GRAMMATICAL RELATIONS AND ANAPHORA
IN MALAYALAM

by

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ABSTRACT

This thesis argues that principles governing the rela-
tion 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 lar guage
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 discuss-
es the problems that these phenomena pose for the Govern-
ment 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
      ___/|\___
     /   |  \   \
     X̄   X̄  X̄ ... V
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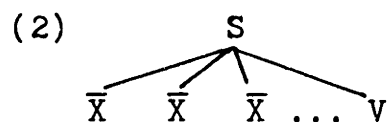
The structure of (3a) is given in (3b) as an example:

(3)a. kuṭṭi   innale   aanaye   nuḷḷi.

    child-n yesterday elephant-a pinched[2]

    (The child pinched the elephant yesterday.)

b.

```
                 S
          _____/|_____
         /      / \       \
       NP     Adv.  NP      V
        |      |     |      |
      kuṭṭi innale aanaye nuḷḷi
```

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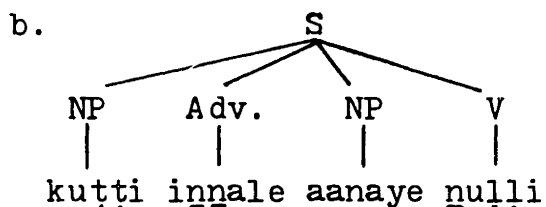
1. For detailed arguments to show that Malayalam does not have a VP node, see Mohanan (in press).

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 anapnor-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: <u>awan</u> 'he; <u>awaḷ</u> 'she'; <u>awar</u> 'they'...

  b. Pronominal anaphors: <u>ṭaan</u> 'self'

  c. Nonpronominal anaphors: <u>swa-</u> 'self'

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

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 antecents 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 bet-
ween pronouns and their antecedents in Malayalam is sta-
ted as follows:

(6) Pronominal Noncoreference (Malayalam)

Pronouns cannot precede their antecedents.[3]

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 ex-
amples:

(7)a. <u>moohan</u> [awante bhaaṟyaye] ṉuḻḻi[4]

     Mohan-n his   wife-a   pinched

     (Mohan pinched his wife.)

  b. * <u>awan</u> [moohante bhaaṟyaye] ṉuḻḻi

(8)a. [moohante bhaaṟyaye] awan ṉuḻḻi

  b. * [awante bhaaṟyaye] moohan ṉuḻḻi

(9)a. [moohante bhaaṟya] awane ṉuḻḻi

     (Mohan's wife pinched him.)

  b. * [awante bhaaṟya] moohane ṉuḻḻi

---

3. The intuitive meaning of the term 'antecedent' is ob-
vious. In "<u>Oscar</u> thinks that <u>he</u> is brilliant", <u>Oscar</u>
is the antecedent of <u>he</u>. For a formal characterisation,
see Mohanan (1981).

4. Here, as in what follows, underlined NP's indicate the
coreferent reading.

(10)a. moohane   awante bhaaṟya   ṇuḷḷi

   b. * awane   moohante   bhaaṟya   ṇuḷḷi

(11)a.ₛ[kuṭṭi aanaye   ṇuḷḷi   ennə]ₛ   awan paraññu

      child elephant pinched that   he   said

      (He said that the child pinched the elephant.)

   b. *ₛ[awan aanaye ṇuḷḷi ennə]ₛ   kuṭṭi paraññu

(12)a. kuṭṭi paraññu ₛ[awan aanaye ṇuḷḷi ennə]ₛ

      (The child said that he pinched the elephant.)

   b. * awan paraññu ₛ[kuṭṭi   aanaye ṇuḷḷi ennə]ₛ

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   bhaaṟyaye] moohan ṇuḷḷi

      self's   (cf. 8b)

   b. [taan aanaye ṇuḷḷi ennə]   kuṭṭi paraññu

      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.[5] 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.[6] Seen in this light, anaphors are a subclass of nominals which have no lexical reference, namely,

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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 $\begin{bmatrix} + \\ - \end{bmatrix}$ anaphoric$\rbrack$ and give the following definition:

(14) α is $[+\text{anaphoric}]$ iff it is lexically required to have an antecedent in the same sentence.[7] (If not, it is $[-\text{anaphoric}]$).

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

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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 pronominals are those which have the feature of number, gender, and person. This raises the issue why reflexives like <u>himself</u> are not considered to be pronominal, since they too, like <u>he</u> and <u>she</u> have the features of number, gender and person. Perhaps, pronominals are those which are NOT araphors and have the features of number, gender, and person. But then, nominals like <u>man</u> also have these features, and to exclude them from being pronominal, one has to say that pronominals 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 <u>awan</u> 'that he' vs <u>iwan</u> '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 $[-\text{anaphoric}]$, 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   ṇuḷḷi

he-n elephant-a pinched

(He pinched the elephant.)

b. *ṭaan aanaye ṇuḷḷi

self-n

(16)a. [awante aniyaṭṭi] uraṇṇi

his   sistcr-n   slept

(His sister has gone to sleep.)

b. * [ṭante   aniyaṭṭi] uraṇṇi

self's

c. * [swantam aniyaṭṭi] uraṇṇi

self's

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

(17)a. [ṭaan aanaye ṇuḷḷi enna] kuṭṭi parañ̃u

that   child said

b. [tante/swantam aniyaṭṭi uraṇṇi enna] awana 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 ṭaan 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.[8] The principle is the one that allows (18b, c) in English, while blocking (18a).

(18)a. * <u>Oscar</u> admires him.

b. <u>Oscar</u> admires <u>his</u> wife.

c. <u>Oscar</u> said Mary admired <u>him</u>.

The same phenomenon is found in Malayalam as well:

(19)a. * <u>moohan</u> <u>awane</u> aaɾaaḏhik'k'uṇṇu.

      Mohan-n him   worships

    (Mohan worships him.)

b. <u>moohan</u> [<u>awante</u> bhaaɾyaye] aaɾaaḏhik'k'uṇṇu

        his   wife-a

    (Mohan worships his wife.)

c. <u>moohan</u> paraññu [maɾi <u>awane</u> aaɾaaḏhik'k'uṇṇu <u>enna</u>]

        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:

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8. For the literature on Disjoint Reference and Noncoreference, see Reinhart (1976), Lasnik (1976), Chomsky (1980).

(20)a. * <u>moohan</u> <u>tanne</u> aaraadhik'k'unnu

    b. <u>moohan</u> [<u>tante</u> bhaaryaye] aaraadhik'k'unnu

    c. <u>moohan</u> parannu [meeri <u>tanne</u> aaraadhik'k'unnu enna]

(21)   <u>moohan</u> <u>swayam</u> aaraadhik'k'unnu

         self

     (Mohan worships himself.)

I shall assume that pronouns have the feature
[+ pronominal] , and that it is this feature that is res-
ponsible for disjoint reference. The principle of disjoint
reference can then be stated as either (22a) or (22b):

    (22)a. Pronomals 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. <u>John</u> expects that <u>he</u> would win.

b. * <u>John</u> expects <u>him</u> to win.

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

(25)a. <u>moohan</u> [<u>awan</u> buḍḍhimaan aaṇa eṇṇa] wicaariccu

           he-n intelligent is that thought

(Mohan thought that he was intelligent.)

b. <u>moohan</u> [<u>awan</u> buḍḍhimaan aawaan] aagr̄ahiccu

                          become-inf. desired

(Mohan wanted him to become intelligent.)

Given the fact that <u>moohan</u> is not contained in the minimal S that contains <u>awan</u>, (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.

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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   enna] kutti
         self-n elephant-a pinched that   child

    raajaawinoota parannu
    king- d   said

    (The child told the king that self pinched
                       the elephant.)

  b.*   [kutti aanaye nulli enna] taan raajaawinoota
       child-n   self-n

    parannu

(29) [[ţante kuţţi] aanaye ṇuḷḷi eṇṇə] ,amma
self's child elephant-a pinched that mother

[[moohan ummawecca] sţriiyooţə] paṟaññu
Mohan kissed- rel.part. woman-d said

(Mother told the woman whom Mohan kissed that

mother's/ *Mohan's/ *woman's child pinched

the elephant.)

(30) [[swanţam kuţţi] aanaye ṇuḷḷi eṇṇə] amma
self's

[[moohan ummawecca] sţriiyooţə] paṟaññu.

(Reading as in (29))

It must be mentioned that there are certain possess-

ive constructions in which the c-command restriction

seems to be relaxed. Compare the following examples:

(31)a. moohante wiŝwaasam ţaan dhiiṟanaaṇə eṇṇə aaṇə
Mohan's belief self brave is that is

(Mohan's belief is that self is brave.)

b.* moohante makan ţaan dhiiṟanaaṇə eṇṇə paṟaññu
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 wiŝwaasam 'belief',

abhipraayam 'opinion', ţoonṇal '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 expla-
nation for the contrast between (31a) and (31b).

Note that it is only when the head (belief) is pre-
dicative that its possessive (Mohan's) is allowed to be
the antecedent of ṭaan.

Compare (31a) with (32):

(32) *   moohante wiŝwaasam   ṭanne   ṟakṣiccu

          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.[10] Thus, the con-
trast 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)

```
                    clause
                   /      \
                  /        \
        Mohan believe clause
              ↑          /    \
              |         self is brave
              |_____|
```

b.   (= 31b)

```
                    clause
                   /      \
                  /        \
        Mohan's son say clause
              ↑           /    \
              |          self is brave
              |_____×____|
```
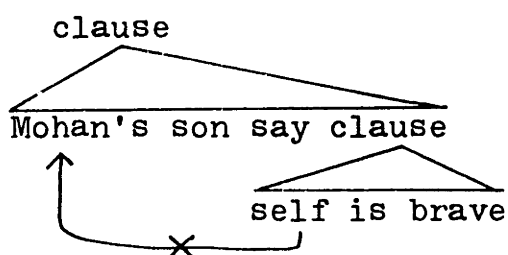
c.   (= 32)

```
                  clause
                 /      \
                /        \
          clause self save
          /    \
    Mohan believe x  )
         ↖_____×
```
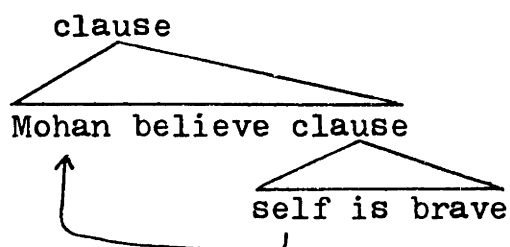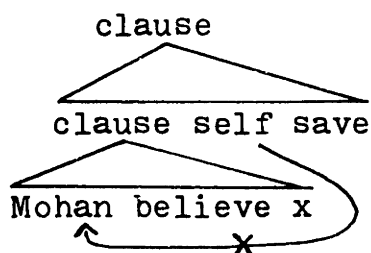
If the suggestion given above is correct, then the

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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) struc-
    ture (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 replac-
ed 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 follow-
ing principle holds in Malayalam:

(34) Antecedents of anaphors must be subjects.

The principle is illustrated by the following exam-
ples:

(35)a. kutti   tante/swantam aniyattiye nulli

      child-n   self's   sister-a   pinched

    (The child pinched self's sister.)

b.* kuttiye   tante/swantam aniyatti 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. [ṭaan aanaye   nuḷḷi   ennə] ṛaajaawə
        self elephant-a pinched that king-n

mantṛiyooṭə parañ̃u
minister-d said

(The king told the minister that self (king/
*minister) pinched the elephant.)

b. [ṭaan aanaye nuḷḷi ennə] ṛaajaawinooṭə
                                king-d

mantṛi   parañ̃u
minister-n said

(The minister told the king that self (minister/
*king) pinched the elephant.)

Is it possible to characterise the phenomenon ill-
ustrated 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 sub-
jects can be antecedents of anaphors. Consider, for exam-
ple, what happens when the modal -anam 'wants to' induces
the dative case on the subject:

(37)a. jooṇi meeṛiye ṭante/swanṭam wiiṭṭil weccə
       John-n Mary-a   self's   house-1 at

umma weccu.
kiss placed

(John kissed Mary at self's (John's/*Mary's)

house.)

(37)b.　joonikkə meeřiye tante/swantam wiittil weccə

　　　　John-d　　Mary-a　　self's　　　　house-l at

umma wekkaṇam

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)　jooni　meeřikkə tante/swantam wiittil weccə

　　　John-n Mary-d　　self's　　　　house-l at

ořu pustakam kotuttu

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.[11] Consider the effect of the shift of subjecthood on anaphors:

---

11. For the details of passivisation and causativisation in Malayalam, see Mohanan (in press).

(39)a. jooni meeřiye 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 meeři tante/swantam wiiṭṭil wecca
     John-instr Mary-n   self   house-1 at

    ṇuḷḷappeṭṭu
    pinch-pass.-past

    (Mary was pinched by John at Mary's/*John's

                              house.)

Since the semantic roles of jooni and meeři are pre-
sumably 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 instru-
mental adjunct:

  (40)a. kuṭṭi tante/swantam wiiṭṭil wecca uraṇṇi
      child-n self's   house-1 at   slept

    (The child slept at self's house.)

  b. amma kuṭṭiye 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.)

(41)a.   auseeppə   jooṇiyekkoṇṭə meeṛiye ṯante/swaṉṯam
         ouseph-n John-a with   Mary-a self's

         wiiṭṭil wecca umma weppiccu
         house-l 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 con-
cluding 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 Malaya-
lam, (42b), is perfectly grammatical:

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

    b. ṯaan wiḍḍhi aana enna jooṇi wicaaṛiccu
       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:

(43) $_S[_S[_S[$ taan aanaye ṇuḷḷi enna$]_S$ amma
             self elephant pinched that   mother

acchanooṭə parañ̃u enna$]_S$ ṛaajaawinə
father   said   that   king

toonni enna$]_S$ mantriye raaṇi wiŝwasippiccu
felt   that   minister queen believe-caused

(The queen convinced the minister that the

king felt that the mother told the father that

self (queen/*minister/king/mother/*father)

pinched the elephant.)

'Queen', 'king', and 'mother' are subjects, and there-
fore, 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 ana-
phor; the latter, on the other hand, is allowed to have
long distance anaphora only when the anaphor is contain-
ed 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/swantam suhratta aanaye nulli enna]
      self's   friend-n elephant pinched that

amma   acchanoota paraññu enna] raajaawina
mother father-d   said   that king-d

toonni enna] mantriye raani wiswasippiccu
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 suhrattine nulli enna] amma
     elephant self's friend-a   pinched that mother

acchanoota paraññu enna] raajaawina toonni
father   said   that king   felt

enna] raani mantriye wiswasippiccu
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. [[[aana   swaṇtam suhrəttine ṇuḷḷi   eṇṇə]
     elephant self's friend   pinched that

    amma   acchanooṭə parañ̃u eṇṇə] r̃aajaawinə
    mother father   said   that king

    tooṇṇi eṇṇə] raaṇi maṇtriye wiśwasippiccu
    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/
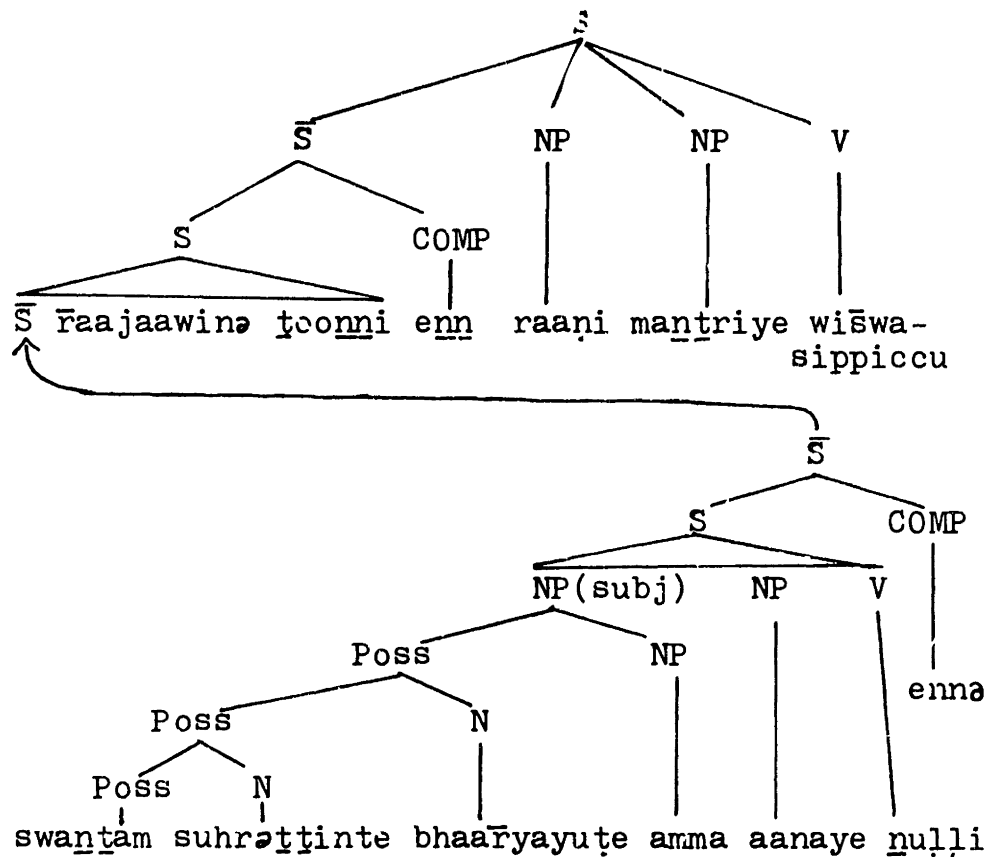
    elephant's) friend.)

Note that in (44ʹ), the NP _swaṇtam suhrəttine_ is the

object of the clause. Hence, _swa-_ is forced tc find its

antecedent in the subject of its own clause. In (44a), on

the other hand, since _swaṇtam suhrəttə_ is the subject of

the clause, there is no such locality restriction on ante-

cedentship. (44b) shows that there is no restriction on

long distance anaphora for _taan_.

The immediate technical problem that arises is the

exact formulation of the condition that allows long dis-

tance anaphora for _swa-_. In (44a), where it shows long

distance anaphora, it is immediately dominated by the sub-

ject. Immediate domination, however, cannot be the right

condition, as illustrated by (45):

(45)a. [[[swan̲t̲am suhrəṭṭinte] bhaar̄yayuṭe] amma]
     self's   friend's   wife's   mother

aanaye nul̲l̲i enne r̄aajaawinə ṭoon̲n̲i enne

raan̲i man̲t̲riye wiɛwasippiccu

(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.

[Tree diagram]

S̄
├── S̄
│   ├── S
│   │   ├── S̄ r̄aajaawinə ṭoon̲n̲i enn
│   └── COMP
├── NP raan̲i
├── NP man̲t̲riye
└── V wiɛwa-sippiccu

S̄
├── S
│   ├── NP(subj)
│   │   ├── Poss
│   │   │   ├── Poss
│   │   │   │   ├── Poss — swan̲t̲am
│   │   │   │   └── N — suhrəṭṭinte
│   │   │   └── N — bhaar̄yayuṭe
│   │   └── NP
│   │   └── N — amma
│   ├── NP — aanaye
│   └── V — nul̲l̲i
└── COMP — enne

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 domi-
nated by the subject is inadequate, as shown by (46):

(46)a. [[swaṇṭam suhrəṭṭine ṇuḷḷiya] kuṭṭi] aanaye
       self's   friend   pinched-REL child elephart

       aṭiccu eṇṇə r̄aajaawinə ṭooṇṇi eṇṇə raaṇi
       beat   that king   felt   that   queen

       maṇṭriye wiŝwasippiccu
       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.)

b.
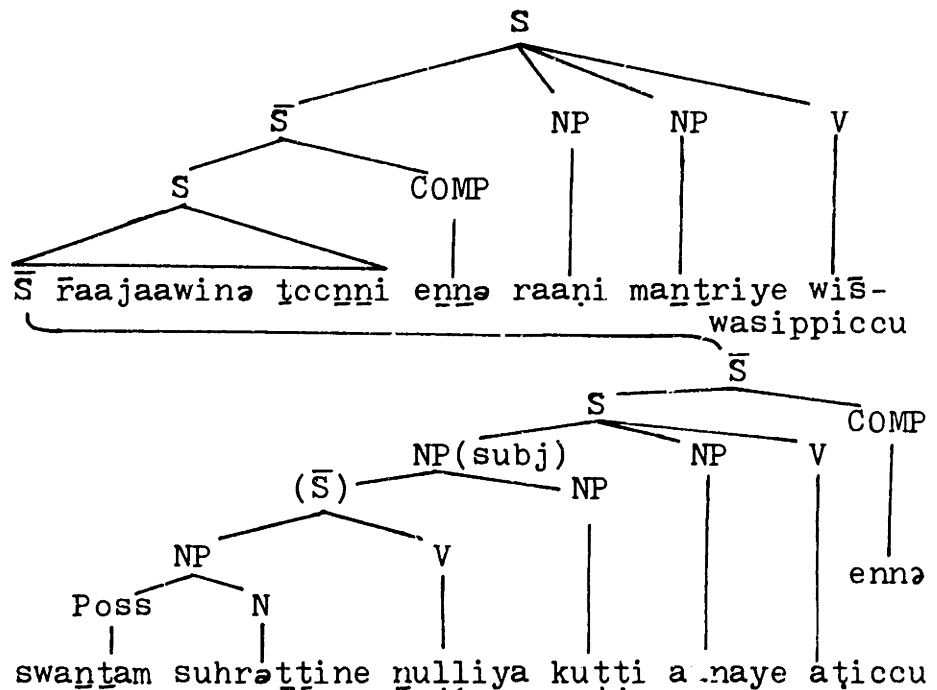
What the contrast between (45) and (46) illustrates is
that long distance anaphora is possible only if swa- is
dominated by the subject with no intervening nodes which
are not NP's. In (46), even though the subject dominates
swa-, there is an intervening S node which makes swa- in-
capable of long distance anaphora.

The contrast between (45) and((46) can be accounted

for by using the notion of 'NP-containment' defined thus:

(47) α NP-contains β iff (i) α is β or (ii) α domi-
nates β 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 Higginbothom
    (1980)) is proposed in Mohanan (1981):

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

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

    The principles that account for the contrast are given
    below:

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

    (iv) α weakly c-commands β iff (a) α c-commands β
         or (b) the node that directly dominates
         α weakly c-commands β.

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

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

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

    (vi)a. ? <u>His</u> mother hates <u>John</u>.
        b. The professor on <u>his</u> committee hates <u>John</u>.

    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 <u>swa</u>-, in (46), it does not. We can now formulate the principle governing long distance anaphora of <u>swa</u>- as follows:

(48) If <u>swa</u>- 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.[13] The domain in which disjoint reference applies in Malayalam is the minimal S, NP containing t.,e 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:

13. cf. Chomsky (1979); Fiengo & Higginbothom (forthcoming).

(49)a. kuṭṭi ammayooṭə [ṭaan/awan aanaye nuḷḷi   ennə]
     child mother   self he   elephant pinched that

     paraññu
     said

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

b. kaḷḷanə [swanṭam/ṭante/awante naaya widdhi aaṇə
     thief-d self's   his   dog-n fool-n is

     ennə] 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 _ṭaan_ and _swa-_ are required to do in these cases.

The second property illustrated by anaphora in Malayalam is that of long distance anaphora. Both _ṭaan_ 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 in-
teresting question regarding the identification of ante-
cedents 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 ante-
cedent, 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 proper-
ties 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 gra-
mmars.

2.1. Anaphora in Kannada[14]

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

(50) $_S[_S[_S$ [taanu aanayennu kiḷḷiḍalenḍu$]_S$ amma
                     self elephant pinched-that   mother

magaḷige heeḷiḍalenḍu$]_S$ raaṇi cintisiḍalenḍu$]_S$
daughter told   that   queen thought   that

aa   heŋgasu nanna henḍatiyennu nambisiḍalu
that woman   my   wife   believe-caused

(That woman convinced my wife that the queen
thought that the mother told the daughter that
self (woman/*wife/queen/mother/*daughter) pin-
ched 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 boun-
daries. The domain of disjoint reference in Kannada, as
in Malayalam, is the minimal S, NP, as shown by (51):

(51)a. moohan [awanu malagalendu] praarthisidanu
      Mohan   he   to sleep   prayed

   (Mohan prayed for him to sleep.)

   b. * amma   [raaniyige awalu killalendu]
        mother   queen   she   to pinch

      praarthisidalu
      prayed

   (Mother prayed for her to pinch the queen.)

   c. amma [raaniyige awalu killalendu] praarthisidalu
      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 { taanu } buddhimwanta endu tilidukondidanu
     Mohan   { self } intelligent that thought
             { awanu }
             { he   }

   (Mohan thought that { self } was intelligent.)
                        { he   }

2.2. Anaphora in Chinese[15]

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

(53) <u>Sally</u> xiangxin $_S$[$\left\{\begin{array}{l}\underline{ziji} \\ self \\ \underline{ta} \\ she\end{array}\right\}$ shasile Mary]$_S$.
         believe   kill

(<u>Sally</u> believes that $\left\{\begin{array}{l}\underline{self} \\ \underline{she}\end{array}\right\}$ killed Mary.)

<u>ziji</u> allows only subjects as antecedents, and allows subjects across finite clause boundaries to be antecedents:

(54)a. John gaosu   Bill ziji toule qian
        informed   self stole money

(John informed Bill that self (John/*Bill)

                            stole money.)

b. Sally xiangxin $_S$[John gaosu Bill $_S$[ziji
        believes   told   self

    shasile   Mary]$_S$]$_S$.
    killed

(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 ana-
phora only when NP-contained by the subjecti

(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 tnat 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[16]

Yoruba has an anaphor òun and a pronoun ó which show
interesting properties. The anaphor òun must take an ante-·
cedent in the sentence, and the antecedent, like the ana-

---

phors in Malayalam, Kannada, and Chinese, may be any subject higher up in the sentence: it cannot take an object antecedent. The pronoun ó, 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 Ségun pé òun sanra
          told   that self is fat

    (Tolu told Segun that self (Tolu/*Segun/*some-

       one else) is fat.)

  b. Tolú sofún Ségun pé   ó   sanra
                          pron

    (Tolu told Segun that *Tolu/Segun/someone

   else is fat.)

(58)a. Adé rò   pé Tolú sofún Ségun pé òun sanra
          thought   that   told   that self

    (Ade thought that Tolu told Segun that self

    (Ade/Tolu/*Segun/*someone else) is fat.)

  b. Adé rò pé Tolú sofún Ségun pé ó 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:

(59)

òun
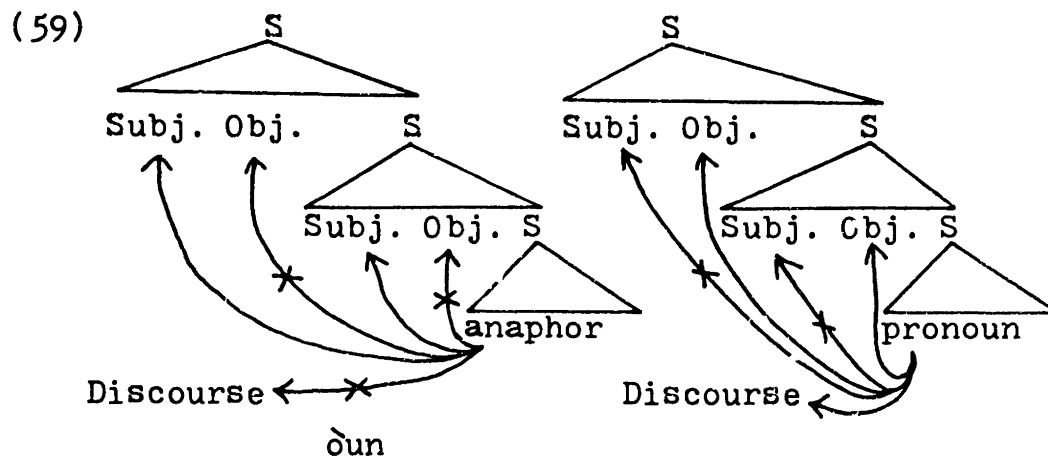
The behaviour of / follows from the principles we formulated in section 1. In order to account for the behaviour of ó, we shall set up the following principle for Yoruba:

(60) Yoruba

Pronouns cannot have subject antecedents.

2.4. Anaphora in Icelandic[17]

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 in-
sight 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 con-
>> tain them.

Examples that illustrate (62) are given below:

(63)a. Jón sýndi Haraldi föt   á   hann

        showed   clothes for him

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

    b. Jón rétti Haraldi hans föt
        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

<u>Harold</u> as its antecedent, but not the subject <u>John</u>. In
(63c), both <u>John</u> and <u>Harold</u> are subjects in the minimal
tensed clause that contains <u>hann</u>, and therefore, neither
of them can function as its antecedent. In (63d), even
though <u>John</u> is a subject, it does not lie within the mini-
mal tensed clause that contains <u>hann</u>, 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.[18] The contrast is illus-
trated 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.[19]

It is tempting to collapse the obviation principles
of Yoruba, Icelandic, and English into something lik?:
"(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:

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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 seen, 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) <u>Mary</u> was annoyed to find John to be surprised

for <u>her</u> 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 Ice-

landic 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]

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20. Finnish appears to be another language in which ana-
    phors 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 <u>sig</u> must f-command it, but then he
    does not give any examples to the contrary either.
    Therefore, I shall assume that the antecedent of <u>sig</u>
    should f-command it.

(68)a. Jón sýndi Haraldi föt   á   sig

      John showed Harold clothes for him

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

b. Jón rétti Haraldi sin   föt

      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 Maria 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 refere-
nce, 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[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 possi-
ble. Second, one is forced to the difficult task of defi-
ning "anaphor" in such a way that it would include refle-
xives in English, but would exclude reflexives in Malaya-
lam, Kannada, Chinese, Yoruba, and Icelandic. Chomsky (1979)
characterises anaphors as elements that are "lexically spe-
cified as needing an antecedent"(p.16), and (inpress) as
"NP's that have no capacity for inherent reference"(Ch III,
p.42). Under either of these characterisations, the re-
flexives in the languages that we looked at in Sections
1 and 2 qualify to be anaphors.

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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. <u>They</u> admire <u>their</u> children.

    b. They admire each other's children.

If it is false that anaphors are bound where pro-
nouns 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 Ice-
landic 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

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23. cf. Hale (1980), Nash (1980), Farmer (1980), Simpson (1980), and Mohanan (in press).

consisting of the verb and the arguments that it sub-categorises 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):

(73)a. kuṭṭi   aanaye   nuḷḷi
        child-n elephant-a pinched

b.

configurational structure

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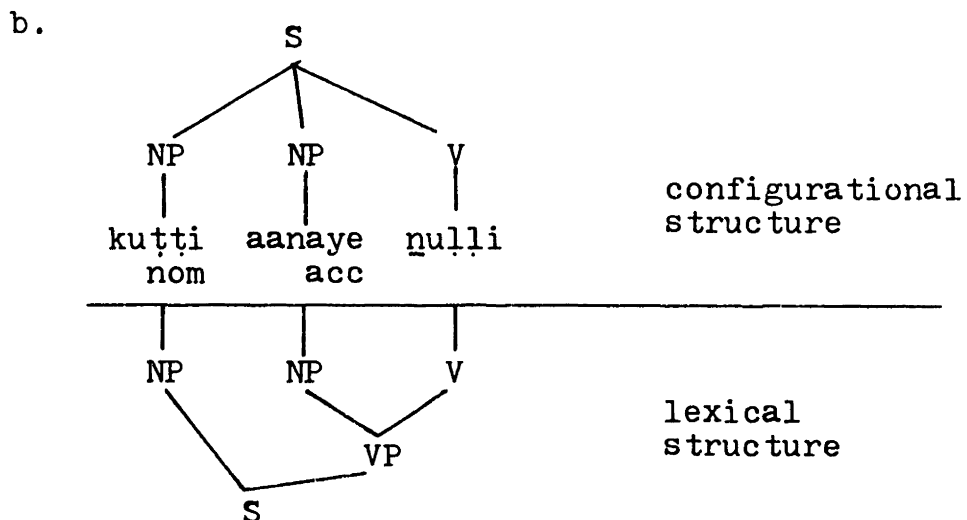
Instead of saying that it is only nonconfigurational
languages that have paired s-structure representations,
it would be better to generalise it to configurational
languages as well, and say that s-structure is univer-
sally a pair of configurational and lexical structures.
In configurational languages,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

(74)

configurational
structure

The boy pinched the elephant
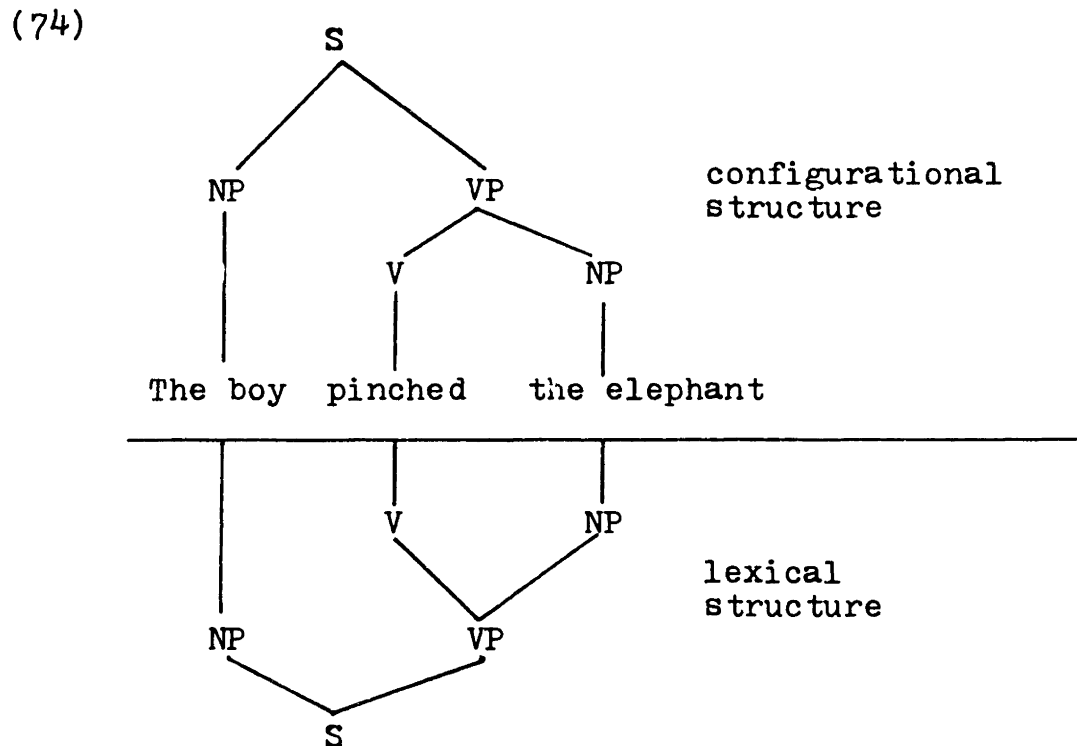
lexical
structure

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 assump-
tions, (72) may be restated as follows:

(75) Anaphors must be bound (to the NP of lexical S)
(in their governing category). [24]

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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 sen-
tence. This prediction, as far as I know, is in-
correct. Therefore, it would be necessary to say
that PRO is not an anaphor. (see also footnote 7)

Another problem would be the treatment of cau-
satives in Malayalam. Recall that under causativisa-
tion, the intransitive subject becomes the transi-
tive 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 obligatorilly 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 lan-
guages, 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 con-
tained 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 antece-
dent", must therefore be redefined as "l-commanded by
an antecedent", where 'l-command' at the level of lex-
ical structure corresponds to c-command at the level
of configurational structure. This revision is perfect-
ly consistent with the analysis of examples like (31a)
and (31b), which independently suggests that the rele-
vant 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.

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