} buddhimwaṅṭa enḍu tiliḍukonoḍanu
   Mohan {\begin{array}{l}
   \text{intelligent} \\
   \text{that} \\
   \text{thought}
\end{array}
}
   (Mohan thought that \{\begin{array}{l}
   \text{self} \\
   \text{he}
\end{array}\text{was intelligent.})
2.2. **Anaphora in Chinese**

The anaphor *ziji* 'self' in Chinese behaves very much the same way as the Malayalam *swa*-, with all the four properties that we listed in 1.8. Consider, for example, the following sentences which show that *ziji* and the pronoun *ta* can have the same antecedent in identical structural positions:

(53) Sally xiangxin $s[\begin{cases} ziji \\ self \\ ta \\ she \end{cases}]$ shasile Mary$_S$. \\
(Sally believes that $\begin{cases} self \\ she \end{cases}$ killed Mary.)

*ziji* allows only subjects as antecedents, and allows subjects across finite clause boundaries to be antecedents:

(54)a. John gaosu Bill ziji toule qian \\
(John informed Bill that self (John/*Bill) stole money.)

b. Sally xiangxin $s[\begin{cases} John gaosu Bill \\ ziji \\ believes \\ told \\ shasile \\ Mary$$_S$$]$_S$. \\
(Sally believes that John told Bill that self (John/*Bill/*Mary/Sally) killed Mary.)

15. I am grateful to Jim Huang for the data.
Like Malayalam swa-., ziji allows long distance anaphora only when NP-contained by the subject:

(55) Sally xiangxin [John gaosu Bill [Mary shasile ziji]]
(Sally believed that John told Bill that Mary killed self (Mary/*Bill/*John/*Sally).)(cf. 54b)

a. (56)/John xiangxin [Bill gaosu Sam [ziji de taitai believes told self 's wife shasile Jack]]
   killed
   (John believes that Bill told Sam that self's (Bill's/*Sam's/John's) wife killed Jack.)

b. John xiangxin [Bill gaosu Sam [Jack believes told shasile ziji de taitai]]
   killed self 's wife
   (John believes that Bill told Sam that Jack (killed self's (Jack's/*Bill's/*Sam's/*John's)
   wife.)

2.3. Anaphora in Yoruba

Yoruba has an anaphor ṣun and a pronoun ọ which show interesting properties. The anaphor ṣun must take an antecedent in the sentence, and the antecedent, like the anaph-

16. I am grateful to Douglas Pulleyblank for collecting the data for me.
phors in Malayalam, Kannada, and Chinese, may be any subject higher up in the sentence; it cannot take an object antecedent. The pronoun ő, on the other hand, can take any antecedent except a subject, and as in the case of pronouns in general, it need not take an antecedent:

(57)a. Tolú sofún Segun pé őun sanra told  that self is fat
   (Tolu told Segun that self (Tolu/*Segun/*someone else) is fat.)

b. Tolú sofún Segun pé ő sanra pron
   (Tolu told Segun that *Tolu/Segun/someone else is fat.)

(58)a. Ade rò pé Tolú sofún Segun pé őun sanra thought that told  that self
   (Ade thought that Tolu told Segun that self
   (Ade/Tolu/*Segun/*someone else) is fat.)

b. Ade rò pé Tolú sofún Segun pé ő sanra
   (Ade thought that Tolu told Segun that
   *Ade/*Tolu/Segun/someone else is fat.)

The generalisation that underlies these sentences is obvious: an anaphor must have a subject antecedent, and a pronoun cannot have a subject antecedent:
The behaviour of / follows from the principles we formulated in section 1. In order to account for the behaviour of òun, we shall set up the following principle for Yoruba:

(60) Yoruba

Pronouns cannot have subject antecedents.

2.4. Anaphora in Icelandic

Pronouns in Icelandic exhibit disjoint reference as shown by sentences like (61):

(61) * Jón hatar hann

(John hates him.)

In addition to the general disjoint reference, Icelandic pronouns also show a subject obviation similar to what we found in Yoruba. The difference between the two languages is that in Yoruba, obviation applies across

17. The entire discussion of Icelandic is based on the examples provided by Thráinsson (1976). His solutions, however, are quite different from mine.
tensed clauses, while in Icelandic, it is restricted within tensed clauses. Adopting Chomsky's original insight of the tensed S condition, one may formulate the obviation principle in Icelandic as follows:

(62) Icelandic

Pronouns cannot have subject antecedents in the minimal tensed clauses that contain them.

Examples that illustrate (62) are given below:

(63)a. Jón syndi Haraldi fót á hann

showed clothes for him

(John showed clothes for him (*John/Harold).)

b. Jón rétti Haraldi hans fót

handed his clothes

(John handed Harold his (*John's/Harold's) clothes.)

c. Jón telur Harald hafa rakað hann

believes to have shaved him

(John believes Harold to have shaved him (*John/*Harold).)

d. Jón telur að Haraldur hafi rakað hann

believes that has shaved him

(John believes that Harold has shaved him (*John/*Harold).)

In (63a) and (63b), the pronoun can have the object
Harold as its antecedent, but not the subject John. In (63c), both John and Harold are subjects in the minimal tensed clause that contains hann, and therefore, neither of them can function as its antecedent. In (63d), even though John is a subject, it does not lie within the minimal tensed clause that contains hann, and hence (62) does not apply to it.

Compare now the obviation principles of Yoruba and Icelandic:

(60) Yoruba
Pronouns cannot have subject antecedents.

(62) Icelandic
Pronouns cannot have subject antecedents in the minimal tensed clause that contains them.

We can collapse the two principles as follows:

(64) Pronouns cannot have subject antecedents (in the minimal tensed clause that contains them.)

At this point, I would like to draw the reader's attention to an interesting fact of obviation in English pronouns. It appears to be the case that English pronouns, when they occur as subjects of infinitival clauses, cannot have matrix subjects as antecedents, though they can have
matrix objects as antecedents. The contrast is illustrated by the following pair of sentences:

(65)a. * John was surprised for him to be left out.
    b. It surprised John for him to be left out.

The principle responsible for this contrast may be stated as follows:

(66) English

  Infinitival subject pronouns cannot have
  matrix subjects as antecedents.

It is tempting to collapse the obviation principles of Yoruba, Icelandic, and English into something like "(Subject) pronouns cannot have subject antecedents (in the minimal tensed clause that contains them)". Since, however, it is only the immediate matrix subject, and not the subjects higher up that the infinitival subject shows obviation with, this may not be the right move to make:

18. This fact was pointed out to me by Joan Bresnan. Even though most speakers reject (65a), I have also come across some who do not. Even in these cases, however, the contrast between the two sentences is quite clear: (65b) is perfectly grammatical, while coreference is possible in (65a) only with some effort.

19. Observe that (66), which seems to be independently necessary, would also account for the following contrast:

(i) * John believes him to be a fool.
(ii) John believes that he is a fool.
(67) Mary was annoyed to find John to be surprised for her to be left out.

It is clear that not all languages choose to include the obviation principle in their grammars. As demonstrated in 1.4., Malayalam grammar does not contain the principle. Since a number of genetically unrelated languages show some version or the other of (66), however, I shall assume that it is a part of UG. 20

We shall now turn to the behaviour of anaphors in Icelandic. It seems to be the case that anaphors in Icelandic can have both subjects and objects as an antecedent, and they can find their antecedents outside the domain of both disjoint reference and subject obviation, as shown by the following examples: 21

20. Finnish appears to be another language in which anaphors must have subject antecedents, and pronouns cannot. Consider the following data (provided by Lauri Carlson):

(i)a. Juha tappoi Villen puutarhassan
    John killed Bill in self's garden
    (John killed Bill in John's/*Bill's/*someone else's garden.)

b. Juha tappoi Villen hanch puutarhassan
    in pron's garden
    (John killed Bill in *John's/Bill's/someone else's garden.)

21. Thráinsson's examples do not clearly demonstrate that the antecedent of sig must f-command it, but then he does not give any examples to the contrary either. Therefore, I shall assume that the antecedent of sig should f-command it.
(68)a. Jón sýndi Haraldi fôt á sig
John showed Harold clothes for him

(John showed Harold clothes for him (John/Harold))

b. Jón rëtti Haraldi sin fôt
handed self's clothes

(John handed Harold self's (John's/Harold's)
clothes.)

c. Jón telur Harald hafa rakað sig
believes to have shaved self

(John believes Harold to have shaved self
(John/Harold).)

d. Jón telur að Haraldur hafi rakað sig
believes that has shaved self

(John believes that Harold has shaved self
(John/Harold).)

e. Jón segir að Haraldur telji að Billi
says that believes that
vilji að María raki sig
wants that Mary shaves self

(John says that Harold believes that Bill wants
that Mary shave self (Mary/Bill/Harold/John).)
3. ANAPHORA AND GB

In this section, I shall raise some of the problems posed for the binding principles in GB by the facts of anaphora in languages like Malayalam, Kannada, Chinese, Yoruba, and Icelandic. My concern here is mainly with the presentation of the problems themselves for fellow researchers in the field, not the construction of an alternative theory of anaphora.

The most serious problem that the current formulation of the binding conditions faces, as far as I can see, is related to the identification of the domains of disjoint reference and anaphor binding. The relevant conditions are stated as follows:

(69)a. Anaphors are bound in their governing category.
   b. Pronominals are free in their governing category.

Whatever be the definition of 'government' and 'governing category', it follows from the conjunct of (69a) and (69b) that governed anaphors must find their antecedents in the domain in which governed pronominals exhibit disjoint reference. That is, anaphors are bound where pronominals are free. As a universal principle, this is inconsistent with the facts of anaphora and disjoint reference in Malayalam, Kannada, Chinese, Yoruba, and Icelandic. In all these languages, anaphors can find...
their antecedents outside the domain of disjoint reference, thereby allowing both pronouns and anaphors to have the same antecedent in the same structural position.

What are the moves that can be made such that these languages do not constitute a counterexample to (69)? One may, for example, think of saying that what I have called anaphors in these languages are not in fact anaphors, and that therefore, condition (69a) is not applicable to them. This proposal\(^\text{22}\) has the effect of making a distinction between those reflexives which are anaphors and those which are not, thus raising the following problem: first, it forces us to treat the binding properties of reflexives in English-type languages and non-English-type languages in unrelated ways, which clearly must be avoided if possible. Second, one is forced to the difficult task of defining "anaphor" in such a way that it would include reflexives in English, but would exclude reflexives in Malayalam, Kannada, Chinese, Yoruba, and Icelandic. Chomsky (1979) characterises anaphors as elements that are "lexically specified as needing an antecedent"(p.16), and (impress) as "NP's that have no capacity for inherent reference"(Ch III, p.42). Under either of these characterisations, the reflexives in the languages that we looked at in Sections 1 and 2 qualify to be anaphors.

\(^{22}\) This solution was suggested to me by Noam Chomsky.
For the binding conditions to be meaningful, the theory should offer a universal characterisation of the class of reflexives to which the principles will apply. It should at least identify the properties which would make languages proper candidates for the binding conditions. As far as I know, no such proposal exists.

Even in languages like English, the prediction that anaphors are bound where pronominals are free is not without problems. Generally recognised problem cases in the literature are sentences like the following:

(70)a. They admire their children.
    b. They admire each other’s children.

If it is false that anaphors are bound where pronouns are free, then (69a) must be revised. Perhaps a possible way of approaching this task would be to make the following parametric option available:

(71) Anaphors are bound (in their governing category).

Languages like Malayalam, Chinese, Yoruba, and Icelandic leave out the more restrictive condition in the brackets, thereby choosing the more general condition "anaphors are bound", which is in fact part of the very definition of anaphors. Languages like English, on the other hand, choose the fuller version of the condition.

A second problem that faces the theory is the speci-
fication of what constitutes a legitimate antecedent in languages like Malayalam. Principle (71) allows any c-commanding NP to be the antecedent of an anaphor, but in the Malayalam type languages, only subjects are possible antecedents of anaphors. Let us say that this phenomenon can be derived by parametricising the condition one step further:

(72) Anaphors must be bound (to a subject) (in their governing category).

Malayalam, Kannada, Chinese, and Yoruba choose the more restrictive condition about subjecthood of antecedents, languages like English and Icelandic do not.

If the parametricisation of the binding condition as in (72) is necessary, the question that arises immediately is: what constitutes a subject? Recent work on nonconfigurational languages has made it amply obvious that the configurational definition of subject as "NP of S", and of object as "NP of VP" is not universally applicable.23 In order to characterise the notion 'subject' in nonconfigurational languages, Chomsky (in press) proposes the notion of 'lexical VP', which may be said to be

consisting of the verb and the arguments that it subcategorises for, on the assumption that verbs do not subcategorise for subjects. Thus, in "John gave Mary a book", the lexical VP consists of the unordered set book, give, and Mary. Languages may differ with respect to having or not having a syntactic VP, but all languages on this assumption have lexical VP's. Even though Malayalam does not have a syntactic VP, it has a lexical VP in the sense outlined above.

Chomsky suggests that d- and s-structure representations in nonconfigurational languages may be looked upon as pairs of configurational and lexical representations. Given that lexical VP's are paired with VP-less configurations in Malayalam, the s-structure of (73a) may be thought of as (73b):

(73a) kuṭṭi aanaye ṯullī
child-n elephant-a pinched

b.

```
S
/   \\)
NP   NP   V
/     \\)
kūṭtī aanaye ṭullī
nom    acc

configuration
structure
```

```
S
/   \\)
NP   NP   V
/     \\)

 lexical
structure
```
Instead of saying that it is only nonconfigurational languages that have paired s-structure representations, it would be better to generalise it to configurational languages as well, and say that s-structure is universally a pair of configurational and lexical structures. In configurational languages, the configurational structures happen to, but need not, reflect the lexical structure:

(74)

\[
S \rightarrow NP \quad VP \\
NP \rightarrow V \quad NP \\
VP \rightarrow \text{The boy pinched the elephant} \\
S \\
\]

From these assumptions, it follows that the universal definition of object is "NP of lexical VP", and that of subject, "NP of lexical S". If one accepts these assumptions, (72) may be restated as follows:
(75) Anaphors must be bound (to the NP of lexical S) 
(in their governing category). 24

24. There are several residual problems. If PRO is an anaphor, (75) would predict that in those languages that leave out the condition "in their governing category", PRO must have an antecedent in the sentence. This prediction, as far as I know, is incorrect. Therefore, it would be necessary to say that PRO is not an anaphor. (see also footnote 7)

Another problem would be the treatment of causatives in Malayalam. Recall that under causativisation, the intransitive subject becomes the transitive object, and is no longer an eligible antecedent of anaphors. (cf. 40 a, b). An identical situation is found with respect to participial adjunct clauses which are obligatorily controlled by matrix subjects. Given the formulation in (75), we are forced to say that the effect of causativisation is to convert an NP of S into an NP of VP at the lexical level. Such a move, however, corresponds to a rule of move that moves an NP into a VP in configurational languages, and would presumably be ruled out by the projection principle (cf. Chomsky (in press)).

One may go on to ask; how is the behaviour of anaphors like the Malayalam swa- and Chinese ziji, which exhibit long distance anaphora only when contained by the subject, taken care of? In what precise terms is the obviation in Yoruba, Icelandic, and English stated? Straightforward answers to these questions do not appear to be a trivial matter. I leave these knotty questions to future research.
If this is the right way of looking at anaphora, what it implies is that binding conditions apply to lexical structure, not configurational structure. The notion 'bound', which means "c-commanded by an antecedent", must therefore be redefined as "I-commanded by an antecedent", where 'I-command' at the level of lexical structure corresponds to c-command at the level of configurational structure. This revision is perfectly consistent with the analysis of examples like (31a) and (31b), which independently suggests that the relevant notion of command for anaphora binding is not to be found at the configurational structure. Thus, we are lead to conclude that the principles governing the relation between anaphors and their antecedents are stated, not at the level of configurational structure, but at a level that represents grammatical relations.
REFERENCES


3. _______ (in press) Lectures on Government and Binding


5. Fiengo, R. and J. Higginbothom (forthcoming) "Opacity in NP"


