CASE THEORY AND THE PROJECTION PRINCIPLE

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ABSTRACT

We examine structures in which an NP bears a grammatical relation to a
verb, to which it bears no thematic relation. We see several semantic
classes of verbs appearing in such constructions, and a number of different
types of such constructions, but no systematic relation between the
semantic class of the verb and the syntactic type of construction in which
it appears.

To explain mapping between thematic structure and grammatical structure,
we assume the Projection Principle (PP), which states that syntactic
structure must reflect lexical properties (thematic
structure/predicate-subject relations) at all levels. The PP appears to be
violated by structures with non-thematic "objects" coreferential with an
embedded subject, object, or oblique NP (=NP-th). We examine data showing
that although the NP acts as an object, it is not outside of the clause
containing NP-th. It is in an embedded intitial A-bar position, acting as
a predicate subject for the constituent containing NP-th. It acts as an
object of the matrix clause due to government holding between a verb and
complement and certain elements in the complement.

A second aspect of a theory of grammar is licensing of NPs for
interpretation. Elements in A-positions are licenced by Case, an abstract
relation holding between arguments and governors. Given A-bar subject
positions, the domain of Case requirement is not A-positions, but rather,
all positions governed by the PP: subjects and complements. Projection and
Case are intertwined facets of interpretability.

In Chapter 1 we introduce the domain of exploration. In Chapter 2 we
consider "Raising to Object" constructions. Certain English, Hindi,
Icelandic verbs effect sentential Exceptional Case Marking =S/ECM) by

subcategorization for "INFL-Phrase", with government and Case to the specifier. In Romance, different ECM structures arise with verbs selecting for a Case assigning head. Hungarian structures support our claims. "Non-vacuous" ECM in Blackfoot, Fijian, James Bay Cree, Kipsigas, Moroccan Arabic, Niuean, Standard Arabic, argues for embedded A-bar subjects.

In Chapter 3 we look at non-thematic subjects (NTS). An NP may come to act as a NTS in one of three ways. Raising to Subject is examined in English. Kipsigas, and James Bay Cree NTS structures involve operator movement, as does "Tough Movement" in many languages. We thus divide the Theta-Criterion into two parts, one holding at all levels and one at LF, and introduce an licensing device of composed theta chains. Niuean and Standard Arabic show that NTS structures arise under non-Case assigning verbs which allow A-bar subjects. Passive ECM verbs in these languages are identical to Raising to Subject verbs, as they are, in a different way, in English.

In Chapter 4, NP complements in Chickasaw, Hungarian, Romanian, Kinyarwanda, Turkish substantiate our claims, as verbs ECM the A or A-bar possessor subjects of NPs, (= NP/ECM). The distribution of NP/ECM across languages argues that Cases exist independently of Case assignment, since NP/ECM requires the existence of an extra Case, as predicted by the Case Filter. NP/ECM allows for direct argument possessors, or indirect argument possessors. We predict that NP/ECM occurs only into object NPs. Several apparent exceptions actually support our claims.

In Chapter 5 Case and chain theory is presented (Levin & Massam,1984), accounting for expletive distribution, Case/argument structure relations of Burzio's(1981) Generalization, and the Nom/Acc,Erg/Abs parameter. The theory is revised to embrace data of this study, and we define Case requirements in terms of the Projection Principle.

We close with a typology which emerges from our study.

Thesis Supervisor: Noam Chomsky
Title: Institute Professor

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This thesis is dedicated
with love
to my mother
Doreen Massam
and to the memory of my father
George Massam

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Uniformity Condition

Chapter 1

Introduction

1.1 Overview

A fundamental aspect of a theory of grammar is the relation between the thematic argument structure of lexical items and the grammatical constituent structure onto which they and their thematic arguments are mapped. In the theory known as "Government and Binding Theory" (GBT) outlined in Chomsky(1981,1982,1984,1985), this relation is considered to consist in the notion of "projection". In this view, verbs, entered in a lexicon along with information as to their meaning, and some representation as to which of their arguments are internal and/or external (cf.Williams, 1979, 1980, 1981), are conceived of as projecting a constituent structure, or "tree", whose structure is in accordance with and is determined by the lexical thematic properties of the projecting verb (cf.Stowell,1981). Lexical items are inserted as dictated by the Theta Criterion (see below). In GBT, this projective structure is considered to be inviolate throughout

the derivation. Any changes in the tree which occur through a derivation

must be made through adjunction, or structure preserving rules

(cf.Emonds,1976). The result of this inviolateness is that at the point of

the derivation where interpretation takes place, the thematic structure of

the lexical item is essentially transparent. (Due to Move Alpha, this

thematic structure may be less than entirely transparent, however, it is

entirely recoverable.)

In the domain of argument/tree-structure relations, as in so many areas

of grammatical study, we find subject/object asymmetries. (We take subject

to refer to the NP dominated by IP (=S), and object to refer to the NP

dominated by VP.) It appears that subject positions may be non-thematic in

a way that object positions appear unable to be. Thus the second sentence

in each pair below is non-existent.[1]

(1) a. It seems that Lucinda Matlock, at ninety-six, felt she
       had lived enough.
    b.*That Phlebas is dead was obvious it.
    c. It is raining.
    d.*Zeus rained it.
    e. There entered a man from rightstage.
    f.*A man entered there from rightstage. (non-locative sense)
    g. Es wurde heute getanzt. (German)
       "It become today danced."("There was dancing today,")
    h.*Mozart tanzt es.
       "Mozart danced it."

The notion of projection must then be formulated in such a way as to

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1. Sentences similar to (1b) are possible, such as "I believe it that he'll
never kiss Lenore.", however these are analyzed as involving extraposition
of a sentential argument, the trace of which is spelled out as it.

allow for this observation. This can be done by associating it with another observation, namely, that all clauses have subjects. This second observation if raised to the level of a principle, will guarantee the existence of subject expletives, given the existence of verbs which have no external thematic argument. This allows such sentences as (1a,c,e,g) to be generated. In the case of objects however, we want the opposite result. This can be achieved by a comparison of subjects and objects. We observe that a subject can fulfill two roles in a sentence. It first might be a thematic argument of the verb (such as agent, experiencer, etc.) and it second must act as the subject of the clause for purposes of predication. Rothstein(1983) accounts for the necessity for clausal subjects by attributing it to the necessity for a predicate to have a subject at LF. Since objects do not act as subjects, there is no reason for an object position to be generated, other than to hold an internal argument of a verb. Thus, if there is no internal thematic argument, there will be no object.

These ideas are formalized in the Projection Principle of Chomsky(1981) and the Extended Projection Principle of Chomsky(1982) and of Rothstein(1983), given below.[2]

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2. We adopt Rothstein's version of the second part of the Extended Projection Principle, rather than that of Chomsky(1982) which reads "Clauses must have subjects".

(2) a. The (Extended) Projection Principle
    (Chomsky,1981,1982) (Rothstein,1983)

    I Given $[_\gamma...\alpha...\beta...]$
              $[_\gamma...\beta...\alpha...]$

       where α is an immediate consituent of γ,

       (i)   if β is an immediate constituent of γ at
              L_i, and $\gamma = \overline{\alpha}$, then α theta-marks β in γ

       (ii)   if α selects β in γ as a lexical property,
              then α selects β in γ at L_i

       (iii) if α selects β in γ at L_i, then α selects β
              in γ at L_j

    II Predicates must have subjects

    For the most part we will refer to both parts as the Projection

Principle.

    The insight captured in the Projection Principle, especially in the

first clause of the first part, has a history of controversy. This

controversy is centred on the problem of how to analyze structures such as

(3a,b), where we find, not an expletive, but a lexical NP which bears no

thematic relation with the matrix verb, acting as its object.

(3) a. I consider Penelope to be a very patient woman.
    b. I believe Barbary to have died of spite.

Works such as Postal(1974) argue that these constructions are best

analyzed as involving raising, whereby the subject of the lower clause is

raised to become the object of the matrix clause. Such an analysis is

incompatible with the Projection Principle, which rules out non=-thematic

objects. Chomsky(1977) presents a different analysis for these

constructions, where the embedded subject is able to act as the object of

the matrix clause since it is in an infinitive clause.[3]

In later works, the non-raising analysis came to be known as Exceptional

Case Marking (ECM), since it was argued that verbs such as believe,

consider etc. were exceptionally able to assign accusative Case to the

subjects of their infinitive complements, and hence these subjects acted

grammatically as if they were objects of this verb. Many linguists,

however, have continued to consider that a Raising to Object rule is

required to describe human language adequately, and have argued so, for

example, Carden, Gordon & Munro(1982) who use raising/ECM data from

languages such as Chickasaw, and Fijian, to show that actual movement must

sometimes be involved in structures where elements embedded within either

sentential or noun-phrasal arguments act as matrix objects.[4]

It is one of the main tasks of this thesis to examine structures of this

type in a variety of languages within a theory which incorporates the

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3. For other early transformational discussions of these constructions see
Lees(1960), Rosenbaum(1967), Ross(1967), and McCawley(1970). These are
reviewed in Postal(1974).

4. Rochemont(1984) argues that Raising to Object is possible, and the
Projection Principle violatable just in case the raised NP is focused. He
argues further that it is this violation of the Projection Principle which
identifies the structure as one of focus from the point of view of the
language learner.

Projection Principle. This is part of a larger task, which is to consider
in a cross-linguistic way a variety of constructions which share with the
sentences in (3) the property of containing an NP which does not receive a
theta role from a verb but which acts as an argument of this verb. "To act
as an argument of a verb" means to undergo processes which in the unmarked
case are undergone by NPs which receive an external or internal theta role
from the verb. Such processes are reflexivization, passivization,
Wh-movement, etc., depending on the language. In accordance with the
Projection Principle, in the case of subjects, an NP will act, in this
grammatical sense, as a subject of a $Verb_j$ when it is immediately dominated
by the IP_i the complement of which is VP_j, and when it receives Case from
$INFL_i$. In the case of objects, an NP will act as the object of a $Verb_j$
when it is in a particular configuration with $Verb_j$, namely that of
government by $Verb_j$, and more especially, when it receives Case from
$Verb_j$.[5] Our interest is in the determination first of the lexical
properties which a verb must have in order to trigger a syntactic process
which enables a non-thematic NP to come to act as an argument of this verb,
and second to determine what these syntactic processes are, and how they
are constrained.

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5. ECM sentences, among other configurations, provide examples of NPs which
are subjects for predication, but which do not act as subjects since they
do not receive Case from INFL, but from a verb. However, no NP appears to
act as a subject if it is not a subject for predication. This further
demonstrates the differences between subjects and objects in this regard.

The second half of our interest brings us to the first half of the conjunction of the title. Here, we concern ourselves with how non-thematic NPs are interpreted. It has been determined that an ingredient essential for the process of thematic interpretion is Case marking, where Case is a form of abstract licensing which might be either a relation between a governor and an argument, or an inherent property of an argument (cf.Rouveret & Vergnaud,1980, Chomsky,1980,1981, Stowell,1981). Case licensing is seen to be required of all elements which appear in projected positions, and so we arrive at the relationship between Case and projection.

1.2 Crucial Notions

Our discussion takes place within the context of GBT, which includes many notions which we will assume without discussion. In this section, we will present very cursorily, some of the more essential notions. We will do this in several cases by simply giving definitions; for discussion, see Chomsky(1981,1982,1984,1985) and references therein.

The projections of lexical items conforms to X'-theory (cf.Jackendoff,1977). The version we assume creates XP projections which have a specifier and complement(s). The maximal projection of a sentence is CP ("COMP Phrase") which takes a specifier position into which

Wh-elements may move, a head position, and an IP ("INFL Phrase")

complement. The specifier of IP is the subject of the sentence, with INFL

as the head, and VP as the complement. The question of whether VP has a

specifier is addressed in Chomsky(1985) but is irrelevant to us here.

Sentential structure is shown in (4a). The structure of NPs is assumed to

be, for the most part, as in (4b), although in Chapter 4 other

possibilities will be discussed and, in some cases, adopted.

```
(4) a.        CP                    b. NP
            /  \                       /  \
        SPEC    CP                  SPEC   N'
              /  \                       /  \
          COMP    IP                   N  (NP/PP)
                /  \
              NP    I'
                  /  \
              INFL    VP
                     /\
                    V (NP)
```
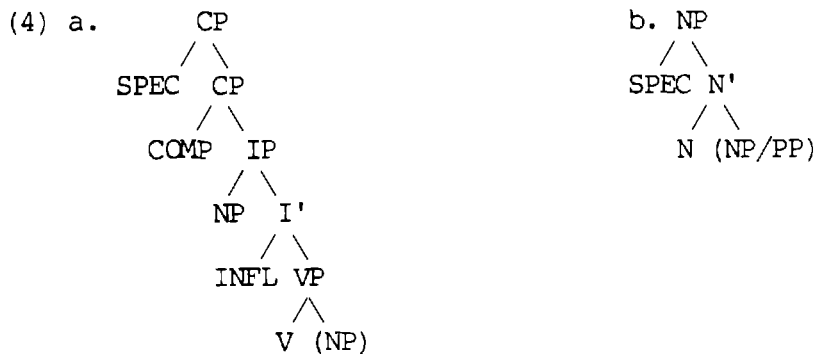
The most central structural concept which we will assume is that of

government. We adopt the definition argued for in Chomsky(1985), without

discussion, although we will see below that for the most part ECM data

support this definition, and we will suggest minor revisions as required.[6]

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6. Another version of government which we will refer to is that of
Chomsky(1981):

$[_\alpha$ governs $\gamma]$ in $[_\beta ... \gamma ... \alpha ... \gamma ...]$, where
(i) α = X^o
(ii) where ϕ is a maximal projection, if ϕ dominates γ,
   then ϕ dominates α.
(iii) α c-commands γ

(5) a. <u>Government</u> (adapted from Chomsky,1985)

   α governs β iff α C-commands β and there is no γ,
   γ a barrier for β, such that γ excludes α.

b. <u>C-command</u>

   α c-commands β iff α does not dominate β and every γ
   that dominates α dominates β, γ a maximal projection
   (cf. Aoun & Sportiche,1983)

c. <u>Barrier</u>

   γ is a barrier for β iff (i) or (ii):

   (i) γ immediately dominates δ, δ a BC for β
   (ii) γ is a BC for β, $\gamma \neq$ IP

d. <u>B(locking) C(ategory)</u>

   γ is a BC for β iff γ is not L-marked and γ dominates β

e. <u>L-Marking</u>

   α L-marks β iff α is a lexical category that
   theta-governs β

f. <u>Theta-govern</u>

   α theta-governs β iff α is a zero level category that
   theta-marks β, and α, β are sisters

g. <u>Proper</u> <u>Government</u>

   α properly governs β iff α theta governs or antecedent
   governs β

Hence in: ...α...[γ...β...], α will not govern β if γ is a barrier

for β. Chomsky's goal in formulating the definition above is to integrate

notions of government and bounding, which is the theory of locality

constraints on movement as seen in (6). We will not be overly concerned

with the finer details of movement constraints, and hence not with the finer details of the definitions above. The most important aspect of it for us, is that it allows a governor to govern into the specifier of its complement. This will be discussed in detail below. Also of importance is the notion of "minimality".

(6) <u>Minimality Condition</u> (from Chomsky,1985)

Given ... α ...[$_\gamma$ ... δ ... β...],

α does not govern β if γ is a projection of δ excluding α

This means that γ serves to protect β from government by α, regardless of whether γ is a barrier for β. The intuitive notion here is that if there is a closer governor than α for an element β, then α does not govern β. The consequence of (6) which is of interest to us is that a verb, while governing the specifier of its complement (whether this complement is an NP or a CP), will not govern the complement of its complement.

We further will assume that Subjacency holds as a condition on movement, and that it is defined as below.[7]

----

7. Chomsky defines various types of Subjacency. The one given here is the one for the locality condition on chain links.

(7)   a. <u>Subjacency Condition</u>
      (Adapted from Chomsky,1985)
         If (α_i, α_{i+1}) is a link of a chain, then α_{i+1}

         is subjacent to α_i

         <u>Subjacency</u>

         β is subjacent to α iff there are less than 2
         barriers for β that exclude α

We also assume the Empty Category Principle.

(8)   <u>The Empty Category Principle</u> (Chomsky,1981)

      An empty category must be properly governed.

The Case Filter will be much discussed and refined below. Our starting

point is simply the stipulation below. It is initially assumed that Case

is a requirement on theta-chains, for purposes of visibility of theta

roles; this will be revised below.

(9) <u>The Case Filter</u>

    *NP-chain, where NP-chain contains a theta-position and has
    no Case (NP ≠ PRO).

Two other important notions are the Theta criterion, and the division

between A and A-bar position.

(10) The Theta Criterion (Chomsky,1981)

Given the structure S, there is a set K of chains,
$K = \{C_i\}$, where $C_i = (\alpha^1_1, \ldots, \alpha^1_{n_i})$, such that:

(i) if α is an argument of S, then there is a $C_i \in K$
such that $\alpha = \alpha^1_j$ and a theta role is assigned
to C_i by exactly one position P.

(ii) if P is a position of S marked with the theta
role R, then there is a $C_i \in K$ to which P
assigns R, and exactly one α^1_j in C_i is an argument.

(11) (Informal Definition)

a. An A-position is a position to which a theta role
might be (but need not be, in a given structure)
assigned.

b. An A-bar position is any other position.

The intuitive idea here is that A-positions are subject and object
positions. We will see, however, that there may be a division between this
intuition and the behaviour of NPs in certain positions, since there are
positions where subjects (for predication) appear, which exhibit some A-bar
characteristic, (and some A-position characteristic) behaviour.

1.3 Outline

1.3.1 Chapter 2

The thesis is organized as follows. In Chapter 2 we examine ECM structures. First, we look at English, showing that given the definition of government above, ECM is not in fact _exceptional_ Case marking. Rather, the marked nature of so-called ECM structures is due to the subcategorization of certain verbs for IP complements. We see that our view that Case can be assigned into any specifier position explains certain facts of complement distribution with respect to Case Resistance (Stowell,1981), and we account for the apparent lack of Case assignment to specifiers by a filter which requires English operators to match the case of the variable with which they are associated. Other ECM cases similar to English are considered, in Hindi and Icelandic, and "quirky Case" is briefly discussed.[8] Hungarian examples provide support for our assumption regarding the general possibility of Case marking into specifiers. We then examine Romance ECM structures in Italian, French, and Portuguese, showing them to involve verbs which take complements with a Case assigning feature in the head position.

The next sections deal with cases of ECM which are not string vacuous, and which generally permit ECM to non-subjects. We examine first data from

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8. Data and information sources for each language discussed are provided as the language is discussed.

Fijian and Niuean, showing that in these languages, ECM is non string vacuous. We propose movement of an NP to a "second Specifier" (SPEC2) position, dominated by the complement CP. We then consider the possibility that these constructions require an analysis involving direct Raising to Object, rather than to SPEC2, as argued for by Carden, Gordon & Munro(1982). We reject a Raising to Object analysis on the grounds that ECM movement displays properties with respect to chain and Case theory and Binding theory which are not consistent with an A-movement analysis of these structures. We note that the distinction between A and A-bar position is blurred in these constructions, since the ECM'd subject position displays properties of both A and A-bar positions. We decide in favour of our SPEC2 analysis.

Next, we compare the relation between the ECM'd NP and the theta position with which it is coindexed, to relations that exist between Topicalized and Left Dislocated elements and their coindexed theta position. we look at ECM movement in a variety of languages, such as Moroccan Arabic, concluding that, the usual situation is that there are differences between ECM and Topicalization/Left Dislocation structures. We then propose that ECM verbs in these languages are those which subcategorize for CP complements which are predicates, and hence, which require subjects (cf.Taraldsen,1983, Haïk,1985). An NP from within the clause moves to act as a subject for the clause, in which position it receives ECM. We examine certain languages such as Blackfoot, which lead

us to consider that ECM constructions of this type need not necessarily involve movement. This will require us to allow the base generation of non-thematic NPs, and to constrain this generation. We will discuss this further in Chapter 3.

We consider two other alternative analyses. The first involves indirect movement to object, via SPEC2. This we rule out because it is unecessary, given our assumptions of government, etc., but we also provide data from Kipsigas which argues that the possibility of Raising to Object should be ruled out in principle, in order to explain certain differences between non-thematic "object" constructions and non-thematic subject constructions in Kipsigas. The last alternative analysis discussed is that of prolepsis, involving the base-generation of non-thematic objects which are coreferential with an embedded argument. We discuss Higgins(1981) arguments in favour of prolepsis, which we reject for theoretical reasons, and we present arguments from the literature against prolepsis analyses for specific languages. Finally, we discuss certain constructions in English which we argue involve ECM movement of the type witnessed in the languages of this chapter.

1.3.2 Chapter 3

In this chapter we discuss constructions with non-thematic subjects. We begin by discussing briefly, the well-known cases of Raising to Subject in English. We then reexamine in more detail the Kipsigas non-thematic

subject constructions discussed in Chapter 2. We show that they are different than both ECM movement constructions, and Raising to Subject constructions. To analyze them, we turn to English Tough constructions, limiting ourselves to a discussion of the so-called "theta-paradox" of these constructions. To account for their thematic properties we suggest a less pure definition of D-structure than that of Chomsky(1981), in which only the thematic positions are referred to by the Theta Criterion. This allows us to base generate non-thematic NPs in A-bar and in some subject positions. The Principle of Full Interpretation requires us to propose the device of theta chain composition at LF, which allows us to constrain the distribution of base-generated non-thematic NPs in both ECM and Tough constructions. Tough predicates are defined as those which consider embedded A-bar positions to be A-positions for the purpose of theta chain composition at LF. We then return to Kipsigas, and see that the non-thematic subject constructions are accounted for by chain composition.

Niuean and Standard Arabic non-thematic subject positions are examined next. It is seen that they have different properties from those of Kipsigas, and from English Raising to Subject constructions. The properties are, however, identical to those of ECM movement constructions, with the sole difference being that the latter involve Case marking verbs, whereas the non-thematic subject constructions involve non Case marking verbs. These data require an analysis of movement from an A to an A-bar to an A position, and we discuss the way to allow this, without allowing

ungrammatical constructions in English, French, and other languages. The crucial factor here is the definition of variable. We conclude that there are many syntactic ways of producing a non-thematic subject construction, and that each is triggered by a specific lexical property of a verb.

1.3.3 Chapter 4

In Chapter 4 we turn to cases of ECM into NPs, commonly known as "Possessor Raising". Since our definition of government allows verbs to govern the specifiers of their complements, we expect to find the phenomenon of NP/ECM, which in fact we do. However, we note that this phenomenon will be constrained by the fact that the Case Filter will require the matrix NP to be assigned Case, and so an NP in specifier position will not be free to receive the Case assigned by a governing verb in most cases. Only if there is an extra Case available will NP/ECM be possible. We examine Kinyarwanda, and Tzotzil NP/ECM, showing that in these languages, verbal complexes may assign multiple Cases, and hence NP/ECM arises. We discuss in some detail the complexities of these cases of NP/ECM.

Our theory of government predicts that there will be no NP/ECM to specifiers of subject NPs, since a subject NP is not properly governed, and hence constitutes a barrier for an NP in its specifier. Furthermore, in all cases examined so far, ECM effects have been due to some lexical property of a verb, in particular, in the case of NP/ECM, of a verbs'

multiple Case assigning talents. Chickasaw provides a counterexample to this claim, since it allows NP/ECM to subjects of intransitive verbs, as well as to objects. We show that in fact it does not counterexemplify our claims, since NP/ECM does in fact depend on verbal lexical properties, and involves structures which permit government of the possessor, where the possessor has moved to a position which is dominated by IP. Our analysis is based on the theory of Case assignment proposed by Levin & Massam(1984), in particular their theory of Surface-ergativity. We discuss the claims of Carden, Gordon & Munro(1982) that Chickasaw provides a strong argument against the Projection Principle, arguing instead that the Projection Principle's treatment of subject/object asymmetries allows for structures in which there is a separation made between the thematic external argument and the subject for predication, such as those which appear in Chickasaw NP/ECM structures.

We turn to another type of NP/ECM, that where the ECM'd possessor receives dative Case, and acts as an indirect, rather than a direct argument of a verb. Szabolcsi's(1981,1983) account of Hungarian NP/ECM is presented, and modified to fit into the cross-linguistic picture presented here. It is seen that in some languages NPs have an AGR node, and a peripheral position similar to SPEC, which Szabolcsi calls KOMP. NP/ECM is thus seen to involve, in some languages, the movement of a possessor to a peripheral position, where it receives ECM. This compares with S/ECM movement discussed above, as Kinyarwanda and Tzotzil NP/ECM compare with

IP-subcategorization S/ECM as found in English. We discuss other cases of dative NP/ECM in Romanian and in Choctaw and Chickasaw.

We turn next to inalienable possessor NP/ECM, which in many languages presents properties different from those of alienable possessor NP/ECM. We look at Kinyarwanda and argue that inalienable possessor NPs and NP arguments of what we call "take-away" verbs, involve dative NP/ECM, similar to that discussed above for other languages. We discuss also Korean "take-away" NP/ECM. Some characteristics of Kinyarwanda dative NP/ECM cause us to question whether NP/ECM is the correct analysis for such structures, and we examine certain English, French and Warlpiri inalienable possessor sentences where the possessor appears as a separate NP from its possessed item, and yet it does not become separated by a syntactic process. Guéron's(forthcoming) notion of lexical chain formation in inalienable possession structures is discussed. Our conclusion is that structures where possessors appear separated in some way from their possessed, may be derived by syntactic means in one language, and by lexical or interpretive means in another, and that each case must be judged separately.

The last language examined in this chapter is Turkish, in which NP/ECM, S/ECM and inalienable possession are seen to interact in a particularly interesting way. We have no solution to the Turkish data, but a possible line of inquiry is sketched out.

1.3.4 Chapter 5

In the final chapter, a theory of Case and chains is provided which integrates the findings of the thesis. First, the theory of Case of Levin & Massam(1984) is outlined, and it is seen to account for the Ergative/Absolutive//Nominative/Accusative parameter, as well as for various aspects of argument structure seen in passive and expletive structures. It also derives Burzio's(1981) Generalization (T<--->A). We see that Case theory must be revised to account for ECM movement and Tough movement analyses, and we propose a theory of Case and chains in which each projected position must appear in a chain, which receives Case, and which is theta-licensed, either by containing a theta position, or by forming a composed chain with a chain which contains a theta position.

The thesis ends with a discussion of the lexical properties which various verbs may have which allows them to appear in constructions with non-thematic subjects or "objects". We see that while there are basic semantic classes of verbs involved in such constructions across languages, there is no one to one mapping between a semantic class of verbs and a syntactic means of effecting ECM or a non-thematic subject construction. A typology is presented, showing the relations between semantic verb class and syntactic process, in a variety of languages.

Chapter 2

Exceptional Case Marking: A case of Case to Specifier

2.1 Introduction

2.1.1 Overview of Chapter 2

In this chapter we examine the phenomenon of Exceptional Case Marking
(ECM) constructions, which we define as those constructions in which an
element (usually an argument) within an embedded complement clause has come
to act in some way as a verbal argument (usually a direct object) of an
immediately higher clause.[1] "In some way" may include as little as being
assigned Case by the higher verb, or it may alternatively include the
ability to undergo "object-referring" rules in the main clause such as

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1. Lefebvre and Muysken(1982) analyze Quechua ECM, showing that in this
language it is possible to ECM non-arguments such as adverbs. (On Quechua,
see also Cole and Hermon,1979,1981.) In other languages such as Irish
(Stowell,1984, McCloskey,1983, 1985 Postal,1985,) and Niuean (Seiter,1980,
and below, this chapter), and Greek (Joseph,1979) the ECM'd entity does not
act as a direct object, but rather, as the object of a preposition.

reflexivization, Passive, agreement, etc.

The view to be developed here incorporates two connected claims. First, although we retain the title "ECM", it is considered to be a misnomer, in that there is nothing in the Case marking itself which is exceptional, although the effect of this Case marking might be so considered in that Case is assigned by a verb to a non-sister which does not receive a theta-role from this verb. This is essentially the view of Chomsky(1981) and Stowell(1981). However, we will consider ECM to result not from S'-deletion (as do Chomsky,1981 and Stowell,1981), but rather from the subcategorization of ECM verbs for IP. In this view, the non-exceptionality of ECM is due to our adoption of the definition of government of Chomsky(1985) (See Chapter 1), by which a governor is able to govern into the specifier of its governed category.[2] Since Case is assigned under government, this view allows verbs taking IP complements to assign Case to the specifier of IP, which contains the clausal subject. In considering this government and Case assignment the norm, we must also consider it to potentially occur in all environments, and not only in case of IP complements. We show that there is in fact evidence that Case is in general assigned to sentential specifiers, rather than only in cases more

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2. The possibility for this was proposed in Kayne(1984) to account, for the most part, for different facts.

generally considered to involve ECM[3] (cf. Kayne,1984).

The second claim made here, a consequence of the non-exceptionality of Case marking in ECM structures, is that the cross-linguistic characterization of ECM (as defined above) is not as a unitary syntactic process, but rather as an effect (with semantic consequences)[4], achieved by general principles of grammar such as government and Case assignment as discussed in the previous paragraph, in conjunction with language-specific subcategorization or selection properties of certain verbs.

Two points should be stressed with respect to the view of ECM outlined above. First, the notion that identical or similar effects across or within languages can be the result of any one of a variety of syntactic or lexical processes or constraints is unique neither to ECM nor to this thesis. Chomsky(1984) argues that the effect of Passivization results from the Case Filter (see Chapter 1 (9)) and the general availability of "Move Alpha" in conjunction with the change in value of a lexical feature [$\pm$CA] (CA=Case Assigner) from [+] to [-]. Furthermore, there are cases commonly referred to as "Passives", which do not involve this feature change at all, such as the so-called "impersonal passives" of German and Dutch, or the

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3. ECM into NP complements, as opposed to sentential complements, will be discussed in Chapter 4.

4. The semantic effects of ECM are discussed more in philosophical than in linguistic work. See for instance, Quine,1956.

"subjectless" Passives of Polish argued for by Kitagawa(1984) (in Chapter 5 Passivization and Case will be discussed). Also, Huang(1982), in his discussion of certain properties of Chinese and English presents evidence that the phenomenon of islandhood (cf.Ross,1967) is another such effect which results from very different constraints, (some of which in fact apply at different levels of the grammar). For example, Huang argues that the impossibility of extraction from adjuncts is due to an S-structure constraint, "Condition on Extraction Domains" which rules out extraction from non-properly governed domains, while Subjacency accounts for the impossibility of extraction from an argument "Wh-island", or a complex NP.

A further aspect of the theory of ECM outlined herein is that it relies heavily on lexical properties of verbs with respect to subcategorization and head-selection. This, we feel, is all to the good, since clearly there is lexical idiosyncracy involved in ECM. Selection for properties of heads is substantially argued for.[5] Subcategorization (in terms of the category of a verb's complement) as a lexical property is more controversial, in that it has been argued that it is unnecessary. For instance, Pesetsky(1982), working from Grimshaw(1979), argues that the C(ategory)-selection of verbs can be derived from their Case marking properties in conjunction with the Case Filter, so that any Case assigning

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5. See Chomsky(1957,1975). Most clear, are cases involving features such as animacy, gender, etc. Other cases involve the selection for a tensed or non-tensed complement -- eg.insist vs. try.

verb with the appropriate S(emantic)-selection properties may take either

an NP or a S' complement, whereas a non-Case marking verb may only take S'

(or PP) complements. While such an analysis may account for the

distribution of the categories NP and CP (although there are problems with

this, discussed in Abney,1985), it leaves open the problem of the different

distributions of CP and IP, necessary according to current assumptions to

account for the distribution of PRO and of ECM'd complements, as well as,

in some accounts, for the distribution of gerunds.[6]

2.1.2 Organization of Chapter 2

This chapter is organized as follows: In Section 2, we present an

analysis of ECM in English. We argue that given the definition of

government presented in (Chapter 1 (5)), and a view of Case marking which

involves government and adjacency, English ECM can be accounted for simply

by specifying that some verbs with clausal complements can subcategorize

for IP. To propose an independant property (such as [± ECM]), is

redundant. We note that our assumptions predict that Case assignment may

occur to any Specifier, and we show that this leads to an explanation of

certain facts regarding Case Resistance. The fact that this Case

assignment does not show up morphologically is due to a constraint which

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6. This was pointed out to me by Kyle Johnson. For discussion of the
properties which must be selected and/or subcategorized, see
Grimshaw(1979),Reuland(1983),Rizzi(1982),Stowell(1981).

disallows non-Case matching between operators and variables. Other languages with ECM similar to that of English, such as Hindi and Icelandic, are briefly discussed.

Hungarian is then discussed as providing evidence that Case can be assigned to the Specifier of CP as well as to IP (with the expected result that Case marking is the only way in which the embedded argument behaves as an argument of the matrix verb). The main difference between English and Hungarian results from the fact that the latter does not require Case-realization matching between an operator and its theta-marked trace in an A-bar chain.

In Section 3 we examine another set of languages that show that Case assignment to Specifiers is possible. Examining the work of Kayne(1981,1984), Rizzi(1981,1982) and Raposo(1984,1985), we present evidence from French, Italian and Portuguese, that Case assignment occurs to specifiers. We consider this Case to be assigned to the specifier of IP, by an element in the COMP which appears under certain verbs which select for a complement with a complementizer consisting of the feature [+CA]. We thus account for the distribution of so-called ECM verbs in these languages, as well as for the differences between English, Icelandic and Hindi ECM on the one hand, and Italian, French and Portuguese ECM on the other.

The final section examines cases of ECM which appear to involve

movement, such as those found in, for example, Berber, Fijian, Kipsigas Malagasy, Moroccan Arabic, Niuean, and Standard Arabic.[7] Most of these languages allow ECM to non-subjects, hence the Theta-Criterion and the Projection Principle dictate that ECM must indeed involve movement.[8] It has been argued that this movement is to object position. We argue against a Raising to Object analysis, and in favour of one involving the lexically determined generation of a complement with an additional specifier position, into which Case can be assigned.[9] The structures are compared to Topicalization and Left Dislocation structures, and seen to have different properties, and so we propose to consider the ECM'd NP to be the subject of

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7. Sources for data in these languages will be given as they are discussed below.

8. Malagasy ECM occurs only to subjects, however, it too must be analyzed as involving movement. In Massam(1984) I argued differently, however data discovered since then in Randriamsimanana,1981 involving ECM from tensed clauses has called for a different analysis. In Massam(1984) I considered the subject NP to be base generated clause initially in ECM sentences, instead of clause finally. This exceptional word order was tied to the occurence of a particle ho which I believed to appear always and only in ECM clauses. However, in Randriamasimanana(1981) he shows that the particle ho appears in clauses other than ECM clauses, and furthermore it does not always appear in ECM clauses. It appears that ECM may occur to tensed clauses, and that the subject NP is external to CP in such clauses, and hence they must involve movement to this position. That ECM movement is restricted to subjects is due to the fact that in Malagasy all movement is so restricted. See Keenan(1972,1976,1978), Keenan & Comrie(1977), Randriamasimanana(1981), and Travis(1980,1984).

9. See Massam(1984) for an earlier version of this analysis, in which movement was considered to occur to COMP. This analysis posed problems, pointed out by G. Carden, p.c., in that ECM movement did not behave in all respects like other cases of movement to COMP such as Topicalization. The differences will be discussed below.

a CP predicate. We consider and reject also an indirect raising analysis and a prolepsis analysis. This discussion will lead us to the topic of Chapter 3: Tough Movement and Raising to Subject.

2.2 ECM with IP Subcategorization

2.2.1 English Data

Examine the following structures:

(1)a. People expect that Mooty will catch mice.
   b. Chandra expects Mooty to catch mice.
   c. Corbin expects her to catch mice also.
   d. Even Mooty expects herself to catch mice.
   e. In short, Mooty is expected to catch mice.

In (1b), in contrast with (1a), the thematic subject Mooty of the infinitival embedded clause is assigned accusative Case. This is seen in (1c), where it appears as her, not she. That her is governed by the matrix verb is evidenced by the fact that the embedded thematic subject can appear as a reflexive, coindexed with the matrix subject, as in (1d). And that the accusative Case of her is assigned by the matrix verb expect, (under government) is evidenced by the fact that her/she can appear as the matrix subject of a passivized verb as in (1e).

There are many other facts relating to constructions such as those

above. Discussed in detail in Postal(1974), is their interaction with other operations such as "Complex (heavy) NP Shift", quantifier scope readings, Gapping, and etc. Postal accounts for these facts by a Raising to Object analysis, whereby an embedded subject is raised to fill a subcategorized non-thematic object position in the matrix clause.

2.2.2 ECM analysis

As discussed in Chapter 1, a Raising to Object analysis is not available in GB theory, due mainly to the Projection Principle (see Chapter 1 (2)), which rules out non-thematic complement positions. Instead, Exceptional Case Marking is proposed (Chomsky,1981); an operation whereby the infinitival sentential complements of certain propositional attitude verbs (expect, believe, think,...) undergo S'-deletion. Under a phrase structure schema where S' is a projection of S, S'-deletion will result in a non-maximal complement, the subject of which will be in a position to be governed by the matrix verb (where government is defined as in (Chapter 1,Note 5), where α, a governor, governs β iff α and β are in all the same maximal projections). If Case is assigned under government (with an adjacency condition also imposed (cf.Stowell,1981)), then the subject of the embedded clause will be assigned Case by the matrix verb. The tree

below illustrates.[10]

(2)

```
                VP
               /  \
              V    S'
        [+S'-del]  / \
                  C   S
                     / \
                    NP  I'
                    ...
```
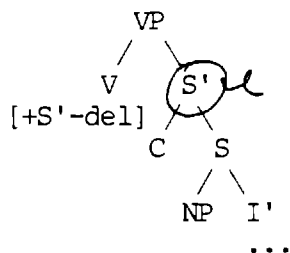
Under the version of X'-theory we are assuming (given in Chapter 1), S' is

not a projection of S, but rather of COMP, and S in fact is a maximal

projection, IP. Notice now, that the questionable rule of S'-deletion is

unnecessary; since S is a maximal projection, we can simply consider ECM

verbs to subcategorize for IP.[11] Since subcategorization for IP eradicates

only one of the two maximal projections which usually intervene between a

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10. For a different analysis of English ECM, see Kayne(1984). His work on
ECM will be discussed further below, although not in any detail.
Bouchard(1983) provides a critique of both Chomsky's and Kayne's views on
ECM, and provides a different analysis.

11. Another reason for positing S' deletion was provided by Subjacency
facts. Since the complement clause maximal projection did not act to
prohibit extraction, it was theoretically necessary to delete it. Under
the version of Subjacency outlined in Chapter 1, IP will not act to block
extraction, since it is properly (theta-) governed by the matrix verb,
hence the Subjacency facts are explained. A problem remains, however, as
to why subcategorization for IP is so restricted. It appears to be
subcategorized for only by verbs (unless sentences such as "Pyramus planned
for Thisbe to kiss him" involve a structure: [$_{PP}$ P IP]. The possibility of
IP-subcategorization might be determined by whether or not infinitival
clauses need to be assigned Case in a particular language, see Section 2.4
on Romance.

matrix verb and the subject of its complement, under the sisterhood definition of government, conditions for Case assignment would not be met, and there would be no explanation for ECM sentences such as those in (1b-e). There are two possibilities open to us We can consider ECM verbs to in fact be exceptional, in that they, and no other verbs, have an expanded government and Case domain, allowing Case assignment into the specifier of their complement. This seems redundant, however, as we must also specify that these verbs are unusual in that they subcategorize for IP.

The second possibility is to adopt the notion of government given in Chapter 1(2), and repeated in part below.[12]

(3) Chomsky(1985)

  a. α governs β iff α c-commands β and there is no γ, γ a
     barrier for β, such that γ excludes α
     (and there is no "closer" governor)

Under this definition of government, a matrix verb governs its complement, and also the specifier and the head of this complement. Since the subject of IP is the specifier of IP, a verb subcategorizing for IP will govern, and hence Case mark this subject.[13] Thus, in this view, ECM consists

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12. The definition of "closer" in this definition of government is provided in Chapter 1(6).

13. Case marking will always take place, in grammatical instances of IP subcategorization, since if it did not (i.e. if a [-CA] verb

simply in subcategorization for IP, and the name "Exceptional Case Marking" is in fact a misnomer, since there is nothing exceptional about the Case marking in constructions such as (1b-e). The tree in (4) illustrates.

(4)

```
         ... VP
            / \
           V    IP      ([+CA]=Case Assigner)
        [+CA] / \       (⟶ =Case Assignment)
            \ NP  I'
             \↗    ...
```

Given the independent motivation discussed in Chomsky(1985) for the definition of government in (Chapter 1(5)), the second view of ECM is preferable, since it requires only that we specify the subcategorization features of ECM verbs, which must be done in either view. Furthermore, subcategorization for IP or CP must be specified even independently of ECM, in order to account for the distribution of PRO.[14] However, if we allow

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subcategorized for IP), a Case Filter violation would result, since the NP subject would not receive Case. This subject could not be PRO, of course, since it is governed by the matrix verb.

14. This is necessary because some verbs taking sentential complements must be specified to take only the category CP (or NP) as a complement, since this stipulation accounts for the fact that their infinitival sentential complements necessarily have a PRO subject. The presence of PRO indicates that CP, and not IP is the complement, since otherwise PRO would be governed, and a sentence such as "Maigret forgot to put down his pipe." would be ungrammatical. (cf. the ungrammaticality of "*Maigret forgot Paris to be so foggy.", even though "forget' can appear with NP objects, and hence is [+CA]—"Maigret forgot this fact.") On the other hand, there are verbs which take infinitival complements, which never allow PRO subjects. This is accounted for by considering these verbs to necessarily appear with IP complements, in which PRO would be governed, hence ruling out sentences such as "*Lenina believes to be afraid of Mr. Savage.",

government into specifiers, we claim that any [+CA] verb can assign its Case to the specifier of its complement. Is this claim justified? The former view predicts that Case marking to a specifier will occur only under ECM verbs, and then only when these verbs are IP subcategorizers. This latter stipulation would be necessary because verbs which can take IP can also take CP, but when they take CP, to whatever extent they might be argued to exhibit ECM properties, so might other non-ECM verbs taking CP complements (See below).

In the following section, I will argue that the claim that any Case assigning verb may assign Case to its specifier is in fact justified, since it allows us to explain certain facts of complement distribution and Case Resistance, and is further substantiated by certain Hungarian structures.

2.2.3 Case Assignment to SPEC: English

2.2.3.1 The Prediction

The view we are arguing for predicts that all verbal Case-assigners can assign Case to the specifier of their complement.[15] We will now examine

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although "Lenina believes herself to be afraid of Mr. Savage." is acceptable.

15. We consider here only verbal governors (Case assigners). Given the definition of government assumed herein, INFL will not govern (and hence will not assign Case) into the specifier of a sentential subject, since it is not a lexical governor (and so subjects are barriers for elements within

evidence from English which bears out this prediction. We consider here

only cases of sentential complements; NPs will be discussed in Chapter 4.

There are four types of sentential complements to consider.

(5)   a. Infinitival IPs
      b. Tensed CPs
      c. Infinitival CPs
      d. Embedded question CPs (tensed and infinitival)

In each of these cases the required configuration might arise, that is,

the configuration in (6).

(6)
```
                    VP
                   / \
                  V   XP
                     / \
                   NP   X'
                       / \
                      ...
```
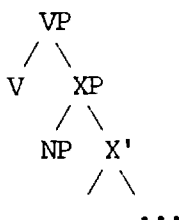

In case of (5a), we have the familiar ECM situation where the specifier NP

is the subject of the embedded IP clause and is Case marked by the matrix

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them). Prepositions are less clearly non-lexical. However, given the
ungrammaticality of sentences such as "*Who did Emma put her needlework on
the picture of t?", it appears that they do not lexically govern their
complements, since these complements act as barriers for antecedent
government. (Note that the PP itself cannot be considered the barrier
here, since the complement of the P can itself be extracted as in "What did
Emma put her needlework on t?" (see Baltin,1978, and Johnson,
forthcoming). This view requires the element for to be different than
other prepositions, since it can govern and assign Case into the specifier
of IP in sentences such as "Miss Alma was wishing for the doctor to see
her."

[+CA] verb.

Let us assume the following:

(7) The specifier of CP is reserved for operators.

(This stipulation is most likely derivable from an LF condition on interpretation, however, we will not attempt to derive it here.)

Now, in cases of (5b,c,and d) the NP in the specifier of XP can only be a [+WH] NP (we leave aside for the moment the question of other [+WH] categories such as PPs). Note that if Case assignment to a (by definition, governed) specifier position is the norm, we might expect a [+WH] element in the specifier of CP (henceforth "SPEC" for the specifier of CP, and "specifier" for all others) to be Case marked by a [+CA] verb just as is the specifier of IP. We will consider each case in turn.

2.2.3.2 Case Resistance: Tensed Clauses

For (5b)--tensed clauses--Case marking to a specifier containing a trace of a [+Wh] NP might result in sentences such as (8), which is generally considered ungrammatical (even given the weak "who/whom" distinction in English).[16]

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16. Apparently, some speakers of some British dialects allow sentences such as (8). This will be returned to below. Coreference will be indicated either by underlining or by indexing throughout the thesis.

(8) * [Whom [does Campion think [t̲[[t̲ stole the chalice?]]]]]

Such data, at first glance, suggest that it is incorrect to assume that

Case assignment to specifiers is the norm. However, the situation is not

so straightforward. First, it has been argued by Stowell that tensed

clauses are subject to the Case Resistance Principle.[17]

(9) The Case Resistance Principle (CRP) (Stowell,1981)

   Case may not be assigned to a category bearing a
   Case-assigning feature.

Stowell observes that [± Tense] is a Case-assigning feature, generated in

INFL, and moving to COMP, the head of S'. Hence, tensed clauses fall under

(9). In our view, we consider Tense to be a generated feature of COMP, so

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17. We adopt the Case Resistance Principle in this thesis, in as much as we
consider English sentences and prepositional phrases to move away from
Case-marked positions. However, it is not clear whether the Case
Resistance Principle holds in all languages. Since the data required to
test it are often quite subtle, and are largely unavailable to me for the
languages discussed in this and in following chapters, I will for the most
part remain agnostic on this point. Also unclear, is whether Stowell s
claim that it is the presence of a "Case Assigning feature" which causes
sentences and PPs to resist Case is correct. The claim becomes
questionable in a framework which considers that NPs with possessor
subjects contain mechanisms to allow internal Case assignment to these
possessors. See Chapter 4 for a discussion of NP-internal Case
assignment. One last point here, is that, while we adopt (some version of)
Stowell's CRP for English, we do not accept his claim that CPs must be in
Case marked chains. Rather we consider that CPs may, but need not receive
Case. See Levin & Massam,1984, and Chapter 5 for arguments regarding this.

that a [$\propto$ Tense] COMP selects for a [$\propto$ Tense] IP complement.[18]

If we accept Stowell's CRP (but see Chapter 5 and note 8 for discussion), it would seem that in (5b), tensed clause complements, the specifier of the complement will never be in a position to receive Case from the verb which selects it, because the adjacency requirement on Case assignment will never be met. However, there are complicating factors which we will discuss below.

2.2.3.3 Case Resistance: Infinitival Clauses

We turn now to (5c)—infinitival CP complements. According to Stowell's Case Resistance Principle, these cases might also be expected never to allow Case-marking into a specifier. This is because, in his system, infinitivals ([-Tense]), are also Case Resistant, but in a way different from tensed clauses. In fact, in Stowell's words: "A number of phenomena fall into place very nicely if we assume that a governing verb never assigns Case to a complement position which is occupied at D-structure by a to-infinitival clause, and that the clause intrinsically satisfies [the constraint that Theta-roles may only be assigned to A-positions which are

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18. A note here on "that-deletion": With Stowell, we consider that the complementizer "that" may be deleted only if the trace which results is properly governed. After Case Resistance movement (adjunction to VP), a CP is both (structurally) governed by, and coindexed with, the verb, and hence can be considered to be still properly governed.

associated with PRO or Case]" (=Stowell's 2.2.15) (Stowell,1981, p.177).[19]

It seems, then, that in the case of infinitivals, as well as tensed clauses,the ECM effect will never arise. In this case, it is because the Case which we expect to find in SPEC will never be assigned by a verb. Here too, however, there are complicating factors, to be discussed below.

2.2.3.4 Non Case Resistance: Wh-Clauses

The third case to be considered is (5d), embedded questions, such as those in (10).

(10)a. Linda knows [who [t iced the cake]] coz its all pink.
   b. Bill asked [what [the props-master had brought t
      to rehearsal]]
   c. Phyllis explained [what [PRO to feed t to the budgies.]]

Here, the issue is somewhat complex. Stowell considers that these clauses are not Case-resistant, given data such as in (11).

(11)a. Although [who [Jenny gave the doll to t]] amused us...
   b. We were talking about [what [Kara should name her doll t]]
   c. Tony considers [what [he chooses to eat t]] to be very
      important.
   d. Dawn explained [who the Sandman is t] to her children.

----

19. Note here also that an infinitival complement, while perhaps not Case-marked, is properly governed by a verb, since it is theta-marked by this verb. In Section 2.4 we will claim, following Raposo(1984) that in certain Romance languages, infinitivals must be Case marked.

He notes that these sentences contrast with sentences such as the
following:[20]

(12)a. *Although [that Jenny gave the doll to Harry]
          amused us...
    b. *We were talking about [that Kara should name her doll
          "Lettuce"]
    c. *Tony believes [that I read old grammars in my spare
          time] to be rather odd.
    d. *Dawn explained [that yeast makes bread rise] to her
          children.

Stowell attributes the contrasts above to the fact that the CRP is

"sensitive to the categorial status of the element present in COMP"

(Stowell,1981, p.393). He considers that the CRP applies to the lexical

head of a phrase, rather than to the phrase itself, and that COMP is the

head of S'. If the elements "that", "e", and "for" in COMP, bear Case

resisting features [+tense], then regular tensed and infinitival clauses

will be resistant to Case. However, he considers that in the interrogative

clauses, the Wh-NP is in the head position of S'. Since NP does not bear

any Case resisting features, the Case assigned to S' can be assigned,

without violation of the CRP. Stowell notes further that this ability to

assign Case to a clause only exists if the element in COMP may bear Case.

Hence, Wh-PPs in COMP do not render a clause non-Case resistant, as in (13)

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20. The distributional facts discussed here are for the most part true of
Infinitival complements also, however, we will use only tensed complement
examples.

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below.[21]

(13)a. *Although [in which book [she met Peter t]]
         doesn't affect Harriet...
     b. *Chrisanne was talking about [at which galleries [she'd
        had shows t]]
     c. *Peter considers [on whose piano [he plays t]] to be of
        prime importance.
     d. *Poirot mentioned [with which weapon [the murder had been
        committed t]] to the doctor.

While Stowell considers the Wh-word in COMP to act as the head of the

clause, for us, due to the X' schema we are assuming, this cannot be so.

However, his analysis need not be substantially changed if we allow Case to

be assigned to either a Specifier position, or to a head. Case Resistance

takes place only if neither the head or the specifier is able to "receive"

the Case. Thus, Case resistance will never occur if the specifier of a

clause (whether it be IP or CP) is able to receive Case, i.e., is an NP.[22]

   This analysis raises an immediate question, both for Stowell's analysis

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21. Wh-words such as "where, "why' etc. act as NPs in this regard, since
they also render a clause non Case resistant, as in: "Gabriel Oak explained
why the corn rick was on fire to Bathsheba." The difference between
"whether" and "if" is explained if we consider "whether" to be in SPEC, and
"if" to be in COMP.

22. As will be discussed below, this view depends on our claim, introduced
in Note 8, and to be argued for in Chapter 5, that sentences, while able to
be in Case assigned chains, are not required to be in Case assigned chains
(we will consider them to have inherent Case marking). This is because, it
is only if the sentential complement does not itself require the Case which
is assigned by the verb, that this Case is able to be assigned to another
XP, namely the NP in Specifier position. We will see in Chapter 4 that
this has implications for ECM into NP complements.

and our revision of it. If the Wh-NP in SPEC is able to receive the Case
that is assigned to the complement, why is this Case not able to be
realized on this Wh-NP, as it is on an "ECM'd" NP? In other words, why are
(14a-d) not grammatical?

(14) a. *Walter knew [whom [t could have delivered
        the newspapers]]
     b. *Ann was talking about [whom [t should take over
        the bookstore]]
     c. *Randy believes [[whom [t has been to Bali] to be an
        interesting question]
     d. *Doreen explained [whom [t abolished the monasteries]]
        to her mother.

There are two possible answers to this question. First, we might simply
rule out the possibility of two Cases being assigned to a single chain.
While the notion that chains may only be assigned one Case is usually
invoked to describe properties of A-chains, it might be possible to extend
this to all chains. This solution is conceptually awkward, however, as it
would mean that although Case resistance would not occur, since NPs are not
Case resistant, in fact, Case assignment would be unable to take place.
This in turn raises theoretical problems. In Stowell's theory, (cf.
Chomsky,1981) Case must be assigned to S' (=CP) for its theta role to be
visible. Thus, if Case is not assigned in (14), a Theta-Criterion
violation should result. In the Case theory assumed here (see Chapter 5),
Case assignment is not required for theta visibility of CPs, however, as
will be argued below in Chapter 5, Case assignment is not optional, and
hence the complicated scenario of no resistance and no assignment just

outlined is impossible.

There is a simpler explanation at hand, however, for the ungrammaticality of (14). It is, that while Case is assigned to the CP complement in (14), which does not resist it, due to the presence of the NP in its Specifier which receives it, the Case is not phonologically realized, due to a matching effect as below, where English makes the unmarked choice.[23]

(15) In an A-bar chain: $(Op, \ldots t^n, t^{n-1}, \ldots t^1)$,
The Case realized on Op must match the Case of t^i:
In the unmarked case, $\underline{i} = \underline{1}$.

We consider this constraint to be quite superficial. This is supported by the fact that, for some speakers, particularly, it seems, of some British English dialects, sentences such as (8) are considered marginal or acceptable.[24] Further support, both for the superficial nature of (15) and

----

23. The correct formulation of this proposal, would be more complicated than this, since languages (such as Hungarian) which do not select the unmarked case appear to have other constraints on matching, as will be discussed below. Also, it might be desirable to incorporate into this constraint, various "compatibility" statements (i.e. statements as to which Cases might co-occur in a chain.

24. This was pointed out in Kiss(1985). While the possibility of hypercorrection must be considered in these cases, it is notable that "*Whom came." is not a possible sentence, which argues that "whom" is possible, only if the Wh word has passed through an accusative Case marked position. Possibly, however, the confusion caused by a longer sentence creates an environment for hypercorrection which does not exist in the simpler cases.

for our claim that Case assignment occurs to specifiers, is found in the fact that in some languages, Case assignment can be seen to occur to SPEC, due to the fact that (15) does not hold. (See below for a discussion of Hungarian in this regard.)

Let us now briefly consider (16).

(16) *Bernicci knows [whom [t to videotape the sequence]]

Note that in this sentence, (15) might not be expected to rule out Case realization, since no Case at all is assigned to the variable, and therefore no Case realization conflict could arise.[25] Here, however, there is an independent reason why the sentence is ungrammatical, namely, that the variable is not Case marked. Recall (Chapter 1) that we are adopting the claim of Chomsky(1981) and of Stowell(1981) that NPs in A-positions must receive Case (or be PRO) in order to receive their theta-roles. (This will be revised in Chapter 5.) Hence, (16) is ungrammatical due to the Theta Criterion. (See below for a discussion of Romance languages, which handle sentences similar to (16) differently). Note that an explanation such as this is necessary even if we consider ECM verbs to be the only ones which allow Case assignment into Specifier positions, since (16) contains an ECM verb. At the very least, it demonstrates that in this view it is

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25. We might consider lack of Case not to match with Accusative Case, but as will be seen below, a consideration of Romance ECM informs us that more than this needs to be said.

necessary to consider the [+ECM] verb "know" to be both ECM and an IP subcategorizer[26]

2.2.3.5 Case Assignment to traces in SPEC

Stowell's account for the non resistance to Case of embedded Wh-clauses raises a second question also. This is: Is the presence of a Wh-trace in SPEC sufficient to render a clause non Case resistant? It would be predicted that it does, since, in general, traces are able to receive Case. This means that Case resistance should not rule out Case assignment to SPEC whenever SPEC is not empty, as was tentatively suggested above. The data which would determine the correctness of this prediction however, are indeterminate, for reasons having to do with independent aspects of GB theory. According to Stowell, there are four types of constructions relevant to determining Case Resistance. These are those in which a CP appears in an embedded subject position (from whence it cannot Topicalize), after a preposition, in the subject position under an ECM verb, and as object of a verb before another VP level modifier. (cf. egs 11) above) In order to test for the Case Resistance of CPs with traces in SPEC, therefore, we must extract from sentences in these positions. The results

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26. It also creates complications for a theory of ECM as involving structures with CP which somehow allow government of the subject position in that it seems that a verb cannot simultaneously select for WH and effect ECM to subject position. This strengthens the tie between IP subcategorization and ECM to subject position.

are ungrammatical.

(17)a.*Who did [although (that) you had met t] bothered
        Charlotte she kept quiet.
     b.*Which motorcycle were you talking about [t[(that) Chris
        had bought t?]
     c.*Which dress did Marilla consider[[t[(that) Anne wanted t]]
        to be ridiculous]
     d.*Who did Sherlock mention [t [(that) he had seen t] to Watson?

However, the ungrammaticality of these sentences is not due to the failure

of the CP to resist Case. In all cases (a-d), other principles are

violated, as is made clear by the fact that it is impossible to extract

from NPs as well as CPs in these positions. In (17a), the extraction of a

Wh-phrase from the sentence under examination violates the constraint

against extracting an element from an adjunct. This constraint also rule

out (18).

(18) *Who did although pictures of t bothered Charlotte,
      Terry bought them.

Similarly, extraction from NPs after (some) prepositions, as well as from

sentences after prepositions, is ungrammatical, thus arguing that the CRP

is not involved in the ungrammaticality of (17b)

(19) *Who was Martin talking about pictures of t?

In (17c) and (17d) also, ungrammaticality also arises if the clause

extracted from is an NP.

(20) a. *Who did Artie consider pictures of t to be bad?
     b. *Who did Paul mention pictures of t to the curator?

There is one last structure to be examined here. In cases of sentential objects where there is no second argument in the VP, extraposition of the object is string vacuous. Stowell argues, however that Case resistance does take place in sentences such as (21).

(21) Chrisanne thinks [(that) Dee bought the painting].

According to our claims above, this Case resistance should be prevented if the embedded clause contains a trace in SPEC. Unlike in the cases above, extraction is possible here, but due to the string-vacuousness of extraposition in such cases, there is no contrast between (20) and (21).

(21) Who does Chrisanne think [t [[t bought that painting?]]]

There is some indication however, that Case is assigned to the SPEC of the CP complement in (21). As mentioned above, for some speakers, especially, it seems, British speakers, sentences such as (22) are acceptable, where the Wh-word appears in the Case of the complement it was extracted from. This argues that the value for i in (15) above is variable in English.

(22) Whom does Chrisanne think [t [t bought that painting]]?

2.2.3.6 Conclusion

The English data we have examined argue that Case is routinely assigned to an element in SPEC, since we can explain the fact that embedded interrogatives, as opposed to non-interrogatives, do not resist Case. When we examined SPECs with Wh-traces to determine if these also did not resist Case, we found that extraction is ruled out on independent grounds in almost all relevant constructions, and where it is not, in the case of sentential objects, there is some grounds for the claim that there is no Case resistance here, and that Case is assigned to this SPEC. Hence, it seems that English ECM can be considered to result from the fact that certain verbs can subcategorize for IP, with nothing exceptional about the Case assignment in ECM.

2.2.4 Other Cases of IP ECM

2.2.4.1 Hindi ECM

There are many other languages, which, like English, effect ECM by subcategorization of IP complements. Wali and Joshi(1984) discuss Hindi and Marathi, arguing that an ECM analysis is empirically superior to one of

Raising to Object.[27] This is because Hindi exhibits quirky Case assignment (cf.Marantz,1984). In terms of Chomsky(1984), we can consider that Case assignment consists of two subparts: Case assignment, and Case realization. In English, structural Case, (accusative and nominative) is assigned and realized at S-structure. (This is not the case for inherent Case, such as genitive, which is assigned at D-structure, and is theta-related, as will be discussed below in Chapter 4.) In Hindi and Marathi, however, as Wali & Joshi show, the Case that a verb assigns its object is assigned at D-structure, but is not realized until S-structure. Furthermore, certain conditions must hold for it to be realized, since the Case of the object of a Passive verb cannot be realized in object position, thus forcing movement, just as in English.[28]

(23) (Hindi)
    a. Raajne Sunil-ko phatkaaraa.
       Raaj   Sunil-Acc scolded
       "Raaj scolded Sunil." (W&J,2a)

    b. Sunil-ko phatkaaraa gayaa
       Sunil-Acc scolded   Pass
       "Sunil was scolded."(W&J,2a2)

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27. They also argue against a Control analysis.

28. The numbers after the examples refer to the example numbers of Wali & Joshi(1984). In Appendix I, glosses are explained for all data.

(24) (Marathi)
   a. Minini Ravi-laa khadsaavla.
      Mini   Ravi-Acc scolded
      "Mini scolded Ravi." (W&J,2b)

   b. Ravi-laa khadsaavla gela
      Ravi-Acc scolded   Pass
      "Ravi was scolded." (W&J,2b2)

Wali & Joshi show that the same effect holds of Raising to Subject also,

as shown in the Marathi examples below.

(25) a. Asa dista ki Mini karapt jhaali aahe
      it seems that Mini corrupt become Aux
      "It seems that Mini has become corrupt." (W&J,3a)

   b. Mini karapt jhaaleli diste
      "Mini seems to have become corrupt." (W&J,3a2)

(26) a. Asa dista ki Mini-ni Ravilaa paahyla
      it seems that Mini-Erg Ravi-Acc saw
      "It seems that Mini saw Ravi." (W&J,3b)

   b. Mini-ni Ravi-laa paahylela dista
      "Mini seems to have seen Ravi" (W&J,3b2)

In ECM, however, the Case which appears on the ECM'd NP is not that

assigned by the embedded subject, but rather, that assigned by the matrix

object, in both languages. (Note also that the assignment of Case to the

specifier of the complement appears to undermine Case Resistance, as we

would predict in a language which has Case Resistance.)

(27) (Hindi)
    a. Raaj maantaa hai ki Sunil bahut karapt hai
       Raaj believes   that Sunil very corrupt Aux
       "Raaj believes that Sunil is very corrupt." (W&J,4a)

    b. Raaj Sunil-koo bahut karapt maantaa hai
       Raaj believes Sunil to be corrupt." (W&J,4a2)

(28) (Marathi)
    a. Mini samajte ki Ravi karapt aahe
       Mini considers that Ravi corrupt Aux
       "Mini considers that Ravi is corrupt."(W&J,4b)

    b. Mini Ravi-laa karapt samajte
       "Mini considers Ravi to be corrupt." (W&J,4b2)

Wali & Joshi show that this is confirmed by the fact that inanimate

object NPs which are usually assigned null Case at D structure, must take

an overt object Case if they are subjects embedded under ECM verbs and thus

the inherent animate/inanimate distinction is lost.

(29) (Hindi)
    a. Raaj-ne patthar (*patthar-ko) phekaa
       Raaj-Erg stone   -Acc threw
       "Raaj threw the stone." (W&J,5a)

    b. Raaj patthar-ko (*patthar) bhagwaan maantaa hai
       "Raaj stone -Acc   god   believes
       "Raaj believes stone to be a god." (W&J,5a2)

(30) (Marathi)
    a. Minini dagad (*dagadaa-laa) phekla
       Mini   stone   -Acc threw
       "Mini threw the stone." (W&J,5b)

    b. Mini dagdaa-laa (*dagad) dev samajte.
       Mini stone -Acc   god considers
       "Mini considers stone to be a god." (W&J,5b2)

These facts are explained if we consider that verbs in Hindi and Marathi assign Case at D-structure, and that this Case takes one form if a theta relation holds between the Case assigning verb and the NP to which the Case is assigned, and another form if there is not such a relation. At S-structure, Case is realized in a form depending on the Case assigned, under conditions including government, and some other condition which explains why movement is forced in Passive constructions. This second condition can be described, in the theory of Case to be argued for throughout this thesis (see also Levin & Massam,1984), as due to the fact that there are always at least two prerequisites for successful Case assignment. The first is that a governor be associated with a Case, and the second is that this governor have the feature [+CA]. In Hindi and Marathi, then, the Case associated with the verb is assigned at D-structure regardless of the value of the feature [+CA] for the verb. However, this Case cannot be realized unless governed by a [+CA] element at S-structure. Hence, in passive, where the verb is [-CA], movement is forced. The same situation holds for subjects of infinitives as in the raising examples above.[29]

Two other points are of particular interest. An ECM'd NP cannot act as an antecedent for a reflexive in the embedded clause (these reflexives may

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29. Wali & Joshi also provide other arguments for ECM in Hindi and Marathi, for which we refer the reader to their paper.

take only subjects as their antecedents). In this, Hindi is unlike

Icelandic, to be discussed below.

(31) a. (Hindi)
        Raaj Jitan-ko apanaa sabse baraa dushman maantaa hai
        Raaj Jitan-Acc self's greatest enemy believes
        "Raaj believes Jitan to be self's (*J) greatest enemy."
        (W&J,7a2)

    b. (Marathi)
        Mini Ravi-laa swataabaddal udaasin samajte
        Mini Ravi-Acc self-about apathetic believes
        "Mini believes Ravi to be apathetic to self (*R)." (W&J,7b2)

   Also, ECM is impossible to subjects of embedded clauses which are

idiomatic. Hence:

(32) a. (Hindi)
        uski roti (*uske roti -koo) paki hui samajho
        his bread his bread-Acc cooked   consider
        "Consider his bread cooked (=goose cooked)" (W&J,14a)

    b. (Marathi)
        tyaaci poli (*tyaacaa poli -laa) pakleli samjaa
        his   bread his   bread-Acc cooked consider
        "Consider his bread cooked (=goose cooked)" (W&J,14b)

   This ungrammaticality might be due to the fact, that in ECM structures,

the speaker's belief in the existence of the ECM'd NP is entailed, as

exemplified in the following sentences. The effect is strongest with small

clauses as in (33c).

(33) a. The poet believed that fairies were at the bottom of
        his garden.
    b. The poet believed fairies to be at the bottom of his
        garden.
    c. Miles considers ghosts beautiful.

Thus, the English counterparts of the Hindi and Marathi sentences above are also not entirely acceptable (but see below).

(34) ??I consider his goose to be cooked.

2.2.4.2 Icelandic ECM

Thráinsson(1979) also discusses ECM, in Icelandic, which he argues to be Raising to Object.[30] Of interest here is that in Icelandic, an ECM'd NP appears with the Case that is assigned to it by the embedded verb if this Case is inherent, that is, dative or genitive, rather than nominative, as seen below.

(35) a. Mér líkar við hann
       "I (Dat) like him" (T,6.25.1)

     b. Vindsins gætir minna hér
        "The wind (Gen) feels less here."
        (i.e."The wind is less noticeable here.") (T,6.25.2)

(36) a. María telur *mig/mér líka við hann
        Mary believes me (*Acc/Dat) to like him." (T,6.26.1)

     b. Ég tel *vindinn/vindsins gæta minna hér
        I believe the wind (*Acc/Gen) to be less noticeable here."
        (T,6.26.2)

This is in contrast to ECM in cases where the Case that the lower verb would assign is nominative. Here, the ECM'd NP shows up as accusative.

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30. We will not argue for an ECM analysis of Icelandic here, but from the data Thráinsson provides, it appears that an ECM analysis is not problematic, given our theoretical assumptions regarding government, Case, etc.

(37) a. Ég tel Maríu vera fífl
"I believe Mary (Acc) to be a fool." (T,6.2.1)

b. formaðurinn áleit foreldrana hafa farið heim
"The chairman considered the parents (Acc) to have
gone home." (T,6.2.2)

As with the Hindi and Marathi data, the Icelandic facts above can be
explained by a theory of inherent Case which contains two factors; the
existence of a Case to be assigned, and the ability to assign it.   In the
(35) and (36) sentences, the embedded INFL assigns its Case as
D-structure.[31]

According to Thráinsson, Icelandic is unlike Hindi, in that it permits
idioms to be ECM'd (where, Thráinsson states, torfalög is never used except
as the "object" of gjalda "pay", and smiðshögg is likewise used only in the
idiom of (38b).)

(38) a. Ég tel   torfalögin hafa verið goldin
"I believe duty to have been done."(T,6.32.2a)

b. Ég tel smiðshöggið hafa verið rekið á verkið.
"I believe the job to have been finished." (T,6.32.2b)

Contrary to what was said above, Thráinsson considers that idiom chunks
in English may also be ECM'd. And in fact, the subject of the idioms he

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31. This view upholds the Uniformity Condition of Chomsky(1985) (see
Chapter 4 below) if we consider that the embedded verb can be said to Case
mark the embedded subject even though realization takes place under
government by the [+CA] matrix verb. Possibly, the embedded subject is
Case marked twice. This structure is similar to Tzotil structures
involving ECM into NPs which will be discussed in Chapter 4.

uses can be ECM'd more easily than can goose above. (Thráinsson judges

such sentences to be acceptable, but I consider the second and third of

them less than entirely so)

(39) a. I believe tabs to have been kept on Pip.
    b. ?I believe heed to have been paid to Blind Pew's warning.
    c. ?I believe advantage to have been taken of Rebecca.

Icelandic is also unlike Hindi and Marathi in that a subject referring

reflexive in the embedded clause is able to refer to the ECM'd NP, as seen

in (40a) (or, in fact to the matrix subject as in (40b)). Reciprocals may

refer only to the embedded ECM'd subject, as in (40c).

(40) a. Ég tel Jón$_i$ hafa rakað *hann$_i$/sig$_i$.
         I believe John$_i$ to have shaved *him$_i$/himself$_i$ (T,6.5.1)

    b. Jón$_i$ telur mig hafa svikið *hann$_i$/sig$_i$
       John$_i$ believes me to have betrayed *him$_i$/himself$_i$

                                                            (T,6.6.1)

    c.*Mennirnir töldu mig hata hvor annan
       The men believed me to hate each other." (T,6.7.1)

2.3 Case Assignment to SPEC--Hungarian

Supporting our claim that Case marking the specifier of a complement is

an option unexceptionally available to Case assigning verbs are the

Hungarian data brought to light by Julia Horvath, as cited in

Chomsky(1981). In Hungarian, it appears, a Wh-NP may optionally appear

with the Case which is assigned not by the verb which assigns a theta role to the position from which it moved, but rather, by a verb which assigns a theta role to the sentential complement from which the Wh-element is extracted. These facts were discussed by Kiss(1985), from whom these data are taken.[32]

(41) a. Kik   szeretnéd,   ha eljönnének t,...
         Who-Nom you-would-like if came

      b. Kiket   szeretnél,   ha eljönnének t,...
         Who-Acc you-would-like if came

Kiss makes the following claim.

(42) (=Kiss,11i)
     A transitive verb may optionally Case-mark into the COMP slot
     of its sentential object.

As discussed above, we do not consider Hungarian to differ from English, or other languages with respect to (42). However, in English, the Case morphologically realized on a Wh-word will always be the Case assigned to the theta position with which it is associated, that it to the tail of the A-bar chain. In Hungarian, this is not the case. However, as Kiss shows, the Case realization on the Wh-word is not entirely free. Considering the Case relationship between a trace and a Wh-word to be one of inheritance, she states the following:

- ---------

32. The following two sentences contain parasitic gap adverbial clauses, which we have omitted here (see (45) below in text). The examples are from the handout of Kiss(1985).

(43) (=Kiss,11i)
    If an element of an A-bar chain is both Case-marked by a
    Case-assigner and inherits a Case, the more marked one of
    the two Cases is realized morphologically.

This is seen below, where the Case assigned to each trace is marked in

capital letters.[33]

(44) a. [[*Kik/Kiket   [mondtad   [t(ACC) [hogy [szeretnél
        Who-NOM/Who-ACC you-said   that you-would
                                                        -like[-def]

        [t(ACC)   ha eljönnének t(NOM)]]]]]]]]
                if came
        "Who did you say that you would like it if they came?"

    b. Kitöl/*Kit   szeretnéd/l,   [t (ACC) hogy ajándékot
       Who-Abl/Who-Acc you-would-like   that gift-Acc
       kapj t (ABL)
       you-receive
       "Who would you like to receive that gift from?"

Other constraints hold also. For instance, Kiss discusses the fact that

a sentence such as (44) which contains an additional clause containing a

parasitic gap, may not have a nominative Wh-word, but rather, must have one

in the accusative Case.[34]

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33. I have altered the order of the complementizer and the trace from
Kiss(1984) to suit our assumptions regarding phrase structure. This,
according to Kiss (p.c.) does not affect any crucial aspects of Hungarian
syntax.

34. Kiss's paper is in fact on parasitic gaps, and she develops a Case
based theory of their distribution.

(45) Kiket/*Kik   szeretnél/d,   ha eljönnének t anélkül,
      Who-Acc/Who-Nom you-would-like if came   without-it
      hogy meghívtál-volna ec
      that you-had-invited

It is clear then, that in Hungarian, verbs may assign Case to the
specifiers of their complements. Whether this Case shows up
morphologically on the Wh word which has passed through this specifier is
dependent on other factors, which appear to be independent of the ability
of the verb to assign Case into SPEC.

2.4 Case Assignment to Specifier of IP-Romance

2.4.1 Italian and French ECM

In this section we will examine what we consider to be another example
of Case Assignment to the Specifier of IP, with strikingly different
properties from those examined so far. Here, we do not consider the Case
to be assigned by the matrix verb, but rather by an element (either an
auxiliary verb, or an index) in COMP, although in some cases the origin of
the Case assigned is in fact the matrix verb. In spite of these
differences between the ECM cases discussed above, and those to be
discussed below, the broad outline is the same: an element in a head
position assigns Case to the specifier of its complement.

Kayne(1981,1984) and Rizzi(1981,1982) discuss certain constructions in French and Italian respectively, which they consider to involve Case assignment into COMP. The basic facts are as follows. French and Italian, unlike English, Hindi, and Icelandic, etc. do not allow IP complements of Case assigning verbs, and hence never exhibit ECM in the usual sense.[35]

(46) a.*Je crois [Jean être malade]
        "I believe John to be sick."

     b.*Mario affermava [questa donna non volerlo sposare] (R,1982,3b)
        "Mario stated this woman not to want to marry him."

In both French and Italian, however, sentences such as those above, (with matrix verbs such as croire "believe", juger "judge"; and constater "to determine"; ritenere "believe", and affermare "assert") are permissable if the subject of the embedded infinitive has been extracted, as below.

(47) a. Qui crois-tu être malade?
        Who do you believe to be sick?

     b. Le garçon que je crois être malade..
        the boy who I believe to be sick...

     c. Quante persone ritieni essere in grado di pagare
        il riscatto?
        "How many people do you believe to be able to pay

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35. Such complements are arguably allowed in these languages, since both exhibit Raising to Subject constructions, which, for Binding theoretic reasons are generally analyzed as involving IP complements (see Chapter 3). IP subcategorization in Romance will be discussed further below. Pearce(1984) presents interesting evidence that Old French allowed overt subjects inside infinitives, in a way analogously to modern causative constructions.

the ransom?   (R,1982,3.35a)

  d. La donna che Mario affermava non volerlo sposare era
     mia sorella.
     The woman who M. stated not to want to marry him was
     my sister." (R,1982,3.2b)

Kayne, and Rizzi(1982)(following Kayne), account for these facts with

analyses in which the matrix verb assigns Case to COMP, thus permitting the

A-bar chain which contains a trace in COMP to satisfy the Case Filter.

Questions arise as to why this is possible only with certain Case assigning

verbs[36], how the original trace receives Case (assuming variables must

receive Case), and why such a phenomenon in this exact form is not

witnessed in English, or in other languages.[37] We will answer these

questions below. For us, given that the normal path of Wh-movement is

through SPEC, not COMP, the question arises also as to whether these

structures involve Case marking to SPEC. At first glance this appears to

be the case, however, given further data, to be discussed immediately, this

potential claim becomes weakened.

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36. Rizzi considers this due to the fact that other infinitives are
"COMPless" and hence cannot have elements moved into them,, while Raposo
considers that [α Tense], present in only some COMP positions, is crucial
for movement to COMP.

37. Kayne answers these questions in certain ways which tie together
differences between French and English with respect to prepositional Case
marking. We will depart from his analysis here. In fact, our analysis is
in some ways the reverse of Kayne's, as he proposes Case assigning (null)
prepositions in COMP for English and not French, whereas we propose
something similar to this for French and not English.

2.4.2   Italian and Portuguese Aux Fronting

In literary Italian, embedded infinitivals may have an overt subject NP
if the sentence contains an aspectual auxiliary or copula which appears
clause initially.

(48) a. Suppongo non esser la situazione suscettibile di ulteriori
          miglioramenti
          "I suppose not-to-be the situation susceptible of further
          improvements." (R,1982,3.6a)

     b. Questa commissione ritiene aver loro sempre ottemperato
          agli obblighi previsti dalla legge.
          "This commission believes to-have-they/them always
          fulfulled the legal duties." (R,1982,3.6c)

Rizzi(1982) considers these constructions to involve movement of an
auxiliary to COMP position, where it is able to assign Case to the subject
of the infinitive clause. Raposo(1984,1985) notes that in this respect,
Italian is similar to European Portuguese (henceforth Portuguese), where
the so called "inflected infinitival" may appear embedded under certain
epistemic verbs, such as pensar, achar "to think", acreditar "to believe",
and verbs of saying such as dizar "to say", and declarar "to declare", if
the clause contains an auxiliary verb in initial (as opposed to the normal
preverbal) position. The auxiliary verbs include ter "have", poder "may',

estar a "be (progressive)", ser "be (copula)" etc.[38]

(49) a. O Manel pensa [terem os amigos levado o livro]
        M. thinks to have-infl his friends taken the book away
        (R,1985,33)

     b. *O Manel pensa [os amigos terem levado o livro]
        (R,1985,32)

In accounting for these facts, among others to be discussed below, we
consider, (cf.Raposo) that in these Romance languages, infinitivals are
nominal and hence must be Case marked to satisfy the Case filter.[39]

In this way, infinitivals are unlike tensed clauses. This is based on
the fact that while tensed clauses may, infinitivals may not appear in a
position subcategorized by a non-Case assigning category such as N or A
without the presence of a preposition (the same preposition which occurs
before a NP in these environments).

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38. Inflected infinitivals may also appear in other positions, in which
case, Raposo argues, they are NPs, rather than clausal. See
Raposo(1984,1985) for a complete discussion of these structures. I am
indebted to Luigi Rizzi for bringing Raposo's work to my attention.

39. Although they are nominal, Raposo argues that they have a clausal
structure, seen by the fact that the verb in them can assign Case directly
(i.e.not prepositionally). If there are no VP complements (cf.
Chomsky,1981), then the subject of these clauses must be able to be PRO,
hence CP, and not IP must be the category.

(50) a. *O receio [chumbar o exame] VP
        "The fear (of) to fail (failing) the exam"

     b.*O receio [os exames]
        "The fear (of) exams"

     c. O receio que o rapaz chumbe o exame VP
        The fear that the boy fails the exam

     d. O receio de chumbar o exame VP

     e. O receio de os exames   (R,1985,1a,2a 11a,3a,4a)

A similar situation exists in Italian, and in French (cf. Rizzi,1982,

Kayne,1984). A potential problem for Raposo's view is the fact that

infinitivals in Romance languages may appear after Raising to Subject verbs

such as the English verb "seem". For example, in Italian:

(51) a. Piero mi sembrava [essere molto stanco]
        "Piero seemed to me to be very tired." (R,1982,1.131)

However, L. Rizzi points out (p.c.) that certain data lead us to

conclude that verbs such as sembrare can in fact assign Case, although this

Case cannot be assigned to an NP, as is seen by the impossibility of (52).

(52) *It seems his mother to annoy Karel.

Rather, the Case assigned by seem is one which is assigned to APs. This is

seen by the fact that an AP small clause must appear adjacent to seem in

the following sentences.

(53)a. Katy seemed [$_{AP}$ t brave] to Elsie.

b.*<u>Katy</u> seemed to Elsie [$_{AP}$ <u>t</u> brave]

Given the similarity between the data in (53) and those in (54), we might conclude that (53b), like (54b) is out due to the violation of the adjacency principle on Case Assignment.[40]

(54) a. Kay sent a letter to her lover from Mexico.
 b.*Kay sent to her lover a letter from Mexico.

It remains to be said, then, that IP, as well as AP, but not NP, may accept the Case which is assigned by <u>seem</u>. This rules out (52) and (53) above, while allowing us to explain the configuration of data in (50) regarding the distribution of infinitivals in Romance, by maintaining Raposo's claim that such clauses require Case.

We now have an explanation for the lack of the English type of ECM in these Romance languages, since if an infinitival requires Case, it will be impossible for a verb's Case to be assigned to any other element than the infinitival itself (and hence to the head of the infinitival-COMP) if a grammatical sentence is to result.[41] An important side-effect of this view, pointed out by L. Rizzi, is that we would expect Romance verbs to be

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40. This depends on Case assignment being obligatory, since only then will the AP be required to be adjacent, not, as is usually the case, because it requires Case, but rather, because the Case must be assigned to an element, and it is the only element which can accept this Case.

41. This idea is due to Luigi Rizzi p.c. See Chapter 4 for a discussion of how the same facts hold for English (but not several other languages) with respect to ECM into NPs.

able to subcategorize for IP, so long as they are in the Passive form, since then the embedded subject could move to matrix subject position, as in (55a), analogously to (55b).

(55) a. *Mario è affermato essere simpatico.

b. Pierce was generally believed to be a kind man.

This is not the case in Italian. as seen above. However, if we remember that IP may not be freely generated, but rather, must be subcategorized for, the data above become more easily explained. While it would be possible indeed for a verb to subcategorize for IP, while being unable, in the active form, to exist in a grammatical sentence with such a complement (due to the Case Filter) it is not necessary that such verbs exist. Hence, the absence of such verbs in Italian is not troublesome. That our theory should predict the possibility of such verbs is clear from the following French data (cf. Rouveret & Vergnaud,1980 and Dominicy,1979 cited by Kayne,1984).

(56) a. *Je suppose Farida être algérienne.
     b. Farida est supposée être algérienne.

The claim that Romance infinitivals require Case, then, appears to explain the lack of the English type of ECM in Romance. Still to be explained, however, is the Romance type of ECM data discussed above.

Raposo, following Rizzi, considers that the auxiliary in (49) moves to

COMP (an argument for this, given by Rizzi, is that the fronted auxiliary is in complementary distribution with other COMP elements such as di and se "if").[42] Rapsoso considers this movement to be required by the Case Filter, since he considers the AGR element in the inflected infinitive to be nominal, and hence to require Case independently of the CP in which it appears. By moving to COMP, it is in the position assigned Case by the matrix verb, and hence the Case Filter is satisfied. In an infinitive clause, there is no AGR to require Case. In a tensed clause, the nominal AGR can be assigned Case by the verbal Tense element which also appears in INFL (This concept of AGR as nominal and Tense as verbal Raposo attributes to Reuland,1983). In Italian, Raposo considers that regular infinitivals also include AGR, which is morphologically null.

2.4.3   The Proposal

In the spirit of Raposo although departing from the letter of his proposal in order to incorporate the Wh-movement facts of Italian and French discussed above[43], we propose the following view.[44]

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42. Rizzi also claims that elements such as se move into SPEC at LF, in order to explain facts similar to those noticed by Chung & McCloskey(1983) here, with respect to the impossibility of extraction of why from clauses with se.

43. Raposo discusses these, using an analysis similar to Rizzi's.

44. See following chapters, and in particular Chapter 5 for a justification of this notion that Cases exist independently of a feature of Case

(57) α can assign Case if and only if:
    i) α has a Case associated with it (for INFL, via AGR)
    ii) α contains the feature [+CA]   (for INFL, via Tense)

In tensed sentences, (57i) is satisfied by the presence of AGR, and (ii) by the presence of Tense. In a regular infinitive, there is neither AGR nor Tense and hence INFL cannot assign Case. In the Portuguese inflected infinitival, the presence of AGR satisfies (i), but there is no Tense to satify (ii), and so INFL would be expected not to be able to assign Case.[45]

However, if we assume that the COMP position of complements embedded under certain verbs contains a Case assigning potential, that is a feature [+CA], then, when AGR, and its associated Case, move to COMP, with its [+CA] feature, the result is an element fully able to assign this Case to the subject position of the embedded infinitival complement (i.e. to the specifier of the complement of COMP). (We will discuss below the interaction of this with government.) Note that this constitutes an instance of Case assignment to a Specifier position, here, as in English

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assignment.

45. Raposo points out (citing Mateus,et.al.,1983 and Moreira da Silva,1983) that in Brazilian Portuguese, and a substandard dialect of European Portuguese, movement of an auxiliary is not required for Case assignment in the inflected infinitive. For us, this could be explained by a parameterization regarding the Case and the [+CA] feature in INFL. This appears to be necessary anyhow, since in some languages either or both of Agreement and Tense appear to be unnecessary for Case assignment to subject position.

ECM, the Specifier of IP.[46]

Let us now consider the three languages. Unlike Portuguese, Italian has no inflected infinitival. However, as noted above, under certain epistemic verbs and verbs of saying (essentially the same verbs as in Portuguese), infinitivals with lexical subjects are possible provided either fronting of the auxiliary takes place (in a manner essentially identical to Portuguese) or Wh-extraction of the subject takes place. In French, only Wh-extraction can be utilized to "save" such structures.[47] Notably, in these constructions in all three languages, no overt complementizer occurs (nor may an overt Wh-phrase, or a Wh-operator in Portuguese, according to Raposo), Case is somehow assigned to an embedded subject, and the possibility for the construction is determined by the matrix verb.

What of the sentences like (48) and (49a) but in which the auxiliary is not fronted (i.e. the normal case in French, and a derivational

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46. Raposo argues that under certain verbs (eg.epistemic verbs such as pensar "to think", but not volitional verbs such as desejar "wish"), COMP has a Tense feature (regardless of the fact that it is an infinitival) which allows AGR to move into it. Here, Raposo follows Jakubowicz's(1984) analysis of subjunctive clauses (See also Johnson,1982 and Picallo,1984). This might serve to explain why, in our view, these COMP positions are able to contain a [+CA] feature, if this feature is usually associated in INFL with Tense.This will be the case by definition (See Chapter1(5)) since IP is stipulated as not a barrier.

47. It is not clear why French should be unable to front auxiliaries, but presumably, this inability is linked to some other property of French as opposed to Italian and Portuguese.

possibility in Italian and Portuguese)? Here, COMP contains a Case assigning feature, but presumably no Case while AGR, in Italian and Portuguese, but not, perhaps in French, has a Case associated with it. However, independently they are unable to assign Case. There is one catch here. It could be argued, and in fact we do argue, that by virtue of being under a Case assigning verb COMP can indeed be said to have a Case associated with it (namely the Case which has been assigned to it by the matrix verb). However, although in this view COMP contains both a Case, and a [+CA] feature, these cannot be utilized. The question is then, why can't we get sentences like (46) and (49b)?

There is a second way in which the properties of COMP may be utilized. This is by Wh-extraction through SPEC. This possibility depends the existence of the following rule in Romance.[48]

(58) A Specifier and a Head are coindexed.

The existence of this rule, in Romance, but not in English, accounts for a variety of facts, such as the Romance requirement that a possessor agree in gender and number with a possessed noun, and the well-known "que/qui" phenomenon in French, which allows an element in COMP to properly govern a

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48. In regard to COMP/SPEC indexing relations I am grateful for conversations with Danilo Salamanca (Salamanca,1985) and Luigi Rizzi.

subject trace, thus avoiding the "that-trace" effect of English.[49]

(59) a. sa/*son mère
       "her/his mother"
    b. *sa/son père
       "her/his father"
    c. *son/*sa/leurs doigts
       "his/her/their fingers"

(60) a. L'homme que je crois qui a gagné.
        "the man who I believe that has won."

In Romance, COMP under certain verbs is a Case assigner. It may come to have a Case associated with it either by movement of an auxiliary (through INFL, and with AGR) to COMP, or by Case assignment into COMP by a governing verb. In the former situation, COMP will be coindexed with the subject position by virtue of the coindexation relation which plausibly holds between AGR and the subject. In the latter situation, COMP will be coindexed with the subject position just in case the element in this position has been extracted through SPEC, and is thus coindexed with COMP, via (58).

2.4.4   Interaction with Empty Operators

There is one final point to consider. Raposo argues that the inflected infinitival is impossible in situations where COMP (i.e. SPEC for us,

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49. The "that-trace" effect is that which rules out: "Who did Jude think (*that) t would teach him?". For discussion see, Chomsky(1981), Chomsky & Lasnik(1977), Kayne(1984), Pesetsky(1978,1980), Taraldsen(1978).

however the results are the same, given whatever version of the Doubly

Filled COMP Filter we assume) is filled with an empty operator. The

examples he uses are Tough Movement examples, which, as argued by

Chomsky(1981), involve an operator in COMP (=SPEC). In these structures,

the subject is PRO, and hence, the inflected infinitival would be

impossible, since AGR would govern PRO.

(61) *essas teorias são difíceis de memorizar-es/-mos/-em.
     "These theories are difficult to memorize-infl infin 2sg/1pl/3pl."
     (R,1982,74)

   Raposo's discussion of Tough Movement includes a discussion of

"impersonal" and passive constructions, which allow for the inflected

infinitive in Portuguese.

(62) a. essas teorias são difíceis de se memorizarem.
        "Those theories are difficult to be memorized."

   b. essas teorias são difíceis de serem memorizadas
       "Those theories are difficult for (one) to memorize."
       (R,1982,80,79)

   If the subject of an these embedded infinitival sentences may be

governed, but need not be Case marked, the possibility of such clauses here

is explained for us. Raposo states that such constructions, unlike regular

Tough constructions, may not licence a parasitic gap. He concludes that

they do not involve an operator. If the subject position is empty and

available to be moved into (and subsequently, out of), then these sentences

appear to involve Raising to Subject rather than Tough Movement. This

would explain the distribution of data. (See Chapter 3 for a discussion of Tough constructions.)

The above becomes more interesting when we consider data brought to my attention by Isabelle Haïk (p.c.). She observes that in addition to sentences such as (47a,b), the following French sentences are grammatical. This is true for Italian also, as seen in (63b).[50]

(63) a. Je crois être intelligents tous les gens de cette
          classe.
          "I believe to be intelligent all the people in this
          class."

     b. ?Ritengo [poter risolvere il problema] tutti gli
          studenti di questa classe.
          "I believe to be able to solve the problem all the
          students in this class."

It is at first glance difficult to accomodate this fact in the theories of Kayne, or Rizzi, or of that proposed here. However, under one view of Heavy NP shift, these data are explained. Engdahl(1981), notices that Heavy NP shift licenses parasitic gaps.

(64) John offended t, by not recognizing ec immediately,
     his favourite uncle from Cleveland.

Under some current assumptions, parasitic gap structures are licensed by

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50. Luigi Rizzi and Isabelle Haïk agree (p.c.) that these sentences are
better if the embedded verb is to be, and that they are not as good as the
sentences with Wh-movement discussed above.

the presence of an operator binding the real gap (t above), where there is

some locality constraint on the relation between either the real gap, or

its operator, and a second operator binding the parasitic gap. (See

Engdahl,1981,1983 Taraldsen,1981, Chomsky,1982, Pesetsky,1982, and

references therein.) In (64), the shifted NP could act instead of an

operator, to bind the real gap. However, it is possible that Heavy NP

Shift at least can involve the presence of an operator in the SPEC position

of the clause from which the NP is shifted. Thus, in the structure (63)

above, there can be posited an operator (or the trace of an operator if the

shifted NP is moved to adjoin to a category in the matrix clause) in the

SPEC position of the embedded clause. The presence of this operator then,

is sufficient to allow the Case assigning feature and the Case present in

the embedded COMP position to assign Case to the subject position of the

embedded clause, since here, as in the instances of Wh-movement above, the

embedded COMP position will be coindexed with the embedded subject

position.

2.4.5 Conclusion

We have tied the possibility for sentences such as (47), (48), and (49a)

to the subcategorization of certain verbs for complementizers with [+CA]

features in COMP. Thus, it is clear that such phenomena will not generally

exist. However, it is not entirely clear that they do not exist in

English, since ECM structures such as (69a) could conceivably have two

possible derivations such as shown in (65b,c). That some verbs in English

appear to subcategorize for [+CA] COMPs is seen by the grammatical

structure (66a) (vs (66b)), noticed by Kayne(1984). Notice that this

English sentence is also permitted in the shifted structure pointed out by

Isabelle Haïk.

(65) a. Who did Grant believe to be the culprit?
     b. who did Grant believe [$_{CP}$ t [$_{IP}$ t to be the culprit]]
     c. who did Grant believe [$_{IP}$ t to be the culprit]]

(66) Bredon, who I assure you to be the best add man in town...
     b.*I assure you Bredon to be the best add man in town.
     c. I assure you to be the best add man in town, that strange
        fellow who examines the iron staircase so carefully
        each morning.

2.5 Non-String-Vacuous ECM

2.5.1 Introduction

There is a group of languages, which unlike all of the languages

discussed above, clearly require syntactic displacement of a (non-Wh) NP in

ECM constructions. These are those in which the ECM'd NP appears in a

position distinct from its original theta position, and which generally

allow ECM of non-subject NPs. Some such languages are, Berber, Blackfoot,

Fijian, Greek, Ilokano, James Bay Cree, Kipsigas, Malagasy, Moroccan

Arabic, Niuean, Quechua, Standard Arabic and Zacapoaxtla Nahuat[51], and they

have been used to argue that an ECM analysis, as opposed to one involving

Raising to Object, is inadequate to explain the facts, and that therefore

the first clause of the Projection Principle (Chapter 1(2)) is incorrect.

While most of the work referred to here (such as for Fijian, Gordon,1980,

for Niuean, Seiter,1980 etc.) argues for a Raising to Object analysis,

without discussion of the Projection Principle, in Carden, Gordon and

Munro(1982) it is explicitly argued that the Projection Principle should

not be maintained in the face of, for example, the Fijian data. They

concede that analyses consistent with the PP are possible, but argue that

they are more complex than a Raising to Object analysis. In this section I

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51. Sources of data for most of these languages will be identified below in
the text. Not all of the languages mentioned here will be discussed in any
detail in this thesis. Of those which we will not discuss in detail: For
an analysis essentially compatible with the assumptions in this thesis, for
Quechua, see Lefebvre and Muysken(1982). In other frameworks: Ingria(1981)
and Joseph(1978) discuss Greek. Higgins(1981) discusses Zacapoaxtla
Nahuat, and Keenan(1976,1978) Keenan & Comrie(1977)
Randriamasimanana(1981), and Travis(1980,1984) discuss Malagasy.
Salih(1985) cites Ilokano data from Gerdts(1980) which, on first glance,
appears to be ECM with movement of the type discussed here. ECM of this
type needn't necessarily be permitted to non-subjects, since there are
independant restrictions in different languages as to which elements
(subjects, objects, prepositional phrases, adverbs, etc.) may be fronted
and hence receive ECM. In Malagasy, for instance, it is the case that only
subjects may be moved regardless of the "rule" involved. In many other
cases it is likely that somewhat superficial constraints such as
Case-matching, are responsible for the restrictions. Also, in French there
are constructions similar to those discussed in this section (see
Taraldsen,1983, and Haïk,1985), but in which the ECM'd element must be the
subject of the embedded clause. (See below for a discussion of these
constructions)

propose an ECM analysis of these constructions and examine their properties in some detail. Arguments are presented that show that within GB theory, a Raising to Object analysis cannot be maintained for Fijian even independently of the Projection Principle, since the properties of these constructions are distinct from those characteristic of raising (whether directly or indirectly) to an A-position. We will also consider, and reject, an analysis in which the ECM'd NP is base-generated in a non-thematic object position and related to an embedded argument in some way ("Prolepsis"). Data is presented from Kipsigas which suggest that a Raising to Object analysis should be ruled out in principle. Finally, the main complications of my analysis necessarily exist in a Raising to Object analysis also.

2.5.2 Fijian and Niuean Data

2.5.2.1 General Data

Before looking at ECM structures in Fijian, and Niuean we present some of the background on these languages. The Fijian data and information comes primarily from Gordon(1980), and the Niuean primarily from Seiter(1980).[52]

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52. Data from Gordon(1980) is indicated by "G" followed by the example number in her paper. I wish to thank her, and also Guy Carden, for helpful conversations. While almost all of the data cited are from her paper, I

Bauan Fijian is a dialect of the Austronesian language of Fijian spoken

in Fiji.[53] The basic word order is VOS, as seen in (67).

(67)   sa   mokuta na tamata qaqa   na nona meca   (h p.6)
        Emph smote art man   strong art his enemy
        "His enemy smote the strong man."

There is extraposition of sentential and heavy objects as seen in (68).

(68) a. e vinakata ko   Timaima [me   lako na   tagane]
        3s want   prop-art T.   sub-3s go   art man
        "Timaima wants that the man go."   (G,56a)
        (prop=proper/sub=subordinator)

     b. era a   raica na gone [na nona boto damudamu na
        3pl pst see   art child art his boat red   art
        tagane balavu]
        man   tall
        "The children saw the tall man's red boat." (G 3)

Fijian is a null subject language (see Rizzi,1982 for discussion of the

53. P. Geraghty (p.c.) notes that "Bauan" is used with two senses, first
to indicate a particular dialect, spoken on Bau, and second to indicate
what he dubs "old high Fijian", a sort of standard dialect most completely
represented in the Fijian Bible.

null-subject phenomenon) as seen in (69), where only preverbal agreement markers are overt.

(69) e a tagi (pro)   (G,9)
     3s pst cry
     "He cried."

Niuean is a Polynesian language spoken on the island of Niue. The basic word order is VSO (strict) as exemplified in (70a & b)

(70) a. Mitaki lahi [a   Niuē]
         good   very Abs Niue
         "Niue is very nice."   (S,1.72.d)

     b. Ne kai [he pusi ia]   [e   moa]
         Pst eat Erg cat   that Abs chicken.
         "That cat ate the chicken."   (S,1.73.a)

Niuean exhibits "Surface ergativity", that is, subjects of intransitive clauses, and objects of transitive clauses act as a class for the purposes of morphological Case marking, although for syntactic and semantic purposes the more familiar classification of subjects (of transitive or intransitive clauses) vs. objects is maintained.[54] The Surface-ergative Case marking schema is shown in (71a), and contrasted with the more familiar Nominative/Accusative schema. Surface-ergativity is exemplified in (70a & b), where in (70a), Niue, an intransitive subject, is in absolutive Case,

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54. See Levin & Massam(1984) and Chapter 5 for a more thorough discussion of surface-ergative Case marking. See also Marantz(1984) in particular for discussion of "deep" ergativity.

as is <u>moa</u> "chicken", a transitive object, in (70b), while <u>pusi</u> "cat", a

transitive subject, in (70b) is in the ergative Case.[55]

(71) <u>Case-marking in Nominative/Accusative,</u>
      <u>Ergative/Absolutive Languages</u>

Structural position	N/A	E/A
a. NP/S of transitive Verb	NOM	ERG
b. NP/S of intransitive Verb	NOM	ABS
c. NP/VP (of transitive Verb)	ACC	ABS

2.5.2.2 ECM Data

The operation which we are calling ECM, (arguing for the appropriateness

of this name below), occurs in Fijian with many verbs, and in Niuean with

very few.[56]

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55. Niuean Absolutive and Ergative Case markers are as follows (from
Seiter(1980):Absolutive-- <u>e</u> (Common), <u>a</u> (Proper/Pronoun). <u>Ergative</u>-- <u>he</u>
(Common), <u>e</u> (Proper/Pronoun). <u>Middle</u>--<u>ke he</u> (Common), <u>ki</u> (Proper/Pronoun).

56. It is interesting to note that in Niuean, the absolutive ECM verbs are
essentially causative verbs. This underscores the point made throughout
this thesis, that while there appear to be classes of verbs (such as
"tough" verbs, epistemic verbs, propositional attitude verbs, and causative
verbs) which cross-linguistically tend to develop grammatical function
relations with non-thematically marked NPs, the syntactic devices used to
effect these relations vary from language to language and from verb to
verb.

(72) a. Fijian ECM verbs
diva "wish", kila "think, know", lewa "decide",
namaka "expect, hope", vakatitigataka "doubt",
vinakata "want, wish" .. (Gordon)

    b. Niuean ECM verbs
toka "let", fakaata "permit", (absolutive)
manako "want, desire", loto "want, like" ("middle")
(Seiter)

The Fijian verbs in (72) appear with tensed clausal complements with

either ni or me complementizers. (There is no infinitive, as such, in

Fijian.)[57]

(73) a. e vinakata ko   Timaima [me   lako na tagane]
        3s want   prop-art Timaima sub-3s go   art man
        "Timaima wants the man to go." (G,56a)

    b. au kila pro [ni   vinakatai iko ko   Timaima]
        1s think   sub-3s want-prop you prop-art Timaima
        "I think that Timaima likes you." (G,59a)

The Niuean verbs in (72) appear with subjunctive clausal complements

----

57. It appears that ni is the unmarked complementizer, while me is
essentially subjunctive (Milner,1956). Churchward(reprint 1973) states
that ni is "temporal or explanatory" (p.23) while me is "imperative,
prospective or resultant" (p.24). However, Milner states that it is
difficult to predict which subordinator should be used. Gordon states that
which complementizer is used is idiosyncratic, i.e. lexically determined
and that for some verbs, either may be used, with a different meaning for
the verb associated with each one. There are other embedding particles
also. Agreement markers in embedded clauses appear on the complementizer.
Tense particles (a "past" and na "future") may appear before the verbal
base (Milner,1956).

with a ke complementizer.[58]

(74)   a. To nākai toka e   au [ke kai he pusi e   ika]
          Fut not   let Erg I Sbj eat Erg cat Abs fish
          "I won't let the cat eat the fish." (S,3.76a)

       b. Manako a ia [ke momohe   e nā   tama]
          want abs he Sbj sleep-Pl Abs pair child
          "He wants the two children to sleep." (S,3.75a)

Alternatively, the verbs in (72) can appear in structures where an
embedded subject or object appears before the embedded clause, and behaves
as an argument of the matrix verb. (Fijian also allows indirect objects,
possessors, and obliques to be ECM'd as will be seen below). In Fijian
this fronted subject or object appears before the matrix subject.

(75) Fijian ECM
      a. [ECM to subject]
         e vinakata [na tagane] ko   Timaima [me   lako t]
         3s want   art man   prop-art Timaima sub-3s go
         "Timaima wants the man to go." (G,56b)

----

58. It is not clear whether the constraint on movement from tensed clauses
is due to subjacency or Binding Theory.It might be that in this language, a
tensed CP always constitutes a barrier. This is unexpected, and appears
not to be the case in other languages discussed, where ECM is possible into
tensed clauses. This situation is reminiscent of the Tensed S Condition,
except that here it applies to A-bar movement. To anticipate -- Below we
will see that ECM-movement does appear to obey the Binding Theory, if the
relevant governing category can be the higher of the two CPs if the CP is
[-tense] and the lower one if the CP is [+tense]. This seems not
unreasonable, given a modular approach to Binding Theory, such as proposed
by Pica(forthcoming). However the fact that an embedded fronted topic is
not ECM'd, even if under a [+CA] verb, and the fact that similar
constraints apply on ECM movement in languages where there is in fact, no
movement, argue that Binding Theory is not relevant here. See 2.2.5.2
below.

b. [ECM to object]
```
au kilai    [iko] pro [ni    vinakata t ko      Timaima]
1s think-prop you       sub 3s want       prop art Timaima
"I think Timaima likes you." (G,59b)
```

(76) Niuean ECM[59]
a. [ECM to subject (Absolutive)]
```
To nākai toka e    au [e   pusi] [ke  kai t e   ika]
fut not   let Erg I   Abs cat    Sbj eat  Abs fish
"I won't let the cat eat the fish." (S,3.77.a)
```

b. [ECM to object (Absolutive)]
```
To nākai toka e    au [e   ika] [ke  kai he pusi t]
Fut not   let Erg I   Abs fish Sbj eat Erg cat
"I won't let the fish be eaten by the cat." (S,3.78a)
```

c. [ECM to subject (Middle)]
```
Manako a    ia  [ke  he nā tama] [ke  momohe   t]
want    abs he  Mid pair child Sbj sleep-Pl
"He wants the two children to sleep." (S,75b)
```

d. [ECM to object (Middle)]
```
Ne  manako a   mautolu [ke he kulī] [ke  lagomatai e
Pst want    Abs we-Pl-Ex to   dog   Sbj help        Erg
```

----

59. There are two types of ECM in Niuean. The first, involving causative verbs (see Note above), is uncomplicated, in that it involves transitive verbs which assign ergative Case to their subjects, and absolutive Case to either the sentential object, or to their ECM'd object. The second involves the Case marking associated with some perception, emotion and psychological state verbs such as onoono "look", and ita "angry" which are "intransitive" in that they assign absolutive Case to their subjects, and the so-called "middle" Case to their objects (Chung,1978 and Seiter,1980). ECM verbs of this type, such as manako "want" may take as a middle object either a clause (as in 74) or an ECM'd object (as in 76). Middle Case is oblique or prepositional, in that a middle object is unable to undergo rules such as Raising to Subject or ECM movement (Seiter,1980). (See Chapter 3 for a discussion of Niuean Raising to Subject.), and they act as obliques with respect to gap/pronoun strategies for questioning, clefting, etc. Thus, middle Case is like "of-insertion" (see Chomsky,1984, and Chapter 4) in that it inserts a preposition, although it is unlike the genitive "of" Case in that it is not "inherent", i.e. theta-related, since it can be assigned to non-thematic ECM'd arguments. We will discuss some structures like this in English, in the final section of this chapter.

Lemani t]
                     Lemani
                    "We wanted the dog to be helped by Lemani." (S,78b)

It is clear that the phenomenon distinguishing the sentences in (75) and

(76) from those in (73) and (74), unlike ECM in English, is not

string-vacuous. Ironically, it is the Projection Principle itself (in

conjunction with the Theta-Criterion) that tells us that movement must be

involved in (75) and (76).● To take (76b) as an example Since the NP ika

"fish" in (76b) receives its theta-role from the verb kai "eat" it must be

generated in object position, and hence must have moved from this position

by "Move Alpha".

The question arises, however, as to whether the movement (76) and (75)

is to object position, as argued for by Gordon and by Seiter. On first

examination, their arguments are convincing. In Fjian, for example, the

word order [V NP_i NP_j S'] where NP_i is in the canonical position of a

matrix object, suggests that NP_i has become a matrix object, since it

appears to have moved entirely out of its own clause. Furthermore, the

matrix verb appears with "proper/pronoun" agreement if the fronted element

is a proper noun or a pronoun. (See (75b) above, and also below) And

finally, according to Gordon, the fronted element can be passivized to

become the subject of the matrix clause. (This will be discussed further

----

60. We will see below that in some cases of this type of ECM, movement is
not necessarily involved, but rather base-generation of an NP in the
initial position, which is coindexed with a theta position NP.

in Chapters 3 and 5 below).[61]

Seiter's arguments for a Raising to Object analysis in Niuean involve
the fact that the fronted element appears with absolutive Case (i.e.
object of a transitive verb) or middle Case (i.e. object of an
"intransitive" verb, see Note above). even though it may have originated
in an ergative (i.e. subject of a transitive verb) or absolutive (object
of a transitive verb) position. This change in Case is seen by comparing
(74a) with (76b).

Both Gordon and Seiter present as an argument for a Raising to Object
analysis, the fact that the fronted argument is eligible to undergo further
raisings, if embedded under the appropriate verb (and in Niuean, if not
raised to middle). In the Fijian example below, Bale the thematic indirect
object of the lowest clause (where it is resumed by vua "for her"), acts as
the direct object of the highest clause. That it has passed through an
intermediate position which is governed (and Case marked) by the
intermediate verb vinakata "want" is determined by the fact that no other

----

61. Andrew Pawley, (p.c.) and Paul Geraghty (p.c.) state that native
speakers which they have consulted, do not allow Passivization of an ECM'd
element. (In fact, Geraghty and Pawley state that even the ECM sentences
without passivization are in some cases unacceptable.) Samu Topou,
consulted by myself, also found the Passive sentence ungrammatical. We
will consider this to be a "dialect" split, although when the Passivization
cases are discussed in more detail below (see especially Chapters 3 & 5),
the Fijian data will be subordinated to more clear cut cases of
ECM-plus-Passivization such as in Standard Arabic.

NP can front to be ECM'd by <u>vinakata</u>. (The Fijian cases of ECM with pronouns appearing in the theta position will be more fully discussed below.)

(77) <u>Fijian</u>
    <u>e a nuitaki   Bale ko   Wati me'u t
    3s pst expect-prop Bale prop art Wati sub 1s want
    vinakata mo volia vua   na motoka
    sub-2s   buy   for-her art car
    "Wati expected that I would want you to buy a car
    for Bale." (G,77d)

Within GB theory, the first objection to the analyses of Gordon and Seiter rises from the Projection Principle, which rules out non-thematic complements. However, since there is nothing to be gained by the maintenance of empirically inadequate principles, we must consider the possibility that the Projection Principle is simply incorrect in this regard, and that non-thematic complement positions must be allowed if full empirical coverage is to be attained.[62] However, in the following sections, we will see that this move would be unjustified, since, even leaving aside the question of the Projection Principle, there are several indications that the fronted NPs in structures such as those above are not, and must not be, in the matrix object position.

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62. In cases of small clauses, Schein(1982) has argued that the Projection Principle is unnecessary.(See also Williams,1983.) We will not discuss small clauses here, but will argue that for ECM, the Projection Principle should be maintained as a principle.

2.5.3 ECM--The Analysis

2.5.3.1 The Structure

For a Fijian sentence such as (75a), we propose the following structure.

(78)

```
                        CP3
                       /  \
                    COMP   IP
                          /  \
                        I'    NP
                       /  \      Timaima
                    INFL   VP
                          /  \
                      V(ECM)  CP2
                       /      /  \
                  vinakata  SPEC2  CP1
                   (want)    /     /  \
                           /     SPEC  C'
                  na tagane_i         /  \
                    (man)          COMP   IP
                                   /      /  \
                                 me     I'    NP
                                       /  \
                                    INFL   VP   t_i
                                            /
                                           V
                                           |
                                          lako
                                          (go)
```
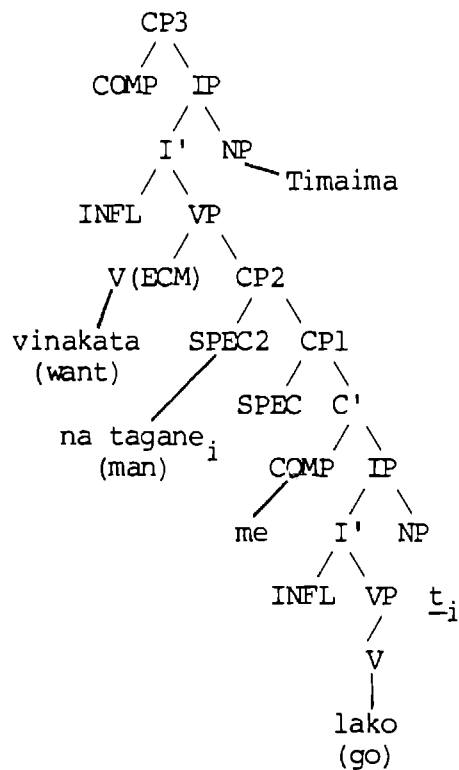
There are two essential parts to the analysis, with a third in the case of Fijian. First we propose that the clauses embedded under ECM verbs include an additional specifier position (SPEC2). This position is an

A-bar position, since no theta-role is ever assigned to it.[63] An NP

appearing in SPEC2 will be (by definition) governed by the matrix verb, and

hence will be Case marked by this verb if it is [+CA]. Third, in Fijian,

extraposition of the lowest CP1 projection over the matrix subject takes

place, as shown above.

The government and Case marking of the specifier position falls under

the definition of government and the conditions for Case marking outlined

in Chapter 1 and hence need not be discussed further here (but see below

for a discussion of the differences between these, and essentially

identical structures of embedded Topicalization in Niuean). Other aspects

of the analysis, however, must be further discussed. We will discuss them

after we have argued that there are problems for a Raising to Object

analysis. First, a note on Niuean word order.

2.5.3.2 A Note on Niuean Word Order

The major problem with Niuean ECM, among other languages, is not in fact

a problem with ECM at all, but rather is subsumed under the more general

problem of VSO languages. This problem consists in the fact that VSO

languages do not exhibit a VP at surface structure, although they do

exhibit processes which are best defined in terms of asymmetry of

----

63. In similar structures in French, however, the "SPEC2" position acts as
an A-position, see below in text.

government between subjects and objects or in terms of c-command, such as pronominal coreference, constraints and cross-over effects.

It should be noted that the ECM analysis proposed for Fijian holds for Niuean regardless of our theory of VSO word order, since, however the verb is determined to govern and assign Case to its non-adjacent object, it can be supposed to govern and assign Case to its non adjacent ECM'd NP in the same way. However, we will briefly discuss the topic here.[64]

For our discussion of Niuean, we will assume the theory of Sproat(1985) for VSO languages. Sproat, in discussing Welsh and Arabic considers D-structure representations to be configurational (SVO) with the S-structure (VSO) order resulting from the obligatory movement of INFL to an S-adjoined position, followed by movement of the verb, in order that cliticization may occur between tense, agreement and the verb. The movement of INFL is triggered by a rightwards directionality setting for government and Case assignment for all categories, including INFL, in these languages; a claim which is consistent with the fact that in these languages rightwards government and Case assignment is exhibited also in nominals, prepositional phrases, etc.

Under these assumptions we can see that Niuean ECM, is identical to that of Fijian except for the following distinctions. In Niuean, the clause

----

64. See Chung(1983), Sproat(1985), McCloskey(1983).

into which ECM occurs, is necessarily a ke-clause, that is, non-tensed (as

was discussed above). And in Niuean, extraposition does not take place (at

least not so as to effect a variation in the word order). In this regard,

Niuean is like English, Icelandic, Hindi and Romance.

2.5.4 Objections to Direct Raising to Object

2.5.4.1 Raising to Object vs. ECM

The main difference beween the analysis proposed in Section 2.5.3.1 and

an analysis of Raising to Object is that the former involves movement to an

A-bar position (although, as will be discussed below, this position

patterns with A-positions in some respects, in that it must form a chain

which requires Case) and the latter to an A-position.[65] The two types of

movement exhibit different properties. An examination of the

characteristics of ECM fronting shows that in some respects, it must be

considered as movement to an A-bar position, not to A-position, thus

supporting our analysis, and arguing against a Raising to Object analysis.

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65. As will be discussed below, similar movements in French are argued to
act as movements to A-positions, see Haïk(1985).

2.5.4.2 Case and Chain Theory

One central distinction between A and A-bar movement, is that the former is triggered by necessity due to the Case Filter. This has led to the characterization of A-movement as "Movement as a Last Resort" (Chomsky,1984). It has been stated formally as a condition on A-chains, in the chain theories of Chomsky(1981), Rizzi(1982b), and Brody(1983), and in Levin & Massam(1984), generally as a condition that the head of a chain must be Case-marked, and that there may be only once Case in an A-chain. This latter has been developed by Rizzi(1982b) and Brody(1983) into a Chain location algorithm. Following Chomsky(1984) we will refer to this as the "Chain Condition" (See Chapter 5 for a more extensive discussion).

On the other hand, variables, or A-bar bound traces are necessarily Case marked. This has been put forward at various times, and in various ways. For instance, following Chomsky(1981), we could attribute this necessity to the Theta-Criterion in the following way. If the Case Filter is to be subsumed under the Theta-Criterion (cf.Chomsky,1981, Stowell,1981, and Levin & Massam,1984, and Chapter 5), then all theta-marked NPs must receive Case in order to be visible for the Theta Criterion. Since a variable trace is always the head of its A-chain, it must be Case marked to satisfy

the Theta-criterion.[66]

In the ECM examples, it is clear that the original position of the fronted NP is Case marked. There are three things which tell us this, involving Surface-ergativity, agreement, and the appearance of pronouns in the original theta position in some cases.

Niuean, as shown above, is a surface-ergative Case marking language. In a theory of Case marking such as that developed by Levin & Massam(1984), in such languages, Ergative Case is assigned to a subject, if and only if Absolutive Case has been assigned (to the object). (See also Chapter 5.) Thus, in a construction where an object has been fronted, leaving a trace, we can determine whether this trace receives Case by examining the Case of the subject of the clause. In cases of ECM fronting, the subject of the clause appears in Ergative Case (he pusi in (79b)), therefore demonstrating that the trace of the ECM'd NP (e ika in (79b)) has received Absolutive Case.

---

66. This might be problematic in the case of thematic PPs, the traces of which conceivably do not receive Case in sentences such as "To whom did Amy give the pickled lime t?". Perhaps here the trace "inherits" from the PP with which it is coindexed, the property of bearing inherent Case. For the relation between CP arguments and Case, see Chapter 5.

(79) a. To nākai toka e   au [ke kai he pusi e   ika]
        fut not   let Erg I Sbj eat Erg cat Abs fish
        "I won't let the cat eat the fish." (S,3.76a)

     b. To nākai toka e   au [[e ika] [ke kai he pusi t]]
        fut not   let Erg I   Abs fish Sbj eat Erg cat
        "I won't let the fish be eaten by the cat." (S,3.78a)

A second argument that the trace left behind in ECM fronting is Case

marked is that in structures in Niuean when a subject is fronted, agreement

(for number) still appears on the embedded verb. Agreement between subject

and verb appears in most languages just in case Case is assigned to the

subject by INFL.

(80) a. to nākai toka e   au [a   koe   [ke mohe t e   timeni]]
        Fut not   let Erg I Abs you-sng Sbj sleep Abs floor
        "I won't let you (sng) sleep on the floor." (S,3.86a)

     b. To nākai toka e   au [[a   mutolu] [ke momohe t e   timeni]]
        fut not   let Erg I   Abs you-pl Sbj sleep-Pl Abs floor
        "I won't let you(pl) sleep on the floor." (S,3.86b)

The fact that the theta-position to which the ECM'd NP is related is a

Case marked position is perhaps most clear in the cases where an overt

lexical pronoun appears in the theta-position. Since the pronoun is

lexical, it must fall under the Case Filter (See Chapter 1(9) and Chapter

5), and hence must receive Case. For this reason, given the Chain

Condition above, pronouns do not appear in the tail position of A-chains.

We have seen some Fijian ECM examples with (resumptive) pronouns. Further

examples are provided here, with ECM to an indirect object, oblique,

possessor, and object (in which the pronoun is optional: compare (81d) with

(75b)).

(81) a. [ECM to Indirect Object)
au gadreva na koro levu ni ko a lako kina.
1s wish art town big sub 2s pst go to-it
"I wish you had gone to the city." (G,72)

b. [ECM to Oblique]
e vinakati Tevita ko Bale me'u lako kaya.
3s want prop Tevita prop-art Bale sub-1s go with-him
"Bale wants me to go with Tevita." (G,73)

c. [ECM to Possessor]
au namaki Bale ni damudamu na nona boto.
1s expect-prop Bale sub-3s red art her boat
"I expect Bale's boat to be red.," (G,74)

d. [ECM to Object]
e a vinakata na tagane ko Mere me'u mokuti koya
3s pst want art man prop-art Mere sub-1s hit-prop him
"Mary wanted me to hit the man." (G,78)

In some languages, the data are sometimes at least superficially ambiguous as to whether a Case marked trace or an empty pronoun appears in the theta-position of an ECM'd NP. Such languages are Kipsigas, a Nilo-Saharic language, and Blackfoot, both to be discussed further below. Since these languages are null subject and null-object languages (with agreement markers on the verb), the distinction is difficult to make. However, it is clear that in either case, the presence of agreement on the lower verb indicates that Case has been assigned to the theta-position coindexed with the ECM'd NP. In the Kipsigas example which follows, the underlined object agreement clitic is all that appears in the lowest (and, for that matter, in the highest) clause. This agreement clitic agrees with

the underlined ec (=empty category) which could be interpreted as a

null-object pro which is coreferential with the (shown) pro in SPEC2, or as

a trace, A-bar bound by the (shown) pro moved to SPEC2.

(82) mOc -O:n   Mu:sa   [pro_i [kO -tIl-an   KIplanat ec_i]]
      want 1s.Obj Musa(S)   3s.Sub-cut-1s.Obj Kiplangat
      "Musa wants that Kiplangat cut me." (J&O,12b)

The evidence given above to show that the theta-position coindexed with

an ECM'd NP is a Case marked position argues against an analysis in which

the ECM'd NP is considered to be in an A-position (that is, against a

Raising to Object analysis), and in favour of the SPEC2 analysis for ECM

presented above.

2.5.4.3 Binding Theory

The second argument against a Raising to Object analysis, is the fact

that it violates Binding Theory A which holds of A-traces. This will

always be true, since the governing category for an object will always be

its own clause, as will the governing category for a subject of a tensed

clause. This is given by the following condition and definition.[67]

----

67. Chomsky(1984) presents a rather different version of Binding Theory.
Since the subtle aspects of Binding are not our concern here, we use the
version of Chomsky(1981).

(83)   Binding Theory A (Chomsky,1981)
   a) Anaphors must be bound in their governing category

   b) Governing Category
      α is a governing category for β if and only if α is the
      minimal category containing β, a governor of β, and
      a SUBJECT accessible to β.

As with the Projection Principle, however, we should consider the

possibility that the definition of Governing Category is incorrectly

formulated, and should be reformulated to allow Raising to Object from

tensed clauses and from object position in some languages. In this way, we

could allow A-movement out of a tensed clause and from object by

considering the Governing Category of an NP in Fijian, Niuean, etc. to be

the next clause up from the usual one. Even aside from the difficulty of

devising such a definition, and isolating the parameters involved in

differentiating English and Fijian, there is a problem with this.

The problem is that Binding Condition A, as given above, holds in Fijian

in cases of Raising to Subject.[68] Hence, we must retain (83) as is, in

order to account for the fact that Raising to Subject may not occur out of

tensed clauses, nor from object position.

----

68. Moyne & Carden(1974) and Guy Carden p.c. points out that there are
languages in which Raising to Subject appears to violate the Binding
Theory, such as Persian, where subjects of tensed clauses can be raised
(but not objects).

(84) a) Passive: era_i a   raic-i $\underline{t}_i$ na $\underline{\text{tagane}}_i$ (G,8)
               3pl pst see-Pass   art man
               "The men were seen"

     b) RtoS: ko_i rawa   [ni vukei   au $\underline{t}_i$] $\underline{\text{pro}}_i$
               2s   possible sub help-prop me
               "You can help me."   (G,41)

     c) RtoS: *ko_i a   sega [ni'u   mokuta/mokuti $\underline{t}_i$ pro] $\underline{\text{iko}}_i$
        (from   2s   pst not   sub 1s hit/hit-prop   you
         Obj)   "I didn't hit you."   (G,52)

     d) RtoS: *au_i a   sega [ni a   mokuti   iko $\underline{t}_i$] $\underline{\text{pro}}_i$
        (from   1s   pst not sub pst hit prop you
        [+tns]) "I didn't hit you."   (G8448b)

It should be mentioned that the [-tense] feature of the embedded clause
in (84c) is not straighforward. Gordon states that the tense morpheme may
appear either on the matrix or the embedded clause in cases of Raising to
Subject, but not on both. We take this to mean that only the matrix clause
is tensed, and that this tense may be realized on any verb within its
scope. Secondly, Gordon notes that agreement morphemes may appear on both
higher and lower verbs when an NP is Raised to Subject with the verb dodonu
"right", and must appear on both upper and lower verb if the sentence is in
the past tense. Dodonu is also unusual among Raising to Subject verbs in
that it alone takes the me- complementizer.

Since Fijian exhibits Raising to Subject (a rule of A-movement which is
compatible with the Projection Principle), and since this rule obeys the
Binding Theory, it would be difficult to explain why a second putative rule
of A-movement such as Raising to Object does not also obey this

constraint. This disobedience, however, is unproblematic in a theory of ECM fronting such as that proposed herein since movement to A-bar positions is not subject to the Binding Theory.

In our analysis of movement to SPEC2, an interesting result obtains. First, since SPEC2 is an A-bar position, as argued for above, with respect to Case theory (and see below and Chapter 5), we do not expect that Binding Theory should hold of the relation between an NP in this position and its trace. And yet, given the data, and our analysis, it appears that the Binding Theory is not violated in an instance of ECM movement, if we consider CP and not IP to constitute the governing category. It is not clear, however, whether it must hold. (In the following sections we will discuss further the problem of the locality conditions which hold betweeen an ECM'd NP and its coindexed theta position.) Since, as we discuss below, the SPEC2 position is ambiguous in several respects as to whether it is an A-position or an A-bar position, it is not inconceivable that the Binding Theory would hold of movement to this position. We will leave the question open to some extent.

It is interesting to note that there are in fact what look like exceptions to the Binding Theory for ECM movement, if it is said to hold of this movement. Consider the following.

(85) a.

```
                        .
                        .
                       VP
                     /    \
                 ECM V     C2''
                  /        /  \
              expect    SPEC2  CP
                        /     /  \
                    you     SPEC1  C'
                       k          /  \
          A                    COMP   IP
                                    /    \
                                  I'      NP
                                 /  \       \
                             INFL    VP     I        B
                                    /  \
                                 RtoS   IP
                                   V   /  \
                                     I'    NP
                                    /  \     j
                                 not
                                  INFL   VP
                                        /  \
                                       V    NP
                                      /       k
                                    hit
```
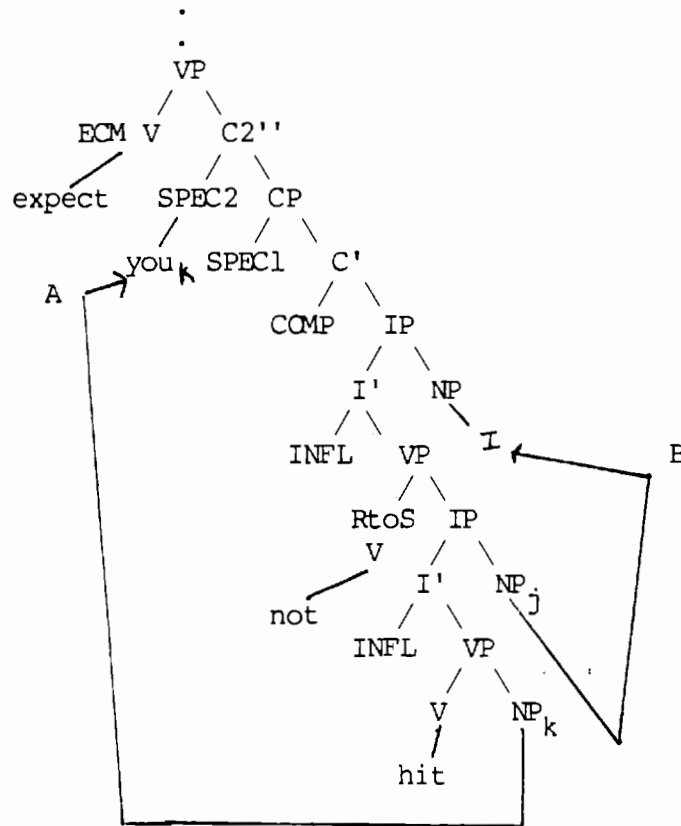
b. e namaki   [iko [ni'u sega [ni [mokuta t] t] pro] pro]
      i   k   j   k   j   j   i
   3s expect-prop you   sub-1s not   sub hit
                    k
   "He expects me not to hit you."   (G,76b)

In (85a), the lowest NP$_k$ can move across an intervening clause to SPEC2
of the highest CP (Movement A) just in case the higher verb is an ECMing
verb (as marked), and the middle verb is, as in (85a), a Raising to Subject
verb, (or a Control verb). Movement A is exemplified in (85.b), where
Movement B (Raising to Subject) has also taken place. That Movement to
Subject need not take place in order for ECM movement to cross the
intervening clause, is seen in (86a), while (86b) shows an example with an

intermediate Control verb.[69]

(86) a. e$_i$ namaki   [iko$_k$ [ni sega [ni ['u$_j$ mokuta t$_k$]
3s expect-prop you^k sub not   sub-1s^j hit
pro$_j$] pro$_j$] pro$_i$]
"He^{j}expects me not to hit you."   (G,24b)
[Note:pro$_i$ is an expletive.]

b. keimami$_i$ a   namaki   [iko [me rere [ni
1pl ^{i}pst expect-prop you   sub afraid sub
[vukea] PRO$_j$] ko Mere$_j$] pro$_i$]
help   prop-art Mary ^{j}
"We expect Mary to be afraid to help you." (G,25c)

Note that Binding Theory Condition A appears not to be a constraint on the relation between the trace of NP$_k$ in (85) and its antecedent in SPEC2 (iko/"you" in (85)). The Governing Category for NP$_k$ in (85) is the lowest sentence, but NP$_k$ is not bound in this category, although the sentence is good. In (85) the trace is correctly (since the sentence is acceptable) bound in a domain which include an extra clause.

It is not clear, however, given the situations in which an extra intermediate clause is permitted between an ECM'd NP and theta position with which it is coindexed, that the Binding Theory does not hold here. This is because, it is notable that the allowable intermediate clauses contain Raising to Subject and Control verbs. These verbs are noted cross-linguistically for creating transparent domains for Binding Theory and other constraints, so that in Italian, for example, a clitic may be

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69. These examples are taken from a handout and not the ms of Gordon(1980).

coindexed with a position two clauses away if the intermediate clause

contains certain verbs of the class of verbs which include Raising to

Subject verbs and Control verbs such as potere "be able to", sembrare

"seem", dovere "have to", volere "want", cominciare "begin", continuare

"continue", etc. although normally the presence of this intermediate

clause renders the clause ungrammatical. (cf.Rizzi,1978,1982, Burzio,1981,

Manzini,1983, on the theory of Restructuring.)

(87) a. Credo che Gianni la presentera a Francesco
        "I believe that Gianni will introduce her to Franceso."

     b.*La credo che Gianni presentera a Francesco.
        (Rizzi,1978,6a,b)

(88) a. Gianni ha dovuto parlargli personalmente
        "Gianni has had to speak with him personally."

     b. Gianni gli ha dovuto parlare personalmente.
        (Rizzi,1978,12a,b)

(89) Lo voglio leggere
     It I want to read. (Burzio,6.1.1a)

For the Italian examples it has been proposed (see references above)

that Restructuring verbs form complex verbs with the verbs which follow

them. such an analysis seems feasible for Fijian also.[70]

These results are interesting. Note that within our framework, a

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70. Guy Carden (p.c.) points out that it would be interesting to see if
dodonu behaves in the way outlined above with respect to "clause union"
phenomena, since it has several different characteristics from other
Raising to Subject verbs, as noted above.

Raising to Object analysis would require the relationship between the ECM'd NP and its coindexed theta position to obey the Binding Theory, while at the same time, by its very nature, it would render such obedience impossible, given the data under discussion. Conversely, our Movement to SPEC2 analysis would not necessarily require the Binding Theory to be obeyed, since, as we have seen, it does not act in all ways at least, as movement to an A-position. And yet, given our analysis in conjunction with the data, it appears entirely possible that the Binding Theory is obeyed by Movement to SPEC2. We will see below that there is ambiguity with respect to the A/A-bar characteristics of SPEC2, which would explain the fact that movement to an A-bar position appears to obey the Binding Theory.

We will see cases below, however, which arguably do not involve movement of an NP to SPEC2, but rather the base-generation of an NP in this position, which is coindexed with a pronoun (usually) in a theta position. We will see that the same locality constraint appears to apply here, although it would be unlikely to be due to the Binding Theory, since the category in the theta position is pronominal, not anaphoric, and in some cases, can even be an r-expression. Thus, it appears that even if the Binding Theory does hold of ECM movement, it alone cannot explain the locality constraints in ECM structures, which appear to be like subjacency, but which exist even in cases of no movement. We return to this issue below.

It seems clear then that we cannot consider the movement in ECM

structures in languages like Fijian and Niuean to involve direct movement

to an object A-position. However, there is one possibility to maintain a

Raising to Object analysis which we have not yet discussed and that is to

consider ECM movement to be a two-step process, with first movement to an

A-bar SPEC2 position, and then a movement from this position to object. We

will argue against this in a later section. We will now turn to a more

detailed discussion of the SPEC2 analysis.

2.5.5 ECM Movement vs Topicalization and Left Dislocation

2.5.5.1 A-bar/A Relations

While the structures under discussion involve movement to some sort of

S-initial A-bar position, the exact nature of this movement and position

remains to be discussed. In particular, is there a difference between the

position occupied by, or the movement of, an ECM'd element and those of a

Topicalized or Left-Dislocated element? In most cases of ECM movement, the

answer appears to be yes. Let us clarify the possibilities for

A-bar/A-position NP relations. First, it is possible for an operator to

move to SPEC, and to have a coindexing relation with an NP in a position

adjoined to CP. This is exemplified in Niuean Topicalization.[71]

(90) a. $[_{CP}$ NP$_i$ [$\emptyset_i$ [...t$_i$...]]]

    b. Ti fakalata a ia ko ia nī ne malōlō
        then think   Abs he Pred him Emph Nft strong
        "So he thinks (it's) him that's the strong one."
        (S,2.105a)[72]

    c. Ko e   lupo kava haau, ne inu e   Sione
        Pred Abs bottle beer your Pst drink Erg Sione
        "Your bottle of beer, Sione drank." (S,2.74b)

Second, it is possible for an NP to move and adjoin to IP, (possibly

successively), as in English Topicalization (cf. Baltin,1978).

(91) a. $...[_{IP}$ NP$_i$ [IP... $[_{IP}$ t$_i$ $[_{IP}$ ...t$_i$...]]

    b. I know that Gill, Sally thinks Adrian likes

    c. Pascal, the angels sing about.

Third, it is possible for an NP to be base generated in a position

adjoined to CP, and to be coindexed with an NP (pronoun) in an A-position.

This is seen in Niuean Left Dislocation. (Note: the pronoun in (92c) is

not the resumptive pronoun _ai_ as in (97) below (Topicalization), but rather

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71. In some languages, including Niuean, Topicalization involves resumptive pronouns in oblique positions. In this case, the operator might be generated in SPEC, or the resumptive pronoun might be considered a spell-out of the trace.

72. I have changed the gloss here to emphasize that this is not like a cleft sentence, involving an further level of embedding, but is rather, equivalent to an English topicalized sentence.

is a personal pronoun.)

(92) a. $[_{CP}$ NP_i $[_{CP}$ $[_{IP}....pronoun_i....]]$

    b.   Ko   e   tagata ia   ne pākia, kitia nakai e   koe a   ia?
           Pred Abs man   that Nft injured see   Q   Erg you Abs him
           "That injured man, did you see him?" (S,2.77b)

    c.   Ko   e   fifine ia,   to   āhi   atu ki a   ia.
           Pred Abs woman   that Fut visit   Dir2 to Pers her
           "As for that woman, we'll go visit her." (S, 2.78b)

A second instance of this type of relation is possible, but with

adjunction to IP, as in Moroccan Arabic Left Dislocation (from Wager,1983

-- see below in text for discussion).

(93) a. $[_{IP}$ NP_i $[_{IP}....pronoun_i...]]$

    b.   gallihum   belli naẓat, ma   ɣadiš   yšufha
           said(3sgm)-to-3pl that   Nazat   Neg Fut-Neg 3sgm-see-3sgf
           ɣedda
           tomorrow   (W,3.64b)
           "He told them that Najat he wasn't going to see her tomorrow."

    c. Muhend, režʕat   lemṛa   elli kaybɣih
           Mohand   returned-3sgf the-woman that Cont-3sgm-loves
           "Mohand, the woman that he loves returned." (W,3.13a)

Also possible is direct movement of an NP to an adjoined position, CP.

This should be possible, since no constraints on movement are violated,

since, assuming May(forthcoming) (and cf. Chomsky,1985), we consider that

when a CP node dominates another of the same type, the two together

constitute a single category.[73] This, then, would be an option for

movement in cases of single clause Topicalization in Niuean, such as in

(90) above.

The question now is, which of the above types of movement, if any, does

ECM movement correspond to? In all cases, it appears to involve the direct

movement of, or base generation of an NP to/in an A-bar position hanging

from CP. We will discuss now some differences that appear between ECM

movement and Topicalization or Left Dislocation in various languages. (We

will use "Topicalization" to refer to a movement involving an operator as

outlined above, since in the languages under discussion, Topicalization

appears to involve adjunction to CP.)

In Fijian, it appears there is no operator involved in ECM movement,

unlike in Topicalization, as is seen by the several distinctions between

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73. For Chomsky(1985) and May(forthcoming) the two nodes constitute one in
cases of adjunction. We do not consider SPEC2 to be an adjoined position,
since it is a subject, however, we assume that the two CPs constitute a
single category. This might allow us to circumvent the problem raised by
our structures for an observation of Kyle Johnson's regarding adjunction.
He notes that if a we adjoin to a node XP, where XP is a complement, then
the theta relation between XP and its theta role assigner will be
obscured. This rules out adjunction to arguments. We allow an ECM verb to
assign a theta role to a CP, which is a predicate and hence takes a
subject, but we do not consider the higher CP which dominates the subject
and the theta marked CP to obscure the theta relations. Possibly, since
both CPs are there at D-structure (i.e. ours is not a case of adjunction),
if they consitute a single category, then the theta role is assigned to the
category CP at D-structure, and at every level, thus a violation is
avoided.

the operation of "Move Alpha" which characterizes Topicalization, and that
which characterizes ECM fronting. And in Niuean also, Topicalization
differs from ECM movement.

There is evidence in Moroccan Arabic, and Niuean that ECM is not the
same as embedded Left Dislocation in these languages. By "Left
Dislocation", we mean an operation whereby an NP is generated in an A-bar
position which hangs from IP or CP (depending on the language), and is
coindexed with a pronoun in an A-position. In Berber, on the other hand,
there appears to be no ECM movement as distinct from Left Dislocation. We
will review the evidence for a distinction to be made in most languages
between Topicalization or Left Dislocation and what we are calling the ECM
relation or ECM movement.

2.5.5.2 Topicalization and ECM Movement

First, we note that Fijian ECM movement differs from Topicalization in
several ways, as discussed by Gordon. Gordon states that it is possible to
Topicalize from a clause which has had an NP "raised to object" from it.
Hence, it appears that ECM movement does not prohibit operator extraction.
However, it is not possible to "raise to object" from a clause which has
had an NP "raised to object" from it, as seen below in (94), arguing that
ECM movement does prohibit ECM movement. An alternative interpretation of
this last point is that ECM movement is bounded, while Topicalization

(movement through SPEC) is not.

(94) *e a   nuitaki   Bale$_i$ ko   Wati me'u vinakati
     3s pst expect-prop Bale$_i$prop-art Wati sub-1s want-prop

     iko$_j$ mo   volia vua$_i$ na motoka t_j
     you$_j$ sub-2s buy   for-her   art car
     "Wati expected me to want you to buy Bale a car." (G,77e)

These characterizing traits fall in with the traditional notion of the
distinction between movement to COMP (=SPEC) (Wh movement) and NP-movement
to A-positions. On first glance, this might lead us to an analysis of
Raising to Object, however, we will see below that ECM movement is unlike
NP movement with respect to Case and Chain theory. It appears then that
ECM movement is a sort of hybrid, with characteristics of both Wh and NP
movement. We can account for its properties by the movement posited above,
which will be further analyzed below. That is, ECM movement is movement to
an A-bar position (thus accounting for some of its characteristics, to be
discussed below), but at the same time, it is movement of an NP, and not of
an operator. If, as we claimed in Section 2.2, SPEC is limited to
operators, then ECM movement (of an NP) cannot be movement to SPEC, but
rather, movement to a second specifier position. This also accounts for
the property of ECM movement mentioned above, namely that it does not
create islands for Wh-movement.

Gordon discusses another distinction between Topicalization and "Raising
to Object", which involves movement from conjuncts. She states that

Topicalization is possible from a position in one of a pair of conjuncts,
only if the parallel position in the other conjunct is coreferential and
also Topicalized. This is not the case with ECM movement.

(95)a. au a   vinakati [Timoci [mo   [[mokuta t] ka
       ls pst want-prop Timothy sub-2s hit   and
       [caqeti   Tevita]]
       kick-prop David
       "I want you to hit Timothy and kick David." (G,75b)

   b. au a   vinakati [Tevita [mo   [[mokuti   Timoci] ka
      ls pst want-prop David   sub2s hit-prop Timothy and
      [caqeta t]]
      kick
      "I want you to hit Timothy and kick David."(G,75c)

Topicalization obeys the "Across the Board" constraint of Williams(1978)
in that it is possible to Topicalize an object of one conjunct only if
there is a parallel empty object in the other conjunct. On the other hand,
ECM movement does not obey this constraint, since it is possible to ECM the
object of one VP conjunct and not the object of the other.[74] This
difference in behaviour is explainable if we consider that the "Across the
Board" constraint applies only to operator movement, and that NPs are not
operators (see Chapter 3). This is in the spirit of Pesetsky(1982) who
argues that the "Across the Board" constraint applies only to A-bar bound
elements. Since ECM movement is to an A-bar position, we narrow his

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74. Frantz(1978) reports that this is possible in Blackfoot ECM. See also
below.

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restriction here. The restriction accounts for the following contrast.[75]

(96) a. Oliver seems to have been laughed at and to have run away.
    b.*Who was laughed at and ran away?
    c. Who was laughed at and teased?

ECM movement in Niuean differs from Topicalization in this language in
that the former, according to Seiter, unlike the latter, is restricted to
subjects and objects. (Topicalization involves a resumptive pronoun in
oblique positions.)

(97) a. Ko   e   motu   ia, ne pehe a   Tale kua lali ke
        Pred Abs island that Pst say Abs Tale Perf try Sbj
        nofo ai
        live there
        "That island Tale said he tried to live on." (S,2.75b)

Data from Kipsigas (Jake & Odden,1979) shows that ECM movement is
bounded. In this, it is different than Raising to Subject, which is not so
constrained. Kipsigas ECM will be discussed in more detail below, and
Kipsigas Raising to Subject (which we will argue to involve operator
movement) will be discussed in Chapter 3.

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75. This possible explanation for the Fijian data is due to a conversation
with G. Goodall.

(98) a.*ó -mŏc -í:n [kŏ-yáy Mù:sá [kŏ-tĪl-Ín KĪplaŋat]]
      1s want 2s   3s make Musa(S) 3s cut 2s Kiplangat
      "I want that Musa make Kiplangat cut you." (J&O,18a)

    b. a -wŭy [kŏ-tĚstâ   [à -más KĪplaŋàt]]
      1s hard 3- continue 1s beat Kiplangat
      "It is hard for me to continue beating Kiplangat." (J&O,43b)

2.5.5.3 Left Dislocation and ECM Movement

Evidence from other languages informs us that ECM movement is not
necessarily the same as Left Dislocation in embedded contexts in these
languages.

A general distinction between ECM movement, and Left Dislocation, is
that the former is subject to locality constraints (see below) whereas the
latter is not. This will be discussed further in Section (2.5.6.2). A
possibility here would be to force ECM movement to involve actual movement
(and thus to be subject to Subjacency), whereas Left Dislocation would
involve coindexing. A problem for a "necessarily movement" analysis would
be how to rule out the possibility of the base generation of a Left
Dislocated NP under an ECM verb (in a language where it would appear to the
left of the complementizer), which is coindexed with an NP which then could
conceivably be indefinitely far away from it, as is possible in Left
Dislocation. We will see below that this is permitted in Berber, and will
rule it out in other cases below.

Wager(1983) discusses constructions in Moroccan Arabic, within the

framework of Lexical Functional Grammar, which she considers to involve "Prolepsis" (See section 2.5.8 below for a discussion of a prolepsis analysis of ECM structures.).[76] Prolepsis is an analysis of non-thematic object constructions in which these objects are considered to be base-generated in object position and licensed by coindexation with an embedded thematic pronoun. We will consider these Moroccan Arabic sentences (as (99)) to involve ECM.[77]

(99) a. tsennitu   yẑi   men leblad
         waited for-lsg-3sg 3sgm-come from the-village
         "I waited for him to come from the village."(W,3.36c)

     b. bǧitu   yddiwh   lleblad
         want-lsg-3sgm 3pl-take-3sgm to-the-village
         "I want (him) for them to take him to the village." (W,3.37a)

     c. xeftu   yttlagaw mʕah
         feared-lsg-3sgm 3pl-meet with-3sg
         "I feared (him) they'd meet him." (W 3.38f)

     d. sebtu   ẑat   ṃṃu
         found-lsg-3sgm came-3sgf mother-3sgm
         "I found (him) his mother had come." (W,3.39b)

Wager points out that there are differences between Left Dislocation in Moroccan and what we are considering to be ECM movement. For instance, ECM movement is permitted only in certain embedded contexts, i.e. under

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76. I am grateful to Mohamed Guerssel for discussing these data with me.

77. Wager's arguments against an ECM type of analysis are due to the fact that ECM movement is different from Left Dislocation, as discussed below and in Section (2.5.8.4). Numbers after the examples refer to chapter and example number.

certain matrix verbs. Verbs such as <u>fhem</u> "understand", <u>ndem</u> "regret" <u>nker</u>
"deny" <u>sekk</u> "doubt", do not allow ECM movement, although they do take
sentential complements. In the case of the latter three verbs, this may be
due to the fact that they are not Case assigners, if we take the fact that
they do not take NP objects (M. Guerssel, p.c.) to indicate that they do
not assign Case. This, at least, argues that an ECM moved NP <u>requires</u>
Case, which indicates that the process is not the same as Left Dislocation,
since here the dislocated NP does not require Case.[78]

(100) a. *fhemtu   belli ɣadi yšufuh   ɣedda
         understood-1sg-3sgm that Fut 3pl-see-3sgm tomorrow
         "I understand (him) that they are going to see him
          tomorrow." (W,3.66b)

      b.*ndemtu   elli mša
         regretted-1sg-3sgm that went(3sgm)
         "I regretted (him) that he left." (W,3.67b)

Furthermore, the position of a Left Dislocated NP is different than the
position of an ECM'd NP. In the example below we see that while ECM
movement is impossible, embedded Left Dislocation is all right.

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78. We mention here only some of the differences which Wager notes between
Left Dislocation and ECM movement, here. Others will be discussed below in
Section (2.5.8.4).

(101) a.*gallihum   naẑat belli ma ʔădiš yšufha
        said(3sgm)-to-3pl Nazat that Neg Fut-Neg 3sgm-see-3sgf
        ɣedda
        tommorrow.
        "He told them Najat that he wasn't going to see her
        tomorrow." (W,3.64a)

     b. gallihum   belli nazat, ma   adis   ysufha
        said(3sgm)-to-3pl that   Nazat Neg Fut-Neg 3sgm-see-3sgf
         edda
        tommorrow.
        "He told them Najat that he wasn't going to see her
        tomorrow." (W,3.64b)

There is another distinction between Left Dislocation and ECM movement,

found in Niuean, which raises questions about our notion of government. We

showed above that in Niuean, ECM occurs only with ke-clauses

(subjunctives). Seiter shows that Left Dislocation is possible in tensed

clauses embedded under verbs of cognition, speaking, etc.(as in (102))[79]

Note that in Niuean, unlike Moroccan Arabic, Left Dislocated items appear

to the left of the complementizer. This means that while the dislocated

element is in a position to receive ECM, according to our definition of

government, since the matrix verb is a Case marking verb (with an ergative

subject), it does not receive Case from the matrix verb.

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79. Seiter refers to the structure in this example as Topicalization rather
than Left Dislocation, but we consider the former to involve gaps or
resumptive pronouns and the latter personal pronouns in the theta
position. Using these definitions, Niuean has both Left Dislocation and
Topicalization. Seiter refers to both of these operations as
"Topicalization".

(102) a. Kua tupu hake he loto haaku ke iloa
        Perf grow up   in heart my   Sbj know
        [[ko   lautolu oti hahā he poko nei], ko e ō mai
        Pred   they   all Pred in room this Pres come,Pl
        oti nī i   Niuē a lautolu].
        all Emph from Niue Abs they
        "It has just occurred to me that everyone in this room
        comes from Niue." (S,2.106)

It seems from this that a verb cannot govern across a node if this node
is tensed. That this is not universally the case can be seen from the fact
that in Moroccan Arabic, as seen above, Berber, and other languages, ECM
occurs to an element fronted in a tensed clause, as well as from the
Hungarian and English data discussed above, where a verb governs into the
Specifier position of a tensed clause.

In Niuean, then, a tensed clause appears to act as a barrier for
government, even though the clause is theta-governed and possibly Case
marked.[80]

Also in Niuean, ECM movement differs from Left Dislocation in that the
latter, but not the former involves a pronoun in the theta position. ECM
movement on the other hand, involves an empty category. In this way ECM
movement is like Topicalization in Niuean, however, in other ways it is

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80. K. Hale suggests (p.c.) that it might be the case that in all
languages there is a Tense domain barrier, but that languages might differ
as to whether this is CP or IP. Thus, in Niuean, tensed CPs are barriers,
while in languages such as Berber and Fijian, where ECM occurs across
tensed CPs, the Tense barrier would be IP.

not, as Topicalization is possible from oblique positions from which ECM
movement is not possible.

Underscoring the strength of our claim that in the languages discussed
here, ECM movement is distinct from other the movements associated with
processes such as Topicalization and Left Dislocation is the fact that
there appear to be some languages in which this is not the case.
Guerssel(1978) and Shlonsky(1985) discuss Left Dislocation and Clefting in
Berber, showing the former to involve the base generation of an NP in a
position external to (adjoined to) CP. (=S' for Guerssel).[81] (See also
Guerssel,1984) This is seen in (103b) ((103a) shows a simple Berber
declarative.) That this NP is base generated and not moved is seen by the
fact that the relation between it and the NP with which it is coindexed can
be arbitrarily long, and, as seen in (103c), it does not obey island
constraints. That the dislocated NP is external to CP is seen by the fact
that in an embedded context, the Left Dislocated NP appears to the left of
the complementizer is, seen in (103d)

(103) a. issudm   Muhend Tifa i taddart.
         he-kissed Mohamed Tifa in house
         "Mohamed kissed Tifa in the house."(G,1)

      b. Muhend issudm   Tifa i taddart
         Mohamed he-kissed Tifa in house
         Mohamed he kissed Tifa in the house. (G,1a)

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81. I am grateful to M. Guersell for his help with Berber. The examples
are taken from Guerssel(1978) (=G) and Shlonsky(1985) (=S).

```
c. litub ssen-x    uryaz din-t -y  -uri   -n
   book  know-1sm man   who-it-3ms-wrote-imp
   "The book, I know the man who wrote it." (S,5c)

d. Ssenx Tifa is   tt issudem  Muhend
   I know Tifa that her he-kissed Mohamed
   "I know that Tifa, Mohamed kissed." (G,2b)
```

Shlonsky argues that in an embedded context, a Left Dislocated NP is
ECM'd by the matrix verb, which therefore must be said to govern into the
CP-adjoined position. This ECM is seen below in (104). In (104a) we see a
simple sentence. In (104b), an operator coreferential with tabratt
"letter" is at D-structure in a Left Dislocated position in the embedded
clause. It then undergoes extraction from this (lower) CP adjoined
position to a SPEC position containing a "that". This process is
clefting. The pronoun in SPEC must be in the dative Case, as seen by the
contrast in grammaticality between (104b) and (104c). Since the Case of
the embedded theta position associated with tabratt is accusative, and
since sll "hear" assigns dative Case, as seen in (104d)) it appears that
the clefted operator received dative ECM in the position adjoined to CP in
the lower clause.

```
(104)   a. sll  -x   is   y  -uzn  M tabratt gher Fas
           heard-1ms that 3ms-sent M letter  to   Fas
           "I heard that M sent a letter to Fez." (S,24a)

        b.*tabratt ay   sll  -x   is  -tt y  -uzn  M gher Fas
           letter   that heard-1ms that-it 3ms-sent M to   Fas
           "It is the letter, that I heard that M sent it to Fez."
           (S,24b)
```

c. tabratt a   -mu sll -x   is -tt y -uzn M gher Fas
   letter   that-Dat heard-1ms that-it 3ms-sent M to   Fas
   "I heard that M sent a letter to Fez." (S,24c)

d. sll-x   *(i)   Muhend
   saw-1ms   Dat   Muhend
   "I heard Muhend." (S,25a,b)

Since in Berber it appears that there is no ECM movement distinct from

Left Dislocation, we expect none of the constraints on ECM movement

discussed above to hold. This is indeed the case. In Berber, there are no

locality constraints on Left Dislocation, and there are likewise no

locality constraints on "ECM movement".

(105)
   zri-x   Muhend is-t$_i$ irjit-x $\underline{ec}_i$ is -t$_i$ t
   saw-1ms Muhend that-him dream-1ms   that him   3fs
   issudm Tifa $\underline{eci}$
   kissed Tifa
   "I saw Muhend that as for him, I dreamt that Tifa
   kissed him." (S,21a)

Both Left Dislocation and "ECM movement" utilize the same resumptive

pronoun strategy; -pronouns in all positions except subject, which is

null). And "ECM movement" is not restricted to occur only under certain

verbs. It seems, then, that in Berber, there is no ECM movement, although

there is ECM.

We conclude then that there are essentially three possibilities for

A-bar/A-position relations between non-Wh elements. First, is the

straightforward case of Left Dislocation involving the base-generation of

an NP in an A-bar position (from IP or CP, depending on the language) which

is coindexed with an NP (pronoun) in an A-position. Characteristically, this relation is unbounded and not subject to island constraints.

Second, there is the possibility of operator movement, involving the movement of an operator from SPEC to SPEC, and coindexing this operator finally with an NP in an A-bar position, immediately adjacent to it (hanging from CP). Characteristically this movement is unbounded, but subject to Wh-island constraints.

A third type involves straightforward movement to, or base generation in a position dominated by CP, and sister to CP. This appears to be what ECM involves, -- an NP in an A-bar position (hanging from CP), which is coindexed with a trace (or a pronoun) in an A-position. The problem is: What rules out the possibility of unbounded movement up to the point of the ECM'd position, or base generation of an NP in this position, with an unbounded coindexing relation between this NP and a pronoun? That is, why is not either of (106a) or (106b) a possible derivation for the ungrammatical Kipsigas sentence (106c) (repeated from above), as it would be for a corresponding Berber sentence?

(106) a. [...ECM-V $[_{CP}$ $\underline{NP}_i$ $[_{CP}$...$[_{CP}$ $\underline{t}_i$ $[_{CP}$ ...$\underline{t}_i$...]]]]]

b. [...ECM-V $[_{CP}$ $\underline{NP}_i$ $[_{CP}$...$[_{CP}$...$\underline{pronoun}_i$...]]]]

c. *Ó -mòc -í:n [kÒ-yáy Mù:sá [kÒ-tìl-ín Kíplaŋat]]
    1s want 2s   3s make Musa(S) 3s cut 2s Kiplangat
    "I want that Musa make Kiplangat cut you." (J&O,18a)

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Another way of phrasing the question is: Why can not ECM movement involve either of the first two types of A-bar relations: involving an operator, or long-distance coindexing (as it does in Berber). That is, essentially,--why is ECM movement not unbounded?

To say that ECM movement is not unbounded is not quite correct, since it is possible to move successive cyclically, from SPEC2 to SPEC2 as seen in Kipsigas below.

(107) a. Ó -mÒc -í:n [kÓ-yày -Ín Kíplàŋàt [kÓ-tÍl-Ín Mù:sá]]
         1s want 2s   3s make 2s Kiplangat   3s cut 2s Musa
         "I want that Kiplangat make that Musa cut you." (J&O,16c)

Thus, it appears that two things must be said. First, that ECM relation, whether derived by movement, as in Niuean, or base generation and coindexation, is in some way bounded,[82] and second, that there are differences between the ECM relation between an ECM'd NP and the theta position with which it is coindexed, and one which exists between a Topic and its coindexed theta position, or a Left Dislocated item and its coindexed theta position.

2.5.6 ECM Relations

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82. We saw some counterexamples to this, namely movement across Raising to Subject or Control verbs in Fijian.

2.5.6.1 French "avoir" Constructions

The nature of the ECM'd NP in SPEC2 may be found in Haïk's(1985), and Taraldsen's(1983), discussions of French. Taraldsen considers sentences such as (108a) and Haïk considers sentences such as (108a) and (108b).

(108) a. Marie a vu Pierre qui sortait du cinéma.
          Marie saw Pierre who left the cinema.
          "Marie saw Pierre leaving the cinema."

      b. Marie a sa fille qui fait la vaiselle.
          Marie has her daugher who does the dishes.
          "Marie has her daughter doing the dishes." (H, p.c.)

(Haïk, considers the (a) sentence to involve a thematic object, (Pierre), with control of an embedded PRO.[83]) For the (b) structures, we consider the complement to be "sa fille qui fait la vaiselle". Sa fille receives Case from the verb avoir. The structure appears to involve a relative clause type of structure, however, both authors argue that que does not act as an operator. Furthermore, the fronting of the NP sa fille is strictly local.

(109) *Marie a sa fille qui Jean sait que lave la vaiselle."
        Marie has her daughter who Jean knows that (she) washes
        the dishes.

----

83. Taraldsen's analysis for the (a) sentence is like the analysis of the (b) sentence discussed here, and in Haik(1985). Perception verbs will be discussed further in 2.5.8.

Taraldsen and Haïk consider the structure under the main verb to be a small clause, with the lower CP acting as a predicate, predicated of its subject, the NP in the specifier position of the CP, (sa fille in (108b). Indeed, the structure proposed is that of a small clause (cf. Stowell,1981).

(110) a.

```
        XP          b.X=N I consider Ms. Honey a true revolutionary.
       /  \
      NP  XP         c.X=A Oliver considered Fagin cruel.
```

Thus, a verb such as avoir may take as an argument a CP which is a proposition (see (111)), or, alternatively, a CP which is a predicate, and which consequently must be predicated of a subject (as 108b), and so, an NP must appear in the subject of this CP.

(111) Jean a que sa fille est malade.
      John has that his daughter is sick
      (in answer to a question "What's wrong with John?")

This analysis carries over to the ECM cases which we have been discussing. One interesting difference is that in French, Taraldsen and Haïk argue, the subject position acts like an A-position, in that movement to it is subject to the Binding Theory, and hence is possible only from subject position. We saw above that the ECM'd NP does not act in all ways as if in an A-position in Fijian and Niuean, since, we claim, the ECM'd NP does not form an A-chain with its theta position, and hence is not subject to various conditions on A-chains. (Note that in French also, there appear

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to be two Cases in the "chain" (Jean, sa) or (Marie, sa).) This becomes less problematic when we realize that the subject position of this CP small clause is not a position to which a theta role is ever assigned, and hence aligns with A-bar positions, and yet, it is a subject position, which enters into predication. It would seem then there is some ambiguity in the nature of this position, which we can call a "quasi A-position", and it is reasonable to consider that this ambiguity might be reflected in such cross-linguistic variation as we find here. In addition many aspects of the behaviour of ECM'd NPs are explained in terms of the ambiguity of the position in which they appear.

2.5.6.2 The SPEC2/Theta-NP Relation

We consider SPEC2 a base-generated position, rather than a position of adjunction through movement, since it functions as the subject of CP. We consider the Extended Projection Principle, to require all subject and complement positions to be present at all levels. In this way, the ECM position differs from the position of Topicalized elements, since the latter are derived by adjunction rather than base-generation in accordance with the Projection Principle. (This will be developed in Chapter 5.)

ECM'd NPs differ from Left Dislocated ones in most languages, as we saw above. The main points here are that there are locality constraints on the relation between an ECM'd NP and its coindexed pronoun, which do not exist

between a Left Dislocated NP and its coindexed pronoun. This locality

condition would be explained by a theory in which ECM structures

necessarily require movement, whereas Left Dislocated structures do not,

since for the most part the locality condition is the same as Subjacency

which is generally considered a constraint on movement.[84] However, it

appears that in some cases, a movement analysis is not what is indicated.

In many cases, a pronoun appears in the theta position.

```
(112) (Fijian)
      au gadreva na  koro levu ni  ko a    lako  kina
      1s wish      art town big  Sub 2s pst go    to-it
      "I wish you had gone to the city," (G,72)
```

While this might be considered a spell-out of a trace,[85] in other cases a

full NP appears in the theta position, as in Nandi, a Nilo-Saharic language

discussed by Creider(1979).[86]

```
(113) (Nandi)
      ámáce  kipe:t      koké:r  (kípe:t)    kâ:t
      I-want Kibet(acc) 3-see    Kibet(nom) house(acc)
      "I want Kibet to see the house."  (C,93)
```

This too might be considered a spell-out of a trace. In Blackfoot,

however, Frantz(1978,1979) gives examples where it would seem that movement

----

84. See Chomsky(1981,1984,1985) but also Rizzi(1982b).

85. The data required to determine the nature of the "resumptive" pronoun
is in most cases not available to me. (See Sells,1984 for a detailed
discussion of resumptive pronouns.)

86. I am grateful to David Odden for bringing Creider's work to my
attention.

has not taken place at all. Frantz(1978) gives Blackfoot examples which

would appear to argue against a movement analysis for ECM in this language

at least, since the ECM'd element may be a subpart of a plural pronoun, as

in (114) or an understood part of an directional element such as "towards

the speaker". Thus, in (115) below, the ECM'd NP is the first person which

appears in the embedded clause as an element of the directional morpheme

meaning "towards the speaker".[87]

(114)   kits-iksstak-k-a noxkówa áxk-a'po'taki-o'si
        2-want-SL-3 my-son-3 might-work-12(conj)
        "My son wants (you) that we(me1 and you2) work."
        (F,1978,32)

(115) a. íksstaa-wa n-oxkó-wa m-áxks -ipooxsáp-aapiksist-a
         want-3   my-son-3 3-might-Iward-throw-SH-conj
         -xsi omi pokon-i
                   ball-4
         "My son wants to throw the ball to/at me." (F,1978,47)

    b. nits-íksstak-k-a   n-oxkó-wa m-áxks -ipooxsáp-aapiksist-a
       1-want-(trans)-SL-3 my-son-3 3-might-Iward-throw-SH-conj
       -xsi omi pokón-i
                 ball-4
       "My son wants (me) to throw the ball to/at me."
       (F,1978,48)

There are also Blackfoot examples where movement does not appear to have

taken place in that the ECM'd NP is still in its original position.

(116) (Blackfoot)
      a. Nits-iikstaa   m-aahks-oyi-hsi noko's-iksi iinai
         I-want(intrans) 3-might-eat-sub my:kid-pl   banana(s)
         "I want my kids to eat bananas. (F,1979,5)

```
b. Nits-iikstata-yi           m-aahks-oyi-hsi noko's-iksi
   I-want(trans)-dir-obj-3pl 3-might-eat-sub my:kid-pl
   iinai
   banana(s)
   "I want my kids to eat bananas. (F,1979,9)
```

Here, in a non-movement analysis, we could consider an empty element to

be base generated in SPEC, but it is difficult to conceive of a movement

analysis which would account for these data, as Frantz points out.

Given a number of complicating factors in Blackfoot--principally, that

it appears to be, in the sense of Hale(1983), a "non-configurational"

language--it is possible that it does not exemplify ECM in the sense

discussed here. The cases where no movement seems to be involved, might be

analyzed as involving the generation of an empty NP in SPEC2 which is

coindexed to an NP in an embedded clause, and where no violation of

Condition C (r-expressions must be free) occurs due to some aspect of

non-configurationality. This analysis would be consistent with the ECM

analysis proposed in this thesis. An alternative however, might be that

there may be free agreement (and Case assignment?) of a verb with (almost)

any "embedded" NP. ("almost" because Frantz(1978) states that for at least

some speakers an ECM'd NP cannot be coindexed only with an embedded

possessor.) Frantz(1979) shows that the one overt lexical NP in an ECM

sentence may show up in a number of positions, so that in (116/117),

noko's-iksi "my kids" can show up sentence initially, as in (117a), or

mid-sentence as in (116b) above. In addition, the lexical NP may be

topicalized in which case it is null in both matrix and embedded clauses, and shows up initially, with comma intonation between it and the rest of the clause, as in (117b). Aawa Frantz glosses as PRO, describing it as an enclitic pronoun.[88] Last, he considers that it may have "ambivalent" status, as in (117c).[89]

(117)
    a. Noko's-iksi nits-iikstata-yi
        my:kid-pl   I-want(trans)-dir obj 3pl
        m-aahks-oyi-hs-aawa iinai
        3-might-eat-sub-PRO(3pl) banana(s)
        "I want my kids to eat bananas. (F,1979,7)

    b. Noko's-iksi , nits-iikstata-y-aawa
        my:kid-pl I-want(trans)-dir-obj-3pl-PRO(3pl)
        m-aahks-oyi-hs iinai
        3-might-eat-sub-PRO(3pl) banana(s)
        "I want my kids to eat bananas. (F,1979,8)

    c. Nits-iikstata-yi noko's-iks m-aahks-oyi-hsi
        I-want(trans)-dir-obj-3pl my:kid-pl 3-might-eat-sub
        iinai
        banana(s)
        "I want my kids to eat bananas. (F,1979,6)

It is difficult to surmise what the difference is between the structure where the element glossed as PRO appears and where it does not. We can speculate that PRO is similar to the controlled element in English control

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88. Frantz refers the reader to Fox and Frantz(1979). It is interesting that the same element, and the same array of facts as described here, hold of Control type sentences also in Blackfoot, as shown in Frantz(1979).

89. In Frantz(1978) he states that there are no independant diagnostics for objecthood or subjecthood here.

structures, except with more freedom of occurance. On the basis of the
theory outlined above, we can further speculate that (116b) involves the
base generation of an empty NP in SPEC2, which is coindexed with an
embedded theta-marked lexical NP, while (117c) involves the base generation
of a lexical NP in SPEC2 which is coindexed with a pronoun in the embedded
clause. (117a), on the other hand, might involve a lexical NP in SPEC2,
which has scrambled in the matrix clause, and which is coindexed with a
downstairs PRO, while (117b) might involve a focussed element, which is
coindexed with two PRO elements, one in SPEC2 and one in the embedded theta
position.

To some extent, the same type of data appear in James Bay Cree also, as
discussed by James(1979,1984) and by Shrofel(1977).[90] It appears that in
this language, any verb which takes a sentential complement can be an ECM
verb if it is marked with a transitive suffix. This leads us to suspect
that James Bay Cree ECM might be like that in Berber, as discussed above.

(118)   a. nikiske:lima:w   e:ki:wa:pamak ca:n
           I know-TransAnim-1-3sg that-I-saw   John
           "I know that it was John that I saw." (J,p.c.)

        b. nikiske:lima:w   ca.n omasinahkikanilliw mitisonahtikohk
           I-know-TransAnim-1-3sg John his-book   on the table
           e:te:htaste:lik
           that it is
           "I know that it's John whose book is on the table."(J,p.c.)

Non-configurational languages with ECM are theoretically interesting, since in many theories of non-configurationality, (cf.Hale,1983, Kiss,forthcoming) the theta-role of an NP is determined by some form of coindexation with the theta-role assigner. Thus, if a verb takes a sentential (theta) argument, it should not be free to coindex with an NP to which it does not assign a theta role, as this would then (necessarily) be ungrammatical, since the embedded verb and its other arguments (which are not coindexed with the matrix verb) would receive no interpretation. It is possible that multiple coindexations are permitted, or that sentential arguments are lexically entered into a configuration, although NP arguments are not.[91] Interestingly, it appears to be the case that in these languages ECM "movement" obeys the same constraints, (eg. in Blackfoot, it must be local) and contrasts with other rules in the same way as in the other languages discussed here. For this reason, I assume that at some level of abstraction ECM in these languages is the same as the other languages discussed here. It appears that the correct analysis for ECM in such languages is tied to a formulation of the "configurationality parameter", and since a full discussion of this is beyond the scope of this work, we will not discuss the issue further here.

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91. This idea would be strengthened if there was no agreement on the verb which could represent a sentential object, i.e. if there was no pronoun which could represent a sentence. However, D.Frantz (p.c.) informs me that this is not the case in Blackfoot. Thus it is possible to say a sentence which would translate as: "I know it."

Even if we wanted to consider cases of ECM to necessarily involve movement, it is not clear how it would be possible to force the ECM'd NP to have moved. In terms of Chomsky(1981) this could be done by the Theta-Criterion, which disallows the base-generation of NPs in A-positions. The ECM position is not an A-position in all ways, but it might be considered to fall under the Theta Criterion by virtue of its being a subject. However, we will present data in the following chapter that argues that the Theta Criterion is too strong, and that we do want to allow the base generation of NPs in non-thematic subject positions provided interpretation is possible at LF. This last is the determining factor. After all, the essential difference between a Left Dislocated NP and an ECM'd subject lies in the fact that a Left Dislocated NP does not enter into interpretation at LF in the same way as positions which are present by virtue of the Projection Principle. How this is formally determined at LF is not entirely clear but the facts are intuitively clear.

Consider that positions which are projected must be interpreted according to theta licensing, whereas positions which are not, are interpreted in some other way. The division will thus be between subjects and complements, vs all other positions. Further, there are two ways of receiving theta licensing. The first is by being in an A-chain which includes a theta position. The second is by a form of what we might call theta interpretation chain composition by analogy with chain composition proposals which have been made for so called parasitic gap structures which

were first discussed by Taraldsen(1981) and Engdahl(1983) such as (119).

(See Chomsky(1985) regarding chain composition.)[92]

(119) This is a construction that she loathes t [Op [without
       ever having worked on pg]

(120) Chain Composition (Chomsky,1985)
       If [C] = ($\alpha_i,...,\alpha_n$) is the chain of the real gap, and
       [C]' = ($\beta_1,...,\beta_m$) is the chain of the parasitic gap, then
       the "composed chain" ([C], [C]') = ($\alpha_i,...,\alpha_n, \beta_1,..., \beta_m$)
       is the chain associated with the parasitic gap construction
       and yields its interpretation.

We propose that a chain which includes no theta position can be licensed

by virtue of a type of chain composition, whereby it associates with a

chain which does contain a theta position, by coindexing. This chain

composition differs from the chain composition discussed by Chomsky(1985)

in that the latter takes place at S-structure, whereas ECM chain

composition appears to take place at LF for purposes of theta licensing of

projected subject positions. We explore this idea below, and further in

Chapter 3.

It has been argued that certain locality constraints must hold in

parasitic gap constructions such as (119) between the chain containing the

trace, and the chain containing the parasitic gap. (cf. Aoun &

Clark,1985, Chomsky,1985, Johnson,forthcoming.)

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92. The similarity between conditions for ECM licensing and parasitic gap
licensing was pointed out to me by Kyle Johnson.

Chomsky(1985) and Johnson(forthcoming), suggest that the head of the parasitic gap chain must be antecedent governed by (subjacent to) the tail of the chain containing the trace.[93] The chain composition between the two chains in such structures is for purposes of reference, and not for theta-identification, since each chain receives an independant theta role in such structures. In ECM structures, on the other hand, the relationship is one of theta-identification of the ECM'd NP. And yet the locality conditions on ECM structures appear to be essentially the same as those for chain composition in parasitic gap structures. Judging by the ECM data under discussion, the theta position must be antecedent governed by the tail of the chain which requires theta association. There is a constraint on the theta-licensing chain composition, however, which does not hold of chain composition in parasitic gap constructions.

Recall that we questioned why it is not possible to ECM move from a more deeply embedded position of Topicalization, Left Dislocation or Wh-movement. Movement from these positions would have the effect of making the ECM relation an unbounded one, which it appears not to be. If we consider that the position in which an NP is ECM'd, (which is, as stated above, a subject position with respect to predication), then the generalization appears to be that an ECM'd NP cannot be related to a

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93. The correct conditions on chain composition for parasitic gaps are complex and remain undetermined. See the references above for discussion.

"genuine" A-bar position. It appears, then that theta-association can take place only between a subject and an A-chain, where antecedent government holds between the two. This rules out "long-distance" ECM relations such as in (121a) and (121b).

(121) a. $[_{CP}$ NP$_i$ $[_{CP}$ $[_{IP}$ NP $[_{VP}$ V $[_{CP}$ Op$_i$ $[....t_i....]]]]]]$

     b. $[_{CP}$ NP$_i$ $[$ Op$_i$ $[....t_i...]]]$

We can thus state the theta-licensing chain composition constraints informally as follows.

(122) A chain Cl without a theta position can be theta licensed,
     by LF chain composition with an A-chain C2, where the tail
     of Cl antecedent governs the head of an A-chain C2.

2.5.6.3 Extraposition of CP in Fijian

We turn now to the extraposition in Fijian of the lower CP (to sentence final position, as seen in (75,77,78,81b), rather than the CP immediately dominating it. This raises some questions. First we note that this movement violates the A/A theory of Chomsky(1964), which states that if conditions for a rule are met by two nodes, where one node dominates the other the rule will apply to the topmost of the two nodes. This can be accounted for, if we consider the A/A to be overridden by Case Theory requirements. However, this raises further questions.

The view above presupposes that the ECM'd NP requires direct Case marking. However, it is not entirely clear that this should be the case,

since it is in an A-bar chain which receives independent Case in the

original theta position. This too, though, is due to the ambiguous status

of this position. Since it is not in an A-position, it does not form an

A-chain with the theta position. And since it is the subject of a

predicate, it can be said to require Case, in the same way as an argument,

for purposes of Visibility at LF. In most cases, Visibility is required for

the satisfaction of the Theta-Criterion. Here, however, it appears to be

required for predication also. Since both are forms of licensing, in terms

of the Principle of Full Interpretation, this is not an unnatural

requirement.

Other points are to be discussed with respect to the extraposition of

the predicate CP, which separates the subject and predicate. While such

movement is unusual, it is not without precedent. For instance, in English

ECM, the ECM'd NP may be separated from the rest of its clause by an adverb

at the matrix clause level. This is true in small clauses also.

(123) a. Derrick considers Elena, without a doubt,
         to be a great gardener.
      b. Dean declared Emily, to his credit, the most
         beautiful woman in the world.

Furthermore, relative clauses may be separated from their heads.

(124) A donkey arrived, who held a glum view of the world.

In both of these cases, the separation must be made where it is, due to

the Case Filter. Elena, Emily and a donkey need Case, and so may not be extraposed with the rest of the clause they are in.

Also concerning the extraposition of CP, there is a problem of C-command, since once the lower CP has extraposed, the fronted NP no longer C-commands its trace, which has moved with the CP that contains it. There are two possibilities here. It is possible that the extraposition takes place after S-structure, i.e. in the PF (phonological) part of the grammar.[94] Alternatively, these structures fall under the "Reconstruction Effect", which includes a number of structures in which it appears that the Binding Theory holds, either to a pre-movement structure, or to a structure where the moved element has been replaced in its D-structure position at LF (cf. van Riemsdijk and Williams 1981, Barss,1984, Szabolsci,1985a). These examples are taken from the handout of Rochemont(1985).

(125) a. Which picture of himself did John put on the mantel?
      b.*Satisfied with John's work ui(he) will never be.
      c.*Tell him that Mary is leaving though she may.
      d. This picture of himself is difficult for John to look at.

Various proposals have been made to account for data such as that given above, and we will not discuss them here. Rather, we will note that the problem posed by our analysis above with respect to binding of traces is

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94. It is difficult to determine the feasibility of this view with the data available. However, note that such a view would necessitate that the Case Filter hold at PF, since otherwise, the ECM'd NP would be able to extrapose with the rest of the clause.

part of a larger and more general problem referred to as reconstruction. Finally, we note, as did Carden, Gordon, & Munro(1982), that this problem exists for a Raising to Object analysis of Fijian ECM, as well as for our SPEC2 analysis.

2.5.6.4 ECM Analysis--Conclusion

The analysis proposed above can account for the arguments provided by Gordon for a Raising to Object analysis. The word order is explained by fronting and extraposition. The agreement between the verb and the fronted NP, shown again below is accounted for by defining agreement not on "objecthood" but rather, on Case assignment.[95]

(126) a. ko a   tukuni <u>Mere</u> ni'u   a   mokuta <u>t</u>. (G, 69c)
         2s pst say-prop Mere sub-1s pst hit
         "You said I hit Mary."

      b. ko a   tukuna ni'u   a   mokuti Mere. (G. 69c)
         2s pst say   sub-1s pst hit-prop Mere
         "You said I hit Mary."

(127) Fijian Agreement: A verb agrees in Properness with a lexical
                        NP it assigns Case to (where pronouns and
                        Proper names are [+Proper]).

The successive raisings can be accounted for also by a SPEC2 to SPEC2 movement, similar to COMP to COMP movement.

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95. Pawley(1984) argues that "proper agreement" is in fact a 3rd person agreement marker.

Gordon's final argument concerns Passivization of the fronted NP. She provides elicited data such as in (128).

(128) a. au a   tukuni   ni'u   a   mokuti   Mere (G,70)
         1s pst say-Pass sub-1s pst hit-prop Mere
         "I was said to have hit Mary."

      b. era a   vinakati na gone me mokuta ko   Mere. (G)[96]
         3pl pst want-Pass art child sub hit   prop·art Mere
         "The children are wanted for Mary to hit."

While this data is controversial in that not all speakers accept such sentences (see Note above), but also see comments on Standard Arabic and Niuean below), it is clear that Passivization of the fronted NP would not violate conditions on movement such as Subjacency, nor conditions on representations such as Binding Theory A. These constructions do raise questions regarding chains, and so-called "improper movement" (i.e. movement between A and A-bar positions) and the status of variables (A-bar bound traces) as r-expressions, for the cases of ECM which do involve movement, such as Niuean, and some Fijian sentences such as (128)-- (the original trace in a sentence such as (128) is A-bound by the matrix subject position which should result in ungrammaticality according to Binding Theory C, which states that r-expressions, which includes variables, must be A-free). We will address these questions in Chapter 3 and 5.

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96. This example is taken from the handout, and not the ms. of Gordon(1980)

It seems then, that there is an analysis available to us to explain the Fijian data, which is consistent with the Projection Principle. We will now examine some other possible analyses.

2.5.7 Objections to Indirect Raising to Obect

2.5.7.1 The Two-Step Analysis

Since, as we have seen, the ECM'd NP acts as an object, and since, as we have also seen, the trace it binds acts in some ways as a A-bar bound trace, a proponent of a Raising to Object analysis might want to argue for a two-step analysis, in which the NP moves first to an A-bar position, thus A-bar binding its trace, and then subsequently moves to object position, thus behaving as an object. This two-step analysis is schematized below.

(129)

```
              VP
            /  _____
          /    \        \
        V      (A)       CP
               NP_i     / \
                  SPEC2 CP
                       |
                       t_i
```
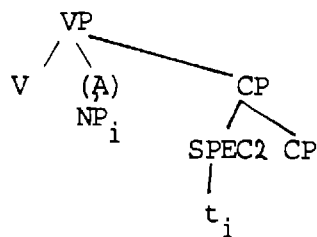
Our first objection to this analysis would be that it violates the Projection Principle, but we are testing the empirical adequacy of this principle, and so cannot appeal to it. Even so, there are arguments against the analysis in (129). The first is simply that it involves an

unnecessary step. Since, as we have seen, there is evidence for government and Case-assignment into the specifier position of a complement, the first movement in (129) alone will achieve the ECM effect. Also, the movement from the A-bar position to the object position might be considered to involve "improper movement" (but see Chapter 3 and 5). In addition, there is an empirical argument against the two-step analysis, which shows that we don't want there to be a possibility for any position other than the one A-bar, SPEC2 position to be involved in ECM, and therefore that the Projection Principle should be maintained, in order to rule out this possibility.

2.5.7.2 Kipsigas Data

The argument involves Kipsigas, an African (Nilo-Saharic) language.[97] Kipsigas is a null-subject, and null-object language in the sense that only subject and object agreement morphemes (clitics on the verb) appear in case the subject and object are pronominal. The word order is either VOS or VSO, and there is a special subject marking tone (S), which appears on the subject unless it has been moved to the left of the verb by

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97. The data here is exclusively from Jake & Odden(1979), as indicated in parentheses after each example. I have also benefited from reading Creider(1979) on Nandi, a language closely related to Kipsigas. I wish to thank David Odden for helpful correspondance, and Guy Carden for originally informing me of the relevance of Kipsigas to my work.

Topicalization. These points are illustrated in (130) below.[98]

(130)   a.   kàtIl Mu:sà KIplàŋàt / kàtil KÍplàŋat Mu:sà
             cut   M.   K.(S)   (S)
             "Kiplangat cut Musa." (J&O,5.d)

        b.   kà`   -tÍl-âñ
             pst 3s cut 1sg,obj
             "He cut me."   (J&O,3)

        c.   (Topicalization of Subject)
             KÍplàŋàt kÓ- kà- tÍl pè:ndÓ
             K.   top-past-cut meat
             "Kiplangat cut the meat." (J&O,6a)

There are many ECM verbs in Kipsigas, some of which are shown in (131).

(131) <u>Kipsigas ECM Verbs</u>
      <u>-mac</u> "want", <u>-yay</u> "make", <u>-ri:p</u> "watch"...(Jake & Odden)

It appears that the basic structure of Kipsigas is like that proposed for
Hungarian by Kiss(forthcoming), that is: Verb initial, with both subject
and object properly governed by the verb, and with free word order for
subject and object, unless the object is a clause, when it seems always to
occur finally. We assume scrambling to be a process of adjunction (cf.
Ross,1967, Saito,1985 and references therein).

The verbs in (131) take complements with an initial agreement marker

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98. I use capital vowels in place of Jake and Odden's Ɔ, ɩ, Ɛ, and ʊ.

from the embedded series, and an optional complementizer, <u>ole</u>.[99]

(132) mȯce Mù:sá [kȯ-lápát Kȋplaŋat]
       wants M.(S)   3s run   K.(S)
       "Musa wants that Kiplangat run." (J&O,7.a)

In Kipsigas, like Niuean and Fijian, ECM involves a displaced NP, and it
can occur to either subject or object (and certain indirect objects such as
benefactives and instrumental, which are not prepositional). Example (133)
shows ECM to subject and to object. Note there is agreement on both the
lower and the higher verb, if the ECM'd NP is non-third person, as in
(133c), and that the ECM'd NP, if coreferential with the subject, is
reflexivized. Note also that in Kipsigas, it is possible for only the CP,
(as in Fijian) or the entire clause, including SPEC2 to appear sentence
finally. This is accounted for if Kipsigas is a flat-structure language,
which does not require adjacency for Case assignment.

(133)   a. mȯce Mù:sá <u>Kȋplaŋat</u> [kȯ-lápát <u>t</u>]
           wants M (S) <u>K.</u>   3s-run
           (note:Musa and Kȋplanat can be in either order)
           "Musa wants Kiplangat to run." (J&O, 7.b)
           [ECM TO SUBJECT]

        b. mȯce Mù:sá pè:ndȮ [kȯ tȋl Kȋplanat <u>t</u>]
           wants M.(S) meat   3s cut K.(S)
           (note:Musa and pe:ndO can be in either order)
           "Musa wants the meat to be cut by Kiplangat." (J&O,11.b)

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99. The embedded series markers are: a "1s", i "2s", kO 3, kE "1p", and O
"2p". According to Jake & Odden(1979) the complementizer's appearance
depends on the nature of the higher verb, and "it's presence or absence
does not affect the application of the raising rules." (J&O,p.134).

[ECM TO OBJECT]

c. mÒcÓ:n   Mù:sá [à   -lápàt t]
   wants-1sg.Obj M.   1s.Sub-run
   "Musa wants me to run."   (J&O, 8b)

d. Ó   -mÒkcÍni-kE   [à   -lápàt t]
   1s.Sub want   reflex 1s.Sub run
   "I want myself to run." (J&O,9b)

ECM movement in Kipsigas obeys the boundedness constraints on ECM

movement discussed above. Thus, the relation between the ECM'd NP and its

theta position may not cross an intervening clause. This relation is,

however, able to exist between two SPEC2 positions. An example of this

appears in (134).

(134) a. Ó -mÒc -í:n   [kÒ -yày -In KÍplaŋàt
          1s.-want-2s,Obj 3s.-make-2s,Obj Kiplangat(S)

          t [kÒ -tÍl Ín   Mù:sá t]]
            3s.-cut-2s,Obj   Musa
          "I want that Kiplangat make that Musa cut you."
          (J&O,16.c)

     NOTE: (134) is ungrammatical without the object agreement
           In on yay "make"

That (134) involves relations as in (135a) rather than as in (135b) is

determined by the fact that (134) is ungrammatical without the object

agreement In on the intervening verb yay. That is, "you", the thematic

object of the lowest clause, may not be related to the NP which acts as the

object of the highest clause without being similarly related to the (null)

NP which acts as the object of the intermediate verb.

(135)
a. V   [CP   [IP V   [CP   [IP   NP

b. V   [CP   [IP V   [CP   [IP   NP
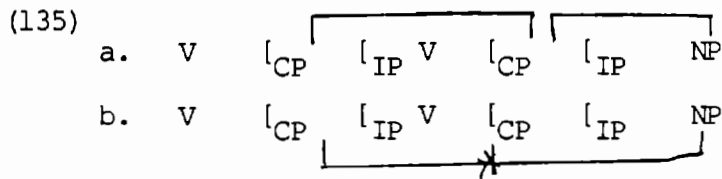
There is one major difference between Fijian and Kipsigas, however, and

that is that in Kipsigas, Movement to Subject is possible from object

position, as well as ECM movement. (Recall that Fijian Raising to Subject

is like English).[100] In (136) we see that panyE:k, "meats", the thematic

object of tIl "cut", acts as the subject of tEsta "continue". (We will

discuss Movement to Subject in Kipsigas in more detail in the next chapter,

and here will simply note that it does not in fact involve a chain

including the subject NP, and traces down to the theta position, but

rather, is more like English Tough Movement, involving operator movement

into SPEC, and coindexing with a lexical subject.)

(136)   ka -tEsta panyE:k [kO   tIl Mu:sa t]
         past-continue meats(S) 3s.Sub-cut Musa
         "Musa continued to cut the meats"   (J&O,32.c)

Non-thematic subject constructions in Kipsigas differ from ECM

constructions, however, in a number of ways. One crucial difference is

that in the former it is not necessary (though it is possible) for the

highest subject NP to be related to an NP acting as subject of an

intermediate clause. We saw above that this is required in the case of ECM

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100. Niuean Movement to Subject will be discussed in Chapter 3.

movement, due to the locality condition discussed above.

(137) a. (successive raising)
            k   -É: -tEsta pro [i: -nyOlu ec
            past 2s.Sub-continue   2s.Sub-necessary
            [i: -tÍl t panyE:k ec]]
            2s.Sub-cut   meats
            "It continued to be necessary for you to cut the meats."
            ("You continued to be necessary to cut the meats")
            (J&O,37c)

        b. (long-distance)
            k   -á: -tEstá   pro [kÓ -nyOlu
            past-1s.Sub-continue   3.Sub-necessary
            [kO'   -màs -án   KIplànàt (ec
            3s.Sub-beat-1s.Obj Kiplangat(S)
            "It continued for it to be necessary for Kiplangat
            to beat me."
            ("I continued for it to be necessary for Kiplangat
            to beat.") (J&O,43a)

In (137a) we see that "you" (pro) appears as subject of the highest

clause. It is coindexed also with the (null) NP appearing in subject

position of the intermediate clause, as we see by the fact that the

intermediate verb exhibits 2nd person singular agreement. In (137b), it

also acts as subject of the highest clause, but in this case it is not

coreferential with the subject of the intermediate clause, as we can see by

the fact that the intermediate verb exhibits 3rd person singular (unmarked)

agreement. Hence, in this clause, the subject ec is interpreted as an

expletive. For the moment, let us assume (it will be argued for in Chapter

3) that the relation between the most deeply embedded theta-position and

the matrix subject shown in (137) is like ECM movement in so far as it

moves first to an A-bar position. (We will refine this in Chapter 3,
showing that, unlike ECM movement, Kipsigas Movement to Subject involves
the movement of an empty operator successively from SPEC to SPEC--as
opposed to SPEC2-- and that the empty operator is coindexed with the theta
position NP, and with the highest subject NP, similarly to English "Tough
Movement".) This is necessary, since this relation does not obey Binding
Theory, and it leaves a Case marked trace. Under this assumption the
differences between the non-thematic subject constructions and the ECM
constructions are explained. The former can be of the form of (138a) or
(138b), where the connected lines show coreferential relations.

(138)
    a. [[...V..NP...[X [...V..NP..[X [...V..NP...]]]]]]

    b. [[...V..NP...[X [...V..expletive..[X [...V..NP...]]]]]]

Under our analysis of ECM movement, note that the relation (138b) would
be, as desired, impossible for ECM, that is, ECM cannot "skip" a clause.
This is because there is no object position that a NP can be in, other than
the SPEC2 position itself. While the relation between NPs and operators in
a non-thematic subject construction has the option of being from SPEC to
SPEC or from SPEC to (intermediate) subject to SPEC to matrix subject, ECM
movement has only the former option (with SPEC replaced by SPEC2 in this
case). And by taking this option (the only one), it is forced to act as
the object of the intermediate clause, since by being in SPEC2 position, it

is, by definition, governed and Case-marked by the intermediate verb.

The Kipsigas facts then, involving differences between "Raising to Subject" and ECM constructions, argue that a two-step analysis for ECM movement should be ruled out in principle. Since the Projection Principle would rule out this option, these data argue in favour of this Principle.

We have used Movement to Subject constructions in Kipsigas to argue in favour of a principle ruling out non-thematic complement position. We have not, however, analyzed these constructions in any detail. This will be undertaken in the next chapter.

2.5.8 Objections to "Prolepsis"

2.5.8.1 Introduction

There is one final possible alternative to our ECM analysis which must be discussed. This is an analysis in which we consider the constructions to involve the base-generation of an NP in a (non-thematic) object position, with an obligatory coreferential relation between such an NP and some argument of the lower clause. This analysis would involve the postulation of a process distinct from Raising, and from ECM movement, which would bear some resemblance to (although it would also be distinct from) the phenomenon of Control. Following tradition, we will call this process Prolepsis.

This move gains some initial support from the fact that in many languages, as we have seen above ECM movement does not in fact necessarily involve movement, but possibly a relationship between a base-generated NP and a pronoun. It will be recalled that Fijian ECM to non-subjects and non-objects involves a pronoun in the theta position, and that Kipsigas examples are ambiguous between a pronoun and a A-bar trace analysis. The relevant data is repeated below.

(139) <u>Fijian</u>
    a. au gadreva <u>na</u> <u>koro</u> <u>levu</u>$_i$ ni ko a   lako <u>kina</u>$_i$.
        1s wish   art town big sub 2s pst go to-it
        "I wish you had gone to the city."   (G,72)
        [ECM to INDIRECT OBJECT]

    b. e vinakati <u>Tevita</u>$_i$ ko   Bale me'u   lako <u>kaya</u>$_i$.
        3s want-prop T.   prop-art B.   sub-1s go with-him
        "Bale wants me to go with Tevita."   (G,73)
        [ECM to OBLIQUE]

    c. au namaki   <u>Bale</u>$_i$ ni   damudamu na <u>nona</u>$_i$ boto.
        1s expect-prop B   sub-3s red   art her boat
        "I expect Bale's boat to be red."   (G,74)
        [ECM to POSSESSOR]

    d. e a   vinakata <u>na</u> <u>tagane</u>$_i$ ko Mere me'u mokuti <u>koya</u>$_i$
        3s pst want   art man   prop-art M.sub-1s hit-prop him
        "Mary wanted me to hit the man."   (G,78)
        [ECM to OBJECT]

(140)   <u>Kipsigas</u>
        mOc -O:n Mù:sá <u>pro</u> [kò - tIl-án KIplanat <u>ec</u>]
        want-1s.Obj Musa(S)   3s.Sub-cut-1s.obj Kiplanat
        "Musa wants that Kiplangat cut me"   (J&O12b)

We are claiming that the base-generated NP in these pronoun cases is in
a SPEC2 position (and that in other cases, the NP moves to this position).
However, we might ask if it could be the case that it is in object
position. Such an analysis would not raise problems for Binding Theory
(since no anaphors are involved) nor for Case theory (since no chain is
involved). Nor need it cause problems for the Kipsigas data discussed
above, since we might simply impose a locality constraint on the Prolepsis
relation to account for the fact that it may not cross a clause, and may
not exist between an NP and an operator. There are, however, other
problems with this analysis. One of the main ones is that in some ECM
cases, we clearly do want to posit movement, and we have already seen that
this movement cannot be to object position. Thus, we would have to now
consider what we are calling "ECM" in Fijian to sometimes involve movement
to SPEC2, with government and Case marking of this position, and sometimes
"Prolepsis", with a base-generated NP in a non-thematic object position.
Also, we would need to posit one operation involving movement in Niuean,
and another which does not involve movement, in Blackfoot. Since the two
types of constructions are very similar, this seems undesirable.

2.5.8.2 Higgins' (1981) Prolepsis Analysis

Higgins(1981) argues in a thought-provoking manner for a prolepsis

analysis for certain constructions in Zacapoaxtla Nahuat.[101]

The constructions analyzed as proleptic are given below, where the (a) sentences involve prolepsis and the (b) sentences do not. Higgins does not provide a gloss for the morpheme ke, but he refers to it as a "subordinator" in the text (Higgins,1981,p.77).[102]

(141) a. nimickaki   (ke) tiwa:lah
         1s-2s-hear-Pres 2s-come-Pret
         "I hear that you came." (H,10)

      b. nikaki   (ke) tiwa:lah
         1s-3s-hear-Pres 2s-come-Pret (H,4)

(142) a. niki:nitak   kihekohkeh   tahto:skeh   mehika:noh
         1s-3p-see-Pret 3-3s-try-Pret-P 3-speak-Fut-P Nahuat.
         "I saw them trying to speak Nahuat." (H,12)

      b. nikitak   kihekohkeh   tahto:skeh   mehika:noh
         1s-3s-see-Pret 3-3s-try-Pret-P 3-speak-Fut-P Nahuat.
         "I saw them trying to speak Nahuat." (H,7)

Higgins considers however, that prolepsis does not involve an obligatory coindexing relation between the matrix object and an embedded argument.

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101. Higgins also discusses constructions with what he calls "a form of something resembling topicalization" in the lower clause (Higgins,1981,p.69). Unfortunately, he is unable to determine from his data if the fronted NP acts in any way as an argument of the matrix verb. Since the verb does not agree with the fronted NP, it would appear that the structures involve embedded topicalization or Left Dislocation without ECM, and it would be interesting to see, if the fronted NPs are governed by the verb, why ECM is prohibited. An example structure is: "nikayik i:n ta;kah (ke) wa:lahkeh/1s-3s-hear-Pret man-Pl (that) 3-come-Pret-P "I heard that the men came".

102. Higgins gives Spanish and English translations for the Zacapoaxtla Nahuat sentences, but I provide only the English ones.

Rather, he thinks that:

"The most general analysis of prolepsis...need invoke no
transformational rule and need impose no coreferentiality
requirment. Indeed to take either path would surely be to
take the path of error. The verb is allowed to take an
object noun phrase in addition to the complement clause,
and the interest of the construction shifts to the question
of what semantic relationships that object contracts with
the verb. Achieving proleptic constructions merely requires
the addition of NP to the subcategorization frame, perhaps
by a lexical redundancy rule keyed to some semantic
classification."   (Higgins,1981,p.73)

As Higgins suggests, possible English examples of prolepsis might be

sentences like those following.

(143) a. Catherine saw the nuns doing yoga.
      b. Barbara heard Geoffrey and Avril singing.

For Higgins, the issue of prolepsis is not entwined with the notion of

the Projection Principle. Thus, for him, non-thematic objects may be

generated. At issue is whether the relation between the object and an

argument of the lower clause is mandatory. Here, we hold the Projection

Princple. Thus, to the extent that it is required that Catherine actually

saw the nuns in (143a) we can agree that the sentence (143a) might be said

to involve prolepsis, rather than ECM. However, as Higgins points out, it

is not entirely clear that such sentences must involve such a direct

relation between the verb and the so-called proleptic object.

Consider the following. It appears that there is an argument in favour

of a prolepsis analysis for the Zacapoaxtla Nahuat constructions in that

the proleptic argument must satisfy selectional restrictions of the matrix

verb. Hence:

(144) a. nikayik ke   noho:n ko:meh akih   mahtakti
         1s-3s-hear-Pret that   pot   3-hold-Pres-P ten
         li:troh ka:da se:
         litre   each one
         "I heard that each of those pots holds ten litres."
         (H,22)

     b. *niki:nkayik ke   noho:n ko:meh akih   mahtakti
         1s-3p-hear-Pret   that   pot   3-hold-Pres-P ten
         li:troh ka:da se:
         litre   each one
         "I heard that each of those pots holds ten litres."
         (H,23)

     c.*niki:nkayik   noho:n ko:meh ke akih   mahtakti
         1s-3p-hear-Pret that   pot   3-hold-Pres-P ten
         li:troh ka:da se:
         litre   each one
         "I heard that each of those pots holds ten litres."
         (H,24)

     d. niki:nkayik   noho:n ta:kah ke tahtohkeh   mehika:noh
         1s-3p-hear-Pret that   man-P   3-speak-Pret-P Nahuat
         "I heard those men talking Nahuat." (H,25)

Higgins quotes his informant as saying that (144b,c) are ungrammatical

because pots cannot speak, and as giving (144d) as a sensible sentence.

From this it appears that the verb "hear" requires its object to be a

noise, or an (agent?) object capable of making a noise. To the extent

that this is true, then, the verb appears to require an NP object, and to

take also a sentential object, both of which signify noise in some way.

However, Higgins wonders if it is entirely true that it would be necessary

for the pots to speak in order for the sentences (144b,c) to be acceptable,

since, with respect to the English example above, he notes, following Dretske(1969) and Gee(1975), that it is possible to hear someone start an engine without hearing the person at all, and to see someone doing something without seeing the person at all. This is seen below, where in the first sentence the agent of start is simply assumed to be George by the speaker, and in the second, the speaker has merely seen the equipment and other signs of painting, and no actual human beings. The third sentence speaks for itself, as does the more natural reading for (d).

(145) a. I heard George start up the chainsaw.
      b. I saw them painting Building 20 this morning.
      c. I could smell my neighbours cooking their dinner.
      d. I saw him crash the Huey.

Higgins speculates that the same observations may hold in Zacapoaxtla Nahuat proleptic constructions. It would be interesting to know if (146) is grammatical in Zacapoaxtla Nahuat.

(146) I heard the pots being smashed/falling/spilling over...

It is difficult to determine in such cases what the correct analysis should be, since, given our assumptions, it depends on whether or not the "proleptic" NP is receiving a theta role. If Higgins' informant is correct for Zacapoaxtla Nahuat, then it would appear that an analysis is called for in which the object NP is indeed an object of the verb, since the verb appears to make demands as to what this object can be. In this case, Higgins' analysis of prolepsis seems essentially correct to me, although for him, the issues are different, since he does not consider that a

proleptic analysis depends on correct determination of thematic role

assignment.[103] Our views of these structures differs in another way also.

Proleptic structures in my view would be those in which a verb takes an NP

object (to which it assigns a theta role) and a second sentential object

(to which it also assigns a theta role) where the first object enters into

a relationship with an argument of the second object. Higgins considers

this relation not to be grammatically mandatory. From his words quoted

above, and directly below, it would appear that the relationship comes

about due, in some way, to the relationship the proleptic object has with

the verb. He states: "It is part of the very meaning of the construction

that a relationship should hold between the entity denoted by the proleptic

object and what is denoted by the following clause." (Higgins,1981,p.83)

But we must ask see how this could be, if indeed the verb assigns no

independent theta role. And if it does not do so, then an ECM analysis is

possible, and would be enforced in a theory with the Projection Principle.

It is difficult to determine the validity of the claim that no relationship

need hold in Zacapoaxtla Nahuat, however, in the English perception clause

sentences, it appears not to be true. Consider the following clauses.

(147) a. I saw Paige [PRO dye some wool in the garden]
      b.*I saw Paige [that she dyed some wool in the garden]
      c.*I saw Wynne [that the ballerina kissed her]

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103. Higgins also rejects Frantz's(1978) copying rule for Blackfoot.

In the English prolepsis cases, if this is what they are, what is

required seems not to be a simple case of coindexing for semantic reasons.

The coindexation must in fact be with an embedded subject PRO. This is

grammatically forced by the fact that see takes an NP and an infinitive

clause. Thus, the requirement of coindexation is grammaticalized and it

appears that English cases of prolepsis are simply object control verbs,

which is different than prolepsis is generally considered to be.

The question is, whether Control is a desirable analysis. The verb try

in English also can take only an infinitive clause, and thus it too is a

mandatory Control verb. However, the ungrammatical sentence in (148b),

which has grammatical counterparts in many languages, is understandable.

This is not true of a sentence like (148c,d,e).

(148) a. Verner tried [PRO to hawk the tin painting]
      b.*Eugene tried [for the brains in black butter to turn
         out to be delicious/that the b.i.b.b. would be delicious.
      c.*Candy saw the refried beans that Paul was having dinner.
      d.*Artie heard the choir that the chants had only three notes.

It appears then, that if the NP acting as an object is determined to

receive a theta role from the matrix verb, then these sentences could be

analyzed as proleptic, which means that there must be a coreferential

relation between it and an argument of the embedded clause. (This would

not be true of the verb try, for instance.) The fact that the

coreferentiality is always between the matrix object and the lower subject

is then an accident of syntax, that is, of the fact that the verbs in

question subcategorize for an infinitival clause.

The other possibility, which is more in accord with my intuitions, is that the object of these verbs is simply a clause, and that the so-called proleptic object does not receive a theta role from the verb, although it does receive ECM. This means that perception verbs such as see, hear, smell, etc. may take NP objects, tensed clausal objects, or IP infinitivals. In the latter case, the verbs display ECM, and the fact that, for instance, with the verb see, the embedded subject is usually seen is due to the fact that when the event determined by the clause is seen, it is normally the case (though not always, and not necessarily) that the participants in the event are also seen. (I restrict my attention here to the cases of see which actually involve visual reception.)

(149) a. Ada saw the steelworkers.
      b. Cuchulainn could see that the lady wore a dress of many colours.
      c. He saw the sword bring(ing) blood from the wind.

(150) a. I heard the crows from my window.
      b. When Carl hears that the children are playing outside, he
         doesn't worry about them.
      c. Sylvie heard Bruno talk(ing) to the flowers.

(151) a. From miles away you can smell her perfume.
      b. I can smell that there's fish chowder in the office.
      c. On Main Street you can smell the factory make(ing) cookies.

This is supported by the fact that idioms may appear in these constructions.

(152) a. One could hear the shit hitting the fan in the next room.
b. I saw the roof fall in on my sweetest dreams.
c. We used to see the fur fly when the phone bill came due.

In this case, an ECM analysis is desirable. Whatever the facts are with respect to the putative theta role, it is unnecessary to consider that there is a non-thematic object in any of these constructions.[104]

For the most part, the authors of the works on the languages discussed in this chapter argue against a prolepsis analysis on the grounds that (i) there is no theta role assigned to the matrix "object" and therefore, it should not be base generated, but rather moved or copied into the matrix object position, and (ii), the relation between the matrix "object" and the embedded argument is unlike other mandatory coreference relations such as Control. In Higgins' examples from Zacapoaxtla Nahuat, neither of these points is clear. In English, in at least some of the constructions discussed, the first point appears to be true, and the second not true. There are, however, other constructions with required coreference relations in English in which both (i) and (ii) hold. These will be discussed shortly.

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104. Higgins cites Warnock(1965) as noting that it is possible to see a man mowing the lawn, when one has seen the man, but not seen that that is what he is doing. This example would seem to argue that "I saw the man mowing the lawn." is structurally ambiguous between a sentential complement, and an NP complement with a secondary predication. This example then, would be similar to the well-known examples such as "Bugs ate the carrots raw.". We will not discuss these examples here, although clearly they are relevant to the problems which we have touched on. See Williams(1975,1980,1983).

2.5.8.3 Gordon(1980) & Seiter(1980) against Prolepsis

Gordon and Seiter, in their discussions of Fijian and Niuean
respectively, consider such an analysis, although they do not term it
Prolepsis. In each of these works, the analysis is rejected. We will
review some of their arguments.

Gordon notes that there are several differences between structures with
what we are calling a proleptic NP, and those with a thematic NP which
happens to be coreferential with an embedded argument. Her arguments are
connected to the point made above, namely, that movement must be posited in
some cases.

First, in cases where a thematic argument is coreferential with an
embedded object, according to Gordon, it is impossible for the embedded
object to be null.[105] Hence, (152a) is ungrammatical, while (152b), a case
of ECM, is acceptable.

(153) a. e a   kerei   au ko   Mere
         3s pst ask-prop me prop-Art Mary
         [me   vukea   au/*0 ko   Bale]
         sub-3s help-prop me/0 prop-Art Bale
         "Mary asked me (to have) Bale help me." (G,58a,b)

     b. au kilai   [iko] (pro) [ni   vinakata t ko

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105. This is unless the embedded object is 3ps, the normal form of which is
null.

- 169 -

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        1s think-prop  you          sub-3s want        prop-art
        Timaima.]
        T.
        "I think Timaima likes you."  (G,59b)
```

Secondly, a reflexive object in Fijian, cannot be null, although 3rd

person object pronouns are normally so. Thus, in (154a), involving a

thematic matrix object with a coreferential embedded subject and a

reflexive embedded object, the embedded reflexive object must be

phonologically present (koya), and may not be null. In (154b), however,

where the ECM'd NP is coreferential with the embedded subject awnd the

embedded object is reflexive, the embedded reflexive object can be

null.[106]

```
(154)  a. au a   kerei    koya [me     vukea 0 ko      Bale]
          1s pst ask-prop her  sub-3s help    prop-Art Bale
          "I asked Bale to help *herself (G,65b)

       b. au vinakati  koya [me     vukea 0 ko Mere]
          1s want prop her  sub-3s help    prop-Art Mere
          "I want Mary to help herself."  (G,66b)
```

This distribution of koya is explained under the assumption that in

these sentences, movement has taken place. It is not clear how a rule of

Prolepsis could be formulated so as to allow a null pronoun in a position

where it is otherwise disallowed. It is likewise unclear how such a rule

could allow a reflexive to be null, just in case it is coreferential with a

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106. It is not clear from the data available to me whether the reflexive
object must be null.

matrix <u>non-thematic</u> element.

Another distinction between thematic and non-thematic "objects", appearing in many languages, is that non-thematic "objects" are not able to be anaphoric to the matrix subject. This is seen in the following examples from Blackfoot.

(155) a. nits-íksstaa n-áxks-oy-ssi
           1-want   1-might-eat-conj
           "I want to eat (that I eat)." (F,1978,13)

      b.*nits-íksstat-oxsi   náxkoy'ssi
           1-want(trans)-reflex to eat(that I eat) (F,1978,16)

(156) a. kit-ssksiniixpa kit-sá-waakskitsstaa-xsi
           2-know   2-neg-fut-win-conj
           "You know you won't win." (F,1978,18)

      b.*kit-ssksino-oxsi   kit-sa-waakskitsstaa-xsi
           2-know(TransAnim)-reflex 2-neg-fut-win-conj
           "You know you won't win." (F,1978,15)

If the non-thematic "objects" are considered in fact not to be subcategorized by the verb (i.e. not to be objects at all) then the impossibility of reflexivization in these cases follows if reflexive is defined as a rule which is lexical, as it seems to be in these languages, in as much as reflexive relations between NPs are signalled by affixes on the verb, and such relations are impossible unless both the antecedent and the anaphor are arguments of the verb on which the reflexive morphology appears. But this fact causes problems for an analysis which considers the ability to take a non-thematic object as a subcategorization property of a particular verb, since it is not clear how a verb's subcategorization for

an object is to be kept distinct from its assigning a theta role to this object for the purposes of reflexivization,

Seiter, in his argument against Prolepsis, which he calls "R-Equi", points out that this rule would be a version of "Equi-NP Deletion" (or Control, in GB terms), but that it would differ from Equi in several ways. While Equi may only apply to embedded subjects in Niuean, "R-Equi" would apply to an embedded subject or object, but could not apply to other arguments.[107] A second difference is that while the subject of an Equi verb may or may not be coreferential with an embedded NP, a "raised object" must be coreferential with some embedded NP (subject or object).

Seiter's main objections to R-Equi, however, are based on the fact that in Niuean, Movement to Subject is identical to ECM Movement, and in the case of Movement to Subject, he can provide data showing serious problems with R-Equi. We will argue in the following chapter that Niuean Movement to Subject involves movement to SPEC2, with subsequent movement to the matrix subject position. This could not involve a relation like prolepsis, since it is possible to move to subject idiom chunks. (This is not possible in Equi cases, of course.) And finally, it is possible to have an

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107. It is not completely clear why a language such as Quechua (Lefebvre and Muysken,1982) allows ECM to all types of embedded NPs and even to non-NPs such as adverbs, while Fijian allows it to all types of embedded NPs, and Niuean, on the other hand allows it only to subjects and direct objects. Since languages vary so much on this point, the variation is likely due to language-specific restrictions on Case-compatibility.

overt element which is coreferential rather than a PRO in a controlled

position, just in case this element is an A-binder of a reflexive. This is

not the case in Movement to Subject sentences. (See 3.4 for further

discussion of Niuean Movement to Subject.)

(157) a. Kua kamata tei e tau matahui ke oeli e lautolu
         Perf begin Perf Abs Pl knee Sbj oil Erg they
         "They've begun to get a little drunk." (S,3.66)
         ("oil the knees" = "get drunk")

(158) a. Kua amaamananaki e   na   tama ke   fe -tohitohi-aki
         Perf hope   Abs pair boy Sbj Rcpr-write -Rcpr
         hololoa   (a   laua)
         frequently Abs they,Du
         "The two boys are hoping to write to each other frequently"
         (S,3.67b)

      b. Liga   ai maeke   e   fifine ke logona e   ia a   ia (nī)
         likely not possible Abs woman Sbj hear   Erg she Abs her Rfl
         "The woman couldn't hear herself." (S, 71b)

2.5.8.4 Non-Prolepsis in Moroccan Arabic

Wager(1983) rejects an ECM type of analysis (where she considers the

movement might be analogous to Left Dislocation), in favour of Prolepsis.

Her reasons for doing so largely concern the fact that ECM Movement could

not be considered identical to Left Dislocation, since, as we discussed

above, an ECM'd NP is in a position to the left of a complementizer, and a

Left Dislocated one is in a position to the right of a complementizer.

This does not worry us, however, as we are not considering ECM movement to

be necessarily the same as any other type of movement in a given language,

as discussed above.

Furthermore, Wager argues, a Right Dislocated NP may not be an anaphor, and may be an independent pronoun, whereas the reverse situation holds for an ECM'd NP.

(159) a. *ṛaṣi   ma ʕreft   fin   maṣi
         myself Neg know-1sg where going(m)
         "Myself, I don't know where I'm going." (W,3.57a)

     b. ma ʕreft   ṛaṣi   fin   maṣi
        Neg know-1sg myself where going(m)
        "I don't know (myself) where I'm going." (W,3.57b)

(160) a. hiyya, šeftha
         her   saw-1sg-3sgf
         "Her, I saw her." (W,3.16a)

     b.*šeft   hewwa ma bɣaš   yhḍer   mʕahum
        saw-1sg him   Neg want(3sgm)-Neg 3sgm-speak with-3pl
        "I saw him he doesn't want to speak with them." (W,62b)

The ungrammaticality of (157a) can be explained by Binding Theory, since the anaphor is not bound. In (157b) the anaphor is bound, by the matrix subject. (This is not the case for Wager, since she assumes a different definition of government from the one assumed herein.)[108] This also explains the ungrammaticality of (161a) as compared with (161b). (161a) must be construed with the non-emphatic meaning of herself to be ungrammatical.)

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108. Wager also discusses an interesting aspect of Moroccan binding, namely that total overlap of reference is not required for the anaphor/antecedent relation, so that, for instance, the word for I can act as antecedent for the word for we.

(161) a. *Herself$_i$, Lily$_i$ doesn't undertand her(self)$_i$.
      b. Lily$_i$, Edith understood her$_i$ all too well.

Wager considers that the fact that an independent pronoun cannot appear
in an ECM'd position is due to its being an object position, since
independent pronouns also cannot appear in object positions, nor in fact in
any A-position. It may appear in its emphatic sense as an A-bar NP
coindexed with a clitic, or as a Left Dislocated NP coindexed with a
clitic, as in (158a), where they "do not have the emphatic meaning; they
are simply NPs which have received prominence in the sentence, as are all
dislocated NPs." (Wager,1983 p.113). However, the contrast between (158a)
and (158b) can also be explained in that in the case of the emphatic NPs
which are grammatical, they are generated in an A-bar position which
receives no theta interpretation, however, in the case of ECM'd pronouns,
they act as subjects of predication, and thus assume a grammatical
function. Hence the generalization regarding independent pronouns can be
that they may not be in a position which is theta interpreted.

Wager also points out that not any verb may be an ECM verb, which would
be expected if ECM verbs are as defined above, that is, verbs which
subcategorize for a CP, and select for a predicate rather than a
proposition. Thus, the ungrammaticality of the sentence below is explained
without a Prolepsis analysis.

(162)＊gallihum   naẑat belli ma ɣadis̆
        said(3sgm)-to-ɜ̩pl Nazat that Neg Fut-Neg

        ys̆ufha   ɣedda
        3sgm-see-3sgf tomorrow
        "He told them Najat that he wasn't going to see her
        tomorrow."(W,3.64a)

Wager's discussion of what she considers to be prolepsis show that it

must be a form of ECM in a theory which incorporates the Projection

Principle. She states that the string below is ambiguous as to whether or

not the physical person was actually perceived.

(163) seftha   dexlat   leddar
      saw-lsg-3sgf entered-3sgf to-the-house
      "I saw her that she went into the house." (W,6.44)

However, she states that the clause is disambiguated by intonation as

follows, where (164a) takes a thematic object, and (164b) does not. (164b)

is thus synonymous with (164c), except states Wager, that the "object" in

(164b) receives prominence.

(164)a. s̆eftha   dexlat   leḍḍaɾ
        saw-lsg-3sgf entered-3sgf to-the-house
        "I saw her go into the house." (W,6.44a)

     b. s̆eftha   dexlat   leddar
        saw-lsg-3sgf entered-3sgf to-the-house
        "I saw her go into the house." (W,6.44b)

     c. s̆eft   belli dexlat   leḍḍaɾ
        saw-lsg that entered-3sgf to-the-house
        "I saw that she went into the house." (W,6.45)

Coreferentiality is necessary (for whatever reason), as it is in

English, and presumably Zacapoaxtla Nahuat.

(165) Muhend$_i$, ddawh$_i$./*$_j$ lṣefur
      Mohand, took-3pl-3sgm   to-Sefrou
      "Mohand, they took him to Sefrou." (W,6.46b)

She contrasts this with other verbs.

(166) galt$_i$liyya   belli heḍru   mɛaha$_i$./$_j$ lbarħ
      said-3sgf-to-1sg that spoke-3pl with-3sgf yesterday
      "She told me that they spoke with her yesterday." (W,48a)

She too considers that:

"[the] presence and meaning of the matrix verb impose a
 special connection between the dislocated NP and the
 complement sentence, but one which is also limited by
 these same two factors. With the M[atrix] O[bject]
 Dislocation structures, the dislocated NP is put in a
 position of prominence in the sentence, and, depending
 on the meaning of the matrix verb, this foregrounding
 entails certain expectations of the relationship between
 the person or entity denoted by the matrix object and
 the event described in the complement clause."
 (Wager,1983.p.136)

Wager notes that the proleptic NP need not be the semantic object of

perception or cognition. Thus, (167) are possible sentences, and contain

no contradiction.

(167) a. dxelt   leddar   w šeftu   ma
         entered-1sg to-the-house and saw-1sg-3sg Neg
         kaynš
         being there-Neg
         "I went into the house and saw (him) that he wasn't
         there." (W,6.51a)

      b. mšit   ldaru   w lgitu   ma
         went-1sg to-house-3sgm and found-1sg-3sg Neg
         kaynš
         being there-Neg
         "I went to the house and found (him) that he wasn't
         there." (W,6.51b)

c. ma kaneírfuš̌   gaɛ, walakin íref_tu
   Neg Cont-1sg-know-3sgm-Neg at all but   know-1sg-3sgm
   as   adi ygululiʰ
   what Fut 3pl-say-to-3sgm
   "I don't know him at all, but I know (him) what they're
   going to tell him." (W,6.73)

Likewise, (168) is possible if "it meant that every time his mother came

from the village he did a particular thing...and the speaker knew this and

saw him in that particular state. What is important in this sentence is

that the <u>state</u> of the person is what is seen, <u>not</u> the person himself."

(emphasis in original) (Wager,1983,p.138)

(168) ʔseftu   žat   ṃṃu   men leblad
      saw-1sg-3sgm came-3sgf mother-3sgm from the-village
      "I saw (him) that his mother came from the village."(W,6.52)

Furthermore, verbs which cannot appear with only an NP object, such as

the verbs meaning "fear", hope, think (see (169)) may appear in these

constructions, as seen in (167) below.

(169) *xeft Muhend
      feared-1sg Mohand
      "I feared Mohand."

Wager gives two pieces of evidence which suggest that the matrix object

in these constructions might indeed receive a theta role in some cases.

First, she notes that the dislocated object of the verbs <u>bɤa</u> "want" and

<u>tsenna</u> "wait" is presumed to have some power over the event in the embedded

clause, so that (170a) is unacceptable, although (170b) is fine.

(170) a.*bɣɪ́tu   teʕteṣ   ṃ̣ṃu
          want-1sg-3sgm 3sgf-sneeze mother-3sgm
          "I want (him) for his mother to sneeze." (W,6.49a)

     b. bʕit   ṃ̣ṃu   teʕteṣ
          want-1sg mother-3sgm 3sgf-sneeze
          "I want his mother to sneeze." (W,6.49b)

It is not clear whether the object in this example really is thematic,
in which case it differs from the examples given above, which clearly are
not, or whether the constraints leading to the ungrammaticality of (170)
can be attributed to non-thematic "overlay" constraints which are imposed
on an ECM'd NP. As mentioned above, we do not claim that there is no
difference in meaning between a sentence with and without ECM, but rather,
that these differences are not thematic.

A second set of data which might suggest that the object in these
constructions is in fact thematic, is that idiom chunks may not appear in
the dislocated position, according to Wager.

(171) *ʕreftha   tartlih
      know-1sg-3sgf 3sgf-flew-to-3sgm
      "I know her she flew to him."
      ("she flew to him" = "he got angry") (W,6.53e)

However, Wager points out that idiom chunks cannot be Left Dislocated
either, and that non-specific items are subject to the same constraints
with respect to both Left Dislocation and ECM movement. She attributes the
constraint to the fact that both ECM movement and Left Dislocation place
prominence on an item.

For the most part, then, it appears that no theta role is assigned to the NPs in question. Wager also argues that there is no vague "aboutness" theta role assigned by the verb in these constructions, since such a theta role would be inappropriate in the following examples. ("Aboutness" is discussed further below.)

(172) tsennitu   yži   men   leblad
      waited-for-1sg-3sgm 3sgm-come from the-village
      "I waited for him to come from the village." (W,6.36c)

  b. xaftu   yĭlebha   felklam
      feared-3sgf-3sgm 3sgm-defeat-3sgf in-the-words
      "She feared him that he would defeat her with words."
      (W,6.36f)

Our conclusion here is that, since there is no theta role assigned to the "proleptic" NP, it is not necessary to consider this NP an object of the verb, in the sense of it being a sister to the verb, and hence, no need for a proleptic analysis. Rather, we propose the ECM analysis put forward in earlier sections of this chapter.

2.5.8.5 "Verb-of-NP-that-S" in English

Higgins gives examples (some from Shearin,1910) of what he calls prolepsis from Biblical English.

(173) And God saw the light, that it was good.(Genesis 1.4)

He notes that passivization is possible in these cases.

(174) a. Then shall the prophet be known that the Lord
       hath truly sent him. (Jeremiah 28.9)
     b. Now if Christ be preached that he rose from the dead.
       (1 Corinthians 15.12)

More recent examples can be found in Jespersen(1961 reprint).[109]

(175) a. The fear of being swallowed up made me
       that I never slept in quiet.
       (from Defoe,R.96, in Jespersen,p.297)
     b. He also desired me that I would not take any more servants.
       (id Rox 62, in Jespersen, p.298)

These examples are somewhat different than the English ones involving

perception verbs in that the role of the "object" is a form of vague

"aboutness". Although such sentences are not entirely acceptable in modern

English, there are other very similar examples which are, namely "of-NP"

cases such as below, with verbs such as "know" and "read" etc.

(176) a. I know of Mrs. Dalloway that the light gave her
       headaches.
     b. I read of Carroll that he was painfully shy.
     c. I've heard of him that he didn't realize he was
       oppressed.

These objects of of contrast with the objects of the perception verbs in

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109. Interestingly, these examples all more or less require coreference
with the embedded subject, (to the extent that I have intuitions about
them) rather than any embedded NP, as in the examples below. This is in
accord with Wager's(1983) observations about the Moroccan Arabic verb for
"want", (see (168) above). Jesperson gives one example with "make" with
non-subject coreference, of a much earlier date: "the sclaundre of his
diffame Made hem that they him hatede therfore" Caxton R 107 in
Jespersen,p.297).

English in that they can be coreferential with an NP in any position of the

embedded clause, and not just the downstairs subject, as seen in the first

example above, contrasted with (177a), and that they can never be the only

object.

(177) a. I saw Piers plowing the fields.
b. I saw Piers.
c. I've heard of the Wife of Bath that she had a gap
   between her front teeth.
d.*I've heard of the Wife of Bath.(other than in the
                                   sense that I know of her
                                   existence through my hearing faculty)
e. I know of Bertilac that his wife was seductive.
f. I know of him.   (other than in the sense
                             that I know of his
                             existence)

There has been much puzzling as to what the theta role might be of the

object of of in these constructions. Intuitions are not very helpful,

since the role of these objects is so indeterminate. It is possible that

there is, as suggested and rejected by Wager for Moroccan Arabic, an

"aboutness" role. It does seem, however, on the level of intuition, that

it should not be as difficult to pin down the role of a thematic NP as it

is to pin down this one. This leads us to speculate that the of object

receives no theta role at all in the sentences above, but rather that it is

licensed simply through coreference with an NP in the clausal object of the

verb. This in turn leads us again to the Projection Principle, and to the

notion of non-thematic proleptic arguments. We have argued that in

languages such as Moroccan Arabic, an ECM analysis can account for the

sentences which contain a non-thematic "object". Is this so in the case of

of arguments?

Some of the data which have been considered to involve Raising to Object/Prolepsis/ECM in various languages at times has had an "aboutness" reading attributed to it. Thus, D. James (p.c.) states that the James Bay Cree ECM sentences given above have a sort of special focus on the ECM'd NP. An example follows.

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(178) nikiske:lima:w          e:ki:wa:pamak can
      I-know-TransAnim-1-3sg   that I saw    John
      "I know that it was John I saw."
```

James thinks that these sentences might be comparable to the English sentences with of-NP clauses, except that the NP in question is acting like a direct object of the verb, rather than of a preposition. James comments that it is not clear what the thematic status is of the ECM'd NP in the James Bay Cree sentences, but that it is likewise not clear what the status is of the of-NP in English. It is usually assumed that the of-NP has independent thematic status. However, this is not a necessary assumption.

We note first that an ECM analysis, (which involves the base generation or movement of an NP in/to a subject SPEC2 position, which receives Case -but no theta role- from a matrix verb), can account for the vague "extra meaning" which the of-NP has in the sentences under discussion. This is because, as is noted in much of the literature on this subject, ECM (especially of the non-string vacuous type) places focus and attention on the ECM'd NP. Furthermore, as subject of the predicate it acquires an

overlay sense of topic even as can an expletive subject.

We note that the of-NPs contrast with true about-NPs. in the following sentences in that they are not acceptable with NP arguments in which there is no pronoun with which they are associated. This reinforces our claim that they do not receive a theta role.

(179) a. I know a thing or two about that guy.
      b.*I know a thing or two of him.
      c. About him, I could tell you things that would make your skin crawl.
      d.*Of him, I could tell you things that would make your skin crawl.

We are thus claiming that an of-NP may appear in a non-thematic SPEC2 position under certain verbs, such as know, read, hear, etc. What of the Case it receives? We note that these constructions might be considered similar to the Niuean ones discussed above, where the ECM Case is prepositional. In Niuean, whether an ECM'd NP receives Absolutive or Middle Case is determined by the ECM verb. This might be the case in English, since, in some cases, such as those discussed earlier in the chapter, an ECM'd NP receives Accusative Case. In other cases, it might be assigned Case with for. With these verbs, as is seen in (b), the verb assigns a "for" Case to an NP object too.

(180) a. Dora hoped for Davy to leave.
       b. Charlie hoped for the crown of Scotland.

However, in the case of Accusative vs "of" Case, the same verb is able to assign both. The question is therefore: Why is (181a) not grammatical with of, and (181b) not grammatical withaccusative?

(181) a. I believe (*of) Paolo to be a good mathematician.
      b. I believe *(of) Paolo that he's a good mathematician.

We might consider the ungrammaticality of (182a) to be due to the
constraint noticed by Koster(1978) and Stowell(1981), that prepositions may
not appear in subject positions. This is problematic for us since in our
analysis we view a dislocated ECM'd NP to be in subject position. It
appears that the constraint on PPs should be phrased to exclude them from
A-subjects. We leave this question open.

Finally, we note that there is a subjacency constraint on the relation
between the of-NP and the NP with which it is coindexed, as we predict
there would be.

(182) a.*I read of him that Mary knew that he was unhappy.
      b.*I heard of Huntingbush that Chris believed that he was real.
      c.*I knew of him that Mary thought that his mother had died.

Kyle Johnson points out that these sentences improve if the bottommost
that is deleted, and that this is reminiscent of the that-trace effect,
which is attributed to the lack of antecedent government in Chomsky(class
lectures,1985) (and cf Chomsky,1985).

Chapter 3

Non-Thematic Subjects

3.1 Introduction

In the previous chapter, we discussed the phenomenon of non arguments acting grammatically in ways parallel to objects, or internal arguments. In this chapter, we will discuss a similar phenomenon- that of non-arguments acting grammatically in ways parallel to subjects, or external arguments. We will see that there are several ways in which an NP may come to act a subject. First, due to the formulation of the Projection Principle, it is possible for an NP to simply raise to subject, in a way in which it is not possible for an NP to raise to object. This movement is pure A-movement, that is, movement from a non-Case marked position to a Case marked position, subject to Subjacency and the Binding Theory. This type of movement is seen in English Raising to Subject, to be discussed in Section 2, as well as in languages such as Fijian (see previous chapter) and many other languages.

In Section 3, we look at non-thematic subject constructions in Kipsigas. Since non-thematic subjects can be coreferential with subjects or objects of embedded tensed complement clauses, they cannot be analyzed as Raising to Subject constructions. We argue that they involve operator movement and a process of chain composition similar (with certain differences) to that discussed in the previous chapter, and that this process is found in English Tough constructions also. Our analyses cause us to revise the Theta Criterion of Chomsky(1981) and to divide it into two parts, one holding at all levels, and one only at LF.

In Section 4 we examine Niuean non-thematic subject constructions, and see that they have different properties than both English raising structures, and Kipsigas and English Tough structures. We analyze these sentences as involving ECM movement, as defined in the previous chapter, with a subsequent movement to subject position, possible due to the ambiguous status of SPEC2 as an A/A-bar position. An identical derivation is proposed for Fijian, Kipsigas, and Standard Arabic Passive ECM constructions. This raises questions about Case theory and Chain theory which will be returned to in Chapter 5.

3.2 Non-thematic Subjects via Raising

While the Projection Principle rules out non-thematic objects (i.e.
sisters of V), and requires thematic objects to be present at all levels,
it does not rule out non-thematic subjects (i.e. sisters of I'), nor does
it require thematic subjects to be present   However, the Extended
Projection Principle (Chomsky,1981 and Rothstein,1983) does require that
every predicate have a structural subject, for purposes of predication at
LF. The result of the Extended Projection Principle is the possibility of
non-thematic subject positions in clauses with verbs with no external
argument (See Williams,1979,1980,1981 and Travis & Williams,1982 regarding
external and internal arguments).   This in turn results in the possibility
of movement of NPs into subject position.   The situation here is the
opposite of that for internal argument positions, since these may never be
non-thematic, due to the Projection Principle.   Given these theoretical
considerations, structures such as (1), can be derived via the process of
"Raising to Subject".[1]

(1) a. Turco seems to have been kept in a cage.
    b. Prospero appears to be an autocratic father.
    c. That flea is likely to bite Donne and his friend.

Verbs such as "seem", "appear", etc.   are considered to have a lexical
entry with a single propositional argument, which appears as an internal
argument at D-structure.

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1. For more detailed discussions of Raising constructions, see M.
Anderson(1979,1983) and Chomsky(1985).

(2) $[_{IP}$ $[_{VP}$ seems $[_{CP}$(that) Turco was kept in a cage]]]

The structure above is rendered grammatical by the insertion of the expletive element it, which is coindexed with the internal argument (see Chapter 5).

(3) [It [seems [(that) Turco was kept in a cage]]]

There is another possibility for verbs such as seem however, which is that they appear with an internal argument which is an IP, rather than a CP.

(4) $[_{IP}$ $[_{VP}$ seems $[_{IP}$ Turco to have been kept in a cage]

Here, the Case Filter rules out "it-insertion" as a possible derivation, since the embedded subject does not receive Case in its clause. However, as with Passive objects, it is possible for the NP in question to receive Case by Movement to Subject position, as in (1). If the embedded complement is IP this movement results in a well-formed chain, since it does not violate subjacency, nor does the relation between the raised NP and its trace violate the Binding Theory.

(5) [Turco [seems [t to have been kept in a cage]]]

In other languages, we find non-thematic subject constructions with different characteristics than the well-known English Raising to Subject constructions. We turn to these now.

3.3 Non-thematic Subjects via "Tough-Movement"

3.3.1 Kipsigas Non-thematic Subjects

In the previous chapter we introduced the Kipsigas non-thematic subject constructions. It was noted that non-thematic subjects as well as ECM'd objects may be coreferential with embedded objects as well as subjects. This is seen below.[2]

(6) a. kà -tÉstâ pànyE:k   [kÒ   tÍl Mù:sá t]
       past-continue meats(S)   3s.Sub-cut Musa
       "Musa continued to cut the meats"   (J&O,32.c)

    b. nyÔlu   kwÒ:ndÒ [kÒ   -más Mù:sà]
       necessary woman(S)   3s.sub beat Musa
       "It is necessary for the woman to beat Musa." (J&O,33a)

In order to explain the fact that the relation between the non-thematic subject and the theta position with which it is coindexed does not obey the Binding Theory, nor the condition which disallows Case marked theta positions in A-chains, we tentatively suggested that this relation, like the one created by ECM movement, involved a movement of a thematic NP to (or the generation of a non-thematic NP in) an A-bar position such as

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2. See notes in Chapter 2 for information on Kipsigas data sources.

SPEC2, as shown below.

(7) NP_i...[ec_i [...ec_i...]]

While it is clear that sentences such as (7) do not involve Raising to

Subject, as defined in the previous section, it is also true that there are

problems with a movement to SPEC2 analysis.

The observation leading to this conclusion is that ECM movement is

possible from a clause from which Movement to Subject has also occurred.[3]

(8) ì   -nyòlú   [kò   -màc -án   Kíplàŋàt
        2s-necessary,   3s -want-1s   Kiplangat(S)
        [à-   màs-ín]]
        1s -beat-2s]]
        "It is necessary that Kiplangat want that I beat you"
        (J&O,45b)

This structure shows that ECM movement can not be to the same A-bar

position which Movement to Subject uses, since it is reasonable to assume

that an ECM'd NP "fills" SPEC2 in such a way that it is not available for

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3. We will use the term "Movement to Subject" to identify the structures
under discussion, that is, the structures in which a non-thematic NP acts
as a subject of a verb, and is coindexed with an embedded thematic NP
position. We do not, however, commit ourselves to the claim that this
construction involves actual movement into the non-thematic subject
position, indeed, it will become clear that we consider this NP to be
base-generated in the subject position. Furthermore, it is not entirely
clear whether any movement at all takes place in these constructions,
since, as pointed out in the previous chapter, it is possible that they do
not involve any movement at all, and that the construction involves the
coindexing of a base-generated pronoun with an empty operator which is base
generated in SPEC, and with a non-thematic subject NP.

other elements. This is supported by the fact that ECM is not possible twice from a clause in any of the languages examined.[4]

We are left to determine which intermediate position is utilized in Movement to Subject. There are two possibilities: an additional SPEC, (SPEC3), which would appear (since ECM movement in most languages must be to a position adjacent to the verb for Case reasons) between SPEC2 (when it is present) and the operator position SPEC1; or in the operator position SPEC1.

(9) a. $NP_i ... [_{SPEC2}$ $[_{SPEC3} \underline{ec}_i$ $[_{SPEC1} [... \underline{ec}_i ...]$

  b. $NP_i ... [_{SPEC2}$ $[_{SPEC1} \underline{ec}_i$ $[... \underline{ec}_i ...]$

There are several reasons for considering Movement to Subject to involve movement into SPEC1 (as in (9b), the position for wh-operators. First, we have claimed above that ECM verbs in languages such as Kipsigas, Fijian, Niuean, (also Blackfoot, James Bay Cree, et al.) are those which subcategorize for a complement which takes a second SPEC position. This is necessary in order to explain the fact that, at least in some languages,

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4. There is one language that counterexemplifies the claim that ECM movement may only occur once from a clause, which is Quechua, discussed in Lefebvre and Muysken(1982) (see also Cole & Hermon,1979,1981). This may be due to the fact that Quechua, exceptionally, allows structural Case to be assigned to any number of NPs (or other categories). In most cases, a single Case may be assigned only to one NP, unless certain other conditions hold. This will be discussed in Chapter 4.

not all [+CA] verbs are able to effect ECM. (That is, not any complement clause may take a SPEC2 position.) The result of this subcategorization view combined with the Subjacency constraint on ECM movement, is that ECM movement may take place only from a clause which is immediately embedded under a clause containing an ECM verb (i.e. a verb which subcategorizes for a complement which takes a second SPEC). Note that this does not disallow subsequent ECM movement, it simply enforces a two-step derivation with ECM movement applied twice, in sentences such as (10). This enforcement is desired since agreement is obligatory on the intermediate verb.

(10) a. Ó -mŌc -íːn   [kŌ -yày -In   KÍplaŋàt t
        1s.-want-2s,Obj 3s.-make-2s,Obj Kiplangat(S)
        [kŌ -tÌl ín   Mùːsá t]]
        3s.-cut-2s,Obj Musa
        "I want that Kiplangat make that Musa cut you."
        (J&O,16.c)

NOTE: (10) is ungrammatical without the object agreement
      In on yay "make"

This situation does not obtain in the case of Movement to Subject, which is unbounded. Thus it is possible to move an NP to subject out of a clause which is not subordinate to a clause containing a Movement to Subject verb, across this intervening clause to become subject of the clause dominating the intervening clause, as in (11a), although it may also move successively as in (11b).

(11) a. (long-distance)
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     k   -a:    -tEsta        [ko  -nyOlu
     past-1s.Sub-continue pro 3.Sub-necessary
     [kO    -mas -an      KIplaŋat (t
     3s.Sub-beat-1s.Obj  Kiplangat(S)        (J&O,43.a)
     "It continued for it to be necessary for Kiplangat
     to beat me."
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   b. (successive raising)
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     k   -E:     -tEsta pro [i:    -nyOlu t
     past 2s.Sub-continue       2s.Sub-necessary
     [i:    -til t panyE:k]]
     2s.Sub-cut  meats
     "It continued to be necessary for you to cut the meats."(J&O,37.c)
```

If Movement to Subject were considered to involve a movement to a SPEC3 position, there would be a contradiction between ECM movement and Movement to Subject with respect to what constraints are necessary on the possibility of generation of clauses containing extra SPEC positions. On the one hand, ECM movement tells us this generation must be lexically governed (in the traditional sense), whereas Movement to Subject tells us that the generation may occur in any clause. Given that there is already freedom of generation of SPEC1 position, necessary to allow the possibility of extraction of Wh-elements from clauses (which is generally allowed, subject to other constraints), we have a ready solution to the contradiction, which is to consider that Movement to Subject is movement through SPEC1.

An apparent objection to this analysis is that Movement to subject is possible twice from the same clause in Kipsigas.

(12) ì   -wûy [à   -nyôlú   [i: -tîl-án   t t]]
     2s̱.Sub-hard 1s̱.Sub-necessary 2s̱.Sub-cut-1s̱.Obj
     "It is hard for it to be necessary for you to cut me"
     ("You are hard for I am necesssary that you cut me")
     (J&O,44a)

Thus it appears that Movement to Subject does not obey Subjacency, i.e.

it is possible to move from what should be a Wh-island.[5] However, the

strength of this objection depends on the general obedience to Subjacency

by Wh-movement in this language. The available data on this point are not

extensive for Kipsigas.[6] However, data from Nandi (Creider,1979), a very

closely related language suggest that Wh-movement is not generally

constrained by Subjacency in Kipsigas, since such is the case in Nandi. In

Nandi, Creider notes, it is possible to relativize an NP which is within a

relative clause.[7]

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5. Alternatively, these examples could be considered to obey Subjacency,
with the stipulation that Kipsigas allows two elements in SPEC.

6. I am grateful to D. Odden, for reviewing his field notes for me on this
point.

7. Creider also gives an example of relativization from an embedded
question, however, in this case the embedded question involves an in situ
question word, and hence is not expected to create a Wh-island. Questions
are formed either in situ or by fronting by clefting, where the Wh word is
the predicate, and the rest of the sentence, a relative clause. Creider
also notes that extraction is possible from a conjoined structure.

(13) Nandi
      ni   kò cɛ:pyÓ:sɛ́:t ne   Á:nken ci:tÀ
      this (acc) woman (acc) rel (acc) I know person(acc)
      ne   kí:kÀ:cî̂ kítâ:pó:t
      rel(acc) Past give book(acc)
      "This is the woman that I know the person that gave a book to
      her/ she gave a book to."

It seems then, that Movement to Subject shares its general

characteristics with Wh-movement. There remain problems. How is it

possible for a non-Wh lexical NP to move into SPEC, which we have reserved

(see Chapter 2) for operators? And secondly, even if this were possible,

how is it that the NP moved to (or generated in) the operator position is

able to move from this position to subject position in sentences such as

(11), (12) etc?

This type of movement--from A-bar to A positions--has been termed

"improper movement", and has been ruled out by the consideration of

variables (locally SPEC1 bound) as r-expressions, and hence subject to

Condition C of the Binding Theory, as below (where "movement chain"

subsumes A and A-bar chains, and is not equivalent to "chain" as defined in

chapter 5 and assumed here).[8]

(14) Binding Theory Condition C
    An r-expression must be free (in the domain of the head of
    its movement chain).

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8. This version of Condition C also rules out "strong crossover" cases such
as: "Who did she show the garden to Dickon?". This will be discussed
below.

Furthermore, such movement violates the condition on A-chains, since in the improper movement configuration, a chain headed by an A-position, has as its tail, a (Case marked) trace or resumptive pronoun.

The major problem with considering Kipsigas Movement to Subject to involve movement from SPEC to subject position comes from the fact that in allowing such movement we must take care not to also allow "improper movement" in other cases, such as in French ECM sentences, and English sentences such as (15).

(15)a. *[Qui [t était cru [t [t être malade]]]]
       Who was believed to be sick?

   b. *[Who [t was said [t [t had peeled that log]]?

   c. *Mary seems [t [t lived in Shetland]

   d. *Rum seems [t [that [Jim was asked for t]]]

Rather than attempting to devise two versions of Condition C, and two versions of the chain conditions, (one for English, French, and other languages, and one to allow Kipsigas constructions such as (11) or (12)), let us consider an alternative analysis of Kipsigas Movement to Subject. In doing so, we will turn to constructions which bear a resemblance to Kipsigas Movement to Subject constructions, namely English "Tough" constructions. We note that, among the Movement to Subject verbs in Kipsigas, James Bay Cree, and Blackfoot, among other languages which exhibit structures like the Kipsigas examples above, are the verbs

difficult and easy.[9]

(16) a. wÛy [kÒ-tĺl Mù:sá   pè:ndó]
        hard 3s cut Musa(S) meat
        "It is hard for Musa to cut the meat."(J&O,28a)

     b. wÛy pè:ndó [kÒ-tĺl Mù:sá]
        hard meat(S) 3s cut Musa(S)
        "The meat is hard for Musa to cut."(J&),28b)

     d. rÒísi [kÒ-tĺl Mù:sá   pànyE:k]
        easy   3s cut Musa(S) meat(pl) (J&O,32b)
        "It is easy for Musa to cut the meats."

     b. rÒísi pànyÈ:k   [kÒ-tĺl Mù:sá]
        easy meat(pl)(S) 3s cut Musa(S) (J&O,32b)
        "The meats are easy for Musa to cut."

(17)   James Bay Cree[10]
     a. alime:li-ht-a:kwan kihǯi milowe:li-m- ak me:ri
        hard   TI II(+O) sub. like   TA 1-3 Mary
        "It is hard for me to like Mary." (J,2)

     b. alime:li-ht-a:kosi-w me:ri kihǯi milowe:li-m -ak
        hard   TI AI   3 Mary sub   like   TA 1-3
        "Mary is hard for me to like." (J,5)

(18) Blackfoot[11]
     a. Iksịkkinisi-wa [koko'siksi ot-aahk-anists-iksimsstaahsi
        easy(inan)-3s   your:kids 3-might-manner-think:subord
        [kit-aahk-sspinn-oki-hsi]]
        2-might-lift-2:1-subord
        "It's easy for your kids to think that you might lift me."

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9. In Blackfoot, only the verb for easy acts as a Tough verb. Epistemic
type verbs act as ECM verbs, as will be discussed further below. As
discussed in Chapter 2, Blackfoot and James Bay Cree are complicated by
their nonconfigurational character.

10. These examples are from James(1979).

11. These examples are from Frantz(1980).

(F,19)

b. Nits-ikkinissi [koko'siksi ot-aahkanistsiksimsstaahsi
   1-easy(anim)
   [kitaahksspinnokihsi]]]
   "I'm easy for your kids to think that you might lift me "
   (F,20)

3.3.2 English Tough Movement

(19) a. The people united are hard to defeat.
     b. Bad poems are easy to write.

Tough sentences such as those above, are interesting constructions which

come with a host of problems that have yet to be satisfactorily

explained.[12] For instance, among the questions to be explained in a full

analysis are: Why must the embedded subject be PRO?, or phrased

differently, Why must the embedded complementizer position be empty (i.e.

it cannot contain for), and non-tensed?. And further: Why must the

extracted element be the object?

(20) a. *The people united are hard for the tyrants for
         their mercenaries to beat.
     b. *Good poems were difficult (for Tennyson) (that) he

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12. For more detailed discussions of the properties of Tough Movement see
Berman(1974), Berman & Szamosi(1972), Browning(1984),
Chomsky(1973,1977,1981), Goodall(1984), Haïk(1985), Lasnik & Fiengo(1974),
J.Levin(1984), Manzini(1983), Montalbetti,Saito & Travis(1983),
Nanni(1978), Williams(1983), and references therein. My discussion of
Tough Movement owes much to Browning's(1984) paper, in which she outlines
many of the problems with Chomsky's(1981) approach. Her analysis, however,
differs from the one outlined here in that she considers the matrix subject
of Tough constructions to be thematic.

wrote.
    c. *Bad poems are easy to be written.

We will not attempt a full explanation here of these questions, although
we will point out ways in which Tough constructions differ across
languages, which indicates that the above properties should be considered
due to language specific constraints rather than as potentially universal
aspects of Tough Movement. Rather than present a full analysis of Tough,
we will concentrate on the "theta paradox" of Tough sentences, which
results from the constraint on improper movement. This problem is
described below.

A central characteristic of Tough adjectives, is that they may appear
with an expletive subject, or with a lexical NP which is coreferential with
the (empty) object of the embedded clause. Thus, both (21a) and (21b) are
acceptable.

(21) a. It is hard to fool Miss Silver.
     b. Miss Silver is hard to fool.

In order to capture the fact that these two sentences have the same
meaning (as far as thematic meaning is concerned), it is desirable that
they should have a uniform lexical entry.[13] The problem comes from the
fact that in (21a), the subject position is clearly non-thematic, and yet

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13. As mentioned above, Browning argues differently, considering "Tough"
verbs to assign a theta role to their subjects. Others who argue this are
Haik(1985) and Williams(1983).

as is shown in (21b), a lexical NP may occur here. This lexical NP, however, cannot have originated in the theta position and have moved to subject position, since direct movement is ruled out by Condition A, and movement via SPEC by Condition C.[14] It must then be lexically inserted. This requires that the verbs in question have dual lexical entries, one in which the verb assigns no theta role to its subject, and one in which it assigns a theta role to its subject and where there necessarily occurs internal movement. Chomsky refers to this as "the paradox of theta theory". In Chomsky(1981) this problem is resolved by reanalysis, a process which adds a monostring to the phrase marker of a sentence. (See Chomsky,1957, and Lasnik and Kupin,1977, Manzini,1983, Goodall,1984.)

The underlying structure of both sentences is considered to be as in (22).

(22) ec...[[PRO to fool NP]]

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14. Chomsky(1981) (cf. Lasnik & Fiengo,1974) argues that Tough subjects differ from raised subjects in that they cannot be an idiom chunk which otherwise can be moved transformationally: "*Good care is hard to take of the orphans." However, when dealing with a variety of languages, this test against raising is tricky, since not all idioms can appear in raising constructions ("*The bucket seems to have been kicked."), and since (as Lasnik & Fiengo note) some idioms are amenable to Tough Movement ("?Headway is hard to make on these problems."). It is difficult to know the status of any given idiom in the languages under discussion, hence their behaviour is not a reliable test for the type of construction involved in non-thematic subject sentences.

In the case of (21a), NP is Miss Silver. In (21b), it is an empty

element (possibly PRO, Chomsky,1981 suggests, but see below), which moves

to the COMP (=SPEC) position of the embedded clause. Easy to please is

reanalyzed as in (23), and the matrix subject is coindexed with the theta

position empty category, which is not Case marked or governed by the verb,

by free coindexing. If empty categories are interpreted contextually, the

empty category can be considered an NP trace, bound (within its governing

category, after reanalysis) by the matrix subject NP. Hence the matrix

subject gets its theta role by virtue of being in a chain with a theta

marked trace, in the usual fashion. Both the reanalyzed structure and the

D-structure are available for S-structure processes.[15]

(23) John$_i$ is [[easy to please] t_i]

Since the lexical NP in subject position does not arrive there via

movement, and yet has no direct theta role, Chomsky proposes that lexical

insertion be allowed to operate freely at both D-structure and

S-structure. Thus, the non-thematic subject NP is inserted at

S-structure. This is necessary, since, Chomsky notes, the Theta Criterion

requires that all positions lexically filled at D-structure be theta

positions. As noted above, at S-structure, the inserted subject is

licensed due to the fact that it is in an A-chain configuration with the

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15. This is necessary, since Tough constructions license parasitic gaps, as
in: "These daffodils were hard to walk by without buying."

embedded object empty category.

There are several problems with this analysis (cf. Browning,1984, Manzini,1983). For example, it might appear to acccount for the observations above, namely that Tough Movement must involve an empty PRO subject, and an empty operator (hence the ungrammaticality of (24)), since reanalysis can be stipulated to occur only over elements which are not r-expressions (Chomsky,1981).[16]

(24) *Gawain is hard who to tempt.

However, as Browning(1984) points out, this is a stipulation, since reanalysis should work blindly, referring only to the trace of operator movement in the complement. And further, Browning notes, with this stipulation we might still expect reanalysis to be possible in structures such as (25).

(25) a. *Gawain is easy to be virtuous.
     b. *Gawain is hard to be tempted.

There are some other problems also. The reanalysis account requires that the lexical NP inserted in subject position must be able to form a

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16. Levin(1984) accounts for the fact that Tough sentences must have empty operators by assuming empty operators to be PRO, and hence necessarily ungoverned, in contrast with overt operators which must be governed. She assumes the embedded sentence in Tough constructions to not be a complement, and hence to be ungoverned.

theta chain with the NP trace of the lowest clause. This chain formation is not permitted in the theory of Chomsky(1981,1984) (which we assume here), where chains are defined as a "history of movement" (Chomsky,1984). Hence some mechanism other than those provided by a theory of A-chains is necessary to allow the empty category to be interpreted (i.e. to have an antecedent) and to license the non-thematic NP in Tough constructions.

Additionally, there is a potential problem with the insertion of material at S-structure, since as Browning notes (citing Jones,1983, and Lasnik p.c.) the material inserted can be a complex NP, or a clause. Both of these entail that theta roles are assigned <u>within</u> the category inserted, and hence this category is required to also have a D-structure representation, which is independent of the D-structure representation for the matrix sentence. This requires a generalized transformation of the form proposed in Chomsky(1957), and later rejected in favour of recursive rules (although see Goodall,1984).

(26) a. [That Hal rejected Falstaff] is hard to forgive.
     b. [The cream puffs which are sold in the tuck shop]
        are hard for Bessie Bunter to resist.

Browning further points out that structures of the form of (27) are also problematic, since they involve raising of an NP which is not present until

S-structure.[17]

(27) Duddy seems to be hard to please.

An additional problem discussed by Browning is that the reanalysis
theory requires that an empty category change status during a derivation.
(Indeed it must maintain two statuses simultaneously.) This is because the
theta position empty category is an NP-trace [+anaphoric/-pronominal] in
the reanalyzed structure, but is an A-bar trace [-anaphoric/-pronominal] in
the non-reanalyzed structure. Yet Brody(1983) and Chomsky(1984,1985) and
Sportiche(1983) argue that to allow such changes in status is untenable.

Browning notes that the resolution of the theta problem is the main
argument for a reanalysis analysis for Tough constructions. We have seen
that the same theta problem exists for languages other than English, such
as Kipsigas, and also Blackfoot and James Bay Cree, in some cases with
predicates other than the "Tough" type. In the case of Kipsigas, according
to Jake & Odden, these constructions are possible with any verb which takes
a single sentential argument. Yet in these languages, "Tough Movement" is
possible from subject position as well as from object position, as well as
from sentences with overt complementizers. Thus, reanalysis is not so

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17. Browning admits that a solution to this problem would be to raise the
nonthematic empty element, and then insert the NP, which would then be
"accidentally" coindexed with the intermediate subject position.

feasible an analysis in these languages.[18] It seems then, that a

reanalysis explanation for the theta problem is not the correct approach,

if we want to account for these constructions cross-linguistically.

There is an alternative analysis for these constructions, which does not

run into the problems outlined above. In this analysis, the non-thematic

subject is considered to be base generated in the matrix subject position.

It is then, by free indexing, coindexed with an operator in the embedded

COMP, which has been moved from (or is coindexed with) an empty category in

a theta position.

This analysis, we note, does not require a change of status of an empty

category since the theta position contains a SPEC bound trace at every

level other than D-structure.[19] It also allows us to maintain the notion

of chains as history, since the relationship between the lexical subject

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18. Similarly, J.Levin's(1984) analysis which accounts for why the operator
in Tough constructions must be empty (see note 16) depends on the
infinitival in Tough constructions not being a complement of the Tough
adjectival, which is somewhat less intuitive when the predicates involved
include, as they do in Kipsigas according to Jake and Odden, every
predicate which takes a single sentential argument.

19. We are assuming that no change in features takes place between
D-structure and S-structure either, that is, that empty operators are
defined at S-structure as empty categories in operator positions, and at
D-structure as empty categories in theta positions or in SPEC which are
either pro ([+pronominal/-anaphoric]), an r-expression
([-pronominal/-anaphoric]), or as featureless for these features.
Levin(1984) gives arguments that empty operators are PRO. We don't allow
this because PRO would be governed (see note above).

and the empty operator need not be considered a chain (see below). And finally, it avoids the problem of introducing generalized transformations. We must ask now what repercussions this analysis has for theta theory.

In fact, a new conception of D-structure, and the Theta Criterion is required which will account for the data discussed in Chapter 2 also. Chomsky(1981) considers a strong version of the Theta Criterion, whereby every theta role must be assigned, and every argument chain must have a theta role.

(28) Theta-Criterion
Given the structure S, there is a set K of chains, $K = \{C_i\}$, where $C_i = (\alpha^1_1, \ldots, \alpha^1_n)$ such that:

    (i) if α is an argument of S, then there is a $C_i \in K$
        such that $\alpha = \alpha^1_j$ and a theta role is assigned to C_i
        by exactly one position P.
    (ii) if P is a position of S marked with the theta role R,
         then there is a $C_i \in K$ to which P assigns R, and
         exactly one α^1_j in C_i is an argument.

The Projection Principle and the Theta Criterion work together so that "...The Projection Principle determines, on the basis of lexical properties, what are the configurations that appear at each syntactic level (LF, D-structure, S-structure); [and] the Theta Criterion determines the elements that appear in these configurations." (Chomsky,1981,p.335). By the Projection Principle, the Theta-Criterion must be met at every level. At D-structure, each chain will have only one member. Since D-structure is defined as "the pure representation of GF-theta", then , "arguments [will]

appear in every theta-position and nowhere else,...[and] only the null

category...will appear in a non-theta position, excluding other

arguments." (Chomsky,1981,p.335)

In order to account for English Tough constructions, as well as the
constructions with non-thematic subjects which we have seen in other
languages, we propose that D-structure be considered to be a less pure
representation of GF-theta, and that a weaker Theta-criterion is required,
which requires arguments to be present in all theta-positions, but which
says nothing about any non-theta positions, such as A-bar positions, and,
in some cases, subject positions. This Theta Criterion will include clause
(ii), but not clause (i) of the above. D-structure in this view consists
of X' principled structure, and lexical insertion. The Projection
Principle insures that theta properties of all inserted items will be
structurally realized. The Theta Criterion requires that for every theta
role assigned by an element, there is an argument inserted at D-structure,
in the position to which the theta role is assigned.

We have claimed that at D-structure, nothing constrains the insertion of
lexical items into non-theta positions. However, at LF, the Principle of
Full Interpretation (Chomsky,1985) requires that all positions be
interpreted, and to be interpreted, licensed. We consider that all
positions which are complements or subjects must form chains (see Chapter
5) and that all chains must be licensed in a particular way which we can

call Theta-licensed. A chain can be licensed by containing a theta

position, (that is, by satisfying clause (i) of the theta Criterion of

Chomsky,1981) or by forming a composed chain with a chain which does

include an element in a theta Chain, i.e by being theta-linked.

Theta-linking, is thus the licensing factor for the non-thematic subjects

in Tough constructions, as it is for the ECM'd NP in the constructions

discussed in the previous chapter.

Note that there is a difference between the theta chain composition at

LF discussed in the previous chapter for ECM constructions and that

discussed here, in that in Chapter 2 it was determined that a non-thematic

chain can not be licensed by composition with an A-bar chain, which

accounts for the fact that the relation between an ECM'd element and the

theta position with which it is coindexed is bounded. In Tough Movement,

the exact opposite situation holds, where the non-thematic chain is

composing a theta chain at LF with an A-bar chain, and where the relation

between the non-thematic subject and the theta position with which it is

coindexed is unbounded.

Keeping the above contradiction in mind, we note next that Tough

Movement is, in the traditional sense, a verb-governed operation, in that

not all verbs allow it. For instance, French Raising to Subject verbs such

as _sembler_ "seem" do not, hence the ungrammaticality of the (a) sentence

below, even though (b) is acceptable.[20]

(29) a.*$\underline{Pascal}_i$ $\underline{me}_j$ semble [$\underline{t}_i$ [PRO_j avoir rencontré $\underline{t}_i$]
       "Pascal seems to me to have met"
       ("Pascal seems to me that I have met.")

     b. Il me_j semble [[PRO_j avoir rencontré Pascal]]
        "It seems to me to have met Pascal."
        (It seems to me that I have met Pascal.)

We can thus consider Tough verbs to be those which have the property of

having non-thematic subjects which can be licensed by the chain composition

at LF, not between the subject and an A-chain, but rather, between the

subject and an A-bar chain. But for this property, Tough constructions are

interpreted in the same way with respect to theta theory, as ECM

constructions. That is, a non-thematic subject in a chain C forms a

composed theta chain (C3) at LF with a chain (C2) which contains a theta

position. The tail of C and the head of C2 must be subjacent in the sense

----

20. I use the French example since in English a Raising to Subject verb
would have no controller for an embedded PRO in a sentence such as: "*Wendy
seems [[PRO to teach to fly $\underline{t}$]]", and since for infinitivals, and tensed
clauses are for some independent reason ruled out in Tough constructions in
English. The French example is mildly undermined by the fact that French
does not have Tough Movement of the form discussed here. I. Haïk (p.c.)
informs me that Tough Movement in French is bounded. This is true in
Italian also (cf. Rizzi,1982). In the theory of non-thematic subjects
outlined in this chapter, we would consider Romance verbs such as être
difficile "to be difficult" to be ECM verbs which are [-CA], as we consider
Niuean Raising to Subject verbs to be in the next section. The example is
not seriously undermined, however, since whatever prohibits a verb in one
language from governing an operation, while allowing another to do so,
presumably would be what rules out all verbs from governing the operation
in another language.

that only one barrier may intervene. C2 must be an A-chain. Tough verbs have the property of considering the SPEC which they govern as an A-position for the purposes of LF theta chain composition.[21] We thus propose the following, where $\underline{K}$ is, as above, the set of chains in a structure. (What must constitute a chain in a structure will be discussed in Chapter 5.)

(30) <u>Interpretation of Chains</u>

> For a Chain C_i $\in$ K to be interpreted, either
> (i)   a theta role is assigned to C_i by exactly one
>   position P, or
> (ii) C_i is LF-composed with a Chain C_k, $\in$ K, where
> C_k^i is interpreted by (i) or (ii).

Since the Principle of Full Interpretation also requires that operators bind variables, the effect of clause (ii) above will be to ensure that a subject of a Tough verb which is not in a chain with a theta role will be coindexed with an operator which is itself coindexed with an element with a theta role. In the case of tough verbs, the operator/A-position chain will be considered an A-chain.

This analysis leaves unsolved many particular problems of English Tough Movement, such as those mentioned above. It does however, provide a solution to the theta paradox discussed by Chomsky(1981). And, it allows

----

21. The notion that it is precisely this property which distinguishes Tough verbs from ECM verbs and Raising to Subject verbs is due to a conversation with Kyle Johnson.

for this same problem to be solved in a uniform way for a variety of

languages which exhibit it, and for constructions with a variety of verbs.

3.3.3 Kipsigas Non-Thematic Subjects via Tough Movement

With this answer to the improper movement and theta problem posed by

English Tough constructions, we return briefly to the discussion of

Kipsigas Movement to Subject constructions. We consider that the

derivation of Movement to Subject sentences in Kipsigas is analogous to

that of Tough constructions in English. We note however, that in Kipsigas,

the movement of the operator takes place over an overt complementizer, and

from either subject or object, or (in some cases) from oblique positions.

As mentioned above, this suggests that the constraints on Tough Movement in

English are due to language specific factors.

Now, the derivation for the sentences (6a,b) is as (31).[22]

(31) <u>D-structure</u>   <u>S-structure</u>

    NP...[[....ec]] NP_j...[$\emptyset'_j$ [....t_j]]

----

22. In fact, movement of an operator may be not involved in these Kipsigas
constructions, as noted above. Instead, the operator might be
base-generated in SPEC, with all else proceeding as discussed. This would
possibly explain why operator movement does not obey Wh-island constraints
in this language, as we observed above. Either way, the distinction
between ECM "movement", which is bounded, and Tough Movement and
Wh-movement, which is not, is maintained.

As well as solving the Theta problem, this analysis explains the

unboundedness of Kipsigas Movement to Subject (see preceding Note.) This

is seen in English Tough Movement also, with some constraints, as in (32).

(32) a. This taro was hard to convince Roko to buy.

3.4 Non-thematic Subjects via ECM movement

3.4.1 Niuean Movement to Subject

Niuean constructions with non thematic subjects, as discussed in

Seiter(1980), appear to be like those in Kipsigas, James Bay Cree, etc. as

discussed above.[23] That is, a non-thematic subject may derive its

theta-reference by coindexation with an embedded non-subject. This fact

rules out a Raising analysis for such structures, due to the Binding

Theory, and suggests that a Tough Movement analysis should be proposed.

Furthermore, among the verbs allowing non-thematic subjects in Niuean,

shown in (33), are uka "difficult" and mukamuka "easy", as seen below in

(35). Additionally, the empty category in the embedded clause is Case

----

23. In Levin & Massam, to appear (written in 1983), a different analysis of
Niuean Raising to Subject is offered, where in fact it is considered to be
Raising, and the Binding Theory is considered not to hold in Niuean.
Lillo-Martin(1983) also provides an analysis of Raising in Niuean, in which
subjunctive clauses are considered not to be Binding Domains.

marked, as seen by the fact that the embedded subjects in (34,35b) are in

the ergative Case, signalling that absolutive Case has been assigned by the

verbs to their objects and arguing against a Raising analysis (see Chapter

5).[24]

(33)

Movement to Subject Verbs--Niuean

maeke "can, be possible"; kamata "begin"; fakaai
"not (emphatic)"; mahani "usual, customary"; teitei
"almost"; fetamakina "nearly"; uka "difficult"
mukamuka "easy" (Seiter)

(34)
   a. Kua kamata [ke hala he tama e akau]
      Perf begin Sbj cut Erg child Abs tree
      "The child has begun to cut down the tree." (S. 3.3b)

   b. Kua kamata [e tama] [ke hala e akau]
      Perf begin Abs child Sbj cut Abs tree (S,3.4b)

   c. Kua kamata [e akau] [ke hala he tama]
      Perf begin Abs tree Sbj cut Erg child (S,3.5b)

(35)
   a. Uka [a mautolu] [ke totou e tala ia
      difficult Abs we,Pl,Excl Sbj read Abs story that
      "That story is hard for us to read." (S4.3a)

   b. mukamuka lahi [e fua niu paupaku] [ke hē he uga]
      easy very Abs fruit coconut dry Sbj husk Erg crab
      "Dry coconuts are easy for a coconut crab to husk." (S,4.4b)

However, in other respects, the Movement to Subject examples in Niuean are

unlike those constructions discussed above for which a Tough Movement

----

24. For a brief discussion of general Niuean data, see Chapter 2

analysis was proposed. In particular, Niuean Movement to Subject is not

successive, but must occur from the clause immediately dominated by the VP

in which the raising verb appears. Hence, (36a,b and c), which have the

structure as in (36d), are ungrammatical.[25]

(36)
    a.*Kua kamata [e   tau tagata] ke   fia   manako
       Perf begin Abs Pl person Sbj want want
       a tautolu   (ki ai) ke nonofo t   mo   e   mafola
       Abs we,Pl,Incl to them Sbj live   with Abs peace
       "We have begun to want people to live in peace."
       (S,3.98b)

    b. *Ne uka   e   tama kō   ke lali a   au ke
       Pst difficult Abs child that Sbj try Abs I Sbj
       maama
       understand."
       "That child was hard for us to try to understand." (S,4.35b)

    c.*mukamuka a   Pulevaka ke piko kua fakavihiatia
       easy   Abs Pulevaka Sbj think Perf hate
       he   tau faunau
       Erg Pl children
       "It's easy to get the mistaken impression that the children hate
       Pulevaka." (S,4.37b)

    d. V NP [ke V NP [ke V t NP]]

From this it appears that Movement to Subject is unlike Tough Movement,

if the latter is considered to involve movement of an operator through SPEC

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25. Seiter presents the (a) example to show that NPs cannot be raised from
middle object position (see chapter 2 for a brief discussion of middle
objects). However an alternative analysis is possible for this structure,
in which the NP e tau tagata is raised directly from the lowest sentence to
the highest sentence. The fact that this sentence is ungrammatical shows
that such long-distance movement is also ruled out.

position, since these movements are unbounded, due to the fact that each

clause contains a SPEC which can be moved through. The unboundedness of

movement through SPEC is seen in Kipsigas Movement to Subject (=Tough

Movement) above, and also in Niuean Wh-questions, relative clauses,

Topicalization, etc.

(37)
```
    a. Ko   e   heigoa ka  tala age ki a    Pule ke  ta    mai?
       Pred Abs what  Fut tell Dir3 to Pers Pule Sbj bring Dirl
       "What will we tell Pule to bring here?" (S,2.67a)

    b. e    fifine ne fakalata a   Stan kua fakatau tuai e   falaoa
       Abs  woman Nft think    Abs Stan Perf buy    Perf Abs bread
       "The woman who Stan thinks bought the bread." (S,2.19a)

    c. Ko   e   motu  ia  ne  pehe a   Tale kua lali ke  nofo ai.
       Pred Abs island that Pst say  Abs Tale Perf try  Sbj live there
       "That island Tale said he tried to live on."(S,2.75b)
```

Furthermore, examples with Wh-movement display certain properties not

shared by Movement to Subject examples. For instance, in Niuean,

Wh-movement is possible from subject and object position, but also from

oblique positions, where it is resumed by ai pronominalization, as in (37c)

above.[26] This is not true for Movement to Subject, which can only take

place from subject or object position. Other NPs cannot be moved whether

or not a resumptive ai appears.

----

26. See Chapin,1974 for a detailed discussion of certain aspects of
ai-pronominalization.

(38)
```
    a. *Maeke      nakai e   tehina  haau ke  falanaki a   mautolu
       possible Q     Abs brother your Sbj trust    Abs we,Pl,Excl
       (ki ai)?
       to him
       "Can your little brother be trusted by us?"
```

Furthermore, if a subject is moved by Wh-movement (i.e. in Wh-clauses, relative clauses, Topicalization, etc.) it always leaves a trace, as opposed to a resumptive pronoun, as in (39a), except if the embedded subject is itself an A-binder, that is, the antecedent of a reflexive object, when it may optionally be resumed by a pronoun as in (39b).[27]

(39)
```
    a. e   tagata ne  hoka (*e ia) a   Maka
       Abs man    Nft stab Erg he  Abs Maka
       "The man who stabbed Maka" (S,2.17a)

    b. e tagata ne hoka (e ia) a ia
       Abs man Nft stab Erg he Abs him
       "The man who stabbed himself" (S,2.17b)
```

This is not the case for a subject which has been moved to become the subject of a matrix verb, however. In this case, the embedded subject position must be empty, even if it is an A-binder. Hence, it appears that Movement to Subject behaves differently than movement to (or through)

----

27. The gap/pronoun alternation described here is possible in the case of PRO also in Niuean. This alignment of PRO and variables is interesting, and is one of a great number of interesting properties of Control in Niuean which we will not discuss here. See Seiter(1980), and also below. It is not clear from Seiter(1980) whether this gap/pronoun strategy is utilized in case of Wh-questions.

SPEC.

(40)
    *Liga   ai   maeke   e   fifine ke logona e   ia a   ia (nĩ)
    likely not possible Abs woman Sbj hear   Erg she Abs her Rfl
    "The woman couldn't hear herself."   (S.3.71b)

Interestingly, there are constructions in Niuean which do appear to

involve Tough Movement, as defined and discussed above. These

constructions involve a subset of the Movement to Subject verbs, in

particular, uka "difficult" and mukamuka "easy".[28] These verbs appear in

constructions (which Seiter calls "Oblique Copying" and which we consider

to be Tough Movement), only if the argument moved is an oblique argument.

(41)
    a. ai mukamuka e   tagata ia   ke fakamaama e   au
       not easy   Abs man   that Sbj explain   Erg I
       e   tau mena ki ai
       Abs Pl thing to him
       "That man is not easy for me to explain things to."
       (S,4.21b)

    b. Uka   e   vaka ke heke ai   a   Lefu
       difficult Abs canoe Sbj ride in-it Abs Lefu
       "That canoe is difficult for Lefu to ride in."
       (S,4.22b)

That the structures with uka and mukamuka and an moved oblique can

involve Tough Movement as opposed to the structures with raised subjects or

----

28. Seiter(1980) gives a few examples of what we term Tough Movement with
maeke "be possible", a Movement to Subject verb, but he states that there
are several constraints on their acceptability and that for some speakers
they are not acceptable at all.

objects, or with other verbs in (33), is seen by the fact that in just

these cases, the non-thematic matrix subject can be indefinitely far away

from its embedded coindexed theta position.

(42)
    a. Ne uka e tama kō ke lali a au ke fakamaama ki ai ha mena
       Pst difficult Abs child that Sbj try abs I Sbj explain to
       him Nonspec thing
       "That boy was hard for me to try to explain anything to."
       (S,4.36b)

    b. Mukamuka a   Pulevaka ke piko kua ita   ki ai e
       easy   Abs Pulevaka Sbj think Perf angry to him Abs
       tau fānau
       Pl children
       "It's easy to get the (mistaken) impression that the
       children are angry at Pulevaka (S,4.38b)

That the structures in (42) involve movement of an operator to SPEC, as

opposed to some other copying rule, is supported by the fact that ai, a

resumptive pronoun, is used in these sentences, rather than a

non-resumptive personal pronoun. Furthermore, the oblique arguments that

can be Tough Moved with ai-pronominalization include middle objects,

locatives, and stative agents. These are the same NPs which can be

relativized, Topicalized etc. with ai. Also, benefactives can be Tough

Moved, with the resumptive element being a regular pronoun rather than ai,

as is the case for relativization, clefting, etc. of benefactives. And

comitatives, which may not be clefted or relativized etc., may not be Tough

moved either, as seen in (43c).

(43)
```
   a. e    fifine ne  gahua a    au ma-ana
      Abs woman Nft work  Abs I  for-her
      "the woman who I work for" (S,4.32)

   b. mukamuka lahi e    takitaki gahua haaku ke  gaghua
      easy        very Abs boss     work  my    Sbj work
      a    au ma-ana
      Abs I  for him    (S,4.33)
      "My boss is really easy for me to work for."

   c.* Mukamuka nakai a   Pita ke   mahani    e   tau tagata
      easy      Q     Abs Pita Sbj get along Abs Pl  person
      (mo   ia)
      with him    (S,4.34b)
      "Is Pita easy for people to get along with?"
```

I can think of no reason why a class of verbs should trigger Tough Movement
for obliques, and some other movement for subjects and objects.[29]
Presumably this fact ties in with the fact that in English only objects can
be Tough Moved. Other languages place different constraints on which
arguments can be Tough moved, such as Malagasy, which requires the Tough
Moved argument to be a subject, but further, the subject of a Passive
verb.

The ways in which Movement to Subject from subject and object position
is unlike movement to SPEC are the same ways in which ECM movement is
unlike movement to SPEC. Seiter shows in some detail how the rules he
considers to be Raising to Subject and Raising to Object are similar. This
is true in Niuean, although not in languages such as Kipsigas discussed

----

29. Seiter(1980) discusses this from a historical perspective.

above. For instance both are bounded, both occur only from subject and object position, both must have empty theta postion, etc. It is reasonable, then to consider, as does Seiter, that the two types of movement are essentially identical. For Seiter, working in the framework of Relational Grammar, this means that both constitute Raising Rules. What does this mean for us?

3.4.2 Analysis and Implications

We have so far dealt with three types of movements, (or relations, but we will for the moment speak of them as movements, since this is the case in Niuean). One involves movement to SPEC, and it has the properties of unboundedness, the creation of Wh-islands (in some languages), the leaving of a Case marked (variable) trace, etc. This movement is evidenced in Wh-questions, relative clauses, etc. in many languages, and, as discussed above, in Tough Movement, with a subsequent chain composition between a matrix non-thematic subject NP and an embedded operator in SPEC. Another type of movement is Raising, involving movement from a non-Case marked A-position to another A-position, subject to Subjacency, the Binding Theory, etc. A third type was discussed in the previous chapter, involving movement to a SPEC2 position, which we claimed, following Haik(1985) and Taraldsen(1983), can exist only under certain verbs which select for a CP complement which is a predicate rather than a proposition. This movement is subject to Subjacency, and perhaps Binding Condition A, and it leaves a

Case marked trace or a pronoun. In all the cases of movement to SPEC2 discussed so far, a Case marking verb was concerned, and hence the result of this movement was ECM, giving the "Raising to Object" effect. However, in principle, there is nothing to prevent a non-Case marking verb from selecting for a CP predicate complement, and hence for a complement with a SPEC2 position. However, since an NP in SPEC2 must receive Case (since it is in a chain, see Chapter 5), this will only be possible under non-Case assigning verbs which do not have (or need not have) a thematic subject. Then, A-movement essentially like Raising to Subject can take place, from SPEC2 position to the matrix subject position, as schematized in (44).

(44)
$$[\text{ NP}_i \cdots [_{\text{SPEC2}} \; t_i \; [\; \cdots t_i \cdots]]]$$

It is such an analysis that we propose for Niuean Movement to Subject verbs. That is, we consider Niuean Movement to Subject verbs to be syntactically identical to Niuean ECM verbs, with the exception that the former are not Case assigners, and hence, do not have thematic subjects. (See Chapter 5 for a discussion of this implication, known as "Burzio's Generalization", or Perlmutter's Unaccusative Hypothesis.) A Raising to Subject construction thus involves first the raising to SPEC2 of a subject or object NP, and subsequently the movement of this NP to subject position.

Support for our claim that Niuean Movement to Subject involves movement

through SPEC2 to the matrix subject position comes from sentences with Passivized ECM verbs in Standard Arabic (Salih,1985) (See also Ayoub,1981)[30] and Imbabura Quechua (from Jake & Odden,1979) (see also Jake,1983), and possibly Fijian, according to Gordon,1980 (see Notes in Chapter 2). In these languages a situation similar to Niuean Movement to Subject occurs in cases of Passivized "ECM" verbs (where "ECM" refers not to any Case-marking ability of the verb, since as a Passive verb it has none, but rather to its ability to take a complement with a SPEC2). In these languages, an element moved to SPEC2 of a Passive ECM verb can be moved from this SPEC2 position to the position of subject of the Passive ECM verb. This A-bar/A movement is identical to, and occurs for the same reasons (i.e. to satisfy the Case Filter) as the A-bar/A movement in Niuean Movement to Subject.

(45)
    a. <u>Standard Arabic</u>
       dunn-at   Hana:n-un [?anna-ha: qatafat-i
       Pst-thought-3fs Hanaan Nom that she picked V
       l -wardat-a]
       the rose   Acc
       "Hanaan was believed to have picked up the rose." (S,5.43)

    b. <u>Fijian</u>
       au a   tukuni   ni'u   a   mokuti   Mere
       ls pst say-pass sub-ls pst hit-prop Mary
       "I was said to have hit Mary." (G,70)

----

30. Salih, arguing in the framework of Relational Grammar, considers structures such as those below in text to be cases of Raising to Object.The data appear to be consistent with an ECM analysis.

c. Imbabura Quechua
   yachachij-ca jari cri   -shca-mi   [warmiman wawata
   teacher -top man believe-pass-valid. woman   baby
   carajuyta]
   serves
   "The teacher is believed by the man to be giving the woman
   the baby. (J&O,27a)

It is interesting to note that Standard Arabic Movement to Subject,

(possible from subject, object and indirect objects) as discussed by

Salih(1985) appears also to involve the SPEC2 position, although in this

case it is uncertain as to whether actual movement is involved, since a

pronoun (in most cases a clitic, and. in subject position, pro) appears in

the theta position.[31]

(46) (Note: "V" is an epenthetic vowel.)
    a. yabdu [?anna l -walad-a   kasara n -na:fiðat-a]
       seem   that the-boy -Acc broke the-window -Acc
       "It seems that the boy broke the window" (S,5.11b)

    b. yabdu l -walad-u [?anna-hu kasara n -na:fiðat-a]
       seem the-boy -Nom that -he broke the-window -Acc
       "The boy seems to have broken the window" (S,5.11a)

    c. tabayyanat-i l-bint-u [?anna l-walad-a za:ra-ha:
       seem-V the-girl-Nom that the-boy-Acc visited her
       "The girl seems that the boy visited her"(S,5.17b)

----

31. I am not certain whether it is correct that Standard Arabic Movement to
Subject involves SPEC2, since Salih(1985) does not specifically say his
rule of Raising to Subject is bounded. His analysis suggests, however,
that it is. Of interest here is the fact that it appears to be impossible
to topicalize from SPEC2 -see Salih(1985).

d. yaḍharu l muʕallim-u [?anna t -ta:lib -a ?aʕta
   seem   the-teacher -Nom that the-student-Acc gave
   l -kita:b-a   la-hu
   the-book -Acc to-him
   "The teacher seems that the student gave the book to
   him."(S,5.18b)

We note that Standard Arabic and Niuean are two languages which seem to
allow movement through SPEC in both Passive ECM and in non-thematic subject
constructions.

Interestingly, Salih in his Relational Grammar analysis considers
Raising to Subject to first raise an NP from an object clause to become an
unaccusative object, which then gets raised, in the usual fashion of
unaccusative objects, to subject. Although the execution differs widely
between his analysis and the one presented here, the essential idea in both
is the same, which is that the non-thematic subject is related to a theta
position embedded within an verbal argument by way of an intermediate
"object-like" position or role. For Salih, this intermediate role is that
of object of an unaccusative verb, while for us it is that of SPEC2 under a
non Case marking verb. The reason for Salih's unaccusative analysis for
the verb for "seem" is due to the impossibility of impersonal passives with
this verb, as seen below. Impersonal Passives are generally possible with
intransitive (unergative) verbs, thus (47) should be permitted if the

clausal argument of the verb was a subject.[32]

(47)
    *buḍiya   ?anna-hu kasara š̆ -s̆ubba:k-a
    Past-seem that -he broke the window -Acc
    "It is seemed that he broke the window." (S,ftnote 5.7)

There is one interesting fact of Niuean which is relevant to our claim

that ECM and Movement to Subject are essentially identical operations.

Seiter(1980) points out in his footnotes that the two operations differ in

the following way. A verb such as manako "want", is both a Control (Equi)

verb and an ECM (Raising to Object) verb. If it appears in a construction

with ECM, however, the embedded PRO can no longer be controlled by the

matrix subject, but instead becomes arbitrary in reference, as in (48b).

The embedded subject, however, while it can be overt, cannot be

coreferential with the matrix subject, as seen in (48c).

(48)
    a. Fia manako a   au ke fahi e   tama haau
       want want   Abs I Sbj beat Abs child your
       "I want to beat your child." (S,Ftnote 3.14)

    b. Fia manako a au ke he tama haau ke fahi
       want want Abs I Mid   child your Sbj beat
       "I want your child to get beaten." (S,Ftnote 3.14)

----

32. The impossibility of impersonal passives with unaccusative verbs was
noted by Perlmutter(1978) for Dutch. Impersonal passives in such clauses
are ruled out in Relational Grammar by "The 1-Advancement Exclusiveness
Law" of Perlmutter & Postal(1984), which rules out the advancement of more
than one element to subject position in a derivation. For Government &
Binding approaches to these subjects see Baker(1985), Roberts(1985),
Jaeggli(1984) and Marantz(1984).

```
c.*Fia manako a au ke he tama  haau ke  fahi e   au
    want want Abs I Mid   child your Sbj beat erg I
    "I want your child that I beat." (S,Ftnote 3.14)
```

In case of a Movement (Raising) to Subject verb which also is a Control

verb (where a dative NP is the controller), Movement to Subject does not

affect the possibilities for Control.

(49)
```
    Kua  mukamuka e   moa     ki a    au ke  kai lima
    Perf easy      Abs chicken to Pers me Sbj eat hand
    "Chicken is easier for me to eat with the hands." (S,Ftnote 4.3)
```

If Movement to Subject and ECM both involve movement to SPEC2, then the

differences in Control possibilities must be attributable to the difference

in the controller (subject vs dative NP) in the two cases, or to the fact

that in the Movement to Subject case, SPEC2 is phonologically empty,

although it contains a trace, whereas in the ECM case it is always

phonologically filled. I will assume either of these explanations will be

tenable, given a full understanding of Control Theory, and will continue to

assume the two operations involve movement into SPEC.[33]

We note that in Niuean and Standard Arabic, ECM verbs and Movement to

Subject verbs are distinguished from other verbs by the same property: that

of taking a complement with an A-bar subject. In a languages such as

----

33. SPEC2 will always be filled in ECM in Niuean since there is no
syntactic Passive in Niuean. See Seiter(1980), Chung(1978), Chung &
Seiter(1980), and Levin & Massam(1984a), for discussion of Passive in
Niuean and Tchekoff(1979) in Tongan, a closely related language.

English, ECM verbs and Raising to Subject verbs are also distinguished from other verbs by the same property: that of taking an embedded IP complement.

Our analysis raises several questions about "improper movement" discussed above. Why, for instance, is it possible for an NP to move from the A-bar SPEC2 position to an A-position, while we previously ruled out the possibility of movement from the A-bar SPEC position to an A-position, which led to our analysis of Tough Movement involving chain composition? Secondly, once we have raised the SPEC2 NP, might we not have created a chain which has as its head a Case marked A-position, and as its tail a Case marked A-position? Such chains are generally ruled out to allow for a unified theory of chains and of A-movement.

The difference between the A/A-bar/A improper movement that we ruled out above, and the A/A-bar/A movement that we have proposed for Niuean Movement to Subject is precisely that the former involves movement to SPEC, and hence involves operators, that is, either Wh-elements, or empty operators in SPEC, whereas the second involves the movement of NPs through SPEC2. Since movement through SPEC to an A-position is ruled out by the Binding Theory as it applies to r-expressions, it remains to be stated that the element moved to SPEC2 does not bind an r-expression. In this case, Condition C will not apply to its trace, and A/A-bar/A movement will not be ruled out. This is reasonable, since the element moved is a [-Wh] lexical

NP, and these are not considered to be operators, and hence would not bind variables. (cf. May,forthcoming, Higginbotham,1983). In a language where ECM involves base generating an NP in SPEC2 and coindexing it with a pronoun, as in Classical Arabic (or in some cases discussed above, a lexical NP as in Blackfoot) in the theta position, the issue of Condition C would not arise, since there is no movement chain between the ECM'd NP and the theta position.

The trace coindexed with an ECM'd NP is not a variable since its A-bar binder is not an operator, but like a variable its closest binder is an NP in an A-bar (rather than an A-) position. The prediction made here is that this element may share properties with both variables and NP traces. We saw in Chapter 2 that this is indeed the case. However, with respect to Condition C the prediction is that they should not be constrained by it. In terms of improper movement this is the case, as we have seen. However, Condition C also rules out "strong crossover" structures such as (50).

(50)
    Who$_i$ did he$_i$ say [t$_i$ kissed Lai-sani] ?

Our analysis predicts that an ECM or Niuean Movement to Subject construction such as that schematized below should be acceptable.

(51)
    [NP$_i$ ... [$_{SPEC2}$ t$_i$ [...NP$_i$...t$_i$...]]]

I have not found data relevant to this question. Frantz(1978) gives

Blackfoot data he states show that strong crossover is possible in cases of

operator binding, since in the following sentence he claims the object is

moved by an operation falling into our classification of Tough Movement.

(52)
    a. iiksíyikoo-wa n-áxk -anist -akomimm-oxs -pi
       very-difficult 1-might-manner-love   -reflex-conj.nom.
       "It's hard for me to love myself.' (F,62)

    b. nits-íiks-íyikoos   n-áxk-anist-akomímm-oxss-pi
       1-very difficult(anim)   (F,63)
       "I'm hard for me to love myself."

However, in the footnote of a later paper (Frantz,1980) he states that

for most speakers, the subjects of verbs such as iyikoo-"hard" can be

coindexed with an embedded subject position NP and not just an object

position NP. It would appear then, that the sentence above could involve a

relation between the non-thematic element and the embedded subject, with no

crossover at all. Note that, as we saw above, Blackfoot non-thematic

argument constructions appear not to involve actual movement, and so the

question of strong crossover is confused since it is difficult to isolate

which of the two embedded NPs the ECM'd NP is directly, and which it is

indirectly, coindexed with.[34]

----

34. Interestingly, Frantz also states that in case of non-thematic subject
constructions in Blackfoot with coindexation between the matrix subject and
an embedded subject, the rule is bounded. In our terms, this would suggest
that from subject position, this verb effects ECM movement (as do other
verbs taking non-thematic subjects, such as the verb for surprising) and as

In fact, it is difficult to determine whether a verdict of ungrammatical

for a structure such as (51) would rule out our analysis. This is because

of the following. If the empty category left behind by an NP moved to

SPEC2 is not a variable, we must ask what its features are. It might be

considered an anaphor, since as we discussed above, it appears to fall

under the Binding Theory, although this might be a side effect of other

locality constraints on chain composition, since non-movement cases of ECM

relations obey Binding Theory A also, probably by default. Alternatively,

it might be pronominal in nature. If this is so, in the structure (51),

the bottommost element is pronominal. (This is weakly supported by the

fact that an overt pronoun, rather than an overt reflexive, appears here in

many of the languages under discussion). (Note that this argues against a

claim that ECM movement is constrained by the Binding Theory.) If so, then

(50) is ruled out by Condition B of the Binding Theory since the binding NP

is in the governing category of the bound pronoun, independently of

Condition C.

To construct an example which would constitute a clear test of whether

the bottommost element acts as a variable, we would need a sentence where

----

do several verbs in Niuean), but from object, this verb effects Tough
Movement, as does the verb for easy. (The verb for easy can Tough Move
only from Object position.) This is reminiscent of the situation with
Niuean uka and mukamuka discussed above, and shows further that the
possibility for syntactic operations are lexically determined. See the
conclusion of the thesis for further discussion.

it is in a different clause than the coindexed element crossed over.
However, this is impossible, since movement to SPEC2 is subject to
Subjacency.[35]

Another test would be that of the "Weak Crossover Constraint", which is
violated in (53).

(53)
      *Who$_i$ did her$_i$ pregnancy bother t$_i$?

There are several different theories as to what rules out these
clauses. (cf. Koopman & Sportiche,1982, Chomsky,1982) Considering that of
Koopman & Sportiche, these structures are ruled out by the Bijection
Principle.

(54)
      The Bijection Principle (Koopman & Sportiche,1982)

      An operator may bind one and only one variable.

Leaving aside the fact that the binder in our cases is not an operator,
will the Bijection test otherwise help us determine if the bottommost
element in ECM movement sentences is a variable? The relevant sentence

----

35. This might be possible in a language where an ECM'd element which is
coreferential with the subject of the ECM verb is not required or permitted
to be a reflexive anaphor, and it is permitted to be a pronoun. Then, if a
double ECM verb structure such as below is acceptable, it would appear that
the bottommost element in the ECM chain is not subject to Condition C with
respect to Crossover, as well as with respect to improper movement:
[ECM-V [SPEC2 NPi...[NPi..ECM-V [SPEC2 ti..ti...] .

would have the structure schematized below.

(55)

      [ECM-V [SPEC2 NP_i [.. [his_i N']... t_i]]]

The data is not available in the Niuean sources available to me to determine the answer to this. In Moroccan Arabic ECM, weak crossover does not create ungrammatical sentences, however, this is the case for Wh-questions also, so we can draw no conclusions from this.[36]

(56)
  a. ref-t   Mohamed belli ka -te -bghi-h   mmwu
     (Perf)know-1s Mohamed that (Imp)3fs-like-him his mother
     "I know Mohamed that his mother loves him."

  b. skun elli ka-t-bhi-(h) mmwu?
     Who that (Imp)3fs-like-him his mother
     "Who does his mother love?"

In Berber, weak crossover in ECM structures does not create ungrammatical sentences (The weak crossover occurs in the lower clause of (57a)), whereas questioning does (57b). However, we saw in the previous chapter that ECM in Berber does not involve ECM movement, as defined there, nor in fact movement at all. Questioning, on the other hand does involve movement (and necessarily a gap and not a pronoun, as seen in (57c)) in the normal case. Mohamed Guerssel informs me that just in case of weak crossover, a question word may be resumed by a pronoun, in which case weak

----

36. These examples, and the Berber ones following were provided for me by Mohamed Guerssel.

crossover sentences are acceptable (57c).

(57)
    a. wi (t) t -essen-t is   t   y-zru ymmas
       Who 3ms 2s know 2s that 3ms-obj saw his mother
       Who do you know (him) that his mother saw?

    b. wi$_i$ twtu   ymmas$_i$/ *$_j$
       Who 3fs-hit his mother
       "Who did his mother hit?"

    c. wi (*t)   y -zru wryaz
       Who 3msobj 3ms-saw man
      "Who saw the man?

    d. wi$_i$ t$_i$ twtu   ymmas$_i$/ $_j$
       Who 3msobj 3fs-hit his mother
       "Who did his mother hit?"

The second question above asks how it is that a chain is permitted which
has as its head a Case marked element in an A-position, and as its tail a
Case marked element in an A-position. This, we would expect, would be
ruled out by the Chain conditions discussed in the previous chapter, which
rule out two Cases in a chain headed by an element in an A-position. This
question will be addressed in Chapter 5, where we will define chain in such
a way as to make the A/A-bar/A chain of Niuean Movement to Subject and
Standard Arabic Passive, etc. divide into two chains.

3.4.3 Conclusion

We have seen in this chapter, and the preceding one, that there are a
variety of syntactic means whereby NPs can come to act as arguments of
verbs with which they have no thematic relation. While the types of verbs

which trigger these syntactic means fall into basic semantic classes cross-linguistically (such as epistemic, "tough", etc.), there is no one to one mapping between semantic class and syntactic means cross-linguistically, nor even within a single language. This will be further discussed in the final part of the thesis.

Chapter 4

"Possessor Raising": ECM into NPs

4.1 Introduction

4.1.1 Overview

In Chapter 2 we examined the phenomenon of ECM into sentential
complements (S/ECM). We argued that this phenomenon chould be accounted
for reasonably straightforwardly in a variety of languages given the
concept of government as defined in Chapter 1, together with certain
lexically specific (and language specific) characteristics with respect to
subcategorization and selection of complements. We did not, however,
consider cases of NP complements This consideration will be undertaken
here. Note that we are for the moment, restricting ourselves to the
discussion of NP objects (i.e. sisters of verbs). Other cases (such as
subjects and ECM'd categories) will be discussed in later sections of this
chapter.

Recall that by definition, a governor governing an XP also governs the
head and the specifier of this XP. Thus, in the configuration (1), the
subject of IP is accessible to government and Case marking by the matrix
verb.

(1)

```
            VP
           /  \
             IP
            /  \
          NP   I'
               ...
```
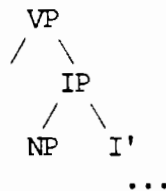
Consider now NP complements. Given all that has been said so far, we
would expect government and Case assignment to be possible also to subjects
of NPs such as NP_i in (2).

(2)

```
            VP
           /  \
          V   NP_j
             /  \
          NP_i   N'
                 ...
```
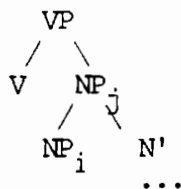
Judging from English alone, we would suppose that such government and
Case assignment is impossible, since specifiers of NPs never appear in
non-genitive Case. ECM (NP/ECM), traditionally referred to as Possessor
Raising, or, in Relational Grammar as Possessor Ascension[1] does not occur

----

1. The term <u>ascension</u> is used in Relational Grammar when an NP which bears
a grammatical relation to an embedded element comes to bear a grammatical

to these specifiers.[2]

(3) Liz proofread [David's/his/*David/*him abstract]

This fact does not require us to redefine government, however, since there are independent reasons why NP/ECM to NP_i in (2) (=<u>David/him</u> in (3)) is not possible.

First, the Case Filter requires that Case be assigned (by the verb in this case) to the matrix NP_j in (2). The Case Filter thus prohibits this Case from being assigned to the NP subject of NP_j, (NP_i). In other words, ECM to the specifier of an NP complement will result in a violation of the Case Filter, since a single Case cannot be assigned simultaneously to two NPs. This situation does not arise in the case of sentential ECM, under the assumption (argued for in Chapter 5) that sentences (CP and IP) do not require Case assignment.[3]

----

relation to a matrix element. (cf. Perlmutter,1983).

2. A structure in English where there does appear to be NP/ECM is the so-called "Acc-ing" construction as in: "Tom didn't like Maggie being a tomboy." However, this would appear not to be a case of external Case assignment, since "Acc-ing" constructions can appear in positions where there is no possible external Case assigner: "Mr. Tulliver not being made of stone, she was given a second chance to pay her debts." (cf.Reuland,1983).

3. We assume, however, that sentential arguments require Case for purposes of theta-role visibility (cf. Chomsky,1981 Stowell,1981 and Chapter 5) In Chapter 2 we adopted the claim (Raposo,1984,1985) that in some Romance languages some sentences (infinitivals) do require Case, and claimed that this explained the lack of English style ECM in these languages. The prediction is that in a language where all sentences need Case, any type of

Note that this position is based on the inability of English verbs to assign two Cases ("ditransitive" verbs will be discussed below), and hence predicts that in a language where it is possible for a verb to assign two or more Cases, NP/ECM would be possible. We will see that this is in fact the case, if other considerations, to be discussed immediately, are met.

Another factor might be involved in the non-existence of NP/ECM in English. It is difficult to determine whether it, or the above is the essential barrier to NP/ECM in English, since the two would work together. This is that, in the case of specifier (=subject) of NPs, there will always be another source of Case assignment available to the specifier, namely whatever it is that assigns genitive Case, if assignment of this Case is not optional (We will assume here it is the head N which assigns genitive Case — see below for more discussion.) If this were the case, then all NPs in English would be (in a loose sense) equivalent to tensed clauses, in that the subject is always internally assigned Case. If we propose a constraint against double Case marking, then, in English, it will be only in the case of clausal infinitives that ECM is possible, since only here is the subject NP available for external Case. This position predicts that in a language with NP equivalents to infinitive clauses, i.e. NPs in which it is possible to withhold either Case assignment or government (and hence

---

S/ECM would be impossible, unless a verb is able to assign two Cases, as will be discussed below for NP/ECM.

Case assignment) of the specifier position, NP/ECM is possible. This
prediction is borne out, as we will see below, in Kinyarwanda and
Chichewa. In other languages we will see that it is possible for a
specifier of an NP to receive two Cases, which also allows for NP/ECM
(Hungarian, Chickasaw).

As mentioned above, it is difficult to know which of the two factors
(the inability of verbs to assign more than one Case, and the necessity
that NP specifiers be assigned only genitive Case) is involved in any
particular language. Obviously, if in Language X, a verb is able to assign
more than one Case, but genitive Case assignment to NP specifiers is
unavoidable and necessarily unique, the verb's abilities will not be
reflected in the syntax of Language X in terms of NP/ECM (although,
presumably it will be in terms of double or triple objecthood). And
conversely, if a Language Y is able to withhold internal Case marking to NP
specifiers, or to allow two Cases to be assigned to this NP, but allows for
no other source of Case assignment to an NP in this specifier, the effect
will be one of obligatory genitive Case assignment, and no NP/ECM. This is
because, non-assignment of genitive Case will only be possible if there is
another Case available to be assigned to the Specifier, since otherwise a
Case Filter violation will result.

There are in theory, then, four types of languages with respect to
factors determining the possibility of NP/ECM although in terms of the

possibility of NP/ECM, there are only two. This is shown below.

(4)

Verb assigns one Case only   Genitive Case obligatory &/or unique

I	yes	yes (either)
II	yes	no (either)
III	no	yes (both)
IVa	no	not obligatory
IVb	no	not unique

In case of a language of Type I, it is clear that NP/ECM will be
entirely ruled out as will also be the case in languages of Type II. While
in theory these two types of Language are differentiated in terms of how
NP/ECM is rendered impossible, in fact they will generally appear to be the
same. A language of Type III will typically allow more than one "direct"
object, but will not display NP/ECM. And finally, a language of Type IVa
or IVb, is predicted to allow NP/ECM.

The discussion above shows that while our definition of government
allows for the possibility of Case marking to specifiers of NPs, it is not
the case that there will be overt evidence of this possibility in every
language. In many cases, in fact, there are independent factors which rule
out such effects. However, in a language of Class IV, where genitive Case
is optional, and/or this Case is not necessarily unique, we expect to find
NP/ECM, given our characterization of it as non-exceptional. In the
following sections we will see that our expectations are borne out.

4.1.2 Organization of Chapter 4

In the next section we will examine cases of NP/ECM where the possessor
in specifier position comes to act as a direct object of the verb, and the
head of the NP (i.e. the possessed) becomes an oblique argument. We will
examine data from Kinyarwanda (Type IVa), seeing that genitive Case is not
assigned to pre-nominal specifier position and that NPs in this position
can be ECM'd. We examine Chomsky's (1984) division of Case into two types:
inherent and structural, and his Uniformity Condition, which accounts for
the behaviour of English genitive NPs. We return to Kinyarwanda, and
Dative Movement constructions in various languages, and provide an
explanation of some characteristics of NP/ECM in Kinyarwanda based on there
being two types of Case. We also argue for a particular definition of
"inherent Case assigner".

We then turn to Tzotzil, another language in which the ECM'd possessor
comes to act as a direct argument of the verb. Tzotzil differs from
Kinyarwanda, however, in that it is of Class IVb, that is, it allows two
Cases to be assigned to a possessor NP; one by the governing verb and one
by the governing head noun. This raises questions for the Uniformity
Condition and for conditions on chains, which we address, although some
questions remain unanswered.

The next section contains an analysis of cases of NP/ECM to specifiers

of NPs in subject position in Chickasaw. We propose an ergative analysis of Chickasaw NP/ECM which allows us to maintain our view of government and of ECM as being tied to particular lexical properties of verbs. A formalization of Case assignment in terms of linking is introduced.

A second type of NP/ECM in languages of Class IVb is then examined, in which an ECM'd possessor appears in the dative Case. We review Szabolsci's(1983) analysis of Hungarian "dative possessors", and propose modifications to her analysis to maintain a unified theory of NP/ECM and of X-bar theory. Romanian NP/ECM and Chickasaw and Choctaw NP/ECM to object specifiers, also of this type, are reviewed.

In the final section of this chapter, we consider inalienable possession NP/ECM which in many languages, such as Kinyarwanda and Turkish, exhibit behaviour distinct from alienable possession NP/ECM. In addition we discuss Kinyarwanda and Korean NP/ECM with verbs that incorporate the meaning "to take away".

4.2 NP/ECM: The Possessor as Direct Verbal Argument

4.2.1 Kinyarwanda Data

4.2.1.1 The Verb Phrase

Kinyarwanda, an SVO Bantu language exhibits the process of NP/ECM. The data in this section come from the grammar by Kimenyi(1980), written in the framework of Relational Grammar.[4] Kimenyi considers what we are referring to as NP/ECM to be an ascension rule of "possessor objectification".

In Kinyarwanda, the assignment of abstract nominative Case is marked by agreement on the verb. Within the verb phrase, direct objects receive abstract accusative case, which as in English is not morphologically marked.

(5) Umugóre a -teets-e inyama
    woman   she cook asp meat
    "The woman is cooking meat." (K,3.2)

Dative (indirect) objects are also morphologically unmarked for Case in Kinyarwanda. The dative argument precedes the direct object.

(6) Umugabo y -a -haa -ye umugóre igitabo
     man   he pst give asp woman   book   (K,3.3)
     "The man gave the woman a book/ a book to the woman."

----

4. The numbers after the examples refer to chapter and example number.

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Benefactive NPs are also unmarked for Case. Here, however, an
"applicative" suffix (-ir) appears on the verb.[5]

The benefactive NP usually precedes both the direct and the indirect
object.

(7) Umukoóbwa a -rá -hé -er -a   umugóre abáana   ibíryo
    girl   she pres give appl asp woman   children food
    "The girl is giving food to the children for the woman."

Direct objects (Themes), indirect objects, and benefactives all act as

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5. There are several other uses of ir in Kinyarwanda. It can also appear
on the verb as an applicative suffix for goal arguments and, as will be
seen below, it is used in cases of NP/ECM. It also serves as a marker on
the verb which emphasizes a locative NP, or along with the reflexive
marker, to indicate what Kimenyi refers to as the "middle voice". As we
will see, it is also appears on the verb in a clause where a possessor has
been raised. It is striking that in many languages there is a relation
between benefactive and possessor raising, either, as in Kinyarwanda, in
that the same morpheme is used to signify both, or, as in Chichewa, because
of this combined with an overlap in meaning in many cases. The same facts
are often true of dative Case also, as in Hungarian, discussed below. A
similar effect is seen in English where, for benefactive shift to take
place, there must be a possessional relation between the theme and the
benefactive NP (I washed him his car./*I washed him my hair.). This is
observed in Green(1974), and Oerhle(1975), and discussed in Stowell(1981).
This observation is not really captured in the account of possessor raising
given here. There are two lines of possibility open, however. First, it
might be that benefactive and dative are the two case markers which are
least rigidly associated with a particular theta role, and hence are more
free to be used in cases of non-thematic Case assignment. Alternatively,
perhaps a theory of dative and benefactive shift based on that of
Kayne(1984) and in Gueron(forthcoming, 1984)), where double object
constructions and possessional relations are structurally small clauses,
might enable us to posit some form of "overlay" relation of
benefactive/possession which exists between elements in such a structural
relationship.

direct verbal arguments in that they, in contrast with other oblique NPs

(see below), appear without preposition-like Case markers (although

benefactive is marked by a verbal suffix), and they can undergo movement to

subject in passivization. They may also be reflexivized under coreference

with the subject, and may undergo what Kimenyi refers to as "pronoun

incorporation".[6] Along with subjects, they can be Wh-moved by

relativization, clefting (Type 1 & 2), and Wh-questioning, and they may

undergo "existential insertion" and "exclusive insertion".[7] Kimenyi finds

no syntactic distinction made between these three types of NPs in

Kinyarwanda (Kimenyi,1980, p.64,78, and throughout).[8] Various examples of

these processes appear below.

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6. In the theory assumed here, pronoun incorporation might be an instance
of cliticization, or of the null-object phenomenon, similar to the
null-subject phenomenon (cf. Bergvall,1983, Mchombo,1984) The theoretical
issues involved are complex, and so we will simply use Kimenyi's term to
refer to the phenomenon, without making any claims as to how it should be
analyzed.

7. There are two types of clefting in Kinyarwanda, one of which (Type 2) is
restricted to subjects and objects, and one of which (Type 1) is available
to obliques also.

8. Dryer(1983) argues, against Gary & Keenan(1977), that there are
distinctions between the three argument types, such as order, chomeur
status after certain operations, and etc. These differences can be
attributed to differences in Case and theta roles, while maintaining the
claim that all three are assigned Case directly by the verbal complex.

(8) a. Passivization-Indirect object
    Ímbwa i -rá -hé -er -w -a   umugabo ibíryo n'ûmugóre.
    dog   it pres give ben pass asp man   food by woman.
    "The dog is given food for the man by the woman."(K,4.55c)

    b. Reflexivization-Benefactive
    Umugabo á -r -íi -he -er -a   'imbwa ibíryo.
    man   he pres refl give appl asp dog   food
    "The man is giving food to the dog for himself." (K,4.59b)

    c. Pronoun Incorporation- Direct Object
    Umugóre a -ra -bi -he -er -a   umugabo imbwa
    woman   she pres it give appl asp man   dog
    "The woman is giving it to the dog for the man." (K,4 56a)

    d. Relativization-Indirect object
    N-a -boon-ye umukoóbwa umuhuungu y -a -haa-ye   igitabo
    I pst see asp girl   boy   he pst rel give asp book
    "I saw the girl to whom the boy gave the book." (K,4.62c)

    e. Cleft2-Direct object
    Igitabo ní cyo ábáana   b -a -cii-ye
    book   be it children they past rel tear asp
    "It's the book which the children tore up." (K,4.79)

    f. Wh-question-Direct object
    Úwo umugabo y -a -shaák -aga   nií nde?
    pro man   he pst rel   want asp be who
    Who is the one for whom the man was looking?" (K,4.85c)

    g. Exclusive construction-Direct object
    Ntaa Maríya umuhuúngu y -a -boón ye
    no Mary   boy   he pst rel see asp
    "As for Mary, the boy didn't see her " (K,4.91c)

Oblique NPs (egs. Instrumentals, Locatives, Purposives, Manners)[9] can

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9. What Kimenyi refers to as "Goals" I refer to as "Purposives" to avoid
confusion with the internal arguments which in English are marked by to
with verbs such as give, and go, which are often referred to as "Goals".

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be marked by a preposition-like Case marker.[10] In this form they may not

undergo the rules discussed above, as shown in (9):

(9) a. Instrumental
    Umukoóbwa a -ra -andik-a íbarúwa n' -íikarámu.
    girl   she pres write asp letter with pen
    "the girl is writing a letter with a pen." (K,3.9a)

   b. Manner
    Umuhuûngu a -rá -ririimb-a   n' -íshavu
    boy   he res sing   asp with sorrow
    "The boy is singing with sorrow." (K,3.49a)

   c. Purposive
    Umwáalímu a -r -iig -iish-a abáana   ku búsa
    teacher   he pres study caus asp children for zero
    "The teacher is teaching the students for nothing."
    (K,3.42)

   d. Locative
    Abáana   ba -rá -rí -ir -a   ibíryo kú méeza
    children they pres eat ben asp food   on table
    "The children are eating food on the table."
    (ir "ben" marks emphasis on the locative NP)
    (K,5.4.13b)

(10) a. Passivization-Instrumental
    *Ikarámu i -ra -andik-w -a   ibarúwa n'umugabo
    pen   it pres write pass asp letter by man
    "The pen is used to write a letter by the man." (K,5.1.6c)

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10. The locative marker is not a preposition in the same sense as the
others, since some of the rules referred to above can occur to locative NPs
(for example, relativization, cleft 2, etc.). Also, exceptionally, a
possessor of a locative NP may undergo NP/ECM without the locative NP
having been "objectivized" (see below). Furthermore, there are several
ways of expressing a locative argument, which are without correspondances
in the case of other obliques. The behaviour of locatives thus poses some
problems for our claims, as they would, I feel sure, for any claims made
independently of a theory dealing specifically with locative NPs in Bantu.
Since such is not my goal here, I will leave the problem open.

b. Reflexivization-Locative
*Ûmwáana y -ii -shyiz-e amabuye kúri we
child he refl put asp stones on him
"The child put stones on himself." (K,4.2.1.49b)

Alternatively, an NP with a semantic role such as goal, instrument, etc,

may appear as a direct verbal argument. In this case, the NP no longer

appears with its Case prefix, and instead, a suffix appears on the verb.[11]

(11) a. Instrumental
Ûmwaalîmu a -ra -andik-iish -a ibáruwa ikaramu
teacher he pres write instr asp letter pen
"The teacher is writing a letter with a pen." (K,5.1b)

b. Manner
Umugóre a -rá -vug -an -a agahiinda
woman she pres say mann asp sorrow
"The woman is talking with sorrow." (K,5.2.2b)

c. Purposive
Karoóli y -a -fash-ir -ije abaantu ubúsa
Charles he pst help appl asp people nothing
"Charles helped people for nothing." (K,5.3.2)

d. Locative[12]
Abáana ba -rá -rí -ir a -ho amééza ibiryo
children they pres eat ben asp on table food
"The children are eating food on the table." (K,5.4.13b)

In the forms shown above, the instrument, manner, purposive, and

locative arguments are direct verbal arguments, in the sense that they may

----

11. This process is discussed in detail in Marantz(1984) and in
Baker(1985).

12. There are other ways to objectivize locatives also; see Kimenyi(1980
and Note above.

now undergo reflexivization and the movement rules discussed above. A few
examples follow.[13]

(12)   a. Passivization-Instrumental
          Ikáramu i -ra   -andik-iish -w   -a   ibáruwa n'umugabo
          pen   it pres write instr pass asp letter by man
          "The pen is used to write a letter by the man."
          (K,5.1.6d)

       b. Relativization-Manner
          N-aá -téekerez-a   íbyiishiimo umugabo a -som   -an
          I pres think   asp joy   man   he rel read mann
          -a íbaruwa
           asp letter
          "I am thinking of the joy with which the man is
          reading the letter."

       c. Pronoun Incorporation-Purposive
          Umugóre y -a -bi -kubit -i   -ye úmwáana
          woman   she pst it beat   appl asp child
          "The woman beat the child for that." (K, 5.3.6)

       d. Reflexivization-Locative
          Abáana   bá -r   -íi -shyir-a -ho ibitabo
          children they pres refl put   asp on books
          "The children are putting books on themselves."
          (K,5.4.21b)

4.2.1.2 The Noun Phrase

The NP in Kinyarwanda has an initial determiner position which can be

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13. The affix which Kimenyi glosses as "benefactive" is glossed as
"Applied" here.

filled with a demonstrative.[14]

(13) iki gitabo
      this book (K,1.9a)

Other nominal modifiers appear after the head, in any order.[15]

(14) ibitabo bitatu bíshya byaa Kárôoli
      books   three new   of Charles
      "The three new books of Charles" (K,1.12.a)

   Alienable possession (inalienable possession will be discussed in

Section 4.5 below) is marked by a post-head possessor Noun prefixed with

the class marker of the possessed NP followed by the morpheme -aa.

According to Kimenyi, this "is semantically parallel to the genitive case

in Latin" and "can indicate possession identification, description,

classification, order or destination....The possessive construction renders

the modifier meanings (colour, size, shape) that other languages such as

English express by adjectives." (Kimenyi,1980 pp 44-45)[16]

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14. It may also be filled with ndi "other", but not with both this and a
demonstrative. If both are present, ndi follows the noun.

15. New information generally appears last.

16. Since all of the examples with NP/ECM that Kimenyi gives are cases of
straightforward possession, I do not know if NP/ECM is limited to these
cases.

(15) a. Igitabo cy-aa K̂aroôli
         book   AG of Charles
         "the book of Charles" (K,3.60a)

      b. Umugabo w'ûmukéne
         man   of poor
         "A poor man"   (K,3.60.d)

Nominal arguments (possessors) behave like oblique arguments, in that

they may not undergo the rules discussed above.[17] For instance, possessors

may not be reflexivized (example (16a)) nor clefted (Type 1, shown in

(16b), nor Type 2).

(16) a. *Abagabo bá -r   -íiy -ubak -ir -a   inzu yáa bo
         men   they pres refl build appl asp house of them
         "The men are building their house." (K,4.2.50b)

      b. *Ni cy'ûmukoôbwa umuhuûngu y-a-sóm-ye igitabo
         be of girl boy he pst rel read asp book
         (K,4.4.2.76b)

         *Nuumukoôbwa umuhuûngu y-a-sóm-ye igitabo cy a (e)(=cye)
         be girl boy he pst rel read asp book of (her)
         "It's the girl that the boy read the book of."
         (K,4.4.2.76c)

In some constructions, possession can also be indicated in another way.

Here, the possessor precedes the head, and no agreement or genitive

morpheme appears.

(17) umugore igitabo
      woman   book   (from K,3.61)

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17. In fact, there are even more constraints on possessors, since they may
not undergo Clefting Type 1, which obliques may undergo.

Since thematic relations are not differentiated between (18a) and (18b),

the constituency of the NP must remain. Hence, we posit that the

difference between (18a) and (18b) is due to the fact that in the former,

the possessor is in a position of complement to N^O, whereas in (18b) it

appears (by base generation, see below) in the position of specifier of

NP.[18]

(18)
```
        a.      NP                   b.      NP
              /  \                         /  \
              N'                          NP   N'
            /  \                          __    /
            N   NP                             N
                __
```
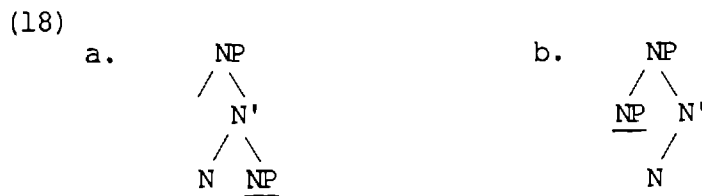
The important things to note about the possessive structure (18b), are (i)

it is possible only when the NP is a verbal argument (see directly below

for details), (ii) the governing verb appears with a suffix -ir as in (19),

and finally,(iii) in such constructions as (19), the possessor acts as a

direct argument of the verb, in that it is now able to undergo the

operations listed above (NP movement, Wh-movement and reflexive) as is

possible for direct verbal arguments. The ECM'd possessor also must appear

next to the verb.[19]

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18. Kimenyi gives no examples which tell us if there can also be a
determiner in these NPs.

19. This fact could be explained in terms of the theory of Case assignment
to be outlined in the following sections, if linking of Cases to arguments
is subject to a constraint as in phonological linking, whereby linking

(19) Umuhuûngu a-ra-som-er-a umukóôbwa igitabo
     boy he pres read appl asp girl book
     "The boy is reading the girl's book." (K,5.5.5b)

(20) a. Pronoun Incorporation
        Umuhuûngu y -a -du-som -e -ye ibitabo
        boy   he pst us read appl asp books
        "The boy read our books."   (K,5.5.17c)

     b. Clefting1
        N'aábáába   ingurube z -a -ri ír -iye   ibiryo
        be children pigs   they pst rel eat appl asp food
        "It's the children whose food the pigs ate." (K,5.5.20)

     c. Existential Insertion
        Ha-ri ábáana   ingurube z -a -ri -dir-iy -e ibíryo
        it-be children pigs   they pst rel eat appl asp food
        "There are children the pigs ate the food of." (K,5.5.22)

Since a pre-head possessor appears in NPs only in the cases under

consideration, it would seem that there is no possible Case assignment

internal to the NP for specifier position. It is thus, possible for NPs to

appear here, only if they can receive Case externally. Second, as

evidenced above, Kinyarwanda is a language in which more than one "direct"

Case may be assigned by a single verb to an argument. It would seem clear

then that we have here the situation posited above as being one where

NP/ECM is expected, and our prediction that in such a situation it would

arise has been borne out.

There are several important points to make. First, we will outline

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lines may not cross (cf. Goldsmith,1976).

Chomsky's(1984) analysis of genitive Case marking in English, and his division of Case marking into two classes: structural and inherent. We will then look more closely at the behaviour of Kinyarwanda NP/ECM, in particular, comparing it to cases of direct/ non-direct verbal relation alternations for oblique NPs such as those in (11). In the process, we will be examining and developing several claims of Chomsky(1984) with respect to types of Case assignment. Finally, we will discuss some differences between Kinyarwanda NP-internal genitive Case assignment and that of English, proposing a definition of "inherent Case marker" to account for certain differences between the two languages.

4.2.2 Inherent and Structural Case and The Uniformity Condition

Chomsky(1984) differentiates between two types of Case assignment; structural and inherent Structural Case (nominative and accusative in English) is assigned by a Case assigner at S-structure, under government, with no reference being made to the status of the theta relations between the Case assigner and the element being assigned this Case. Thus, both nominative and accusative Case, assigned by INFL and the verb respectively, are assigned to elements governed at S-structure which may bear no theta relation to the Case assigner, as is the case in (21a and b) below.

(21) a. It seems that Lugg is a peculiar valet.
     b. The average reader considers Bertie to be a harmless fool.

In addition to structural Case, Chomsky posits "inherent"

(theta-related) Case, assigned at D-structure, including "the oblique Case

assigned by prepositions and...genitive Case, which we assume to be

assigned by nouns and adjectives just as verbs normally assign objective

Case" (Chomsky 1984 p.269).[20] Under this division, all lexical categories

assign Case; P, N, and A assign inherent Case at D-structure, and V and

INFL (with AGR) assign structural Case at S-structure.

Chomsky's proposal is embedded in a discussion of "of-insertion", and it

explains the following distribution of of, and other theta-role specific

prepositions after nominals such as to (after, for example the noun

order).

(22)(=Chomsky,1984 286,p.279)
    a. I persuaded John [of the importance of going to college]
    b. John is uncertain [of the time]
    c.*the belief [of John to be the winner]
    d. *there was [killed of John]
    e. *It seems [(of) John to be happy]
    f. *It is certain [(of) John to be happy]
    g. *the destruction [the city]
    h. [the city]'s destruction e
    i. the [destruction [of the city]]
    j. *proud [John]
    k. proud [of John]

He assumes that direction of Case marking for lexical categories is

uniformly to the right in English, conforming to the head directionality of

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20. Chomsky cites van Riemsdijk(1981) and Manzini(1983) for the general
background of the split between types of Case assignment.

the language. Thus, genitive Case (realized as <u>of</u> or <u>'s</u>) assignment is

considered to be generally rightwards (although in fact it must be possible

to the left also, given possessive NPs such as <u>John's</u> <u>book</u>) To explain the

fact that it can be realized in either complement or subject position of an

NP, he differentiates between Case Assignment (at D-structure for inherent

Case) and Case Realization (at S-structure). Both fall under government,

and theta-relatedness applies to both. Thus, the following Uniformity

Condition (UC) is proposed. (Case marking includes Assignment and

Realization)

(23) <u>The Uniformity Condition</u> (Chomsky,1984)
     If α is an inherent Case-marker, then α Case-marks NP if and
     only if α Theta-marks the chain headed by NP.

This condition ensures that inherent Case will be realized on an NP if and

only if it is governed by the category which theta-marks the NP at

D-structure. Among other things, the UC explains the following data.[21]

(24) (Chomsky,1984, 282i,p.276)
     *John seems that [(his$_j$) pictures e$_i$] are on sale.

In cases such as (25a), Chomsky argues that <u>reading</u> <u>the</u> <u>book</u> theta-marks

<u>John</u>, and so the UC is met. In (25b), it is less straightforward. Chomsky

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21. In the example given, the ungrammaticality could be due to the fact
that the Case realized (nominative) does not match the Case assigned
(genitive). However, in a sentence such as the following, there would be
matching, yet the sentence is still ungrammatical. "*<u>John's</u> sight of (his)
picture <u>t</u>."

points out that following Gruber(1976) and Anderson(1983), we might

consider that a "possessional theta-role" is assigned to the specifier

position, perhaps under government by the noun story (as also, perhaps in

that story of John's. In this case, the UC is met. He concludes "There

are various controversial questions about these structures; let us assume

that they are settled in such a way as to satisfy the UC." (p.273) We will

continue in this assumption.

(25) (=Chomsky,1984 275ii p.272)
     a.[John's reading the book disturbed me]
     b.[John's story] disturbed me.

Chomsky proposes a language specific rule of POSS insertion, in which 's

is inserted in the following context.

(26) [$_{NP}$ NP___]

He notes "in a language lacking the equivalent of [26], movement from the

complement of to the Specifier position is impossible".(Chomsky,1984,

p.273)

Chomsky's analysis also accounts for such things as the inability of

expletives to appear in specifier of N' position (and, as Mark Baker

noticed, in Poss-ing constructions, as opposed to Acc-ing constructions, as

discussed in Ross,1974), the non-existence of PRO complements to inherent

Case markers, and the impossibility of NP movement from an NP complement.

He considers English preposition stranding to be a marked case, and raises

the question as to whether languages might differ with respect to whether
the UC applies to Wh-chains or not. Thus, it could be the case that in
some languages questioning, relativizing and etc. of inherently Case
marked NPs would be disallowed.

4.2.3 Kinyarwanda Case Marking and the Uniformity Condition

4.2.3.1 Inherent and Structural Case in Kinyarwanda

Given the UC, let us consider again the Case properties of Kinyarwanda.
Leaving aside the question of genitive Case assignment, we regard
structural Case to be that assigned to objects (i.e. themes, indirect
objects, and benefactives, as well as "objectivized" obliques) by the verb
or verbal complex since these are able to undergo NP-movement and
Wh-movement rules. On the other hand, the Cases assigned by prepositions
would appear to be inherent (oblique) in that these NPs may not undergo
such rules. For the most part, in Kinyarwanda, the UC would appear to hold
of A-bar chains, since Wh-movement of obliques is generally disallowed.[22]
With this initial characterization of Kinyarwanda Case assignment, let us
examine NP/ECM more closely.

When a possessor appears in Specifier position, and is ECM'd by a

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22. In some cases movement of obliques is acceptable, as in the case of
Cleft1, as long as the entire PP moves, and there is no stranding.

governing verb, the theme head of the NP in which it appears is unable to undergo movement.[23] Hence, Passivization of the theme noun ibíryo "food" in (27) is impossible if its possessor has been ECM'd.

(27) *Ibíryo by-a -ri -ir -iw -e ábáana   n'ingurube
     food   it pst eat appl pass asp children by pigs
     "The food of the children was eaten by pigs." (K.5.5.2.24)

The indirect object's direct argument status is undisturbed by NP/ECM. Hence, umuhuûngu "boy" in (28) can be passivized even though the possessor of the theme has been ECM'd.

(28) Umuhuungu a -rá -hé -er -w   -a umukoôbwa
     boy   he pres give appl pass asp girl
     ibitabo n'ûmugore
     books   by woman
     "The boy is being given the girls books by the woman."
     (K,5.5.2.33b)

It is reasonable that ibíryo cannot be passivized in (27), since it is not an NP, but rather an N', whose specifier is ábáana "children".[24] But

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23. It is also unable to be reflexivized. This makes sense since, as we will claim, the direct object becomes oblique once a possessor receives structural Case from the verb, and, as seen in an earlier section obliques may not be reflexivized.

24. Kimenyi gives one example (5.12d) which suggests that the specifier of the NP may be separated from its N', as in the following sentence where the possessor umukoobwa "girl" is separated from the possessed íkárámu "pen": "Umuhuungu y-a-andik-iish-ir-ije umukoôbwa ìbárûwa íkárámu"/boy he-pst-write-instr-appl-asp girl letter pen/"The boy wrote the letter with the girl's pen." It would seem, however, that this separation is possible only by a scrambling type of rule, and not by NP or Wh-movement rule. This is essentially in accord with Fijian S/ECM, where we saw that extraposition can apply to separate an ECM'd NP from the clause for which it is a

this is not sufficient to explain the behaviour of the theme in all cases
however. This is because the theme noun loses its direct argument status
if NP/ECM occurs, even if the theme is an NP, and not an N', as is the case
if it is not the theme whose possessor is ECM'd. In (29), the possessor of
a direct argument (i.e. non-prepositional) instrumental argument has been
ECM'd. This instrument íkarámu, as predicted in the preceding paragraph,
has no direct argument status, since it is an N' and hence may not undergo
Passivization, relativization, and etc.

(29) *Ikarámu y -a -andik-iish -ir -ij -w   -e
     pen   it pst write instr appl asp pass asp
     umukoôbwa íbárúwa n'ûmuhuûngu
     girl   letter by boy
     "The pen of the girl was used to write a letter by the boy."
     (K,5.6.3.13c)

However, what is more important here, the theme direct argument also
loses its direct argument status when the possessor of the instrumental
argument is ECM'd, even though it is an NP not an N'. This is evidenced by
the ungrammaticality of (30a). That theme arguments do not lose their
direct argument status when instrumental arguments are also direct
arguments is shown in (30b). Thus, it is clear that the ECMing of any
possessor entails the change in status of a theme argument NP, and of no
other NP except the one of which the possessor is a specifier.

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specifier.

(30) a. *Ibáruwa y -a -andik-iish -ir -ij -w   -e   umukoóbwa
         letter it pst write instr appl asp pass asp girl
         íkáramu n'úmuhuúngu
         pen by boy
         "The letter was written with the girl's pen by the boy."
         (K,5.6.3.13b)

     b. Ibáruwa i -ra -andik-iish -w   -a   íkáramu n úmugabo
         letter it pst write instr pass asp pen   by man
         "The letter is being written with a pen by the man."
         (K,5.1.15)

The above facts are explained if we consider the Case assigned to the

ECM'd possessor to be the same Case as that assigned to the theme when it

is a direct argument. This Case then, cannot be assigned to the theme

anymore, if we assume the following.

(31) Case Uniqueness
     (i) In the unmarked case, a Case assigner has a unique
          Case associated with it.
     (ii) A single Case may only be assigned to one NP.[25]

It is clear that an ECM'd possessor must be assigned structural Case.

It is also clear, given (31), that in the case of NP/ECM, this structural

Case is no longer available for Case assignment to any other NP governed by

the verb. It seems then, that the addition of ir, a Case assigner, to the

verbal complex does not add an extra structural Case to the verb. Rather,

it appears that ir appropriates the structural Case normally assigned to

----

25. In some languages, such as Quechua, discussed in Lefebvre &
Muysken(1982), a verb appears to be able to assign its Case an unlimited
number of times. We will discuss in later sections other cases where this
appears to be true, and propose constraints on this possibility.

the direct object, and instead assigns it to a possessor of a direct argument.[26] Since the theme is then assigned oblique Case as we will see, it is tempting to consider ir an indicator of this oblique Case to the theme, since normally, if there is no ECM, no affix appears on the verb to signify the assignment of structural Case. However, this cannot be so, since NP/ECM is possible in intransitive clauses with non-direct locative arguments, and even in these cases, ir appears on the verb.[27]

(32) Umukoóbwa a -be-er -eye umuhuûngu muyu nzu
      girl   she be appl asp boy   in   house
      "The girl is in the boy's house."

We have yet to discuss the question of how the theme argument is assigned Case when NP/ECM takes place. First, we assume that in the case of a simple transitive sentence the theme argument is assigned structural Case. But in the case of NP/ECM, there is no Case available for the theme. Given its inability to undergo movement rules if NP/ECM has occurred it seems that in sentences with NP/ECM, the theme is assigned Case inherently by the verb. That the theme receives inherent Case is seen by its inability to undergo movement rules. It is unlike other inherent NPs,

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26. In fact, ir, a Case assigner, must be able to have a value of [-CA], since it appears on the verb even in cases of Passivization of an ECM'd possessor.

27. Here, we must consider muyu to be a particle, rather than a preposition, if umuhuûngu is in the specifier position of the NP. Alternatively, NP/ECM here might involve movement to an NP-adjoined position, as S/ECM in the languages discussed in Chapter 2.

though, in that it's Specifier is able to be ECM'd. It would appear then that no preposition intervenes between the verb and the theme NP, and that the verb properly governs it. Other oblique NPs, on the other hand, are assigned inherent Case by a preposition which mediates between the verb and the NP, thus preventing proper government, and ruling out the possibility of NP/ECM to the specifier of such an NP unless "objectivization" takes place.[28]

While NP/ECM involves inherent Case assignment to a theme NP, this is not the true of "objectivization". Here, a preposition is incorporated into the verbal complex.[29] Since these prepositions, unlike the _ir_ affix associated with NP/ECM, have both a [+CA] feature and a Case associated with them, they do not need to appropriate the original Case of the verb, and hence the assignment of structural Case to the object is not affected, and it remains able to undergo movement rules. The Case assigned by an incorporated preposition is structural, since it is assigned by the verbal complex. In this there is a similarity to the situation with dative and benefactive arguments in Kinyarwanda, which are assigned structural case by a verbal affix (null in the case of dative). However, in the case of dative and benefactive arguments, there is no non-incorporated form

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28. As seen in the example (32), locatives are a counterexample here.

29. Baker(1985) provides a detailed account of the process of incorporation, with some different assumptions than those adopted here.

available.[30]

The claim that themes are inherently Case marked if the unique structural Case of an unmarked verb is assigned to another element is supported by English "Dative Movement" constructions such as in (33).[31]

(33) a. Mary gave a glass of milk to her sister.
     b. Mary gave her sister a glass of milk.

(34) a. Brody made a hat for the mayor.
     b. Brody made the mayor a hat.

In the (a) sentences <u>her</u> <u>sister</u> and <u>the</u> <u>mayor</u> are assigned inherent Case by the prepositions <u>to</u> and <u>for</u> and <u>a</u> <u>glass</u> <u>of</u> <u>milk</u> and <u>a</u> <u>hat</u> are assigned structural accusative Case by the verbs. In the (b) sentences, the first object has appropriated the structural Case, and hence can undergo Passive.[32]

(35) a. Mary's sister was given a glass of milk.
     b. The mayor was made a hat.

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30. The Case assigned by a verb can sometimes be inherent, as in the case of "quirky Case". This is a marked case, however.

31. For other accounts of these data, see Baker(1985), Kayne(1982), and Stowell(1981).

32. There are differences in acceptability between passivization with benefactives and datives, which I will assume are due to non-syntactic factors.

The second object is now assigned inherent Case, as in Kinyarwanda.[33] As a result it may not easily undergo Passive.

(36) a. ??A glass of milk was given Mary's sister.
    b. ??A hat was made the mayor.

These examples are problematic in that they are not completely acceptable, nor are they completely unacceptable. That they are unnacceptable is explained by our claim that they are inherently Case marked, perhaps (Blevins,1985) by an empty preposition. Furthermore, it is possible that Passivization necessarily absorbs accusative Case, in which case, these sentences would be a violation of the Case Filter. (We will argue differently in Chapter 5 however.)

To the extent that these sentences are acceptable (which varies from speaker to speaker) we can consider Reanalysis to have taken place over the NP. Thus, the acceptability of these sentences should be similar to that for sentences such as (37), which are improper examples of the so-called Pseudo-passive. Judgements for these structures also vary from speaker to speaker, and from sentence to sentence, depending on the lexical items involved.[34]

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33. Blevins(1985) argues, there is a null preposition in these cases which assigns Case to the second object. This is contra Kayne, who argues that the null preposition Case marks the first object.

34. A comparison of these structures with sentences such as the following is also called for however, since these involve Reanalysis over two overt

(37) a. ?The high road was finally decided on as the best route.
     b. ?Guenevere s honour was fought for by all the knights.

The inherently marked theme may be questioned in English, however, contrary to Kinyarwanda inherent themes. This is predicted, since in English, but not in Kinyarwanda, inherently Case marked elements may be questioned, but not usually Passivized (except in cases of Reanalysis), since the UC applies only to A-chains. (Compare (38) with the Kinyarwanda relative clause (10b) above.)

(38) a. *The boy who was given no gruel to
     b. The boy who Kien showed his library to

As mentioned above, Chomsky(1984) hypothesizes (p.281) that the ability to question inherently Case marked NPs may be subject to parameterization. This comparison of English and Kinyarwanda supports this hypothesis.

In Chichewa, a Bantu language related to Kinyarwanda, the same facts are found.[35] Like English, Chichewa may not have more than one direct verbal argument.[36] Thus, NP/ECM and Dative Movement both force the theme to be

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lexical items, as well as containing two NPs needing Case, they are rather worse than the examples in the text: "??The boys were thought rather a lot of by their teacher." i.e.the teacher had a high opinion of the boys.

35. The data are from Sam Mchombo (p.c.). I am grateful to him for his help with Chichewa.

36. Marantz(1984) discusses cross-linguistic variations as to whether applicative suffixes allow for extra, or simply for different direct verbal arguments.

inherently Case marked. An example of NP/ECM and of Dative Movement appear

below.[37] (Tones are not marked in the data here.)

(39) a. Fisi anadya [nsomba za kalulu]
         hyena ate   fish of hare
         "The hyena ate the hare's fish."

     b. fisi anadyera kalulu nsomba
        hyena ate-appl hare   fish
        "The hyena ate the hare's fish."

(40) a. Fisi anatumiza nsomba kwa kalulu
         hyena sent   fish   to hare
         "The hyena sent the fish to the hare."

     b. Fisi anatumizera kalulu nsomba
        hyena sent-appl   hare   fish
        "The hyena sent the hare the fish."

In the (b) sentences above, the structurally Case marked NP (the

possessor and the recipient) can be passivized and the inherently Case

marked theme can not be passivized.

(41) a. kalulu anadyeredwa nsomba ndi fisi
         hare   was eaten   fish   by hyena
         "The hare's fish was eaten by the hyena."

     b.*nsomba zinadyeredwa kalulu ndi fisi
        fish   was eaten   hare   by hyena
        "The fish of the hare was eaten by the hyena."

----

37. S. Mchombo states (p.c.) that there is ambiguity between many cases of
sentences with benefactive direct arguments and with NP/ECM'd possessors.
This is another instance of the correlation between benefactives and raised
possessors, which was referred to above in Notes.

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Likewise, in Tzotzil (Aissen,1979- see below for further discussion), the theme becomes inherently Case marked when any non-direct argument assumes the structural Case. This is seen by the fact that the recipient, locative, benefactive, or etc. triggers agreement, and can undergo Passive, whereas the theme argument cannot in the following examples.[38]

(42)   a. Ch -a   k -ak' -be   (E=Ergative Agr, A=Absolutive Agr)
          ipf A2 El give Appl
          "I'll give it to you."(A,19a)

       b. te   7ak'-b   -at -ik 7un
          there give Appl Pass 3pl particle
          "There they were attacked."
          (lit. There they were given it.) (A,25)

4.2.3.2 Kinyarwanda Genitive Case and the Uniformity Condition

We now return to the question of genitive Case assignment in Kinyarwanda. We saw earlier that a possessor may appear post-nominally, where it is assigned genitive Case, or prenominally, where it relies on ECM to satisfy the Case Filter. There are two possibilities here. Either the possessor NP can be base-generated in either of the two positions, or it is base generated post-nominally, and moves to specifier position. If the latter, and if genitive Case is inherent in Kinyarwanda, as it is in English, (plausible, since movement rules cannot apply to a non ECM'd possessor) this movement constitutes a clear violation of the Uniformity

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38. The Tzotzil data is from Aissen(1979) (=A). The numbers refer to her example numbers.

Condition. However, even if no movement is involved, the UC, as stated

above might still be violated, since under our assumptions, (N') assigns

a theta-role to the possessor, and is an inherent Case assigner, and yet

does not assign Case to the possessor. We note however that the

distinction between Kinyarwanda and English here is that the former, unlike

the latter, is unable to realize genitive Case on an NP in Specifier

position. If we define "inherent Case marker" as follows, the Kinyarwanda

and the English genitive Case assignment facts follow.

(43) Inherent Case Marker
α (=P,N,A) is an inherent Case marker iff it assigns Case to
an NP at D-structure.

This means that while all nouns (and prepositions, for the most part,

and adjectives) are potential inherent Case markers, they are defined as

such only in case they in fact appear with an argument in a position to

which they can assign Case at D-structure. In English, since genitive Case

can be assigned to specifier and/or complement positions, if there appears

at D-structure an NP in one or both of these positions, the N^o will meet

the definition of inherent Case assigner, and genitive Case will

obligatorily be realized on the NPs in question. On the other hand, an

English "intransitive" nominal with no NP subject is not an inherent Case

assigner (thus not a Case assigner at all). Now, in Kinyarwanda, an NP

will be an inherent Case marker only if an NP is base-generated in

post-nominal position, since no inherent Case is assigned (or assignable)

to specifier position. This definition rules out a movement derivation (from post- to pre-nominal position) for NP/ECM structures in Kinyarwanda, as such would violate the UC. This is because, the head noun would theta mark the chain headed by the possessor, but it would not assign it Case, since the possessor receives accusative Case from the verb. The noun would, of course, assign genitive Case to the post-nominal possessor at D-structure, but it could not realize this Case at S-structure. Since Case assignment includes both assignment and realization, the UC is not satisfied.[39]

4.2.4 NP/ECM with Double Case Marking

4.2.4.1 Tzotzil NP/ECM

Tzotzil, a VOS language with a Surface-ergative agreement system, is spoken in Chiapas, Mexico. It exhibits NP/ECM in some respects similarly to Kinyarwanda. The Tzotzil data and most of the Tzotzil information come

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39. I can think of no way to decide whether movement must be posited, and so no way to test the desirability of ruling it out Chomsky(1984) states that "in a language lacking the equivalent of [the POSS insertion rule of (26)], movement from the complement of the specifier position is impossible."(Chomsky,1984 p.273). To test whether movement is ever required in NP/ECM cases in Kinyarwanda we would need to see if deverbal nouns can undergo NP/ECM in Kinyarwanda, since here the "possessor" would be an internal argument, and movement would be required by the Theta Criterion.

from Aissen's(1979) Relational Grammar analysis.[40] We saw in the previous

section that indirect arguments, and obliques may receive structural Case

if the applied affix -be is added to the verb, and that the theme is then

oblique.[41] As in Kinyarwanda, a possessor of a direct object may receive

structural Case, as well as an indirect or oblique argument, if be is

affixed to the verb. In this case also the object receives inherent

Case.[42] Thus a possessed object NP may appear as in (44), or as in

(45a,b,c).

(44)   ta -s -meltzan j -k'u7   (Note: A3 is O)
        ipf E3 make   E1 clothes
        "She'll make my clothes." (A,43a)

(45) a. Ch -i -s -meltzan-be   j -k'u7
        ipf A1 E3 make   Appl E1 clothes
        "She'll make my clothes." (A,43b)

     b. 7i-s -zt'is-be   la   s -nukulal ti pukuj-e
        pf E3 sew   Appl Particle E3 skin   the devil-enclitic
        "He sewed up the devil's skin." (A,26)

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40. Also of help was Aissen(1983). As well as from her field work, her
data come from texts cited in her paper, which we do not cite here.

41. In fact, Aissen states they must appear with be if they are present,
but there are some PPs.

42. For 3rd person possessors NP/ECM is essentially obligatory, Aissen
states, but it is optional for 1st and 2nd person possessors. Further,
NP/ECM is impossible if the possessor of the direct object is coreferential
with the subject, and it is also apparently impossible if there is another
non-direct (i.e. with be) object in the clause.

```
c. Mi muk' bu  x  -av -il -b   -on j -tzeb?
   Q  not       ipf E2  see Appl Al El daughter
   "Haven't you seen  my daughter?"  (A,28)
```

In (45), the verb must agree absolutively with the possessor, not the

possessed noun, as is clear in (45.a,c). Furthermore, intransitive passive

verbs agree with the possessor, and not the possessed, that is to say, the

possessor, and not the possessed NP becomes the subject of a passive verb.

Note that if -be is considered to signal oblique Case assignment to the

theme, then its appearance in a passive structure does not pose any

problems for the view of Passivization as involving a change in value of a

(structural) Case assigning feature. However, as we saw above for

Kinyarwanda, the applied affix cannot be considered a sign of oblique Case

to a theme, since the affix appears in NP/ECM sentences where there is no

theme. Instead, it signals the appropriation of the structural Case for

the possessor. The existence of passive structures with applied affixes on

the verb shows that it is necessary to appropriate the Case, (even though

this Case cannot be assigned) before the possessor can become the subject

of a passive verb. This is because, otherwise, the theme object would

automatically be the potential recipient of the structural Case, and if, as

in passive clauses, this Case cannot be assigned, the theme would

necessarily become the subject of a passive verb, since otherwise it would

not receive Case. Then, an "indirect argument" would be left without Case

and a violation would result.

(46) L -a -chik'-b   -at   t -a -chak-e
     pf A2 burn Appl pass the E2 ass enclitic
     "Your ass was burned" (A,32)

Neither agreement (with object, or with subject of a passive verb) is

possible if the verb is not suffixed with -be.

(47) a. *Mi muk' bu x -av-il -on j-tzeb?
        Q not   ipf E2 see A1 girl (A,30)

     b. *L -a -chik'-e/at t -a -chak-e
         pf A2 burn pass the E2 ass enclitic (A,34)

Aissen(1979) argues that the possessor originates as the possessor of

the direct object, then is copied as an indirect object. It then is

subject to the same advancement rule that operates (obligatorily) to create

direct arguments from indirect arguments, by the suffixation of -be. In

our terms, the data can be seen as follows. The NP possessor in the

specifier position, is governed by a matrix verb. We assume a structure as

shown.[43]

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43. The existence of examples such as "ti y-ajmul ti 7antz/the E3 lover the
woman/the woman's lover" (see Note below) shows that the article, the
agreement clitic and the possessor can co-occur, and thus none of them can
be said to appear in the same position as any other. I assume an extra bar
level to account for this.

(48)

```
                    NP
                   /  \
                 N'    NP
                / \    / \
              prt  N  N''
                      / \
                    prt  N'
```
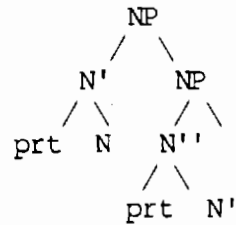
s -nukulal ti pukuj-e
E3 skin   the devil

If this verb is suffixed with be, it is able to assign structural Case
to the possessor, (and inherent Case to the matrix object NP). Tzotzil
NP/ECM suggests that a possessor NP may receive two Cases, since agreement
continues to be marked on the head noun as well as on the verb (see
below).

4.2.4.2 Constituency in Tzotzil NP/ECM

Aissen posits a copying rule for "Possessor Ascension" to indirect
object on the basis of the fact that the matrix NP, including the
possessor, and the possessor itself can both act as constituents. She
proposes that either the original possessor, or the indirect object copy of
the possessor may be null, with the other one appearing as a lexical NP.
Thus both (49.a) or (49b) are possible for the NP in (45b).

(49) (=Aissen,1979,55a,b)
     a. [snukulal [ti pukuje]] [Ø]
     b. [snukulal [Ø] [ti pukuje]

In our account, the fact that the possessor may act as a separate constituent, or as part of its original NP follows since the possessor is ECM'd within the NP, rather than being either extracted from it, or copied as an indirect object.

In arguing that the lexical possessor may be a separate constituent, Aissen notes that material may appear between the possessor and the possessed NP, when -be appears on the verb.

(50) 7i-k'as -b   -at   x -chak ta   te7   ti   bolom-e
     pf break Appl Pass E3 ass with stick the tiger enclitic
     "Tiger's ass was broken with a stick." (A,56)

In (50), the possessor ti bolome, "the tiger" is available for ECM, as is evident from the appearance of the applied affix -be on the verb. When Passive applies, structural Case is not assigned and so the possessor becomes the subject, thus appearing sentence-finally. Since ta te7 is in the VP, it necessarily intervenes between the direct object (the preferred position of which is immediately after the verb) and the subject. This is permitted in our ECM view. Since ti bolome is governed by the verb it may act as a separate constituent, and so be passivized to subject position. (Still, we ignore the problem arising from the fact that there is no evidence that genitive Case has not been assigned to the possessor NP-see below.)

On the other hand, Aissen notes that the (ECM'd) possessor and the

possessed NP may act as a single constituent. This is seen in (51) where together they have been topicalized.

(51) 7a-li s -tot   ti tzeb-e   7i-k -il -be
      pt the E3 father the girl enclitic pf El see Appl
      ta Hobel.
      at Las Casas
      "The girl's father, I saw him in Las Casas." (A,59)

Since non-constituents may not be topicalized in Tzotzil, Aissen claims here that the indirect object copy of the possessor is null, with the possessor in its original NP internal position being lexical (see (49a) above).

Aissen's argument that non-constituents cannot be topicalized comes from the fact that there are near synonymous nouns which form minimal pairs, where one must be possessed and the other may not be possessed. An example is vaj and ot, both meaning "tortilla". The first one may not be and the second one must be possessed. Since vaj cannot be possessed, the be argument in the following sentence (52a) must be a notional benefactive and not a possessor.

(52) a. 7i-j -meltzan-be   vaj   li Romin-e
         pf-El-make -Appl tortilla the Romin-enclitic
         "I made tortillas for Romin." (A,61)

    b. *7a li vaj li Romine 7ijmeltzanbe (A,63)

The string vaj li Romine is not a constituent and may not be topicalized, as seen in (52b). On the other hand, yot li Romine in (53) is

a constituent (possessor, possessed) and so may be topicalized as in

(53b).

(53) a. 7i-j -meltzan-be   y -ot   li Romin-e
          pf-El-make   -Appl E3 tortilla the Romin-enclitic
          "I made Romin's tortilla." (A,62)

      b. 7a li yot li Romine 7ijmeltzanbe (A,64)

For us, the topicalization of the possessor/possessed string is

reasonably straighforward. Since the ECM'd possessor is still contained

within its matrix NP, it can act with it as a constituent for the purpose

of topicalization.[44] However, this analysis raises the question of why a

Tzotzil NP whose specifier has been ECM'd can act as a constituent for the

purposes of topicalization, although a Fijian CP, and an English IP whose

specifier has been ECM'd may not do so for the purposes of extraposition,

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44. Aissen gives an example which appears to show that the string of
possessor/possessed can act both as a constituent and not as a constituent
in a single clause. This is because, in the following sentence, according
to Aissen's discussion (although it is not clear from the glosses), the
subject of the passive verb is the possessor ti yajmul ti 7antz "the
woman's lover", which we would therefore assume to have moved at some point
to subject position without the possessed N' ti yat "the penis", but that
the topic is ti yat ti yajmul ti antz "the woman's lover's penis", which
appears as a constituent in Topic position: "7a la ti y-at ti y-ajmul ti
7antz 7un-e, slekch vo -b-at 7un/ pt pt the E3-penis the E3-lover the woman
pt-enc apart roast-Appl-pass pt /"As for the woman's lover's penis, it was
roasted separately". (A,65)") However, this is under the assumption that
Passive necessarily involves movement to subject. It is not clear that it
does, since it might be possible to bind a postverbal argument with an
expletive (although this would be incompatible with the theory of chains
and of Surface ergativity of Levin & Massam(1984) to be outlined in Chapter
5. It would be interesting to test the constituency of this clause further,
by using first and second person pronouns (to check agreement) and Control
(to check subjecthood), if Control structures exist in Tzotzil.

Topicalization, etc. We return to this below.

4.2.4.3 Problems of Double Case Marking

We now return to the problem of redundant Case assignment. How is it

that the possessor NP is able to receive two Cases, which it seems to do

since ECM does not affect the genitive agreement on the head noun? (i.e.

an ECM'd possessor is agreed with on the verb and on the head noun)

We have seen that in Tzotzil, a possessor NP appears to be able to

receive two Cases. This is under the assumption that there is a

correlation between the appearance of agreement on a Case assigner, and the

assignment of Case. It is possible to consider this correlation false,

i.e. to assume that although the head noun appears with an morpheme of

agreement with its possessor, the head noun is not in fact assigning Case.

However, while double Case assignment to a single NP is unusual, in that it

is rarely discussed in the literature, it is not in fact ruled out in

principle.[45] There might then be nothing more illuminating to say about

such a phenomenon other than that it is permissible in some languages, and

not in others. With this assumption. i.e. that Case is assigned

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45. In Chomsky(1985) the possibility for double Case assignment of a
possessor in a complement position would be ruled out by the Minimality
Condition, which prevents a verb from governing (and hence, from assigning
Case to) an NP for which there is a "closer" governor. "Closer" however,
is defined in such as way so that an N is not considered closer than a
matrix verb to an NP in specifier position. See Chapter 1.

internally, as well as externally in Tzotil NP/ECM, we can account for the
difference in behaviour mentioned above between Fijian and English ECM'd
subjects, and Tzotzil ECM'd possessors with respect to Topicalization.
This will be discussed below. We note now that redundant Case marking
raises questions with respect to the UC, and the Chain Condition (which
states that NP-traces are [-Case]).

The UC states that an inherent Case marker must govern the head of a
chain to which it assigns a theta role. In a Tzotzil sentence such as
(46), the possessor NP is passivized to subject, in spite of the fact that
it has been assigned Case by the N which governs its trace. This would
appear to violate the UC. However, the UC is violated by Passivization,
only if the "genitive" Case which the possessor receives is in fact
inherent. Since, morphologically, the agreement on the possessed noun is
identical to the subject agreement (ergative) on a transitive verb, it is
conceivable that this Case is not inherent.[46] Alternatively, the UC might
need revision. Since Tzotzil data which would determine this issue are
lacking, we will not settle this issue here. For discussion of other
languages in which redundant Case marking appears, see the following
sections of this chapter. (In these cases, NP/ECM appears to involve

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46. Also passivization of the possessor is a violation of the UC only if
the possessor NP has actually moved to subject position. It is conceivable
(see Note above) that no movement is involved in Tzotil passive, in which
Case the UC would not be violated by these structures.

movement to an NP-peripheral position.)

The final question to be dealt with concerning Tzotzil concerns the
topicalization discussed above. We noted that since the possessor is
contained within its matrix NP, even after ECM, it is understandable that
it can act as a constituent with this NP. However, in Fijian and English
ECM, the maximal projection containing the ECM'd element may not act as a
constituent for purposes of A-bar movement. (See Chapter 2). However,
there is a crucial difference between the ECM cases on the one hand and the
NP/ECM case of Tzotzil on the other. In the latter, as we have noted, the
ECM'd element does not depend on the ECM to satisfy the Case Filter, since
it is independently Case marked by the head N within its constituent.
Thus, it is possible to "obscure" the (exceptional) Case "path" (in an
informal sense). In Fijian and English, on the other hand, the ECM'd NP
relies solely on the exceptional Case marker for its Case. (which it
requires for predication purposes, as discussed in Chapter 2, and 5.) If
the entire constituent, including the ECM'd NP is moved, no path is extant
leading from the ECMer to the ECM'd NP or its trace, and the Case Filter
will be violated. Hence, the clause into which ECM occurs cannot act as a
constituent for purposes of movement.

4.3 NP/ECM to Specifier of Subjects

4.3.1 Introduction

So far we have not discussed at all any examples of ECM to specifiers of categories in positions other than complement to a verb. In fact, our theory predicts that such ECM will never occur. This is because of two things. First, the definition of government is such that if a category is not lexically theta governed, then its specifier will not be governed (See Chapter 1). Subjects, and adjuncts are not so governed, and hence their specifiers will not be governed by an element which might govern the subject or the adjunct. Additionally, we have characterized the general possibility of ECM to have an effect usually just in case there is some specific property of a lexical item which brings this result about. Examples we have seen are: the ability of a verb to assign more than one Case, to subcategorize for IP, to subcategorize for a CP which is a predicate, to select a complement with a Case assigning element in its head, and etc.[47]

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47. In other Cases, such as Berber and Hungarian, ECM occurs in less marked environments, since there are fewer constraints on A-bar chain Case matchings in these languages.

INFL, the element which assigns Case to the subject, has a significantly

weaker relationship with its "Case-assignee" than does a verb. For

instance, since the relationship is not one of head/complement, it does not

involve subcategorization, nor does it involve selectional restrictions.[48]

Hence, even for reasons other than the concept of government, we expect

S/ECM not to be possible to subject positions, and such seems to be the

case.[49] Similarly, it is plausible to consider that INFL is in general

unable to assign multiple cases. We would therefore expect that NP/ECM

should never arise in subject position. For the most part, this

expectation is met. Languages with NP/ECM often restrict this to object

position (Kinyarwanda, Chichewa, Tzotzil), or to positions which are for

some other reason than objecthood governed by a verb (Turkish, Hungarian,

see below). There are, however, some languages in which NP/ECM to

specifiers of subject position NPs does occur (Chickasaw, Hungarian). Can

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48. It appears to be the case that a verb can somehow select and
subcategorize for a particular type of subject, but not INFL. Note that
this view takes agreement to be a filter.

49. It has been noted that in a VOS language such as Malagasy
(Travis,1980), Raising to Subject can have the effect of "Subject-ECM",
since it is string vacuous. This analysis would require that we assume
that Raising to Subject verbs take an external sentential argument, rather
than an internal one. (Thus:

[V_i [V_j O S]]

, where V_j ECMs S) Then, however, we would expect "Subject-ECM" (i.e.
Raising to Subject) to occur to sentential subjects of verbs which also
have objects. Raising to Subject is thus a preferable analysis. I know of
no other putative cases of Subject-ECM in the case of sentential subjects.

the data from these languages be explained in our framework? We will

discuss Chickasaw first.[50]

4.3.2 Chickasaw NP/ECM—The Data

Chickasaw is an Western Muskogean language. The following Chickasaw

data and information come mainly from Carden, Gordon and Munro(1982)

(CG&M,1982), and Gordon and Munro(1982) (G&M,1982).[51]

Chickasaw is an SOV language, with a complex system of agreement

(described in detail in G&M,1982 and references therein). Verbs can agree

with their subjects, objects and indirect objects for person and number,

using an agreement marker from one of three classes. The choice of class

is lexically determined by the verb.[52] The subject is marked with an -t

suffix, and the verbal arguments may be marked with a suffix -a. (Note:

underlining in examples signifies Nasalization)

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50. Hyon Sook Choe informs me that NP/ECM is possible into subjects in
Korean. We will not discuss this aspect of Korean here. See below,
Section 4.5 regarding some other Korean data.

51. Other sources are Gordon(1984), Munro(1984) and, for Choctaw,
Davies(1981a,1981b). CG&M provide arguments against an analysis where the
"raised" possessor is not raised, but receives a theta role (something like
a dative or benefactive) directly from the verb. I accept their arguments,
and will simply assume that the structures to be discussed involve
non-thematic verbal arguments. I refer the reader to CG&M for these
arguments.I am grateful to Lynn Gordon and Guy Carden for discussion and
comments.

52. G&M show it is partly, but not entirely, semantically based.

(54) a. <u>Agreement Markers</u>

	I	II	III
1Sg	-li	sa-	am-
2Sg	ish-	chi·	chim-
3Sg	∅	∅	im-

    b. i. aalhpi's -li   ii. sa -ssikopa
          righteous 1SgI   1sII mean
          "I am righteous."   I am mean."

      iii. an   -takho'bi
          1SgIII lazy   (CG&M,8a,b,c)
          "I am lazy."

    c. ihoo -at an   -k   -a   abi -tok
       woman Sbj 1sIII father Obl kill past
       "The woman killed my father." (CG&M,2)

In genitive NPs, the possessor appears before the head noun, and the
head agrees with its possessor using a class III (alienable) or class II
(inalienable) morpheme. Pronoun possessors are null, with agreement
appearing on the head noun (see (54c) above).

(55) a. sa-shki'   b. am-ofi'
      1SgII mother   1SgIII dog
      "my mother"   "my dog"

    c. Jan ishkin   d. Jan im-ofi'
      Jan eye(s) (3II=∅)   Jan 3III dog
      "Jan's eyes"   "Jan's dog"

Under certain conditions, NP/ECM in Chickasaw occurs to specifiers of
subjects. (It also applies to objects, with certain differences in
behaviour, see below.) There are two types of NP/ECM, exemplified

below.[53].

(56) a. No NP/ECM
         [Jan i   -foshi'-at] talowa
          Jan 3III bird   Sbj sing (3I Agr=∅)

      b. NP/ECM-Type A
         [Jan-at] [foshi'-at] in -talowa
          Jan Sbj bird   Sbj 3III sing

      c. NP/ECM-Type B
         [Jan-at] [i   foshi'-at] talowa
          Jan Sbj 3III bird   Sbj sing   (CG&M,10a.b.c.)

In (56b) (Type A), NP/ECM involves the disappearance of the genitive III

agreement, the appearance of -t (subject marker) on the ECM'd possessor,

and the appearance of III-agreement on the verb, agreeing with the ECM'd

possessor. In the third example (Type B), the only difference between the

ECM'd and the non-ECM'd sentence is that the -at marker appears on the

ECM'd possessor. In this case, no III-agreement appears on the verb.[54]

The two types of NP/ECM act the same in all respects for all tests for

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53. CG&M give several arguments that the possessed NP is the "underlying"
subject in constructions such as these. For instance, only they may
satisfy semantic and grammaticalized selectional restrictions (such as for
particular lexical items or for roundness or longness), they govern stem
suppletive number agreement, and they act as antecedents for reflexive
(absorbed) objects (see Note below).

54. It is in fact unclear from the sources cited whether no agreement shows
up on the verb in Type B NP/ECM, or just not III agreement. To determine
this, it would be necessary to have a pair of examples in which agreement
appears which is not null, to see if it disappears under NP/ECM. CG&M
state explicitly for colour verbs that their regular II-agreement
disappears under NP/ECM, but they do not make a general statement on this
topic.

subjecthood to be discussed below, according to CG&M(1982). We will not discuss the differences between the two types of NP/ECM here. Our assumption is that they differ with respect to the type of Case which is donated (in a sense to be made precise below) by the verb, where the first type is incompatible (possibly only at the phonological level) with genitive III Case marking, and the second type is not. Some verbs may assign either type, while others are specified as being able to assign one or the other type.[55]

That ECM is involved in (56b) and (56c), and that the ECM'd NP acts as the syntactic subject, is clear by the following facts, isolated in CG&M(1982).[56]. Subject marking (_t) appears on the ECM'd possessor, and verbal agreement in Type A ECM is with the ECM'd possessor rather than the head noun (as seen clearly in (57)), as is the optional third person plural agreement hoo (compare (5a and 5b).

(57)   hattak -at an   -chaaha
        husband Sbj 1sIII tall
        "My husband is tall."   (CG&M,11.b)

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55. Munro(1984) gives examples showing that genitive agreement with an ECM'd possessor may show up in the same clause as III-agreement on the verb if the possessor is an inalienable one, thus taking II-agreement, and not III-agreement on the head noun. (The example is given below) This suggests that it might be a fairly superficial factor which rules out the co-occurence of agreements, however, whether this is the case remains to be determined.

56. Other arguments include the fact that adverbs can appear between an ECM'd NP and its possessed, an ECM'd NP may be postposed, etc.

(58) a. "hoo" -no NP/ECM
    hattak im -amboh-at hoo litiha
    man   3III house Sbj 3PL dirty
    "The man's/men's houses are dirty."

   b. "hoo" with NP/ECM
    hattak-at aboh -at hoo-i -litiha
    man   Sbj house Sbj 3Pl 3III dirty
    "The men's house/houses are dirty."   (C,G&M,19b,20b)

In addition, <u>hoot</u> focussing, reserved for subjects, appears on the ECM'd

possessor (59a,b,c), adverbs may appear between the possessor and the

possessed when ECM has occurred the ECM'd NP may be postposed. See

example below.

(59) a. "hoot" focus -no NP/ECM
       ihoo i -foshi'-oot talowa-tok
       woman 3III bird   hoot sing   Pst
       "It was a bird of the woman s that sang."

   b. "hoot" focus -with NP/ECM
       ihoo -hoot foshi'-at in -talowa-tok
       woman hoot bird   Sbj 3III sing   Pst
       "It was a woman whose bird sang."

   c. "hoot" focus with NP/ECM
      *ihoo -at foshi'-oot in -talowa-tok
       woman Sbj bird   hoot 3III sing   past   (CG&M,18a,b,c)

(60) a. Adverb Placement -no NP/ECM
      *Jan oblaashaash im-ofi'-at illi-tok
       Jan yesterday 3III dog -Sbj die-Pst
       "Yesterday Jan's dog died."

   b. Adverb Placement with NP/ECM
       Jan-at oblaashaash im -ofi'-at illi-tok
       Jan Sbj yesterday   3III dog Sbj die Pst (CG&M,15b,16b)

(61) a. Postposing -no NP/ECM
      *im-ofi'-at yopi Jan
       3III dog Sbj swim

"Jan's dog is swimming."

b. Postposing -with NP/ECM
   ofi'-at i   -yopi Jan-at
   3III Sbj 3III swim Jan Sbj   (CG&M,17b,d)

And finally, the switch reference system (see CG&M,1982, and G&M,1982) which refers to the subject of the main clause (see CG&M and references therein for arguments to this effect), refers to the possessor of the subject when ECM has applied as seen below.

(62) a. Switch Reference-(SS=Same Subject, DS=Different Subject)
        Jan-at aya-tok abika-hootakot
        Jan-Sbj leave Pst sick because/SS
        "Jan left because she was sick."

     b. Jan-at aya -tok abika-hootako
        Jan Sbj leave Pst sick because/DS
        "Jan$_i$ left because he/she$_j$/they was/were sick."
        (CG&M,21a,b)

(63) a. Switch Reference -no NP/ECM
        ihoo yamma i   -hattak-at tochchi'na
        woman that 3III man   Sbj three
        ayoppanchi-hootakot
        like   because/SS
        "That woman's husbands$_j$ are three because they$_j$ love her."

     b. ihoo yamma i   -hattak-at tochchi'na
        woman that 3III man   Sbj three
        ayoppanchi-hootako
        like   because/DS
        "That woman's$_i$ husbands are three because she$_i$ loves them."
        (OR....because person$_x$ loves person$_y$) (CG&M,23a,b)

(64) a. Switch Reference -with NP/ECM
        ihoo yamm-at hattak-at in -tochchi'na
        woman that Sbj man   Sbj 3III three
        ayoppanchi-hootakot
        like   because/SS

- 289 -

"That woman's$_j$ husbands are three because she$_j$
loves them."

b. ihoo yamm-at hattak-at in -tochchi'na
   woman that Sbj man   Sbj 3III three
   ayoppanchi-hootako
   like   because/DS
   "That woman s husbands are three because they love her."
   (OR.....because 3person$_x$ love(s) 3person$_y$)(CG&M,24a,b)

4.3.3 The Ergativity of Chickasaw NP/ECM

In the Chickasaw examples of NP/ECM above, NP/ECM is occurring to

specifiers of subjects. This is unpredicted, given our definition of

government, and hypothesis above that INFL's relationship with the subject

is too weak for ECM to occur. That the second of these need not be

substantially changed to account for the Chickasaw data is shown by the

fact that NP/ECM to specifiers of subjects is permissible only with certain

verbs. (We will discuss the government problem below.) In particular,

only intransitive verbs allow NP/ECM to their subject position, and not all

verbs of this type allow it.[57] Furthermore, no verb which appears with

subject agreement from class III allows NP/ECM to its subject.[58] And

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57. Reflexive verbs also allow it. This argues for a lexical
reflexivization rule, where the theta-role of the object is absorbed, and
hence is not structurally present, rather than a syntactic Binding Theory
type of reflexive. In lexical reflexivization it is expected that
non-arguments of a verb may not act as antecedents or reflexive anaphors.
This appears to be true in Chickasaw, since NP/ECM'd "subject" possessors
may not act as antecedents.

58. It is possible that the source of all Case marking in Chickasaw is the
verb, and not INFL, since the type of agreement with the subject is

finally, verbs are lexically marked as to whether they allow NP/ECM of Type A, Type B, or both (or neither).[59]

It is clear then, that although NP/ECM is occurring to subject position, its applicability is controlled, not by INFL, the direct source of the ECM, but rather, by the features of the verb of which the ECM'd NP is the subject. Hence it seems not to be tied to any particular property of INFL, but rather, to some particular property of the verb, in accordance with our hypothesis above. In determining how the verb controls a Case assigning operation which takes place between INFL and a subject NP, we will discuss how it is that the transitivity of a verb can effect the applicability of NP/ECM.

Recall that we claimed that ECM is possible only if there is an "extra"

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determined by the verb, in a way perhaps similar to the choice by ergative verbs of a particular auxiliary in Romance languages (cf. Perlmutter,1978, Burzio,1981. This would make Chickasaw even more "ergative/absolutive" than we consider it to be here, and in ways which would be of great interest. If this is the right approach, then it would follow that III-agreement verbs could not NP/ECM, because they would not have a "free" Case, since this Case is required for the "underlying" subject. The issues here are complex, and we will not explore them further. G&M(1982) provide an interesting discussion of many aspects of Chickasaw agreement.

59. CGM explain that all colour verbs (which have II agreement with their subjects) take the NP/ECM without III agreement on the verb while numbers (with I agreement) take NP/ECM of either type. Most active verbs which do not allow both types take the NP/ECM type with III agreement, and most stative verbs which only allow one NP/ECM type take the type without III agreement on the verb. In general, which type is used is semantically unpredictable, and in some cases synonyms fall into different classes. See below for further discussion.

Case available to be assigned to the possessor NP. Now, anticipating the

theory of Case to be presented in Chapter 5, we assume the following.

(65) Z^O a governor, then Z^O has associated with it C_z
where C = Abstract Case

According to (65), every verb, even an intransitive one, has a Case (C_V)

associated with it.   In intransitive clauses ⟨watch thaver[=CAf:verbs]·of:

Surface-ergative languages, this C_V will percolate up a V-INFL^O path to be

assigned by INFL to the subject. C_I in such languages will remain

unassigned in intransitive clauses, as it is a default Case.   In

nominative/accusative languages on the other hand, it is C_I, nominative

Case, which is assigned to the subject in intransitive clauses while C_V,

accusative remains unassigned. (See Chapter 5 for a detailed exposition.)

Thus, there will be an unused Case in every intransitive sentence.

The transmission of Case from the verb to INFL^O is usually accompanied

by morphologically ergative Case marking, (subjects of intransitives and

objects of transitives are absolutive, and subjects of transitives are

ergative). This is due to the fact that the absolutive Case from the verb

overrides the ergative Case associated with INFL. However, it is plausible

that there could be languages which display ergativity with respect to

their Case assigning mechanisms, but in which the Case morphology does not

reflect the source of the Case. Chickasaw NP/ECM argues that Chickasaw is

just such a language. Here, in an intransitive clause, the Case associated

with certain verbs can be transmitted to INFL, which then becomes multi-Cased, and hence permits NP/ECM. Unlike in the case of Surface-ergativity, the verbal Case does not override the Case associated with INFL, but rather, is assigned along with it. Chickasaw is further unlike true Surface-ergative languages in that it does not exhibit ergative Case morphology. Hence, it seems that the morphological form of a Case marker depends not on the source of the Case, but rather on the categorial status (V, I, etc.) of the immediate Case assigner. Thus, subjects of transitives and of intransitives both display -t marking (although it is not clear if this is a Case marker, see below), and objects of transitives appear either with no marking or with -a. The agreement markers also are not morphologically ergative. All of I, II, and III types of agreement may be used to agree with either a subject of a transitive, or an intransitive, and II and III may be used for verbal objects.[60] But Chickasaw agreement displays elements of ergativity, in that transitive subjects (agents) are usually marked with I agreement, whereas intransitive subjects are usually marked (along with verbal arguments) with II or III agreement. (This system is not tight, however,— as G&M(1982) demonstrate, it has become idiosyncratic and highly lexicalized.) And furthermore, for Choctaw, a language closely related to Chickasaw, Davies(1981b) observes that ergativity (or absolutivity) is exhibited in NP/ECM ("Possessor Raising" in

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60. There appears to be no clearcut difference in the Case assignment of direct vs indirect verbal arguments. See G&M(1982).

Relational Grammar terms). This is true of Chickasaw also. Both languages

allow NP/ECM to objects (see below), as well as to subjects of intransitive

verbs. These observations fall out if we assume that NP/ECM in general is

always associated with verbal Case marking, and therefore that in Chickasaw

NP/ECM, the "extra" Case in fact is donated by the verb to INFL, which then

passes it on to the subject.[61]

4.3.4 Multiple NP/ECM in Chickasaw

4.3.4.1 NP/ECM Structures

Chickasaw NP/ECM as well as appearing to provide a counterexample to the

claim that the phenomenon of ECM is verb governed, also presents

counterexamples to the claim that Case assignment is unique (See (31)).

This counterexemplification is seen in sentences with iterative NP/ECM.

The possessor(1) of a possessor(2) of a noun may receive -t marking, if

possessor(2) has been ECM'd.

```
(66)   a. Jan im  -aaimpa' iyy-at  oppolo
          Jan 3III table   leg Sbj broken
          "Jan's table's leg is broken."
```

----

61. The fact that NP/ECM becomes impossible when there is any internal
argument, and not just an object (for example, a locative) argues first
that in Chickasaw, like Kinyarwanda, many Cases are assigned by one verb,
and second, that in losing its Case to INFL, the verb loses its [+CA]
feature also.

```
    b. Jan im  -aaimp-at  iyy-at  oppolo
       Jan 3III table Sbj  leg Sbj broken

    c. Jan-at  im  -aaimp-at  iyy-at  oppolo
       Jan Sbj 3III table Sbj  leg Sbj broken  (CG&M,40a,b,c)
```

This process of iteration is apparently unlimited. CG&M(1982) give
examples with up to six iterations of ECM, and attribute the difficulties
of further iterations to performance factors.

```
(67)  Jan-at  in  -kaana'-at  im  -ofi'-at  iyy-at
      Jan Sbj 3III friend Sbj 3III dog  Sbj leg Sbj
      hishi'-at  ibitop-at lowa-tok
      hair  Sbj end  -Sbj burn Pst
      "Jan's friend's dog's leg's hair's ends caught fire."
      (The ends of the hair on Jan's friend's dog's legs
      caught fire.")  (CG&C,43b)
```

It seems then that the structural Case donated by the verb is able to be
assigned to any number of NPs. Several questions arise. First, what is
the structure of sentences such as (67 and 13b,c)? Second, why is INFL,
and not the verb, able to iterate its NP/ECM Case assignment? (it seems
that iteration does not occur in object NP/ECM, to be discussed below.)
And third, how is it that INFL may assign any number of Cases just in case
it is able to assign two? In other words, if INFL has the ability to
assign many Cases, why is its ability to do so dependent on the particular
verb in the clause? And finally, given our definition of government, why
is INFL able to effect NP/ECM at all, since we have declared it unable to
govern into the specifier of the subject?

In our framework, Case is assigned under government. Hence, in NP/ECM

it is necessary to consider that the possessor NP is governed by the Case

assigner, and in iterative NP/ECM, it is necessary to consider that each

further embedded possessor NP may become governable only as its possessor

is governed. This successivity is necessary, since no possessor may be

ECM'd unless its possessor has been ECM'd. For a construction with ECM of

three levels of embedding, such as (13c), we propose the following

structure.[62]

(68) a. <u>D-Structure</u>

```
            I''
           / \
            I''
           / \
             I''
            /
          NP_i
          / \
        NP_j   N
        / \    \
      NP_k  N   iyy_i (leg)

     Jan_k  aaimpa_j (table)
```

----
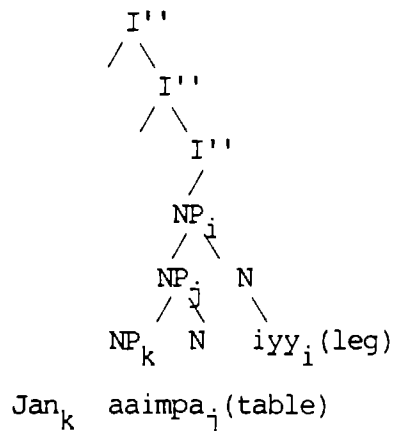
62. This structure revives the question of adverb placement (between an
ECM'd possessor and its possessed) answered by CG&M in a movement
analysis. We assume that it is always possible to adjoin NPs to achieve a
scrambling effect, as it is possible to put an adverb after a subject in a
regular clause also. The structure also appears to raise questions
regarding the Uniformity Condition, similar to those raised and discussed
for Tzotzil above. Here too, the (trace of the) possessor appears to
receive Case both from the noun and from an external source. It is likely
that the double Case marking has an effect on the UC in some way.

b. S-structure

```
            I''
           /  \
         NP    I''
           k   /  \
              NP    I''
                j   / \
               / \ N  NP
              t   N     i
               k        / \
                       t   N
                        j
         Jan   aaimpa  iyy
```
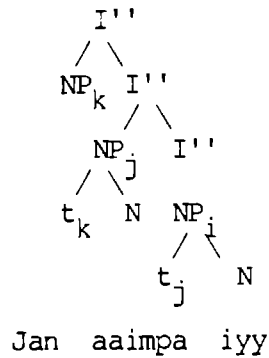
Thus, each NP is finally governed by INFL, and is accessible for -t Case

marking. Also, it becomes able to be governed only as its dominating NP

becomes governed. Furthermore, each possessor trace is antecedent governed

by its coindexed NP after its extraction to become a daughter of IP.[63]

This analysis also explains why there is a fixed order for NP/ECM'd NPs and

their possessors.[64]

Why is this iterativeness possible only in case of subject specifier

ECM? Although NP/ECM is possible in Chickasaw to object position, it is

not iterative in such positions. An example of object NP/ECM ((4a,b) from

Munro,1984) appears below. (Here III agreement always appears on the

----

63. We assume that the positions moved to already exist in D-structure,
because we assume the Extended Projection Principle which requires that
subjects of Predication be base generated. This will become crucial for
our theory of chains and Case, in Chapter 5.

64. CG&M state (citing Gordon,1980) that in Maricopa, iterative NP/ECM is
not possible. The possibility for it, then, is determined by the
conjunction of various language specific properties.

verb.)

(69) a. Ofi'-at ihoo im -pask -a   apa tok
        dog Sbj woman III bread non-Sbj eat Pst
        "The dog ate the woman's bread."

    b. Ofi'-at ihoo -a   pask -a   im -apa tok
        dog Sbj woman non-Sbj bread non-Sbj III eat Pst
        "The dog ate the woman's bread."

A related question here is: Why is iterativeness (as well as NP/ECM at

all) possible only if the INFl appropriates the Case of the verb? We have

proposed above that in general, NP/ECM is possible only if there is an

extra Case available, and that this explains, in part, the restricted

occurrence of NP/ECM. This position is based on the claim that for each

Case there may be only one recipient. If on the contrary, a single Case

may be assigned to many NPs, why is NP/ECM not possible more generally?

And if a second Case is necessary, why is it just after this second Case is

available that INFL gains its ability to assign a Case to each NP it

governs?

4.3.4.2 Case Assignment as Linking

These questions can be explained formally if we adopt the insight of

Borer(1984, 1983) and of J. Levin (p.c.) in the conception of Case marking

as involving the linking between tiers.[65] In the theory of Case in Levin &

Massam(1984) (and see Chapter 5), potential Case assigners are considered

to enter the syntax with an associated Case, as is stated in (6.5) above).

We will consider this Case to be linked to the verb.

(70)

```
        VP
       /  \
      V    NP
     /
  [ C_V]
```
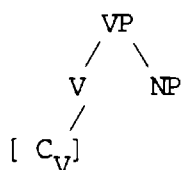
An NP C-commanded by a Case assigner may be coindexed with this Case

assigner. If a government relation holds between the two elements, Case

assignment may take place, where we view Case assignment to involve linking

as follows.

For a verb, its Case will spread (directionally specifically according

to the language), to an adjacent (governed) NP, if the verb is [+CA].[66]

(71)

```
        VP
       /  \
      V    NP
     /    /
  [C_V  ]
```

----
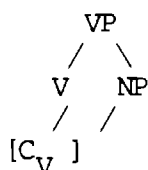
65. This view of Case marking as linking was J. Levin's concept of Case
throughout the writing of Levin & Massam(1984).

66. As discussed in Manzini(1984) and in Massam(1984b), phrasal
phonological rules such as liaison and mutation which can be viewed as
linking rules take place within c-command and government domains also.

The Case associated with the verb is unable to spread if the verb is
[-CA]. (except perhaps in quirky Case; see 2.2.4) But in Surface-ergative
languages, the Case associated with the verb must be assigned. (See
Chapter 5.) (It is this necessity, as argued in Levin & Massam, which forms
the core of the Surface-ergative vs nominative/accusative parameter). The
Case is therefore de-linked from the verb, and is projected along the
V-INFL^O path. It then may link to INFL and be assigned (i.e. linked, by
convention) according to the directionality value for INFL Case assignment,
to the NP governed by INFL.

(72)

```
              I''
            /  \
          /      \
        NP       I'
          \     / \
           \   /   \
            \ I    VP
             \/    /
           [C_V]   V
```
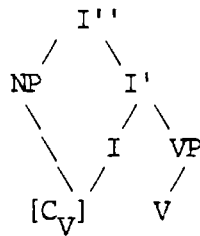
We have seen above that Chickasaw NP/ECM in essence involves ergativity,
but that it also differs from standard Surface-ergativity in several ways.
We can consider that in Chickasaw, the verbal Case is de-linked and
projected to INFL, and that it is then linked to INFL, so to be assigned in
accordance with the standard INFL-NP Case assignment constraints. The
original C_I is then delinked, and by convention, is able to spread without
constraint.

(73)

```
              IP
             /  \
           NP    IP
            \   / \
             \ NP  I'
          ...\  \  /\
              \\\  \ I VP
              \\\  \/
             [C ] [C ]
               I     V
```
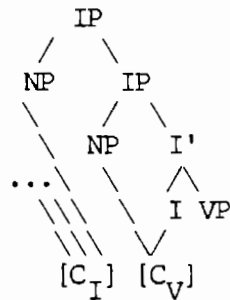
We will see in (+) that this view of Case can be extended to account for aspects of Hungarian NP/ECM also.

4.3.4.3 Conclusion So Far

This conception of Case assignment then, provides answers to the questions posed above. To review:

First, the possibility for NP/ECM is determined by the verb (which must always be intransitive, given our view) because it is the verbal property of ergativity (i.e. of being able to release its Case to INFL) which determines the possibility for NP/ECM. Hence NP/ECM here too is, as we claimed above, possible only if there is an extra Case available.

Second, given Case Uniqueness (see (3.1)), we would not expect NP/ECM to be iterative in Chickasaw. The fact that it is, and that it is just in case of subject NP/ECM, is explained by the weakening of Case uniqueness to

include only linked Cases.[67] It is the normal situation for a Case to be linked; other situations must be derived by rule. Hence, iterative Case assignment is the marked situation.

Third, our definition of government is unaffected by this analysis, as we do not require INFL to govern into the specifier of the subject for NP/ECM to occur. This is because it is possible for the NP in specifier position to move into a position which is a daughter of the IP which dominates the NP of which it is the specifier. This movement is ruled out in non-NP/ECM structures, due to the fact that the NP does not receive Case unless INFL contains an extra Case donated by a verb, lexically marked as being able to donate its Case.

It is important to question here, however, why the possessor NP hanging from IP requires Case. In English, the adjunction site for Topicalization appears to be IP, and an English Topicalized NP does not require Case independent of the Case assigned to a coindexed NP in a theta position. Recall that a similar question arose with respect to the (SPEC2) daughters of CP in the case of S/ECM in Fijian, Niuean, etc. There, it was determined that the reason for the Case requirement was due to the fact that the SPEC2 NP was acting as a subject for the CP of which it was a

----

67. In the case of Chickasaw object NP/ECM the dative Case is attached to the verb, and hence is not iteratively assignable. In this respect it is different than Hungarian dative Case, which is iteratively assignable in cases of NP/ECM, as we will discuss in the next section.

daughter, and therefore needed a Case independent of the one assigned to the theta position with which it is coindexed (see also Chapter 5). A Case Filter which is based on the necessity for Visibility, not just of Theta-roles, but also of subjects for predication, will require this NP to be assigned Case. Now, note the situation in Chickasaw. Here, as seen above, subject is defined as the leftmost NP governed by INFL. Hence, this NP will require Case marking. This is since, in Chickasaw, the subject is defined as the leftmost NP dominated by INFL.

Note, however, that we have explained why the topmost and the bottommost NP in a string of ECM'd possessors need Case, the first for predication purposes, and the second for theta purposes. All the intermediate NPs, however, do not appear to need a Case other than the one they have by virtue of being in a Case marked Chain. However, it appears that they do receive Case. First, as noted, they receive t marking. While it is true that this is not necessarily a sign of Case (it could be simply a sign of being governed by INFL), there is another reason to think that the intermediate NPs receive Case. This is that, as noted by CG&M, in III-agreement cases agreement is not with the final "subject", that is, the leftmost NP dominated by IP, but rather, with the first human possessor ECM'd. If agreement is tied to Case assignment, it appears that the intermediate NPs are assigned Case. We take this to be due simply to the fact that Case assignment, defined as the conjunction of a Case and a Case

assigning feature, takes place wherever possible.[68]

4.3.4.4 Chickasaw NP/ECM and the Projection Principle

In CG&M it is argued that Chickasaw "Possessor Raising" constitutes a counterexample to the Projection Principle, and that a Raising analysis is preferable to any analysis which upholds this principle. They outline a few such possible analyses, and reject them for various reasons. The analysis herein is most similar to the analysis they call a "topicalization" analysis, labeling it the "least bad" analysis consistent with the Projection Principle (CG&M,1982 p.25). I will not explicitly argue for my analysis over theirs here, however, I consider the analysis proposed in their paper essentially equivalent in complexity to that proposed here, since in terms of the movements involved, (though not the concept of Case marking), the two are essentially the same, except with respect to what is considered a subject. There are a few important points to make, however.

CG&M argue against a "topicalization" analysis, which they define as movement to an A-bar position (possibly S' or, as in this thesis, S), on the grounds that such Topicalization is limited to movement of possessors from subjects, and that it is lexically governed. The first is part of a

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68. This view is taken also by Manzini(1983), although her concept of Case assignment differs from the one here.

larger problem, which we will address briefly in the conclusion of the thesis, namely, why is it that all languages do not avail themselves of all "perfectly good" operations? Why, for example, does English not allow any verb to assign two Cases and hence allow NP/ECM? Clearly, to answer such questions satisfactorily is to know a great deal more about parametric variation and implicational relations in languages than we currently know. On a less exalted level, however, in the analysis proposed here, the limitation of adjunction to IP to subjects of certain verbs has to do with the fact that an NP in this position will be defined as subject, and hence requires Case. Cases are not freely available, and hence the possibilities for this adjunction will be very limited. The lexically governed nature of NP/ECM in a "topicalization" analysis such as that proposed here are likewise explained. It is only if a verb is able to transmit its Case to INFL that NP/ECM will be possible.[69]

The main argument that CG&M provide against a "topicalization" type of analysis is that the moved NP comes to act as a subject, in the ways outlined above, while topicalized NPs in languages do not. CG&M do not discuss "real" topicalization in Chickasaw in any detail, but they mention that there are constructions which have discourse functions which are

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69. Another argument CG&M provide against this analysis is that "physical" movement is not necessarily undertaken in the case of NP/ECM of a pronoun, which appears simply as an agreement marker on the verb. This is explained if we assume an analysis of null subjects extended to include subjects of NPs.

topic/focus-like. For instance, affixes can be added to NPs, or oblique NPs can be preposed or subject or oblique NPs can be postposed. They do not show however if the preposed NP must be adjoined to IP. It is likely that it would not be, however, if this prediction is proved incorrect, we note that a subject is a base generated position (by the Extended Projection Principle), whereas a Topicalized NP is in a position which is created by adjunction. In chapter 5 we argue that only base generated positions require Case marking. This leaves open only the problem of Left Dislocation, which, it is possible, is not an NP node at all, and hence not possibly a subject for predication.

The assumption in the argument of CG&M against a Projection Principle compatible analysis is that there is such a thing as a "subject", independently of other factors, and that it is impossible to have two "subjects". At the same time, this is permitted in their analysis which permits Raising to Subject from subject. Further, they assume that in a Projection Principle compatible analysis the "subject" position must be an A-position, and that in moving to an A-bar position, it is impossible to be moving to a "subject" position. I contend that it is not necessary to make these assumptions in a theory which contains the Projection Principle in which grammatical relations are not primary. Instead, it is the strength of a modular approach, which contains certain "skeletal" principles as the Projection Principle, that the assumptions above are not necessarily the

case.[70]

With respect to Raising to Object vs ECM in English, the difference
between the two analyses is that the former considers that there is such a
thing as an "object", which is defined as sister to the verb, and which
should exhibit certain properties. Its normal properties are such things
as accusative Case, relative ease of extractibility, possible anaphoric
reference to a subject, etc. An object may or may not have the property of
being assigned a theta role by (i.e. bearing a direct thematic relation
to) the verb. The second view however, assumes that the set of properties
described above are not due to being the sister of the verb, but rather to
the being in the general structural relation of government with the verb.
A theta relation is another possible relation which can hold between a verb
and an NP. An NP in this relation is defined as an complement or "internal
argument" of a verb, and by the Projection Principle and the Theta
Criterion, must be generated as a sister to the verb. The two sets of
properties must be characterized in any theory, since clearly they can be
distinct. In the latter theory above, both the first list of properties
and the second property of bearing a theta role are reduced to structural

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70. The notion that "subject" is a meaningless term is discussed in Travis
& Williams(1982), where they take six properties normally ascribed to
subjects (NP/S, actor, controlled element, external argument of predicative
phrase, topic, member of a set of primitive elements) and show that they
may not hold of any given single NP in a sentence in many languages. See
also Williams(1979,1980,1981) and Schachter(1976).

definitions, but to different ones, with this difference being maintained
at all levels of grammar. In the former theory, only the first list is
reducible to structural terms at all levels, so that being a sister to a
verb coincides with this set of properties, and a theta-marked object is
defined in terms of levels rather than structure. Most important here, is
that the effect of the PP is to force sister of verb and theta role to
coincide absolutely.

We turn now to Raising to Subject examples such as those discussed
above. In the case of what are informally called subjects we can also
break down sets of properties.[71] First, we have the conjunction of
properties such as control of switch reference, etc. Second we have the
property of being the subject of predication. And third, we have the
property of being a thematic external argument.[72] In most languages, the
first two coincide, as does the third if there is an external theta role.
The Projection Principle says two main things about subjects. First, the
Extended Projection Principle states that there must be a subject, for

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71. See previous footnote.

72. Travis & Williams(1982) consider that an external argument is that
which acts as subject for predication. We consider, following
Rothstein(1983) that predication takes place independently of theta roles,
as in the case of expletives. Thus, in Chickasaw, the external argument is
not necessarily the subject of predication. In Passive cases, in a theory
such as Jaeggli(1984) or Baker, Johnson, & Roberts(1985) where the external
theta role is assigned to an affix and presumably, the subject of
predication is the internal argument which has been raised to subject (see
Rothstein,1983), the same situation obtains.

purposes of predication (at all levels), even if there is no external theta role assigned. And second, there is no necessary correlation between external theta role NP and sister of I'. Thus, in two related ways the subject (sister of I') is different from the object (sister of V) with respect to the Projection Principle. This allows for expletive subjects, Passivization, and Raising to Subject, all of which would be disallowed in the case of objects.

The effect of the Projection Principle for subjects, then, is to not force the sister to I' position to coincide absolutely with a theta role. Hence, it is theoretically possible to have more than one "subject", as long as there is a subject for predication, and an NP receiving the external theta role, if such is assigned. The position to which this theta role is assigned must, of course remain associated with this theta role throughout the derivation.

Hence, in a language like Chickasaw it is possible to divide the functions and characteristics generally associated with subjects. There is one position, present at D-structure, to which a theta role is assigned, and hence, which is an A-position. Throughout the derivation, other NPs can move to become sisters of I'. The leftmost one of these is defined as "subject" for purposes of switch reference etc. All are defined as "subjects" for the purposes of Case assignment by INFL. And one, either the leftmost one, or the leftmost [+human] one, is considered "subject" for

the purposes of agreement.

4.4 NP/ECM: The Possessor as Indirect Verbal Argument

4.4.1 Hungarian NP/ECM

4.4.1.1 Szabolcsi(1981,1983)

So far we have examined languages in which the ECM'd possessor acts as a direct object (with respect to agreement, Passivization, etc.) or as a subject (with respect to agreement, switch reference etc.). There is, however, a second type of NP/ECM, where the ECM'd possessor, rather than receiving the unmarked structural Case of nominative or accusative, is Case marked with a kind of "default" dative Case. This is found in Choctaw and Chickasaw object NP/ECM, as well as in Hungarian, and Romanian.[73]

Szabolcsi(1981, 1983) provides an interesting account of Hungarian possessors which may appear alternately in the nominative Case or in the

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73. In a sense, the NP/ECM cases we have examined so far are "dative" in that, in Chickasaw, III-agreement is used on the verb, which is also used for indirect objects, and in Tzotzil and in Kinyarwanda an affix appears on the verb which is associated with indirect objects and/or benefactives. But since the ECM d possessor acts as an object in these languages, we consider them to constitute a class separate from Hungarian.

dative Case. We will review her analysis here.[74]

(74) a. az én-∅ vendég-e-m
         the I-nom guest-poss-1sg
         "my guest" (S,1)

     b. a   Mari-∅   vendég-e   -∅
         the Mary-nom guest -poss-3sg
         "Mary's guest" (S,3)

     c. én-nek-em a   vendég-e   -m
         I dat 1sg the guest poss 1sg
         "my guest"   (S,8)

     d. Mari-nak a vendég-e-∅
         Mary dat the guest poss 3sg
         "Mary's guest" (S,10)

Szabolcsi argues that Hungarian NPs are S-like in that they have an INFL

category and a "peripheral" position, which she calls "KOMP".[75] She notes

that the morphology of NPs mirrors that of Ss. (She considers a to be a

"mere formative", but see below)

(75) Mari-∅ alud-t-∅
      Mary nom sleep past 3sg
      "Mary slept." (S,4)

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74. The references after examples are to example numbers of Szabolcsi(1981)
unless otherwise noted. Also relevant is Szabolcsi(1985). I am grateful
to Anna Szabolcsi for her enthusiastic help with Hungarian data and theory.

75. NPs contrast with S in Hungarian according to Szabolcsi, who follows
Kiss(1985, forthcoming) on this point, in that the former are
configurational and the latter are not. Maracz(1984a,b) also argues that S
in nonconfigurational in Hungarian, but argues for a different approach.
Horvath(1981) disagrees, considering Hungarian S to be configurational. It
is worth noting, as does Szabolcsi, that KOMP means "ferry" in Hungarian.

Nominative possessors may not be removed. Scabolcsi attributes this to whatever rules out long movement from subject position of tensed clauses (NIC or ECP, etc.) She considers that in cases of dative possession, the possessor is not in its original (subject of NP) position, but rather, has moved to KOMP. This is supported by the word order variation between (74b) and (74d), where the formative a appears before the nominative possessor, but after the dative possessor. That the dative possessor is still part of its matrix NP is shown by the fact that the entire [dative-NP a N'] string can be focussed. (cf. Tzotzil above)

(76) [$_F$ Mari-nak a   vendég-e-∅-∅] alsz-ik
     "It is Mary's guest who sleeps." (S,11)

She notes that WH-possessors must be in the dative form, thus supporting her analysis of dative possessor as being in a COMP-like position.

(77) a. *a   ki -∅   vendég-e   -∅
         the who-nom guest poss 3sg
         "whose guest" (S,12)

     b. ki -nek a   vendég-e   -∅
         who-dat the guest poss 3sg
         "whose guest"   (S,13)

     c. Ki -nek ismer-té -tek a   t$_i$ vendég-é   -∅ -t?
        who dat know past 2pl the   guest poss   3sg acc
        "Whose guest did you know?"

She proposes the following Phrase Structure rules.

(78) (=Szabolcsi,15,16)
    NP'---> KOMP NP
    NP ---> NP' INFL N'   (INFL= [+POSS (AGR)]

NP' is a barrier to movement just as is S'. KOMP, she assumes can be
governed from outside for purposes of ECP.

The structure of (77b) is now:

(79) (=S,1983,13')
    [$_{NP}$ ki -nek$_i$ [$_{NP}$ a t_i vendég-e -∅]]
        who dat   the   guest poss 3sg

An interesting point about Hungarian NP/ECM is that there is no
subject/object assymetry. This, Szabolcsi assumes, is explained by an
analysis of Hungarian as non-configurational, since under such an analysis
the subject, as well as the object, is properly governed by the verb.
According to our analysis of ECM, as discussed above, ECM should not occur
to subject position, and in fact it rarely does. Furthermore, where it
does do so, it is still dependent on verbal properties, as we saw above for
Chickasaw. We will continue to assume that it is this non-configurational
aspect of Hungarian which accounts for the exceptional ability of ECM to
apply freely to subjects as well as objects (see below).

Szabolcsi notes that one difference between COMP and KOMP is that the
latter, but not the former, allows NPs as well as WH elements to be moved
into it. In this way, KOMP is similar to the FOCUS node at the S level.

Once in KOMP, an NP can leave and behave as a separate NP. Szabolcsi

assumes that in doing so it violates the Projection Principle, in that it

can appear as a (non-thematic) sister to V. However, given an analysis of

Hungarian where the A/A-bar distinction is nullified at the level of S

(=VP) due to the non-configurationality of this language, this violation is

permitted. She notes however, that it is not necessary, since the same

effect can be achieved by multiple adjunctions to S. Examples follow.

(80) (=S,1983,18,19)
   a. $[_S$ Alszik Mari-nak$_i$ $[_{NP'}$ t'$_i$ $[_{NP}$ a t$_i$ vendége]]]
       sleeps Mary dat   the guest
     "Mary's guest sleeps."

   b. $[_S$ alszik $[_{NP}$ t'$_i$ $[_{NP}$ a t$_i$ vendége]] Mari nak$_i$]
       sleeps   the guest   Mary dat

   c. $[_F$ Mari-nak$_i$] [alszik t''$_i$ $[_{NP'}$ t'$_i$ $[_{NP}$ a t$_i$ vendége]]]
       Mary dat   sleeps   the guest
     "It is Mary whose guest sleeps"

   d. $[_T$ $[_{NP}$ t'$_i$ $[_{NP}$ [a t$_i$ vendége]]j] $[_F$ Mari-nak$_i$]
               the guest   Mary dat
    $[_S$ alszik t''$_i$ t$_j$]
       sleeps
     "As for his/her guest, it is Mary whose sleeps."

With respect to the source of the dative Case, in Szabolcsi(1981) she

assumes it is assigned by the INFL in the NP, which assigns nominative Case

to subject position, and dative Case to KOMP position. However, in

Szabolcsi(1983) after a discussion of government and other related issues

she states: "I will now risk the assumption that [the source of the dative

Case] is not INFL of NP' but the governor of NP'" (p.13) Thus, she

considers dative possessors in Hungarian to be a case of NP/ECM.

While Szabolcsi's analysis is in essence in accord with the findings reported above with respect to NP/ECM, there are some problems, arising from her proposed structures with KOMP, in conjunction with certain facts of iterative NP/ECM in Hungarian. We will review the iterative data, in terms of Szabolcsi's analysis.

In Hungarian, iterative NP/ECM is possible. That is, the possessor(1) of a possessor(2) may appear in the dative Case. this is only possible, however, if possessor(2) is also dative.

(81) a. ?[a Mari-∅ vendég-e-∅]-∅ álm-a-∅
             the Mary-nom guest poss-3sg=nom dream-poss 3sg
             "Mary's guest's dream." (S,23)

     b. *[Mari-nak a vendég-é-o]-∅ álm-a-∅
             the Mary-dat the guest-poss-3sg-nom dream-poss-3sg (S,24)

     c. ?[Mari-nak a vendég-é-∅]-nek az álm-a-∅
             Mary-dat the guest-poss-3sg-dat the dream-poss-3sg (S,25)

     d. a Mari-0 vendég-é-∅]-nek az alm-a-∅
             Mary-nom guest-poss-3sg-dat the dream-poss-3sg (S,26)

According to Szabolcsi, the questionmark judgements of (81.a) and (81.c) indicate clumsiness and not ungrammaticality.

Szabolcsi's analysis for these constructions involves the following deep structure.

(82)

```
                NP'1
              /    \
         KOMP1     NP1
                  /    \
              NP'2      N'1
             /   \
        KOMP2     NP2
                 /   \
             NP'3    N'2
             Mari   vendég   alom
```
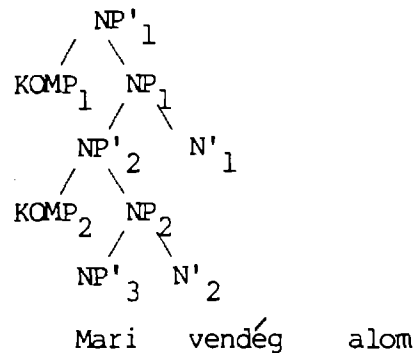
(81a) involves no movement at all, (81b) involves movement of NP'_3 to $KOMP_2$, (81c) involves movement of the NP'_2 obtained in (81b) to $KOMP_1$, and (81d) involves movement of the original NP'_2 to $KOMP_1$.

Regarding the ungrammaticality of (81b), Szabolcsi puts forth two possible lines of explanation. The first, suggested to her by David Lebeaux, is to say that all elements in KOMP, whether empty or lexical, have to be properly governed. This requires a special type of percolation of government to allow the KOMP of an element in KOMP ([$KOMP_1$ [NP_2 [$KOMP_2$...) to be lexically governed. The other line is based on Szabolcsi's notion of KOMP as an "inferior operator position", (that is, it is an operator position, but elements in it are not required to proceed to COMP, TOPIC or FOCUS, but may stay within S). Thus, "when moved into $KOMP_2$, NP'_3 acquires an inferior operator feature even if it is not a lexically defined operator like ki "who". This feature would then percolate up from $KOMP_2$ to NP'_2, thus forcing NP_2 to move to $KOMP_1$ as well. ...On this account [(+b)] is out because NP'_2 has this operator feature but remains in

an A-position within NP'$_1$." (Szabolcsi,1983, p.9)

Both of these explanations leave open the problem of how the NP in KOMP gets dative Case. Szabolcsi argues that, as COMP is considered to be head of S' (cf. Stowell,1981), so might KOMP be considered head of NP. This creates a parallellism between the apparent proper government of a trace in COMP, and of a trace in KOMP. Further, she considers INFL of NP to be in KOMP. Then, she assumes, as stated above, that the source of dative Case is the governor of the matrix NP, and that, in the course of normal Case assignment, Case percolates to KOMP as well as to N, to be realized on the latter as nominative, accusative, etc, but in KOMP, invariably as dative.

Notice that, to account for (81c) this conception requires that Case percolation be iterative. Thus, Case assigned to an NP' percolates to its KOMP as dative, but also percolates to the KOMP of the NP' in KOMP, to be realized as Dative here also. We will discuss how this is possible below.

4.4.1.2 Problems

The main problems with this conception are those it inherits from the approaches on which it is based. Thus, formalizing a structural parallelism between S and NP raises the same problems for NPs which have been noted to hold of S. In particular, there is tension between the assumed structures and X-bar theory. This is made clearest in the account of dative Case in KOMP as involving Case percolation to KOMP (the head).

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If KOMP is the head of NP', then what is N? since Case also goes to N (in the form of accusative or nominative) we might consider that N is also head of NP'. If N is not the head of NP' at all, why does Case percolate to it rather than, say to the NP' which may appear in its subject position? Thus, we have either a problem of percolation paths or, the well-known problem of double-headedness (of COMP and INFL on the S'-level). These problems were solved on the S'-level by the adoption of the structure (Chomsky,1984, and see Rizzi,1984) assumed herein, one where COMP is the head of CP, and INFL is the head of IP. Furthermore, in this view of S'-level structure, COMP (a head) is not considered to be the position into which WH-elements move, but rather SPEC (a specifier). Thus, given current assumptions, Szabolcsi's parallellism is no longer tidy.

The assumptions we are working with with respect to government partially solve the problem. For example, we can first consider KOMP to be, not a head, but (some sort of) a specifier position. This solves the two-headedness problem. Now, since government holds between a governor and the specifier of its complement, "KOMP", will be governed, and hence, in theory, available for Case assignment by a verb. Several problems remain. (i) First, why does it appear that both INFL and Verb are able to assign dative Case to the specifiers of their arguments? (ii) Also, we now have two Specifiers per NP, one for subjects, and one for (ECM'd) possessors. (iii) Third, what about the Case percolation required for (81c)?

Recall that we sought to account for the cross-linguistic distribution of NP/ECM by claiming (31), that one Case can be assigned to only one NP. Szabolcsi's understanding of the dative Case in KOMP as being the same Case (with a different realization) as that assigned to the head N is ruled out by (31). Her view also necessitates the claim that both nominative, and accusative Case assigners (i.e. N and INFL, and V) can assign Case to a Specifier, and to a head. But we have argued that in general, INFL does not allow for ECM. And further, her view does not explain why accusative Case assigned to a sentential argument cannot be realized as Dative by a WH-word which passes through COMP. (Instead it can be realized as accusative, see Chapter 2)

4.4.1.3 Revisions

4.4.1.4 The Structure of Hungarian NPs

These problems can be resolved, and the first question above answered, if we consider that the dative Case in question is not merely a realization in specifier of nominative or accusative Case, but rather, is an independent Case. This independent Case is associated with a verb, as well as the usual accusative Case. However, following the view of Case developed in our discussion of Chickasaw, we consider that this dative Case, unlike accusative, is not linked to the verb. Hence, it is free to link iteratively to any NP governed by the verb. This view is supported by

the fact that it may be assigned to specifiers in subjects (which, according to Kiss(forthcoming) are governed by the verb in Hungarian). Also, as in Chickasaw, it is possible to iterate NP/ECM, which is explained by this view. And finally, it is also possible to NP/ECM into more than one NP in a sentence (although these examples are difficult to process,according to Anna Szabolcsi(p.c.))

(83) en nek em Péter nek nem szereti a   hugat   az ocsem
      I dat 1sg Peter dat not likes   the sister the brother
      "My brother doesn't like Peter's sister." (S,p.c.)

Above, we noted that Szabolcsi s analysis did not explain why dative Case could not be assigned to a Wh-element in COMP (SPEC). This can be explained as follows. If dative Case is assigned to SPEC of CP, then accusative Case will be assigned to the head of CP, namely COMP. This will force Case Resistance, resulting in a stalemate, since movement is impossible as it would obscure the Case path between the element in SPEC and the verb. The Fijian situation, i.e.where the ECM'd element stays behind while the rest of the sentence moves, is impossible in Hungarian since here this would necessitate non-stylistic movement of a non-maximal projection (which is not a head). This is not necessitated in Fijian, since the element in SPEC here is in fact in SPEC2, and hence the constituent moved is a maximal projection.

We now turn to the second question above regarding the structure of NP. Note that if we assume KOMP to be a specifier, we have a structure like one

of those in (84).

(84)
```
              NP                          KP
            /    \                      /    \
     Spec(KOMP)   NP                  Spec    K'
                 /  \                        /  \
          Spec(SUBJ) N'                   KOMP   NP
                    /  \                        /   \
                 Poss   N                Spec(SUBJ)  N'
```
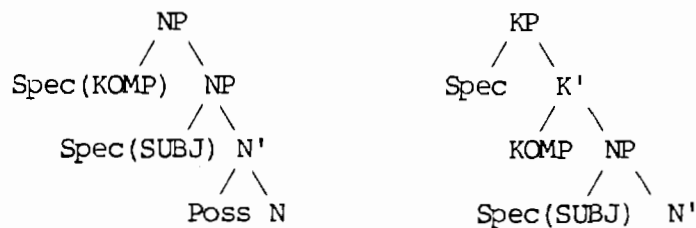
If Szabolcsi's KOMP is a Specifier, it must be either a specifier of the
NP, in which case there will be two specifiers, since (presumably) the
subject of the NP is also to be considered as a specifier.[76] While this
may be reasonable, there are other problems with a structure such as (84a),
the main one being that there is no explanation for why a subject may move
to specifier, and may move from the specifier, but may not move from the
subject position except to the specifier. Any constraints on the movement
from the subject beyond the specifier (such as some formulation of
subjacency) would also serve to constrain the movement from the specifier.
The UC will not help us here, because the nominative subject clearly <u>can</u>
move, it simply cannot move across the higher specifier. Furthermore, it
is not clear that the Case assigned to a Hungarian possessor is inherent,
since morphologically it is nominative, and there are no complement NPs in
a NP (cf. Szabolcsi,1981). And, since Hungarian is "non-configurational",

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76. For Szabolcsi this was not so, due to assumptions current at the time
her paper was written.

the nominative subject of a clause can freely move.

The main problem with the second structure (84b) is that it is not clear
what should be in KOMP. To consider it the home of Agr is to once again
obscure the parallels between S and NP which Szabolcsi attempts to
explain. A further problem is that it is not clear how the NP is assigned
Case. If Agr is in KOMP, and it assigns Case to the subject NP, what
assigns Case to the matrix NP? Due to the presence of KP, the NP is not
governed by the verb.

To solve these problems, we intend to maintain the spirit of Szabolcsi's
claim that Hungarian NPs mirror S's, and propose a maximal projection over
NP, calling it "KP". However, we do not consider KP to house the
Possessive Agreement. Rather, we consider Agreement to be the head of
another category, IP, as shown in (85).

(85)
```
              KP
             / \
                K'
               / \
          KOMP   IP
                / \
              KP  I'
                 / \
              INFL  NP
```
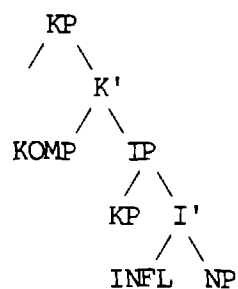
We consider INFL to assign nominative Case to the possessor, just as it
does to the subject of a clause. That an extra node is necessary if a noun
takes an possessor finds some support in the fact that Hungarian Nouns do

not assign Case without some kind of mediator (S,p.c. and 1981).
Counterexamples do exist, however, these, according to Scabolcsi, are
reserved for titles. Examples follow.

(86) a. (title form)
(a) Péter-∅ talalkozás-a -∅ Janos-sal
the Peter-nom meeting poss-3sg John with
"Peter's meeting with John" (S,1981,71)

b. (normal form)
(a) Peter-∅ Janos-sal val-ó talalkozás-a -∅
the Peter-nom John with be -ing meeting poss 3sg
(S,1981,72)

The question arises as to how the NP receives Case. Here we appeal to
Fabb's(1984) claim that Verbs require Case marking in order to assign their
theta roles. This claim is based on Fabb's observation that verbs head
phrases which are governed and adjacent to the same categories which assign
Case to NPs, such as AGR, verbs, and certain prepositions. Since the NP in
(86) appears governed by and adjacent to Agr (which appears on the noun),
it is reasonable to assume that this assigns Case to its NP argument, just
as Fabb considers Agr in a sentence to assign Case to the VP. Agr also
assigns Case to the subject of a VP, in Fabb's theory, and so it can be
considered to assign nominative Case to the possessor in Hungarian
clauses.

KOMP, we consider to be the home of the Hungarian article a. This was
suggested by Anna Szabolcsi who considers it analogous to an auxiliary
formative such as "do".

This analysis can account for several aspects of Hungarian NPs. Consider extraction facts. An NP in the subject position of an NP is not properly governed. Thus it may not cross over a barrier. If it were to be extracted across its dominating NP and across KP, a violation would result, just as in the case of long extraction of sentential subjects. May it cross its dominating NP? If we take Chomsky's definition of barriers strictly, it would not be able to, since its dominating NP is not lexically governed. However, in Chomsky(1985), IP is exempt from barrier status. If we extend the exemption to include sister categories to K/COMP, extraction of an NP which is a subject of an NP will be possible, just in case this extraction is to the Specifier of KP. This gives us the desired result.

4.4.1.5 Case Uniqueness

If what Szabolcsi calls KOMP is considered rather to be the specifier of the category KOMP'' (KP), there appears to be a conflict between our claim that the relation between Case and Case assignee is unique and the analysis given above for (81c). Recall that in this analysis, an NP receives dative Case, even though it seems not to be governed by the verb. The relevant structure is given below.

(87)

```
              VP (=S)
             /   \
           V      KP1
                 /  \
                    K'
                   / \
               KOMP1  IP1
                     /   \
                   KP2   I'
                   / \  ....dream
                       K'
                      / \
                  KOMP2  IP2
                        /  \
                       KP3  I'
                            ....
                       Mary's guest's
```
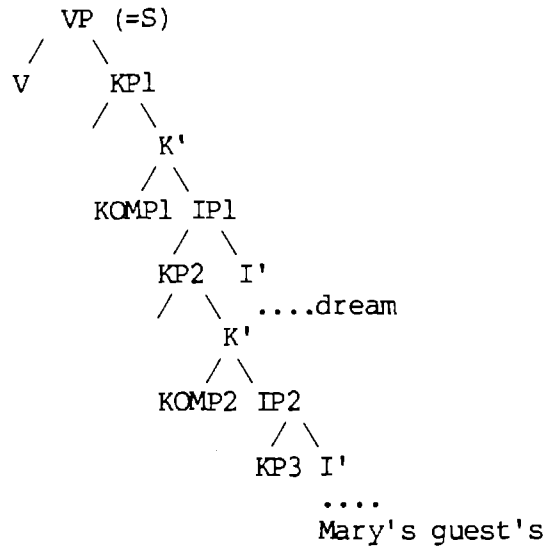
Direct extraction of a possessor in subject position (i.e. the specifier of IP) will be ruled out in general, since its trace will not be properly governed (it is governed, but not properly, by INFL in IP). However, extraction of the subject will be possible, just in case it moves to the Specifier of KOMP. The structure is then:

(88)

```
                   VP
                  /  \
                 V    KP1
                     /  \
                  KP2     K'
                  / \    / \
                    K'  KOMP  IP
                   / \      /  \
              KOMP   IP    t2  I'
                    / \        ....
                  KP3  I'      dream
                  ....
              Mary's guest's
```

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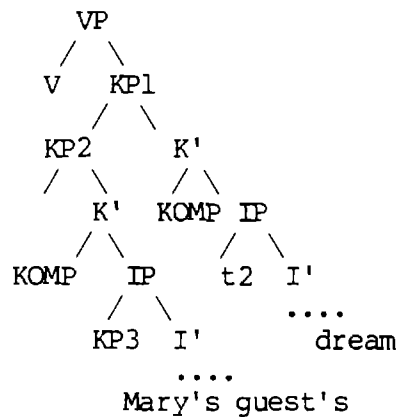
It is clear that KP2 is now in a position to receive dative Case from the
verb. But what about KP3? It may be moved to the Specifier of KP2, as
seen below.

(89)

```
                    VP
                   / \
                  V   KP1
                     /  \
                  KP2    K'
                 /  \   / \
              KP3  K' KOMP  IP
             / \  / \      /  \
            ... K  IP     t2  I'
          Mary's    / \       ....
                  t3  I'              dream
                   ...
                 guest's
```
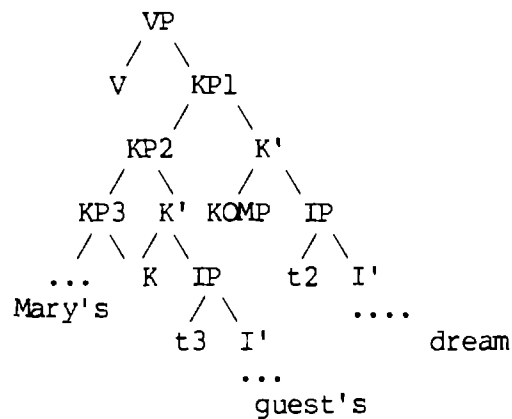
The problem of non-government of the lowest Specifier (containing KP3) in
(89) remains.

We have provided the definition of government of Chomsky(1985) in
Chapter 1. We note that if a constituent is coindexed with a governor, by
virtue of theta assignment or chains, it will not count as a barrier for an
element it immediately dominates, with respect to the verb. Thus KP2 is
governed. For KP3 to be governed, we can consider that the coindexing
relation which arises between KP2 and the verb, makes KP2 a non-barrier for
KP3 with respect to this verb. Thus, in Hungarian, it appears that Case

coindexing may "count" to eliminate barrierhood.[77]

Note that this account of the data explains why it is impossible to assign dative Case to the lowest possessor without also assigning it to the higher one. Since the Case-coindexing relation with the dative Case of the verb can result in Case assignment to the lower possessor only if the lower possessor is governed, which it can be only if the higher possessor is Case-coindexed with the dative Case of the verb.

Note that in some ways the Hungarian data is similar to the Chickasaw data examined above. The similarities are captured by the claim that in both instances, the "exceptional" Case is free to link to as many NPs as are governed, since it is unlinked to the verb or to INFL. The two languages are also similar in that in both, ECM "works from the top down", so that the possessor including a possessor must be ECM'd before this possessor can be ECM'd. In both cases this is explained in terms of government, although in one case (Hungarian), the fact that the matrix NP is properly governed allows percolation of proper government (i.e. successive elimination of barriers), while in the other case (Chickasaw), the matrix NP is a subject, and hence, movement and adjunction is required to obtain the government necessary for Case assignment to proceed.

There are other differences between the two languages with respect to

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77. This idea was contained in Chomsky's(1985) class lectures.

ECM also. We noted that in Chickasaw "iterative" ECM is limited to subjects of certain intransitive verbs, whereas in Hungarian, any NP governed by the verb (which includes subjects in Hungarian) may have its possessor ECM'd. These differences are captured by the claim that in Chickasaw, a Case becomes available for ECM only in intransitive clauses, and only if the verb is able to transmit its Case in absolutive style, to INFL. This process results in an unlinked Case. In Hungarian, on the other hand, any verb may enter the derivation with an unlinked Dative Case associated with it.

4.4.2 Other Languages

4.4.2.1 Romanian

There are several other languages which exhibit NP/ECM to possessors which then act as indirect objects. Examples are to be found in the Romanian "possessive dative" (Steriade,1980) and in Choctaw and Chickasaw (Davies,1981a,1981b, Munro,1984) also.

In Romanian, the facts are very similar to the Hungarian facts discussed above.[78] A possessor of a direct object moves to a peripheral position, and is Case marked dative, and takes on the properties of a dative NP.

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78. I am grateful to Donca Steriade for discussing Romanian with me.

Steriade shows the process to be as follows.

(90) (Steriade, 1981, 8a, b)
   a. $[_{S'}$ COMP $[_S$ ... $[_{NP}$ N' NP_i] ...]]

   b. $[_{S'}$ COMP $[_S$ ... $[_{NP}$ N' $\underline{e}_i$] $\underline{NP}_i$ ...]]

Steriade shows that this then allows for extraction of the possessor so that, if it is a Wh-element, it can be Wh-moved to form a relative clause known as a genitival relative.

(91) (=Steriade, 1981, ,8c)
   $[\begin{smallmatrix} NP_i \\ [+wh] \end{smallmatrix}$ $[_S$ $[_{NP}$ N $\underline{e}_i$] $\underline{e}_i$ ...]]

This describes the derivation of the following relative clause.

(92) a. $Popescu_i$ $[_S$ $căruia_i$ $[_{S'}$ credeam $[_{S'}$ că-[S-i$_i$

   P.   whom   I-thought   that-him
   cunoscusem $[[_{NP}$ toate mătuşile] e_j] e_i] îmi
   I-had-met all the aunts   tó-me
   rezerva o surpriză
   reserved a surprise
   "P. of whom I thought I had met all the aunts, had reserved a
   surprise for me."   (S, 5a)

Steriade notes that there are three restrictions on her rule of "Possessive Dative". First, the rule is clause bounded, in that the dative clitic and the possessed NP must be clause mates. this is explained straightforwardly in an NP/ECM view. In (93a) we see a case of NP/ECM (with scrambling) where pot is an auxiliary verb, and the verb for see is the main verb, and in (93b) a case of NP/ECM where the complement of pot is sentential and the verb for "see" is embedded. This is ruled out.

(93) a. Nu -ţi$_i$ pot vedea umbrela   e$_i$
     Not-you-Dat I-can see   the umbrella
     "I can't see your umbrella." (S,10a)

   b. *Nu-ţi$_i$ pot să văd   umbrela   e$_i$
      Not-you-Dat I-can see(subjunctive) the umbrella (S,10c)

Second, she notes that the possessed NP may be a direct object, the
subject of an ergative verb, or a predicate nominal. This is similar to
the situation found in Chickasaw and Choctaw, and we will assume a similar
solution for Romanian. (Steriade notes the similarity between Davies,1981b
description of Choctaw and the Romanian facts.) (94a,b,c) show acceptable
sentences with NP/ECM.

And finally, the possessed NP, if a direct object, may not be pe-
marked, where pe- appears on direct objects which are specific and either
pronominal or human.[79] We will not discuss this constraint here. (94d) is
out because NP/ECM cannot occur to an indirect object's possessor, and
(94e) because it cannot occur to a pe- marked direct object.

(94) a. Ţi$_i$-a   plecat [nevasta e$_i$]
     you-dat-has left   the-wife
     "Your wife has left." (S,11a)

   b. Ti$_i$-am   vazut [nevasta e$_i$]
     You-dat-I-have seen the wife
     "I have seen your wife." (S,12a)." (S,12a)

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79. Steriade cites Farkas(1978) and Steriade(1980) on Case and pe- marking
in Romanian.

c. Mi$_i$ s-a   declarat [prieten e$_i$] la toti cunoscutii
       Me-dat self-has declared friend to all
       acquaintances
       "He declared himself a friend of mine to all
     ̇ acquaintances." (S,13a)

    d. *Ti$_i$ (i$_j$)-am spus [$_{NPj}$ nevestei e$_i$] sa plece

       You-dat (her-Dat) I have told [the wife]-Dat to leave
       "I have told your wife to leave." (S,14a)

    e. *Ti$_i$-am   vazut-o [pe nevasta e$_i$]
       You-dat-I-have seen her   pe-wife
       (S,12c)

4.4.2.2 Chickasaw and Choctaw (objects)

Davies(1981a,1981b) discusses NP/ECM in Choctaw and Munro(1984)

discusses it in Western Muskogean, including Chickasaw and Choctaw. A

Choctaw example appears below.[80]

(95) a. Am   -ofi-t   miko i   -takkon apa-tok
        1Poss-dog-Nom chief 3Poss apple   eat-Pst
        "My dog ate the chief's apple." (D,1a)

     b. Am   -ofi-t   miko takkon im -apa-tok
        1Poss-dog-Nom chief apple 3Dat-eat-Pst
        "My dog ate the chief's apple.," (D,1b)

The dative possessor acts like a regular dative NP in that it triggers

dative agreement on the verb, and in that this dative agreement appears in

the slot in the verbal complex normally attributed to dative NP agreement

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80. The examples from Davies (=D) are from Davies(1981b)

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(after nominative agreement).

(96) a. Alla towa ish -i   -pila tok
        child ball 2Nom-3Dat-throw-Pst
        "You threw the ball to the child." (D,8)

    b. Ofi is -sa -hottopali-tok
       dog 2Nom-1Dat-hurt   -Pst
       "You hurt my dog." (D,9b)

    c.*Ofi am-ish-hottopali--tok (D,10)

Davies notes that in Choctaw, indirect objects can be made reflexive by use of an affix ilim/ili. This is true of ECM'd possessors also.

(97) a. Hattak-at alla -ya   ili -kachitok
        man   -Nom child-Dat=Obj Refl=Dat-sell-Pst
        "The man$_i$ sold the child to himself$_i$." (D,11)

    b. Am-alla ti:k-at   takkon ilim   -apa-tok
       1Poss-daughter-Nom apple Refl=Dat-eat-Pst
       "My daughter ate her own apple." (D,12b)

An unraised possessor cannot be reflexivized.

(98) *Am-alla ti:k-at   ili-takkon   apa-tok
      1Poss-daughter-Nom Ref=Poss-apple eat-Pst
      "My daughter ate her own apple." (D,13a)

An NP/ECM'd possessor can appear with the optional non-subject marker a

(99) Choyo-ma   alla-t   i-hitha-tok
     woman-Dat=Obj child-Nom 3Dat-dance-Pst
     "The woman's child danced." (D,15c)

The facts above can be accounted for by an NP/ECM analysis, although it is not certain here whether it involves, as does Hungarian, movement to a peripheral position, or, as in Kinyarwanda, simply Case marking into the

specifier of an NP. As seen in the above examples, when NP/ECM occurs, the head noun no longer agrees with the possessor. However, as noted above from Munro(1984), the agreement can appear on both the head noun and on the verb, in case of inalienable possessors which suggests that two Cases are being assigned to the possessor. However, it is not clear whether the two Cases are being assigned directly to the same NP, or whether the nominal Case is assigned to the trace of the lexical NP in a peripheral position, which itself is being assigned Dative.

(100) Sa -pash-at a   -litiha
      1sII-hair-Su 1sIII-dirty
      "My hair is dirty." (M,Ftnote 5)

Davies, and especially Munro provide many arguments that the constructions under discussion involve "possessor raising" and not base generated dative arguments. We will not repeat their arguments here, except to note that idiomatic possessors may appear in the dative (Munro,1984).

It is intereting to note that the Possessor can move separately from the head noun after NP/ECM. This is as we expect, since the trace of this possessor is properly governed by the verb. (See discussion of Hungarian above.) We assume that the movement of this NP in clauses such as (101) involves either a topizalication or a form of scrambling rule.

(101) a. Am-ofi-t   miko i-takkon   apa-tok
         1Poss-dog-Nom chief 3Poss-apple eat-Pst
         "My dog ate the chief's apple." (D,18a)

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    b.*Miko   am-ofi-t        i-takkon      apa-tok
       chief 1Poss-dog-Nom 3Poss-apple eat-Pst
       "My dog ate the chief's apple." (D,18b)

    c. *Am-ofi-t       i-takkon      miko  apa-tok
        1Poss-dog-Nom 3Poss-apple chief eat-Pst
        "My dog ate the chief's apple." (D,18c)

(102) a. Am-ofi-t        miko  takkon im  -apa-tok
         1Poss-dog-Nom chief apple  3Dat-eat-Pst (D,19a)

      b. Miko   am-ofi-t       takkon im  -apa-tok
         chief 1Poss-dog-Nom apple  3Dat-eat-Pst (D,19b)

      c. Am-ofi-t        takkon miko im  -apa-tok
         1Poss-dog-Nom apple  chief 3Dat-eat-Pst (D,19c)
```

While it is possible for an ECM'd NP to be reflexive in Choctaw, it is

not possible for it to be reciprocal. In Chickasaw (Munro,1984) an ECM'd

possessor cannot be reflexive either. This suggests that in Choctaw,

reciprocals are formed lexically but not reflexives, while in Chickasaw,

reflexives are also.

```
(103) a. (Choctaw)
         Pallaska ilim-apa-li-tok
         bread IIIrefl-eat-1sI-pst
         "I ate my own bread." (M,13a)

      b. (Chickasaw)
        *Paska ilim-apa-li-tok
         bread IIIrefl-eat-1sI-pst
         "I ate my own bread." (M,13b)

      c. (Choctaw)
         Hattak-at miko-ya       chokka ittim-i-kachi tok
         man-Nom    chief-Dat=Obj house  Recip=Dat-3Dat-sell-Pst
        *"The men sold each other's houses to the chief." (D,28)
         (OK as: "The men sold the houses to the chief for each other.")
```

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An interesting example is discussed by Davies, where NP/ECM interacts with antipassive. The (c) sentence below can have the meaning of either (104a) or (104b), showing that although normally restricted to subjects of intransitives or objects of transitives, NP/ECM has some exceptions.

(104) a. Am-issoba-ya-t   tachi banna
          1Poss-horse-Dat-Nom corn want
          "My horse wants corn." (D,34a)

      b. Issoba-ya-t   a-tachi   banna
          horse-Dat-Nom 1Poss-corn want
          "The horse wants my corn." (D 34b)

      c. Issoba-ya-t   tachi a-banna
          horse-Dat-Nom corn 1Dat-want
          "My horse wants corn./The horse wants my corn." (D,34c)

Davies explains these data with the following Relational Grammar structure for the sentence given in (105b).

(105) a.(=Davies,1981b,36)

                  P   1   2

              P   2   Cho

          P   1   Cho

      banna   ano   chishno
      "want"   "I"   "you"

    b. Chi-sa-banna
        2Acc-1Acc-want
        "I want you." (D,35)

We can understand the data as follows. The verb banna "want" is unaccusative, and takes two internal objects. The first object raises to subject and its possessor can be NP/ECM'd in the way discussed above for

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Chickasaw, with the verb donating its Case to INFL. The second object is marked with inherent Case if the verb is antipassive, as are other objects of antipassive verbs. This gives us the first reading (of (32a)). The fact that the second reading is possible shows that the verb may ECM into the non-externalized object. And yet, if this is an inherently Case marked NP, how is it possible? This situation is as we saw in Kinyarwanda, where the theme NP into which NP/ECM occurred, was inherently Case marked, although usually inherently Case marked NPs cannot have their subjects ECM'd. In Choctaw, the fact can be explained in the same way, that is, if we consider that it is not the inherent Case of an NP itself which disallows a verb from governing into the specifier of the NP but rather the presence of a prepositional Case marker. Since the Case marker is not present in the example above, NP/ECM is possible.

4.5 Inalienable NP/ECM

4.5.1 Introduction

In many languages, NP/ECM either has different characteristics with inalienable possessors than with alienable ones, or it is possible only with alienable possessors. We will discuss a language of each type here. First, we return to Kinyarwanda, for which alienable possessor constructions were discussed above, and see that while NP/ECM'd alienable

possessors come to have the properties of direct objects, usurping, in fact the direct object in the process, inalienable NP/ECM is more like that of the languages discussed above, where the NP/ECM'd NP comes to act as an indirect object, having received a kind of "floating" dative Case from the verb.

Certain characteristics of Kinyarwanda inalienable constructions lead us to question whether they should be syntactically or lexically derived, and this issue is discussed, using data from Korean, English and French.

We then examine Turkish, which exhibits particularly fascinating NP/ECM, which is possible only to inalienable possessors, and only under S/ECM verbs. We will suggest an analysis to account for the fact that these constructions are possible, however, we have no solution for the fact that if ECM takes place to an embedded subject with an inalienable possessor, NP/ECM is obligatory.

4.5.2 Inalienables as Datives: Kinyarwanda

4.5.2.1 Kinyarwanda Inalienable NP/ECM

We saw above that in Kinyarwanda NP/ECM, what we can call accusative Case can be assigned to the possessor NP in the specifier position of an direct argument NP. If this occurs, the usually accusative theme NP becomes inherently Case marked, even if it is not the NP whose possessor has been

NP/ECM'd.

Kimenyi(1980) shows that there is another type of "possessor
objectification. Its characteristic is that it may only apply to NPs which
are inalienable. (This type also applies to NPs which have the meaning of
"take away"; these will be discussed further below.)

(106) a. Umugóre y-a-vun-nye   ukúboko k'úúmwáana
          woman   she-pst-break-Asp arm   of child
          "The woman broke the arm of the child." (K,5.5.1a)

      b. Umugóre y-a-vun-nye   úmwáana ukúboko
          woman   she-pst-break-Asp child   arm
          "The woman broke the arm of the child." (K,5.5.1b)

As with alienable NP/ECM, the ECM'd NP acquires all the characteristics
of a direct verbal argument, such as the ability to be passivized,
relativized, clefted, etc.

The NP/ECM seen in these examples differs from the cases discussed
earlier, in several ways. First, while, as we saw above, the theme object
of a verb which ECM's a possessor is inherently Case marked, and hence may
not undergo movement rules such as passive, clefting, etc., the theme
object may still undergo such rules if the NP which is ECM'd is an
inalienable possessor. (107a) shows a possessed noun which has been
passivized, and in (107b) it has been clefted.

(107) a. musatsi w-a-shokoj-w-e   umugabo n'úmugore
          hair   it-Pst-comb-Pass-Asp   man   by woman
          "The hair was combed of the man by the woman." (K,5.5.27)

b. N'uumusatsi umugóre y-a-shókoj-e   umugabo
   be hair   woman   she-Pst-rel-comb-Asp man
   "The hair was combed of the man by the woman." (K,5.5.29)

The theme NP may not however undergo reflexivization or relativization.
Kimenyi points out that this is because, in the case of the former, the
theme possessor will never be coreferential with the subject, and in the
case of the latter, since inalienable possessions are unique referents, the
identifying function of a relative clause is unecessary.

It is impossible to NP/ECM an alienable possessor of a clause which
contains a benefactive NP, presumably because there can only be one
morpheme ir in a sentence. In the case of inalienable possessive NP/ECM,
it is impossible if there is a dative or a benefactive NP in the clause.

(108) a. Umugóre á-r-éerek-a   umuhuúngu amaguru y'úmukoóbwa
         woman she-pres-show-Asp boy   legs   of girl
         "The woman is showing the legs of the girl to the boy."
         (K,5.5.13a)

      b. *Umugóre á-r-éerek-a   umuhuúngu umukoóbwa amaguru
         woman   she-pres-show-Asp boy   girl   legs
         "The woman is showing the girl's legs to the boy."
         (K,5.5.13b)

      c. Umugabo y-a-kiinguur-i-y-e   umugóre uruugi rw'ínzu
         man   he-Pst-open-Appl-Asp woman   door   of house
         "The man opened the door of the house for the woman."
         (K,5.5.14a)

      d.*Umugabo y-a-kiinguur-i-y-e umugore inzu uruugi
         man he-Pst-open-Appl-Asp   woman   door of house
         "The man opened the house door for the woman."
         (K,5.5.14b)

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In general, it is not possible to NP/ECM the possessor of a possessor.

However, if one N is inalienably possessed and the other alienably, NP/ECM can occur twice.[81]

(109) a. Umugabo y-a-vun-nye   ukuguru k'úúmw aana w'úmugóre
         man   he-Pst-break-Asp leg   of child   of woman
         "The man broke the leg of the woman's child." (K,5.5.9a)

      b. Umugabo y-a-vun-nye   umwaana w'úmugóre ukuguru
         man   he-Pst-break-Asp child   of woman   leg
         "The man broke the leg of the woman's child." (K,5.5.9b)

      c. Umugabo y-a-vun-i-nye   umugóre úmwáana ukuguru
         man   he-Pst-break-Appl-Asp woman   child   leg
         "The man broke the woman's child's leg" (K,5.5.9c)

(110) a. Úmukoôbwa a-rá-sok-oz-a   umusatsi w'úmugabo
         girl   she-Pres-comb-Asp hair   of husband
         wa Máríya
         of Mary."
         "The girl is combing the hair of the husband of Mary."
         (K,5.5.10a)

      b. Úmukoôbwa a-rá-sok-oz-a   umugabo wa Mâríya umusatsi
         girl   she-Pres-comb-Asp husband of Mary   hair."
         "The girl is combing the hair of Mary's husband."
         (K,5.5.10b)

      c. Úmukoôbwa a-rá-soko-re-z-a   Maríya umugabo umusatsi
         girl   she-Pres-comb-Appl-Asp Mary   husband hair."
         "The girl is combing Mary's husband's hair."
         (K,5.10c)

In these cases, the possessed N becomes unable to undergo rules such as

passive, etc.

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81. Kimenyi(1980) doesn't state two levels is as far as it is possible to
go. In our treatment of the data, we assume it is, however, it is possible
to handle the reverse situation, if necessary, by considering dative Case
to be unlinked, as in Hungarian, and Chickasaw.

4.5.2.2 Dative Case NP/ECM

All of the above facts are explained if we consider that in the case of inalienable possession the Case which is used to ECM the possessor is not an appropriated "accusative", via the applied morpheme ir, but rather, the dative Case. Recall that in Kinyarwanda, dative Case is assigned directly by the verb, with no applied affix, and no prepositional form. This then explains why no applied affix appears on the verb when an inalienable NP is ECM'd. It also explains why an ECM'd inalienable possessor has all the traits of a direct verbal argument.

Furthermore, the data in (108) are explained. While alienable possessor NP/ECM takes the accusative Case, thus forcing the theme to be inherently Case marked, the inalienable possessor is ECM'd with the dative Case, leaving the theme object free to be Case marked with accusative Case. This requires us to allow inalienable possessors to move to a peripheral position before NP/ECM, so that movement of the possessed element involves movement of NP and not N'.

That inalienable NP/ECM is ruled out if there is a dative NP in the clause, suggests that dative Case is not unlinked as in other languages examined, but rather, can only be assigned to one NP (which predicts that NP/ECM of more than two levels should be ruled out -see previous. It is unclear, however, why NP/ECM should be ruled out in a clause with a

benefactive argument.

Finally, we note that the data in (110,111) are explained. Since inalienable and alienable NP/ECM involve two different Cases, the prediction is that two possessor NPs should be able to be ECM'd, as long as there are Cases available to them. This is because, as in Hungarian, when one specifier is coindexed with the verb its specifier becomes governed by the verb (i.e. there are no barriers between it and the verb anymore.) As long as the two NPs can be assigned Case, NP/ECM is possible. Since there is available one dative and one accusative Case, NP/ECM can occur to both NPs. And since the alienable NP appropriates the accusative Case, the head possessed NP becomes inherently Case marked, accounting for the fact that it cannot passivize etc..

4.5.3 Korean "Take-Away" verbs

It was noted above that the verbs with meanings "to take away" in Kinyarwanda allow dative possessor raising of the form discussed above. Such verbs allow a form of NP/ECM in Korean also.

For Korean, it was noticed by Kang(1984) that verbs such as ppaas "deprive", karochae "usurp", thol "rob", ttut "rip off" etc. allow a

genitive possessor to passivize to subject.[82]

(111) a. John-i [Mary-uy   ton -ŭl] ppäas -os -ta
              -Nom   -Gen money-Acc deprive-Past-DE
          "John deprived Mary of (her) money." (K,61b)

      b. Mary-ka John-eke ton -ŭl ppäas -ki -ŏs -ta
              -Nom   -Dat money-Acc deprive-C/P-Past-DE
          "Mary was deprived of money by John."(K,61a)

Kang discusses the possible source of passivization which is

problematic, given the ungrammaticality of (112a) and (112b), and he

rejects (112c) as a possible source for this passivization.

(112) a.*?John-i Mary-lŭl ton -ŭl ppäas -os -ta
                  -Nom   -Acc money-Acc deprive-Past-DE (K,61c)

      b. *John-i Mary-eke ton -ŭl ppäas -os -ta
               -Nom   -Dat money-Acc deprive-Past-DE (K,61d)

      c. John-i   Mary-eke-sŏ ton -ŭl ppäas -os -ta
               -Nom   -Dat money Acc deprive-Past-DE (K,67)
          "John took the money from Mary."

He analyzes these structures as involving an embedded small clause into

which government is possible, and hence from which passivization can take

place.

----

82. I am very grateful to Myung Yoon Kang and Hyon Sook Choe for discussion
of this topic. Of help also was Choe(1985).

(113) (=K,1984,84,a,b,c)
       a. NP-Nom [NP-Gen NP-Acc] V

       b. e   [NP-gen NP-Acc] V-C/P
          ___/

       c. *e [NP-gen NP-Acc] V-C/P
          _____/

These he compares with English small clauses below,

(114) a. John considers Tom a fool
      b. Tom is considered a fool.
      c.*A fool is considered Tom.
      d.*Tom's foolishness is considered.

Kang's analysis is in accord with the concept of ECM presented here. A
sentence such as (113a) is ungrammatical, even though the verb governs into
the small clause, since there is no extra Case to be assigned to the
possessor NP. In the Case of Passive however, the genitive NP can raise to
become the subject of this verb, since there is now a Case available. We
note here that in Chapter 5 we will argue that Passive verbs may still
assign Accusative Case, as long as there is an NP available to move into
the subject position, which is necessary since this position must form a
chain which is theta-licensed. We thus depart from the idea of
Chomsky(1981) which was mentioned in Chapter 1, where Passivization
consists essentially of depriving a verb of its Case assigning ability.
Instead we view it's central property to be the ability to assign its
external theta role to an affix. (See Jaeggli,1984, Baker, Johnson &
Roberts,1984, Baker,1985 and Roberts,1985).

4.5.4 Some Questions

"Take-away" verbs are interesting, in that the possessive sense is contained in the meaning of the verb. Thus, if (115a) is true, then (115b) is usually true also, and vice versa. (There are differences in definiteness, and so on, and, of course, the two are not at all necessarily synonymous in terms of truth conditions.) Likewise, there are two versions for many inalienable possessor NPs.

(115) a. Dizzy robbed Tickletoes' stereo.
b. Dizzy robbed Tickletoes of a stereo.

(116) a. Marley looked straight in(to) Tim's eyes.
b. Marley looked Tim straight in the eyes.

(117) a. The police took away Dizzy's weapons.
b. The police took the weapons away from Dizzy.

Since we would generally consider the (b) sentences to involve two separate NPs with two separate theta roles, the question is raised as to whether we want to consider the Kinyarwanda inalienable and "take-away" NP/ECM to in fact involve no NP/ECM at all, but rather a D-structure dative NP. This question was raised above also, where we noted that an inalienably possessed element in a structure with NP/ECM can NP-move and Wh-move independently of the NP/ECM'd possessor. Since this is so, we must consider that it is possible to move the possessor to a peripheral position, so that the rest of the NP will indeed constitute a maximal

projection for the purposes of such movement rules.[83] Another possibility

exists, however, which is to consider that the inalienable possessor is a

dative NP at all levels, and is not in fact NP/ECM'd at all.

Since the dative NP/ECM rule in Kinyarwanda applies to inalienables and

to "take-away" verbs, this possibility is not unattractive. This is due to

the fact that it has been noticed cross-linguistically that this semantic

class of possessors might appear in constituents separate from their

possessed item. For instance, we have the English examples discussed

above. (which contrast with non-inalienables: "*I hit the teacher on the

desk.") And in Korean, the facts observed above for "take-away" verbs are

true of inalienables also, with the verb ssis "to wash(-oneself)".

(118) a. Tom-i [John-ǔy ǒlkul-ǔl ssis-ki-ta
              -Nom   -Gen face -Acc wash-oneself-C/P-ED
          "Tom washed John's face (John the face)" (K,78c)

     b. John-i Tom-eke ǒlkul-ǔl ssis-ki-ta
              -Nom -Dat face -Acc wash-oneself-C/P-DE
          "John was washed his face by Tom." (K,79)

In Hale(1981), similar phenomenon in Warlpiri are discussed. Hale notes

that in cases of "whole/part" relations (the strongest inalienable

relation), the whole and the part NPs must be separate constituents. This

is not the case with alienables. Inalienable examples are given below.

----

83. Cases of movement of the possessed and not the possessor in languages
which we have analyzed as involving NP/ECM into the subject position of an
NP, and not a peripheral position, have been scrambling rules, for which we
assume different constraints apply.

(119) a. Kurdu-ngku ka-ju rdaka-ngku paka-rni ngaju
       child-Erg Aux:Pres-1o hand-Erg strike me
       "The child struck me with its hand." (H,1981,2)

     b. Nama ka langa-kurra yuka-mi kurdu-kurra
        ant Aux:Pres ear-All enter-NPst child-All
        "The ant is crawling into the child's ear."
        (H,1981,5)

Further, he notes that it is the WHOLE, and not the PART, which

undergoes syntactic rules, (agreement, controller)

(120) a. Maliki-patu O-rna-jana jaka luwa-rnu
       dog-Pl Aux:Perf-1o-333o buttocks hit-Pst
       pirlingki warlkurrma-ninja-kurra
       stone-Inst bark-Inf-COMP:Obj
       "I pelted the dogs in the buttocks, with stones,
       while they were barking." (H,6)

We will not discuss the details of Warlpiri grammar (see Hale,1981,

1983, Nash,1980, Simpson,1983, and reference therein). We simply note that

Hale observes that he assumes "...that the relation between a PART and a

WHOLE is one of predication, in the favourite pattern -- the PART is

predicated of the WHOLE; the latter functions as an argument, while the

former is predicated of it." (Hale,1981,(p.7 of the ms.)) However, he

further states: "...there is a basic, two-faceted, intuition which I would

like to capture -- namely this: The PART is identified with the WHOLE, in

the sense that what is true of the PART is seen to be true of the WHOLE;

but, at the same time, the PART is conceptually, and grammatically distinct

from the WHOLE, in that it can be alienated therefrom, and it can be

independently qualified (by a modifying nominal...)." (Hale,1981, p.7 (of

the ms.)) Hale then provides a formalization of this idea, which we will

not outline.

We find the same intuition expressed in Gueron(forthcoming), where she

discusses examples such as those following.[84]

(121) a. Jean lève la main.
         "John raised the hand."

      b. Je lui ai coupé les cheveux.
         "I cut him the hair."

      c. Elle l'ai embrassé sur la bouche.
         "She kissed him on the mouth."

      d. Il saigne du nez.
         "He is bleeding from the nose."

      e. Je lui ai pris la main.
         "I took him by the hand."

Gueron proposes a construal analysis of these data whereby a lexical

chain is formed between the inalienable possessor and the possessed item at

LF. A lexical chain contains more than one NP with lexical content, where

the two parts of a lexical chain are non-distinct. Other examples are

those proposed for clitic-doubling structures as in Spanish or French

complex inversion structures, as in the following. (See Gueron for a

complete formalization.)

----

84. I am grateful to Jacqueline Gueron for discussing the Kinyarwanda and
the French data with me.

(122) a. Lo veo a Juan.
        "I see him (to) Juan."

   b. Jean est-il parti?
      Jean has (he) left?

Thus, it is not clear whether the Kinyarwanda inalienable/"take-away"
data should be analyzed as involving syntactic movement. It does seem
clear, however, that while languages allow structures in which possessors
and possessed nouns are, speaking vaguely, separate from each other, it
also seems clear that they may effect this separation either syntactically
or by construal. Linguists such as Munro(1984), Davies(1981a,b),
Carden,Gordon,& Munro(1982), and Szabolcsi(1981,1983) give good arguments
that the "possessor raising" data in various languages is syntactic. And
yet it is clear that in English, whatever process we witness in sentences
such as (116)-(118) is lexical, and not syntactic. This is because, among
other things, coreference is not required between the object NP and the
possessor of the indirect object in (118), thus, (123) is acceptable.

(123) Dizzy robbed me of Granny's wedding dress.

Of course, this is not possible with sentences such as (117).

(124) a. Ilse kissed Perry on the nose.
     b.*Ilse kissed Perry on Teddy's nose.

However, in this case, the thematic meaning makes it clear that _Perry_ is
an argument of _kiss_, and is not simply an ECM'd element, since for example

Perry cannot be left out although on the nose can.[85]

It seems then, that it should be reasonably straightforward, in a given language, to determine whether an operation is syntactic or lexical. I leave the question open for Kinyarwanda inalienables, although the account of Kimenyi(1980) suggests a syntactic treatment is required.

It is not surprising that there should be division among languages, or even within a language among lexical items, as to whether an operation is syntactic or lexical, since most rules have lexical and syntactic versions, either in a single language or across languages, such as passive, reflexivization, etc.

4.5.5 Turkish S/NP//ECM and Inalienable Possession

4.5.5.1 Turkish ECM

Turkish presents fascinating data for our discussion, because in this language, NP/ECM and S/ECM come together.[86] Sezer(1984,1985) presents the following data, showing that S/ECM is possible in Turkish, and that it is, at first glance, essentially like that of English, involving

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85. The opposite scenario is described in the "prolepsis" cases of Moroccan Arabic, by Wager(1980).

86. I am grateful to Engin Sezer, Jaklin Kornfilt, and Lale Berke Jenkins for discussing Turkish grammar with me.

subcategorization for IP.[87]

(125) a. (no ECM)
Birisi [Ali okul-u   bitirdi] kabul ediyor
someone   school-Acc finished is-assuming
"Someone is assuming that Ali finished school." (S,4a)

b. (ECM)
Birisi [Ali-yi okul-u   bitirdi] kabul ediyor
someone   Acc school-Acc finished is-assuming
"Someone is assuming Ali to have finished school."
(S,4b)

c. (ECM then Passive)
Ali [t okul-u   bitirdi] kabul ediliyor
        school-Acc finished is-assumed
"Ali is assumed to have finished school." (S,4c)

d. (ECM, Passive, then ECM)
Ben [Ali-yi [t okul-u   bitirdi] kabul ediliyor]
I   -Acc   school-Acc finished is-assumed
sandim
thought
"I thought Ali to be assumed to have finished school."
(S,4d)

Turkish NP/ECM is different than English, however, in that there may be

agreement in a clause with ECM (it is required in the (126a) clause).[88]

(126) a. (no ECM)
Ayşe [ben sinema-ya git-ti-m   (*∅)] sanmis
       I   movies-Dt go-Pst-1sg   thought

----

87. The Turkish data is from the handout of Sezer (1984), or from Engin
Sezer, Lale Burke Jenkins or Jaklin Kornfilt p.c.

88. Speakers differ as to whether they prefer agreement to appear in the
lower clause of an ECM verb or not. Since agreement downstairs is least
favoured if the NP ECM'd is reflexive or passivized to become matrix
subject, a generalization might be that the agreement upstairs may not be
coindexed with that downstairs.

"Ayse thought that I went to the movies." (S,5a)

b. (ECM)
Ayşe [ben-i sinema-ya git-ti (-m))] sanmis
      I   movies-Dt go-Pst (-1sg)   thought
"Ayse considered me to have gone to the movies." (S,5b)

If the embedded subject NP is an inalienably possessed NP, the situation

changes. Here, the NP which becomes marked Accusative is the inalienable

possessor.

(127) a. Ben [sen-in baş-in   ağri-yor] sandim
        I   you-Gen head-Pd2Sg ache-Cont thought
        "I thought you had a headache."
        ("Your head aches.") (S,12a)

    b. Ben [sen-i   bas-in ağri̇or] sandim
        I   you-Acc head-Pd2Sg ache-Cont thought
        "I thought your head to be aching." (S,12b)

It is only under ECM verbs that this NP/ECM takes place. Direct objects

of verbs may not undergo NP/ECM. There is, in fact, one other case where

possessors "separate" from their possessed items. This is when a possessed

NP appears as internal argument to an existential. Here, the possessor

raises to subject, keeping its genitive Case.

(128) Ben-im banka-da para-m   var
      I-Gen bank-Lc money-1Sg exist
      "I have money in the bank." (S,7a)

This type of construction is quite common, and is discussed by

Gueron(1984,forthcoming), and Szabolcsi(1985). It is similar to the

situation we saw above in Korean, where the possessor of an internal

argument, could raise to subject, although it could exist independently

from its head in no other way than by raising (by Passivization) In the

Turkish cases, however, we see quirky Case (see discussion of Hindi and

Icelandinc in Chapter 1).

That a possessor may become an ECM d NP is not surprising. Recall that

we consider NP/ECM to be impossible unless an extra Case becomes

available. In Turkish, there is no floating dative Case, and so NP/ECM is

not generally available. However, under an ECM verb, this extra Case is

available (also in the case of existentials above). Here, the possessor

may get accusative Case, while the matrix NP receives (presumably)

nominative Case. (This supposes the clause to be not a true infinitive, as

indeed it is not -see Kornfilt,1984)

What is surprising, however, is that it is only an inalienable possessor

which may freely be ECM'd in this way. Thus, (129) is unacceptable

(although not entirely out).

(129)   a. Ali [benim arabami] yandi saniyor
              I-Gen car-Acc   burned thinks
         "Ali thinks my car to be burned."

        b.??Ali beni arabasi yandi   saniyor
              I-Acc car   burned thinks
            "Ali thinks my car to be burned."

Also surprising is the fact that an inalienable possessor must be ECM'd,

if ECM takes place, and its matrix NP may not be. This makes (130)

ungrammatical.[89]

(130) a. *ben Ayse-nin kafa-si-ni   karisik   vannedeyorum
          I   -Gen head-Pd3Sg-Acc confused suppose
       "I suppose Ayse('s head) to be confused."

     b. ben Ayse-nin kafa-si-ni   aǧri-yor   vannedeyorum
        I   Ayse-Gen head-Pd3Sg-Acc ache-Prog suppose
        "I suppose Ayse's head to be aching."

4.5.5.2 Speculations

I have no detailed analysis to explain these facts. However, I suspect

that an understanding of them is to be found in the direction to be

sketched out here. Consider that Turkish S/ECM, rather than consisting of

IP subcategorization, is of the type involving fronting of an NP to a

daughter position of CP, as discussed in Chapter 2. Then, we must explain

why the ECM'd NP may be coreferential with no position other than subject.

We hypothesize that the ECM'd NP is not moved, but is base generated in the

position where it receives ECM. This receives support from the following

example, where there are two lexical NPs.

131 Onlar beni bu herif bir boktan ankamaz
        They I-Acc this guy a shit not-know
        zannettiler
        think
        "They think (me) this guy doesn't know a shit."

----

89. At best the second example has a sense as if her brains were literally
(physically) in a mess.

If the ECM'd NP receives its licensing through predication as in Hale(1981) or by the formation of a lexical chain with a <u>pro</u> as proposed by Gueron(forthcoming) then it will be able to be coreferential only with a subject, since it is only in subject position that we find <u>pro</u> (see Kornfilt,1984). There is however, one other position where we find <u>pro</u> as argued by Kornfilt(1984) and that is as subject of an NP -i.e. as possessor. It will then be possible to ECM an NP, which forms a lexical chain with the subject via the <u>pro</u> which appears in the position of subject of this NP. Since the members of lexical chains must be nondistinct, the lexical chain formation is preferred in the case of inalienable possessors since here the ECM'd NP is non-distinct from both the possessor <u>pro</u> and the matrix NP. Why it is necessary to ECM the inalienable possessor, and not possible to ECM the matrix NP which contains it instead, remains a mystery in this picture.

The above is, of course, a suggestion rather than an analysis, and it raises more questions than it answers. It does, however, open up interesting possibilities as to how S/ECM and NP/ECM might interact.

Chapter 5

Case Theory

5.1 Introduction

In this chapter we will outline aspects of Case Theory. In the first
sections, this will be the same as Levin & Massam1984) (L&M).[1] We will
then provide revisions to account for data discussed in the preceding
chapters and not in L&M.[2]

5.2 Levin & Massam(1984)

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1. Levin & Massam(1984) is a more formalized version of Levin &
Massam(1984a), with some differences in content.

2. For his help during the writing of Levin & Massam(1984), I wish to thank
Luigi Burzio.

5.2.1 The Nom/Acc//Erg/Abs Parameter

In L&M, a theory of Case is outlined to account for differences between

(Surface) ergative/absolutive[3] and nominative/accusative languages, which

derives what has come to be known as Burzio's(1981) Generalization. (cf.

Perlmutter's,1978 Unnaccusative Hypothesis).

(1)   Burzio's Generalization (1981)
          T<-->A, where T=assignment of theta role to subject,
          A=accusative [absolutive] Case assignment [to object].

The observational difference between ergative/absolutive (E/A) languages

and nominative/absolutive (N/A) languages is summed up in the following.

(2)   Case Marking in N/A, E/A Languages

       Structural Position   N/A   E/A

       _____

       NP/IP of transitive verb   NOM   ERG
       NP/IP of intransitive verb NOM   ABS
       NP/VP (of transitive verb) ACC   ABS

To account for the differences between the two types of Case marking,

L&M propose the following:

----

3. "Deep ergative" languages are those where the correspondances between
semantic roles and underlying grammatical relations are, loosely speaking,
the reverse of the more familiar AGENT=subject, THEME=object. See
Marantz(1984) and B.Levin(1983). Bok-Bennema and Groos(1982) present a
different analysis of Surface-ergativity.

(3) (=L&M(3))

Z^O a governor, then Z^O has associated with it C_z, where
C=Abstract Case.

Every sentence will contain I^O and V^O, and so every sentence will be

generated with C_I (where I is a governor, i.e. is tensed and/or has

agreement) and C_V.[4]

5.2.2 Case Theory

Safir(1985) notes that in N/A languages nominative Case is always

assigned. L&M note that in E/A languages, absolutive Case is always

assigned (See previous Note). They propose the following.[5]

----

4. The conditions required for INFL to be a governor are not clear
cross-linguistically, but this issue is not important here. Note that the
fact that non-governing INFLs do not have a Case associated with them
allows us to maintain the claim below that Nominative Case is always
assigned, since in infinitives, there is not nominative Case. In E/A
languages, on the other hand, Absolutive Case is always present, since the
verb's ability to govern is never lost. This depends on the notion of
"governor" being defined in terms of potential, since, while an
intransitive verb is arguably not a governor, it would be considered one
for the theory discussed here.

5. They also propose that C_V be assigned only under theta government, which
would mean that accusative and ergative Case are assigned only to NPs with
theta roles. (Here, they assumed that ECM is Case assignment to the
embedded clause, with realization of this Case on the NP in specifier
position.) Later in their paper they derive this stipulation. In this
thesis, I consider that accusative Case can be assigned to non-thematic
arguments and that ECM is in fact direct Case assignment to a non-thematic
NP. I would consider the same could be true, with certain reservations
(discussed below) of ergative Case. This change in assumption is possible
without major revision to L&M.

(4) Conditions on Case Assignment

    A. C_x must be assigned

    B. Case is assigned only under government.

The N/A-E/A parameter is reduced to the value of x, as seen below.[6]

(5) (=L&M(5))
    Case Parameter
    a. x = I (Nominative/Accusative)
    b. x = V (Ergative/Absolutive)

L&M then explicate how Case is assigned. They consider that all Case assigners have feature [+CA]. If the value is [+], the Case assigner must assign its Case, and if it is [-], it cannot.[7] Conditions on Chains are adopted by L&M as below.[8]

----

6. L&M note that this captures the parallelism noted by Marantz(1984) between nominative and absolutive Cases.

7. We noticed in the previous chapter that the requirement that Cases must be assigned is as in Manzini(1983). However, for her, the requirement is dependent on the presence of Case, whereas in the system discussed here it is dependent on both the presence of Case and the [+] value of the Case assigning feature.

8. The examples below are, as indicated, taken from L&M. I have made some modifications, however, to make them consistent with this thesis, such as changing S' and S to CP and IP.

(6) (=L&M(6))

$C = \alpha_i \ldots \alpha_n$ is a chain only if:

A. α_i is [+N,-V] (i.e. CP,IP, NP)

B. $x = \alpha_i$ iff PRO or [+Case] (i.e. iff Case linked;
Brody,1983)

C. Given an A-position, P_i, there is a chain C,
such that C contains P_i and there exists in
C some P_j to which a theta role is assigned.

(cf. Chomsky,1981;Rizzi,1982b;Brody,1983)

(7) (=L&M(7))

A. CP,IP are [+Case]
B. Case is only visible under government.(J.Levin,1984)

Of note here is that CP and IP are considered to be inherently Case marked. This is to account for the fact that although they can be arguments, i.e. receive theta roles, they can also be in non Case marked positions. If the Case Filter is to be reduced to a Theta Visibiblity requirement at LF (see Chapter 1), then the Case Filter must apply to all theta marked elements, including sentences. Chomsky(1981) discusses the fact that sentences appear in non Case marked positions as a problem for the reduction of the Case Filter to Visibility. Stowell(1981) attempts to solve it by considering tensed sentences in non Case marked positions as in (8) to not be theta marked, but to receive their interpretation in some other way (see Stowell,1981).

(8)
Colonel Johnson was happy that Hercule was there.

Niuean data (below) suggests that Stowell's solution is untenable, and instead, (7A) is posited.[9] (7B) accounts for the ungrammaticality of infinitive sentences with sentential subjects, such as (9).

(9) *[That Pender Island is the most beautiful place in the
       world] to be certain.

We noted in Chapters 2 and 4 that it is this property of CPs, i.e. that they do not have to be in Case marked positions in order for their theta roles to be visible, that allows S/ECM to take place. NPs, on the other hand, require Case marking, and so NP/ECM is possible only if there is an extra Case available to be assigned to the matrix NP.

Also of note with respect to (6), is that by (6B), PRO or a Case marked element necessarily heads each chain. And finally, by (6C), every A position must be in a chain and every chain must contain exactly one theta postition. These points will be revised below to include the data discussed in earlier chapters.

L&M consider Case to be assigned under government, and they allow C_x to percolate along the path I^o--V^o.

They then illustrate how the system works. (In the following "S"

----

9. As discussed in Notes in Chapter 1, we accept, at least for English, Stowell's claim that CPs resist direct Case marking, and move away from Case marked positions. This might be due, along the lines of Stowell(1981) to a clash between the inherent Case, and the Case which is assigned.

replaces IP and CP.)

(10) (=L&M(8))

```
        N/A system (x=I)                    E/A system (x=V)
    a.  Transitive verb
                S                                  S
              / \                                / \
           NP    INFL'                        NP    INFL'
               / \                                / \
              I   VP                              I   VP
                 / \                                 / \
                V   NP                              V → NP

    b.  Intransitive verb
                S                                  S
              / \                                / \
           NP    INFL'                        NP    INFL'
               / \                                / \
              I   VP                              I   VP
                                                       \
                V                                       V

    c.  "Unaccusative" verb
                S                                  S
              / \                                / \
           NP    INFL'                        NP    INFL'
            |    / \                           |    / \
           e_i  I   VP                        e_i  I   VP
                   / \                                 / \
                  V   NP_i                            V   NP_i
```
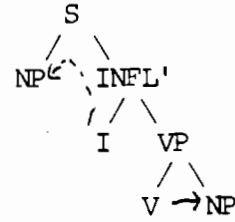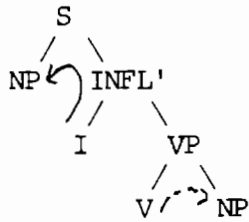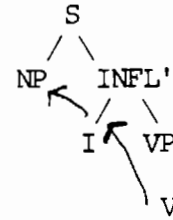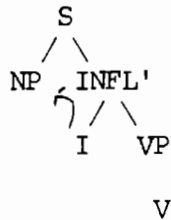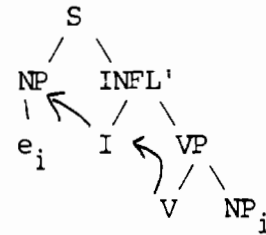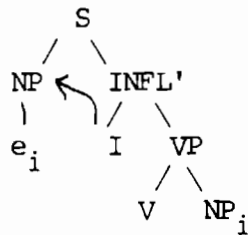
First, consider NPs. In (10a) C_x must be assigned, where C is assigned
under government. Also, C_y is assigned, since if it is not assigned in
(10a) the Case Filter (as in (6B)) will be violated. In (10b), there is no
internal argument, and so in the N/A language, C_x is assigned as in (10a),
and C_y is not assigned. In the E/A language, C_x (absolutive) must be
assigned, and so it will percolate from V to I. (Recall that we assume the
Extended Projection Principle here.) In (10c), no external theta role is

assigned. Coindexing between the non-argument subject and the NP/VP is

forced by (6C). By (6B) Case must be assigned to the head of the chain,

and so an expletive/argument chain results.[10] Alternatively in (10c), the

internal argument could be raised to the subject position, where it

receives C_x directly, as in sentences with passive and unnaccusative

verbs.[11]

L&M next consider sentential arguments. In (10b) and (10c), replacing

the NP argument with CP will result in the same Case assignment, since,

although CPs do not require Case, C_x must be assigned. Thus CP will be in

a Case marked chain. (L&M consider the inherent Case of CP to be

compatible with assigned Case.) Examine now (10a). Here, if either of the

NPs is replaced with a CP, more must be said. If the internal argument is

sentential, Case will be assigned to it only if the verb in question is

[+CA]. If the verb is [-CA], C_x will be assigned under government to

----

10. This is not a chain in terms of history of movement, however, in
Chomsky(1984) he considers that at LF, an argument moves to replace its
coindexed expletive, thus forming a true chain. Notice that this view
requires all expletive/argument pairs to conform to locality conditions
which normally apply to NP/trace chains, since at LF, the
expletive/argument pair is transformed into an NP/trace relation.

11. In Notes in Chapter 4 we suggested that an analysis of Tzotzil Passive
which did not involve movement would provide us with a solution for a
problematic structure. We noted, however, that a non-movement analysis for
passive would cause problems in the theory of Case we are assuming. It
should be evident from the above why this is so, since a non-movement
analysis would create a chain with two Cases, or an expletive PRO. This
last possibility seems problematic, given the somewhat anaphoric semantics
usually associated with PRO.

NP/IP, and the CP will not be assigned Case. (It will, however, satisfy
the Case Filter (6.B) due to its inherent Case.) If the external argument
in (10a) is an CP, in the NA system it will receive nominative Case,
however in the EA system ergative Case may or may not be assigned to the
CP.

5.2.3 Burzio's Generalization

An effect of L&M's outline of Case Theory, as they show, is that it is
possible to derive Burzio's Generalization. This is desirable, since data
from Niuean show that the first part of Burzio's Generalization is not
always upheld, in a way that argues it should be derivable from the Case
Filter.

   Examine the following data.

(11) a. Kua iloa e   mutolu [ke mailonga   e   mahani
        Perf know Erg you   Sbj distinguish Abs signs
        he langi]
        of sky
        "You know how to distinguish the appearance of the sky."
        (M,p.180)

     b. Kua iloa ní   e   au [to tutupu e   tau mena
        Perf know Emph Erg I Fut grow   Abs Pl thing
        he po   ia]
        on night that
        "I just knew that things (clouds) would gather that night."
        (S,2.102a)

(12) a. Kua lali a   ia [ke   vangahau]
        Perf try Abs he Sbj talk
        "He is tryihg to talk." (M,p.146)

b. Piko   e   magafaoa haaku [ne fano a   koe ki Samoa]
   believe Abs family   my   Pst go Abs you to Samoa.
   "My family believed (mistakenly) that you were going
   to Samoa."
   (S,2.100b)

The data above show that Niuean transitive verbs with CP complements

subdivide into two classes: one which appears with ergative subjects (11),

and the other with absolutive subjects (12). This is so, regardless of

whether the complement is tensed or untensed (subjunctive), as is seen

above.

L&M note that to account for these data, we want an analysis which

allows both (13a) and (13b). (They abstract away from the word order

problem -see Section 5.6.5 and references cited there.)

(13) a.   b.
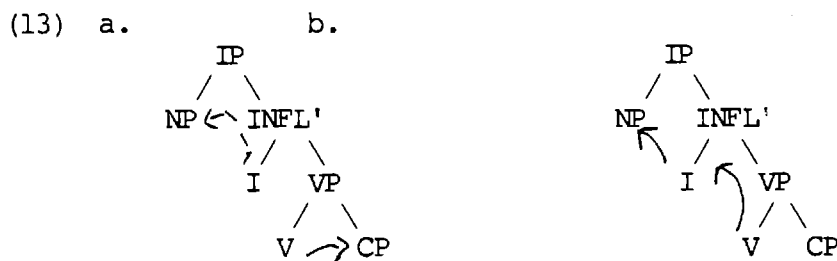
Examine first, verbs patterning with iloa "know". Other verbs in this

class of [+CA] verbs taking sentential arguments which L&M give are:

(14)   [+CA] Verbs Taking Sentential Complements
       iloa,"know,know how"; kamata "begin"; kitia,"see";
       manatu,"think,wonder"; longona,"hear,feel";
       talahaua,"say"

L&M note that such data appear to be counterevidence to Safir's(1985)

hypothesis that CPs can never receive Case. Though absolutive Case does

not surface morphologically on CPs, the ergative subject indicates that

absolutive has been assigned. Given (4), absolutive Case must be assigned,

leading us to conclude that the CP involved has been Case-marked.[12]

Data such as (12b), on the other hand show that CPs do not require Case

assignment, thus arguing against Stowell's(1981) claim that they do require

it. [-CA] verbs taking CP complements are given by L&M as follows:

(15) [-CA] Verbs Taking Sentential Complements
      manaki,"hope"; fakaanga,"attempt";
      foli,"decide"; lali,"try"; fakalata,"think";
      manako,"want"; talifaki,"expect";
      amaamanakii,"hope"; piko,"believe"

These verbs utilize the Case marking schema in (13b). The verb is [-CA].

This is possible, as the internal CP does not require Case. Since

absolutive Case must be assigned, it percolates up to INFL, and is assigned

to NP/IP.

L&M then discuss the implications of these data for Burzio's

Generalization, (see (1)): T<--->A, where T = assignment of theta-role to

subject and A = Accusative Case assignment [to object].[13] Since accusative

----

12. L&M provide arguments against an analysis where the CP is dominated by
an NP, namely, that extraction is possible from these sentential
complements, which would be ruled out by Subjacency if the CP were
dominated by NP.

13. Burzio's Generalization should more properly read " where T =
assignment of theta-role to subject position", since "subject" is rather

Case is that which is assigned to the object in N/A languages, it is clear

that the "A" of Burzio's Generalization refers to absolutive Case, i.e.

the Case assigned by a verb to its object.[14]

The existence of the class of [-CA] verbs taking sentential complements

shows that T--->A does not hold in all cases. [-CA] verbs do not assign

absolutive Case to their S' complements and yet a theta role is assigned to

the subject. L&M consider this to be the evidence which Burzio

hypothesized might exist in his discussion:

> "...our framework will not require that the statement
> [-A--->-T] should hold for verbs in other than the
> configuration in [NP V(-A)...NP$_i$,where NP$_i$ is
> governed by V and only by V]. For example, we would expect
> that in a base form "NP V S" where there is no NP to assign
> Case to, the verb could very well lack the capability
> to assign accusative...However,since we find no evidence
> that would ever falsify it, we will assume that [-A--->-T]
> holds categorically." (Burzio,1981:p.169)

With the Niuean data, it is clear that the generalization T--->A is a

consequence of the Case Filter, as Burzio suspected it might be, combined

with the fact that NPs , but not CPs, must be assigned Case.

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vague considering that if we take the view of passive in Jaeggli(1984) and
Baker, Johnson & Roberts(1985), an external theta role is assigned to the
-en affix, but this affix is not in subject position.

14. L&M note that this is different than the parallellism noted by Marantz
between nominative and absolutive Case. As mentioned above, Nominative and
Accusative are alike in that they are values for x in (5) above, whereas
Absolutive and Accusative share the property of being C_v.

L&M then examine the second part of Burzio's generalization A--->T. They

consider that this generalization receives further support from surface

ergative Case-marking languages which exhibit Raising to Subject. As

exemplified in (17), the raised subject in such constructions always

appears with absolutive Case:

(16) a. Kua kamata [$_{NP}$ec] [ke hala he tama e   akau]
         Perf begin   Sbj cut Erg child Abs tree
         'The child has begun to cut down the tree.'

     b. Kua kamata e   tama [ke hala [$_{NP}$ec] e akau]
                    Abs

A list of Raising to Subject verbs is given in (18). As one might

expect, all such verbs take non-finite (ke-) complements.

(17) <u>Raising</u> <u>to</u> <u>Subject</u> <u>(-CA</u> Verbs)

     <u>maeke</u>, "can, be possible"; <u>kamata</u>, "begin";<u>fakaai</u>, "not";
     <u>mahani</u>, "usual, customary"; <u>teitei</u>, "almost";
     <u>fetamakina</u>, "nearly".

L&M note that the absence of Raising to Subject verbs with ergative

subjects suggests that ergative Case is assigned only under

theta-government. However, this is not necessary to stipulate, as for the

most part, it follows from (6B) and (6C) that all verbs taking single

arguments, whether internal or external, will be [-CA]. This is because,

if a verb has a Case marked internal argument, and no external theta role

is assigned, (6C) will force the external position to be in a chain with a

theta position. If the external position is Case marked, it will be unable

to form a legitimate chain, due to (6B) and the sentence will violate

(6C). If, on the other hand, a verb has only an external argument and yet is [+CA], the [+CA] verb will be unable to assign its Case (which it must assign, if it is [+CA].)[15]

Thus, it appears that the second part of Burzio's Generalization is derived from this theory of Case. However, there is not a complete overlap. The theory of L&M allows for Burzio's Generalization not to hold in certain circumstances. First, if the Extended Projection Principle does not hold absolutely, then it would be possible to assign A to an internal object, and no theta role to the subject position, since there would in this case be no expletive/argument chain formed, and hence no violation of (6B) or (6C). Kitigawa(1984) argues that this situation holds in Polish impersonal passives. Second, it would be possible for a verb to assign A to an internal argument without assigning a theta role to a subject if the verb has more than one direct argument. This situation holds in passive constructions in languages examined in Chapter 4 such as Kinyarwanda, where a verb assigns several direct Cases. Thus, in (18a), the verb andik "write" may be passivized (which means it does not assign a theta role to the subject position), and yet it is still able to assign accusative Case to ibaruwa "letter", since the instrumental ikaramu is available to move to subject position. (18b) shows that ibaruwa really does receive A (that is,

----

15. Note that in E/A languages, a [+CA] verb is unable to transmit its Case to INFL, since it must assign its Case directly.

direct objective Case), and not an oblique Case, since it also may

passivize in such a structure. The point here is that as long as there is

available one argument to form a chain with the empty subject

position--either by moving into it or by coindexing, then the verb is free

to assign A to another argument.

(18)   a. Ikarámu i -ra -andik-iish -w   -a   ibaruwa.
          pen   it-pres-write-instr-pass-asp letter
          n'umugabo
          by man
          "The pen is used to write a letter by the man."
          (K,5.1.6d)

       b. Ibaruwa i -ra -andik-iish -w   -a   ikarámu n'umugabo.
          letter it-pres-write-instr-pass-asp pen   by man
          "The letter is being written with the pen by the man.
          (K,5.1.15)

And finally, as a subset of this last group of verbs would be a

potential class of verbs which assign A to an internal sentential argument,

and do not assign a theta role to their subject, if they can effect Raising

to Subject. Such verbs would always appear in raising constructions,

however, since not to do so would violate the condition that only one Case

may exist in a chain. As obligatory raising verbs, it is doubtful that

they would be easily distinguishable from Control verbs, and it seems

likely that, historically, a theta role would develop to be assigned to the

subject. It is clear at any rate that there could be no expletive here,

and the prediction made by L&M that there are no ergative expletives is

upheld. A potential candidate here would be the verb begin in English.

(Its counterpart in Niuean is a Raising verb.) Given the ungrammaticality

of (19a) (even though it makes sense), and the grammaticality of (19b&c),

it appears that begin might be of this class. However, given the

possibility of an agent reading for the subject in (19b) and (19d), this

claim is weakened. (But see Rochette,1985 for arguments that verbs such as

begin in French (commencer do not assign theta roles to their subjects,

even when they occur with NP objects.)

(19) a. *It began that George cut the logs for the cabin.
      b. George began to cut the logs for the cabin.
      c. The logs began to be cut.
      d. George began the chainsaw.

5.3 Case Theory and The Projection Principle

5.3.1 The Problem

The data which has been examined in previous chapters argues that

certain aspects of the theory of Case and of chains outlined above must be

modified. There are two basic assumptions in all explications of Case and

chain theory which our data show to be inadequate. First, it is usually

assumed that chains are formed on A-positions, and that the Case Filter

applies only to such chains (due to Visibility requirements), since these

are chains which will contain theta positions.

We have seen that in several cases, NPs which are not in theta chains

(defined as A-chains which include a theta position), do in fact require

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Case. First, we saw that NPs which have undergone ECM movement require

Case. These NPs are in A-bar positions (i.e. they are never assigned a

theta role, and they do not form A-chains with the theta position to which

they are coindexed--if they did, there would be chains with two Cases, or

with Case at the tail and not the head). Further, they are coindexed with

NP in a Case marked position, so clearly, by the theory above, they should

not need to be Case marked. Second, ECM'd possessors need to be Case

marked in Chickasaw, although they too are in what may be considered A-bar

positions, coindexed with an NP which is sometimes clearly, and other times

plausibly, Case marked. And finally, it is clear that subjects of Tough

Movement constructions need Case, in the languages examined in Chapter 3.

Here, the NP in question is in an A-position, but it is not in a theta

chain, and hence, it should not require Case marking for Visibility.

Note that we cannot solve the problem by considering the ECM'd NPs to be

in A-positions, since if we did, we would expect that they would form

A-chains with their coindexed theta positions, and that therefore, only one

Case, at the head of the chain would be allowed, and so the coindexed theta

position could not receive Case. But clearly, it does receive Case, as

discussed in Chapters 2 and 4.

We might want to say that all NPs which are not in theta chains require

Case to be licensed. Since adverbial NPs (if they exist)[16] and Wh-operator NPs do not require Case, this might be done by stating that NPs which are not in theta chains, but which are licensed by virtue of being coindexed with an NP in a theta chain need Case. However, this would be the wrong move, since Topicalized NPs, and Left and Right Dislocated NPs do not require Case. So let us reconsider.

The characteristic that all three of the non theta chain NPs (mentioned above as needing to be Case marked) share in the analyses proposed in this thesis, is that they are all subjects. The ECM'd NP of Niuean, and Fijian was analyzed as being a subject of a CP predicate along the lines of Taraldsen(1983) and Haik(1985). The ECM'd possessor in Chickasaw was shown to be a subject by the many tests of Carden, Gordon and Munro(1982). We determined that in this language the leftmost NP dominated by IP is considered to be the subject. And finally, it is uncontroversial that in Tough Movement constructions, the overt NP related to the theta position of embedded object (by coindexing, but not by a chain) is a subject.

5.3.2 Revised Case Theory

Since all the NPs which require Case and which are not in theta chains

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16. It is not clear whether there is such a thing as an adverbial NP, i.e. whether words such as "tomorrow" should be analyzed as NPs or PPs in adverbial positions.

are subjects, we propose that the Case Filter be expanded to include not just NPs in theta chains, but also any NP which acts as the subject for purposes of predication.

Let us review the main points of the Levin & Massam theory above. It states:

(20) (i)   For every A-position there is a chain
     (ii) For every chain there is a theta position
     (iii) For every theta role there must be a Case
           (for Visibility).

In addition, the head of the chain must be CP, IP or NP, and it must be [+Case]. What parts of this need revision to accomodate the data of the previous chapters?

It is clear that we must expand the category "A-position" in (i) above to include A-positions and subjects. This means that chains will be formed to include all NPs in such positions Then, we must ensure that movement to an A-bar position does not form a chain. And also, we must ensure that these chains will be licensed at LF, but we can no longer state that they must include a theta position to be licensed, since we have claimed in fact that they need not include such a position. To allow for the ECM and Tough data, we must then revise (ii) to state that every chain must have an index associated with a theta position. This licenses NP/trace chains, trivial theta NP chains, expletive/argument chains, chains coindexed with an operator as in Tough Movement, and ECM movement chains. And finally,

consider (iii). Since, in the theory of Chomsky(1981), and of L&M, every chain must include a theta position, we can state in these theories that every chain must include a Case marked position, and this will be derivable from the Visibility of theta roles requirement at LF. We can now, as before, simply state that for every chain there must be a Case marked position, and still have this be derivable from the Visibility condition, if we consider that not only theta roles, but also subjects of predication require Case for Visibility.

Notice that the categories which form chains consist of arguments and subjects. This constitutes a natural class with respect to a central aspect of grammar, namely, the Projection Principle. The Projection Principle of Chomsky(1981) requires that all complement argument positions be projected from the lexicon, and remain constant throughout the derivation. The Extended Projection Principle of Chomsky(1982) also requires that all predicates ("clauses") have subjects. Thus, it appears that the Case Filter and chain theory refer to the same classes of positions as does the Projection Principle. We can thus consider that all positions referred to by the latter, must form chains, must be theta-licenced, and must therefore directly or indirectly, receive Case. We thus state the following.

(21) (i)   For every projected position P, there must be a chain
     (ii) For every chain there must be a theta index
     (iii) For every chain there must be a Case

Thus, we revise (6C) to the following:

(22) Given a projected position Pi, there is a chain C,
      such that:

      C contains Pi and is theta licensed.
      C is theta licensed if it has an index I which is
      theta licensed.
      I is theta licensed if it is associated with an NP N,
      which is theta licenced.
      N is theta licensed if it is in a position to which a
      theta role is assigned.

In order to rule out the possibility of the ECM moved NP forming a chain

with the theta position with which it is coindexed, we add the following

condition of chains.

(23) A chain headed by an A-bar position, may not include an
     A-position.

Chains are thus derived by A-movement, that is, movement to an

A-position, or they are trivial, or they are derived by movement from an

A-bar position.

In a case of S/ECM then, we have the following situation. At

D-structure, the Niuean verb toka "let" (see following example) projects,

by the Projection Principle, a subject position and an internal argument

position. Both of these must be filled, by the Theta Criterion. Due to

subcategorization, the internal argument position is filled with a CP.

Toka, however, also selects for a predicate (as proposed in Haïk(1985) and

Taraldsen(1983) and in Chapter 2 and 3 above). Hence, the CP complement

itself must project a subject. An NP from within the predicate CP moves to

this subject position.

(24) a. To nākai toka e au e ika ke kai he pusi
      Fut not let Erg I Abs fish Sbj eat Erg cat
      "I won't let the fish be eaten by the cat."
      (S,3.78a)

   b. [... toka [NP_i [.....t_i.....]]]

Here, the theta position is Case marked, and hence heads a trivial chain. Since the NP moved from it is in an A-bar position, this trivial chain is permitted, due to (23). The ECM'd NP must also be in a chain, since it is in a projected position. It is Case marked, and hence heads a trivial chain. This chain is Case marked and contains a theta index, and so the sentence is grammatical.

There are a few other points which must be discussed. First, recall that the phenomenon of passivization in ECM structures and of Movement to Subject in Niuean required us to allow A/A-bar/A movement in certain circumstances. We can note now that such movement fits into our Case Theory in a natural way. Let us examine Niuean Raising to Subject.

At D-structure, the verb kamata "begin" projects by the Projection Principle, a subject position and an internal argument position, as did toka "let" in (24a). Here, the subject position is non-thematic.[17] The

----

17. By the revised Theta Criterion, there could be NP here, but it would require theta-linking which is not freely available as discussed in Chapters 2 and 3.

object position, by the Theta Criterion must be filled, and, due to
subcategorization, it is filled with a CP. Kamata, like toka, selects for a
predicate. Hence, the CP complement itself must project a subject. An NP
from within the predicate CP moves to this subject position. (Note: (25a)
is a grammatical sentence, but not with the structure in (25).)

(25)   a. *Kua kamata [e akau [ke hala he tama]]
           Perf begin   Abs tree Sbj cut   Erg child

       b. [... kamata [NP$_i$ [....t$_i$...]]]

As in the sentence discussed above, the A-bar subject position is
projected, and hence must be in a chain. This chain includes a theta
index, by coindexation with the embedded object position, but it does not
receive Case, and the sentence is ungrammatical. Although it has moved
from the theta position, it can not form a well-formed chain with this
theta position since this chain will not have a Case marked head position,
as well as because of (23). However, it might alternatively move to the
subject position of the matrix clause.

(26)   [... kamata [NP$_i$] [t$_i$ [....t$_i$...]]]

In (26), there is one chain to be discussed. Since the matrix subject
position is Case marked, it is the head of a chain. This chain contains,
by Move Alpha, the matrix subject, and SPEC2. It receives Case, and is
theta-indexed by virtue of the fact that the NP moved from SPEC2 has been
moved from the theta position of embedded object. Since every projected

position is in a chain, the sentence is grammatical.[18]

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18. As discussed in Chapter 2, the theta position in these sentences contains a pronominal, and not an anaphor.

Typology of Non-thematic Argument Constructions

1 Introduction

In this final section, we will present a typology of the syntactic
constructions which have been discussed in this thesis. The main point
here is that there are two ways to divide up the constructions which have
been discussed--first, in terms of the semantic classes of verbs which
govern various processes by which an element comes to act as an argument of
a verb with which it has no thematic relation, and second, in terms of the
syntactic operations which verbs may use to establish this effect. There
is no one-to-one correspondance between verb classes and syntactic
processes, however, and verbs of one semantic class in Language A may use a
syntactic device which is used by verbs of another semantic class in
Language B.

The Table presented below raises some intriguing questions about the
nature of language variation. Most evident is the question as to why
languages, and verbs within languages "make the choices that they do", so
to speak. I have no solution to this question. For instance, I cannot
explain why English does not have ECM movement, or why it does not permit a
Wh-word to exhibit a different morphological Case from the one assigned to
the theta position with which it is associated by coindexing. Similarly, I

do not know why Fijian "Raising to Subject" verbs choose

IP-subcategorization, while "Raising to Object" verbs choose ECM movement,

whereas in Niuean, ECM movement is used for both types of operation. My

assumption regarding the cross-linguistic variation is that the answer to

questions of this nature are to be found in the study of parameterization

(cf.Chomsky,1981,1985 Rizzi,1982, and references therein, especially

regarding the so-called "null-subject parameter"), and that further study

will reveal certain clusterings of properties between which there are

implicational relations. Thus, there might be an "ECM-movement parameter"

analogous to the "null-subject parameter". On the observational level we

note that the majority of the languages which exhibit ECM Movement are

verb-initial languages, with the exception (Turkish) falling into the

Verb-peripheral class, since it is Verb-final. (Notably, Turkish also in

unusual in displaying ECM movement only for subjects, which suggests it is

a sub-class, or that it is mis-categorized as an ECM movement language.)

We suggested above that languages in which infinitivals require Case will

not be able to effect IP-subcategorization ECM. And, also as noted above,

languages which do not freely permit more than one direct verbal argument

due to limitations on Case availability will not exhibit NP/ECM. However,

this simply leads us to the question of why a certain language does, and

another does not, permit multiple direct Case assignment. It is indeed,

turtles all the way down.

2 A Typology

TYPOLOGY*

I Subcategorization for IP, with government (and Case Assignment
  or subsequent movement) of the NP in the embedded Specifier

Language, & Common Name of Operation	Gloss of Sample Verbs	Target Position[19]

A. Verbs of Modality

Blackfoot(RtoS)+	(surprising)-	"
English (RtoS)	(seem, be likely)	Subjects
French (RtoS)	(seem, turn out)	"
Italian (RtoS)	(seem, appear)	"
Malagasy (RtoS)	(seem)	"

B. Verbs of Propositional Attitude

English (RtoO)	(expect, believe)	"
French (Wh-ECM)	(believe)	"
Hindi (RtoO)	(believe,consider)	"
Icelandic (RtoO)	(believe)	"
Italian (Wh/Aux-ECM)	(believe, state)	"
Portuguese (Aux-ECM)	(believe think)	"

C. Aspectual Verbs

Fijian (RtoS)	(not, be right)	"

D. Tough Verbs

Malagasy	(be difficult)	"

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19. By now it should not be necessary to note that by "object" we mena an
NP governed by and at least potentially Case assigned by a verb, and not a
sister to a verb.

E. POSSESSOR RAISING (substitute NP for IP in I)

   Chichewa
   Chickasaw (from Object NPs)
   Choctaw   (from Object NPs)
   Kinyarwanda
   Tzotzil

II <u>Movement of NP to embedded A-bar subject position with
   government (and Case Assignment or subsequent movement of
   this A-bar subject.</u>

A. <u>Verbs of Modality</u>

Niuean (RtoS)	(nearly, be possible)	Subject/Object
Standard Arabic	(seem, to turn out)	Subject/Object, /Indirect Object

B. <u>Verbs of Propositional</u> Attitude

Blackfoot (RtoO)+	(think,know)	Subject/Object /(Oblique=)
Fijian (RtoO)	(expect, want, think)	Subject/Object, /Oblique
James Bay Cree (RtoO)+	(know)	" " "
Kipsigas (RtoO)	(want, know)	Subject/Object
Malagasy (RtoO)	(hope, think)	Subject
Moroccan Arabic (RtoO)	(see,know)	Subject/Object /Oblique
Standard Arabic (RtoO)	(believe,think)	" " "
Turkish (RtoO)	(assume, think)	Subject
Zacapoaxtla Nahuat~	(hear)	Subject

C. <u>Aspectual Verbs</u>

Niuean (RtoS)	(begin, not, usual)	Subject/Object

D. <u>Tough Verbs</u>

Niuean (RtoS)	(be easy, be hard)	" "

E. Causative Verbs

Kipsigas	(RtoO)	(make)	"	"
Niuean	(RtoO)	(make, let)	"	"

F. POSSESSOR RAISING

Chickasaw (from subject NPs)
Choctaw   (from subject NPs)
Hungarian
Romanian
Turkish

III Movement of an Operator to an A-bar position, with
    theta-linking between it and a non-thematic subject.

A. Verbs of Modality

James Bay Cree (RtoS)+	(be surprising)-	"	"

B. Aspectual Verbs

James Bay Cree (RtoS)+	(seem)	"	"
Kipsigas (RtoS)	(not, continue)	"	"

C. Tough Verbs

Blackfoot (Tough)+	(be hard)	Subject/(Object=)
English (Tough)	(be easy, be hard)	Object
James Bay Cree (Tough)+	(be hard)	Subject/Object
Kipsigas (RtoS)	(be easy, be hard)	Subject/Object
Niuean (Tough)	(be easy, be hard)	Oblique

IV Case Marking into a governed A-[A-bar position

Berber (Left dislocation-ECM) ([+CA])	Subject/Object /Oblique	
Hungarian (Wh-questions)	" " "	

*Some of the classifications of languages are tentative, and the
semantic classifications of the verbs are far from rigid. The sources of
the data used to make the classifications are given in the text, where the

language is first discussed. Or see References.

+subject to an understanding of the non-configurational nature of these languages and its interaction with Raising type processes.

-It is not clear if "modality" is the correct classification here.

=The source author expresses some uncertainty on this point.

~These examples may involve a thematic object, and not ECM.

Appendix A

Gloss Glossary

Glosses almost always follow the source, as does orthography.
Departures from the source are noted in the text or footnotes.
(Appl replaces ben in Kinyarwanda for NP/ECM examples).

1	First person
2	Second person
12	First person plural inclusive
3	Third person (major animate topic- Blackfoot)
4	Fourth person (subordinate animate topic Blackfoot)
I	Agreement Class (Chickasaw)
II	Agreement Class (Chickasaw)
III	Agreement Class (Chickasaw)

```
A ....................................Absolutive Case
Abl..................................Ablative Case
Abs..................................Absolutive Case
Acc..................................Accusative Case
AI...................................Animate intransitive
                                     (subject) (verbal agreement)
Anim.................................Animate
Appl.................................Applied
Art..................................Article
Asp..................................Aspect marker
Aux..................................Auxiliary

Ben..................................Benefactive
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Caus...................................Causative
Conj...................................Affix from the conjunct
                                        order
Cont...................................Continuative
CP.....................................Causative/Passive

Dat....................................Dative Case
Dir2...................................In the direction
                                        of the addressee
Dir....................................Directional
DE.....................................Declarative sentential
                                        ending
DS.....................................Different Subject

E......................................Ergative Case
ec.....................................Empty category
Emph...................................Emphatic
Erg....................................Ergative Case
Ex.....................................Exclusive
Excl...................................Exclusive

F......................................Feminine
Fut....................................Future tense

Gen....................................Genitive Case

II.....................................Inanimate intransitive
                                        (object agreement)
Inan...................................Inanimate
Instr..................................Instrumental
Intrans................................Intransitive
Ipf....................................Imperfect
Iward..................................In the direction
                                        of the speaker

Lc Locative............................Locative

M......................................Masculine
Manner.................................Verbal affix
Mid....................................Middle Case

Neg....................................Negative
Nft....................................Nonfuture tense
Nom....................................Nominative Case
No.....................................Negative existential
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Obj...................................Object
Obl...................................Oblique

Pass..................................Passive
Pd....................................Possessed (agreement)
"Pe".................................Specific pronoun/human
                                       object marker (Hungarian)
Perf..................................Perfect
Pers..................................Article for [+human] NPs
Pf....................................Perfect
Pl....................................Plural
Poss..................................Possessor (agreement)
Pred..................................Predicator
Pred..................................Topic marker (Niuean)
Pres..................................Present tense
Pret..................................Preterite
pro...................................Phonologically empty pronoun
pro...................................Cleft pronoun (Kinyarwanda)
PRO...................................Ungoverned empty category
PRO...................................Type of pronoun (Blackfoot)
Prop..................................Proper (Noun)
Pst...................................Past tense

Q.....................................Question marker

Recip.................................Reciprocal
Reflex................................Reflexive
Refl..................................Reflexive
Rel...................................Relativizer
Rfl...................................Reflexive

S.....................................Singular
(S)...................................Subject tone (Kipsigas)
Sbj...................................Subject(agreement)
Sbj...................................Subject marker (Chickasaw)
Sbj...................................Subjunctive marker (Niuean)
Sg....................................Singular
SH....................................Subject higher on hierarchy
                                       than object
SL....................................Subject lower on hierarchy
                                       than object
Sng...................................Singular
SS....................................Same Subject
Sub...................................Subject
Sub...................................Subordinator (Fijian,
                                       Blackfoot)
```

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TA.....................................Transitive animate
                                       (object) (verbal agreement)
TI.....................................Transitive inanimate
                                       (object) (verbal agreement)
Top....................................Topic
Trans..................................Transitive

Valid..................................Validator
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