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**Issues in Turkish syntax**

**Sezer, Fehmi Engin, Ph.D.**

**Harvard University, 1991**

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**ISSUES IN TURKISH SYNTAX**

A thesis presented

by

**Fehmi Engin Sezer**

to

The Department of Linguistics

in partial fulfillment of the requirements

for the degree of

**Doctor of Philosophy**

in the subject of

**Linguistics**

**Harvard University**

**Cambridge, Massachusetts**

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## ABSTRACT

This thesis investigates the properties of three different aspects of Turkish grammar.

First, starting with the basic assumption that derivational morphology is confined to the lexicon, it is claimed that thematic structure is distinct from the argument structure and that derivational morphology refers exclusively to the latter. It is argued that case interacts with verbal derivation and that nouns and adjectives do not assign case. Some counter-examples are shown to be only apparent. It is shown how verbal derivation, particularly passives and causatives, operate and interact. An explanation is offered for the impossibility of causatives of passives. It is also argued that Turkish obeys the One Advancement Exclusiveness Law as predicted.

Second, it is shown how a series of independently motivated principles of Turkish syntax interact to determine the structure of relative clauses in Turkish. It is argued that the so-called "subjectless clauses" do not constitute an exceptional case in relative clause formation.

And finally, interesting aspects of Turkish anaphora are discussed with respect to different conditions. It is shown how clause internal structure affects binding conditions. It is argued extensively that the obviative nature of the third person singular pronoun is confined to a well-established structural configuration called the "o-domain."

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## CHAPTER ONE: INTRODUCTION

1.1 The Goals of Linguistic Research

Following Chomsky (1986a), we take generative grammar to be a program of study of human language. This program is concerned with those aspects of human language determined by the so-called "language faculty." A theory that aims to discover the structure and principles of this genetically determined language faculty is referred to as "universal grammar."

Generative grammar focuses its inquiry on three general questions:

- (1)     a. What constitutes knowledge of language?
- b. How is knowledge of language acquired?
- c. How is knowledge of language put to use? (Chomsky, 1986a:3)

The answers to the first question may be sought within a particular generative grammar ultimately concerned with the language faculty of a native speaker of some language. The answer to the second question requires a theory that accounts for how universal grammar interacts with external factors, for example, linguistic stimulus in a speech community, to make the acquisition of a particular language possible. Finally, the last question calls for a theory to investigate the interaction of language with thought and communication in general.

An important question that arises with respect to the role of research is: What is the role of the grammar of individual languages in pursuing universal grammar? Chomsky (1981) answers the question as follows:

- (2) A valid observation that has frequently been made (and often irrationally denied) is that a great deal can be learned about UG from the study of a single language, if such study achieves sufficient depth to put forth rules or principles that have explanatory force but are underdetermined by evidence available to the language learner. Then it is reasonable to attribute to UG those aspects of these rules or principles that are uniformly attained but underdetermined by evidence.

(Chomsky, 1981:6)

The present study should be considered a humble contribution in this direction, looking for interesting rules or principles that will hopefully contribute to a better understanding of universal grammar.

A researcher interested in such a program usually has at his disposal a specific generative grammar often referred to as a "theoretical framework," the framework of principles and parameters (usually called government and binding theory) of Chomsky (1981), (1982), (1986a) and (1986b). Further below we will outline the general properties of this theory assumed in this study. But before that a few words are in order concerning the relations between the existing theory and new evidence.

We believe that ideally a research on an individual language should aim at uncovering the tensions between the elements and principles of a theoretical framework and the new evidence, rather than systematically looking for direct confirmations of the predictions of the theory.

Second, not all observations of regularities in a language can be directly codified in terms of the principles of the theory. Usually

there are several stages of codification for generalizations before such observations may be interpreted as direct outcome of the predictions of the theoretical framework. The development of English syntax as an area of study which can hardly be separated from the development of generative syntax illustrates these stages quite well. For example, beginning with Ross's (1967) constraints (which amounted to various observational statements) developing through the stages of conditions, filters and so on, many properties of English syntax may now be claimed to follow from universal principles of human language.

This study assumes the overall framework of the principles and parameters theory, but it also seeks to define rules, conditions or principles that may not be directly reducible to the existing principles of that framework.

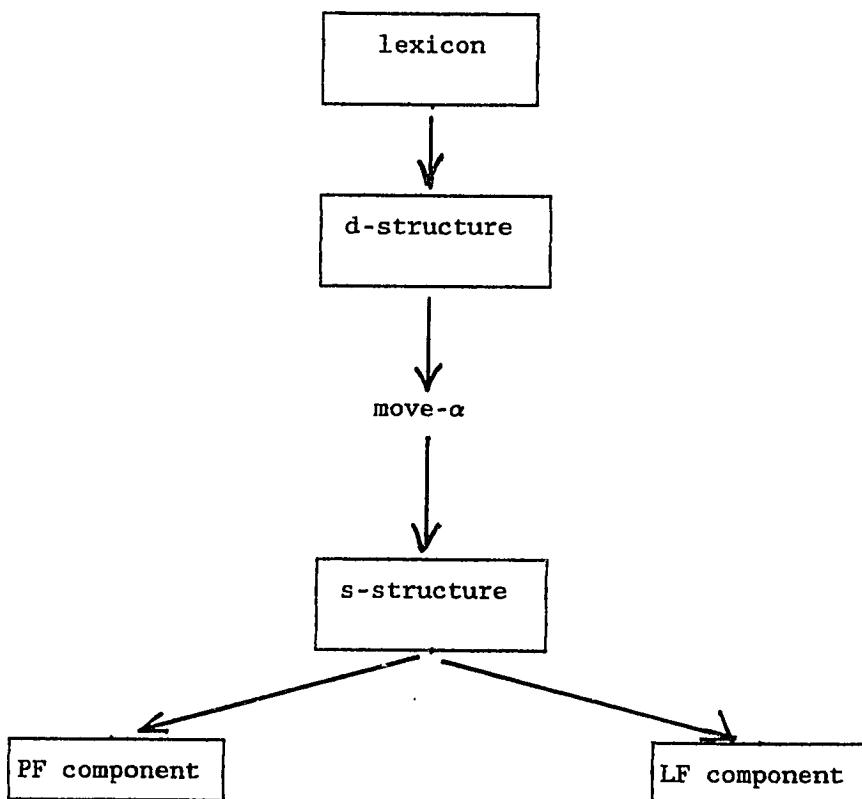
Furthermore, we also attempt to inquire into those aspects of Turkish syntax where a tension exists between the principles of the theory and the observed facts. The inquiry into case is one such area. It is a serious challenge for the current case theory to address the issues centered around causative constructions, incorporation/adjunction, and passive structures in Turkish.

This study owes a good deal to Kornfilt (1984) which constitutes the first comprehensive interpretation of various aspects of Turkish syntax in terms of the principles and parameters theory. In most cases I followed her insight but many times recast her generalizations with or without empirical consequences.

1.2     The Organization of the Grammar

We will assume the modal of generative grammar in (3) below.

(3)     Modal of Generative Grammar



The lexical information concerning lexical items is projected on to d-structure by the  $\theta$ -criterion and the projection principle. D-structure represents the configurational properties of sentences in conformity with X-bar theory, to be discussed below. Inherent case assignment takes place at this level.

D-structures are mapped to s-structures by the rule  $\text{move-}\alpha$ , the only transformation allowed in the theory. Instances of  $\text{move-}\alpha$  cover NP-movement to subject position, and the movement of the verb to INFL to

pick up tense and AGR morphology, an instance of head-to-head movement. Possibly, as suggested by Kornfilt (1984) abstract movement of WH elements to COMP in LF may constitute another instance of move- $\alpha$ .

We assume that move- $\alpha$  is constrained by the principles of binding theory, case theory, theta theory and bounding theory and government theory. We will assume therefore that move- $\alpha$  cannot be responsible for subjects that appear in immediate pre-verbal position. Such NPs either originate in that position in d-structure or are moved there by stylistic rules of the PF component. Typically, these are not instances of move- $\alpha$ ; they do not leave traces and are not restricted by the principles that constrain move- $\alpha$ .

S-structure is where structural case assignment and binding take place. Such s-structures are interpreted by PF and LF. As we suggested both of these components may contain movement rules, albeit of different types.

### 1.3     The Structure of the Theory

The theory of principles and parameters has modular a structure consisting of a set of possibly overlapping subtheories each containing a set of interrelated principles. These theories are:

- (4)     a. X-Bar theory
- b. Theta theory
- c. Binding theory
- d. Case theory
- e. Government theory
- f. Bounding theory
- g. Control theory

In what follows, I will comment on (4a-d). Definitions of government will be given in Chapter 2, and we will have nothing of substance to say on (4f, g) in the present study.

### 1.3.1 The Lexicon and Theta Theory

The lexicon contains the lexical items. It also specifies whatever phonetic, syntactic and semantic properties they may have.

Theta theory primarily deals with the assignment of semantic roles by the predicates to NPs, like agent, goal, theme, etc. We further assume that such semantic roles are in a hierarchical relationship to one another. The semantic roles assigned by a predicate on its arguments constitute the thematic structure for that lexical item.

We will also assume following Williams (1981) that external arguments are distinguished from internal arguments of a predicate. While semantic roles are assigned to internal arguments by lexical categories, the external argument is assigned its semantic role compositionally by the VP. The thematic and argument structures determine the universal components of the sentences of a language.

Additionally, we assume following Zubizaretta (1987) and Grimshaw (1990), among others, an argument structure where hierarchical relations among the arguments of a predicate is expressed in a pure way, without reference to semantic roles directly. Following Chomsky (1970), Jackendoff (1990), and most recently Chomsky (1988b), we assume that inflectional morphology is distinguished from derivational morphology in a principled way; the former being a part of syntax and the latter a part of the lexicon.

The central principle of the theta theory is the theta criterion

(5) below:

- (5) Each argument is assigned one and only one theta role, and each theta role is assigned to one and only one argument.

Theta criterion together with the projection principle, (6) below, insures that lexical information determines syntactic structure to a large extent.

(6) The Projection Principle

Lexical information is syntactically preserved.

The projection principle is responsible for mapping argument structures to d-structures. Moreover the extended projection principle insures that all projections of INFL must have subjects in syntax.

(7) The Extended Projection Principle (EPP)

All projections of INFL must have subjects.

The (EPP) insures that even if a predicate does not select an external argument, the sentence that represents that argument structure will have a subject.

### 1.3.2 The X-Bar Theory

X-Bar theory is a set of conditions on the structure of phrases. First, this theory distinguishes between lexical categories, N(oun), V(erb), A(djective) and P(re/postposition), and nonlexical categories, INFL and COMP. We will assume that all these categories are represented

in Turkish syntax. Although there is no overt COMP, we will follow Kornfilt (1984) in assuming that COMP contains an empty operator.

Second, following Chomsky (1986b), we will assume that all nonlexical (i.e. phrasal) categories are projections of the lexical categories. We will call this the Principle of Endocentricity, (8), below.

(8)      The Principle of Endocentricity

XP ----> ...X...

which says in effect that a phrase always contains a head of the same type.

Third, X-bar theory specifies head complement order for individual languages by what is usually referred to as the head parameter.

(9)      a.  $\bar{X}$  ----> X complement

b.  $\bar{X}$  ----> complement X

Turkish is consistently of the type (9b). Observe below:

(10)      a. [[Yeşil]<sub>A</sub> [kalem]<sub>NP</sub>]<sub>NP</sub>  
              green            pen

b. [[top-u]<sub>NP</sub> [at-t1]<sub>V</sub>]<sub>VP</sub>  
              ball-ACC    threw-PAST

'... threw the ball.'

c.  $[[\text{ban-a}]_{NP} \quad [\text{göre}]_P]_{PP} \quad \text{bir ev}]_{NP}$   
 I-DAT      suitable      a      house

'A house suitable for me'

d.  $[[\text{yaz-diğ-im}] \quad [[\text{kitap}]_N]_{NP}}$   
 write-PART-1SG      book

'The book I wrote'

e.  $[[\text{açık}]_{SPEC} \quad [\text{sarı}]_A]_{NP}$   
 light      yellow

'light yellow'

#### 1.3.2.1 Projections of INFL

Classical grammars of Turkish systematically distinguish between two types of NP's: those that carry agreement markers on the head and those that don't. The former is generally referred to as the "genitive (possessive) phrase" or "genitive (possessive) NP". The term possessive is due to the fact that such agreement morphology is traditionally characterized as "possessive."

Observe the following:

(11)    a. Ben-im      ev-im  
           I-GEN      house-1SG

'My house'

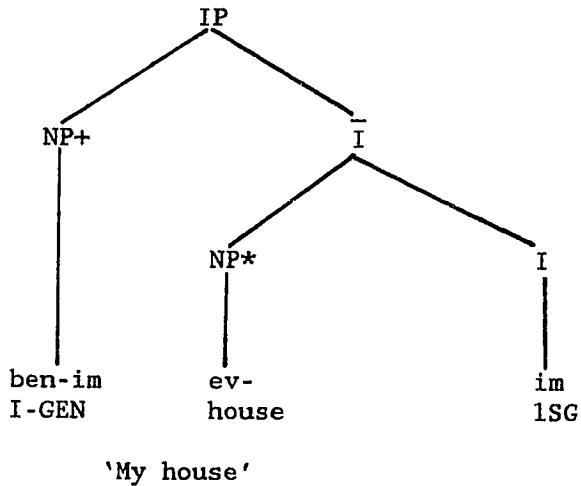
b. Sen-in      ev-in  
       you-GEN      house-2SG

'your house'

It was Kornfilt (1984) who first cast these facts within the government and binding theory, and assigned INFL to NP's like (11a,b).

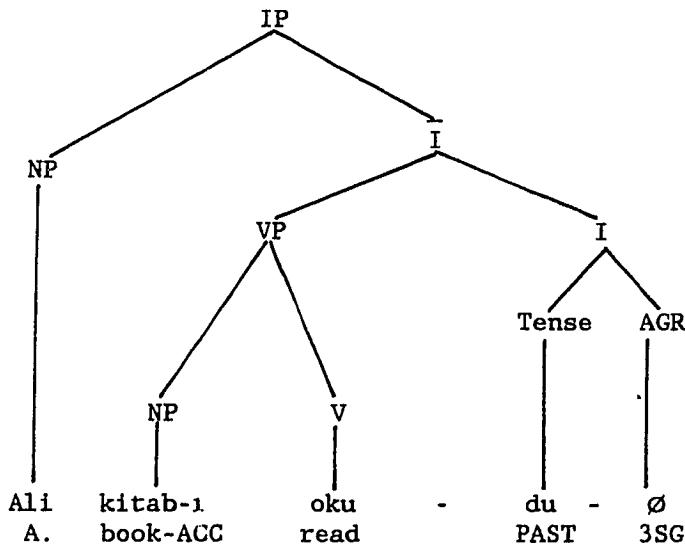
The Barriers framework of Chomsky (1986b) offers a more insightful representation of (11). We will assume that these are actually projections of INFL.

(12)



Let us leave (12) aside momentarily and see how S's are represented as projections of INFL. Observe below:

(13)



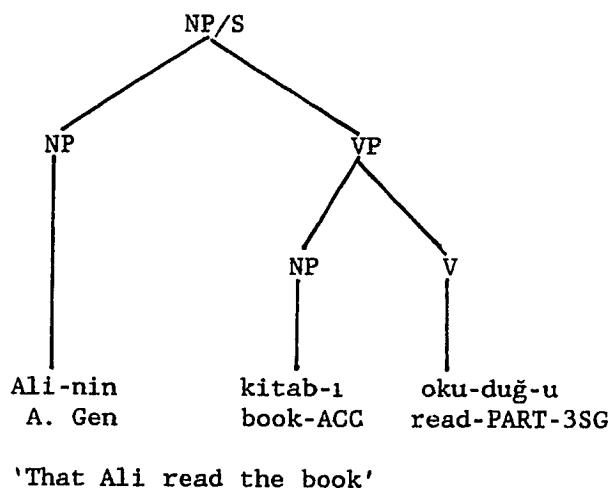
'Ali read the book.'

If both (12) and (13) are projections of INFL, how do we express the fact that (12) is an NP and (13) is an S? The answer to this is that we don't. Now the type of AGR in (13) is distinct from the AGR in (12). The latter is usually referred to as "possessive." Kornfilt (1984) insightfully distinguishes between verbal and nominal AGR morphology as presented in (13) and (12) respectively. We will see shortly that the INFL as a whole has to be distinguished as  $\pm$  nominal. Therefore, under the X-bar theory assumed here the difference between (12) and (13) is not that the former is an NP and the latter is an S. It is rather that (12) is a nominal IP being the maximal projection of nominal INFL, whereas (13) is nonnominal, call it verbal, for being the maximal projection of verbal INFL. We will nevertheless refer to (12) as NP for ease of reference.

### 1.3.2.2 Nominalizations

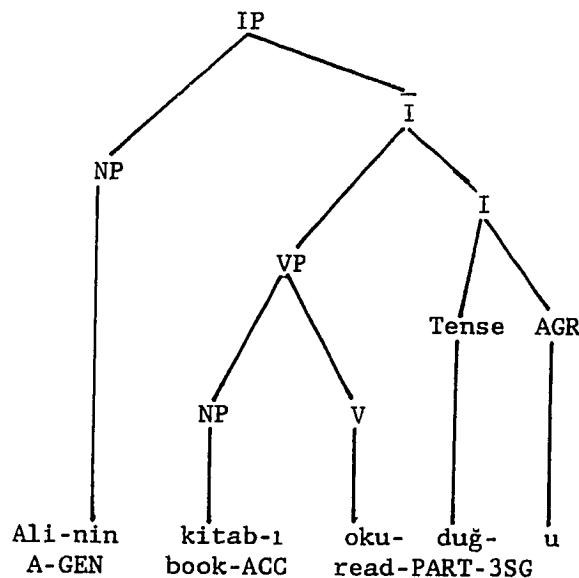
Consider first the following:

(14)



Nominalizations like (14) have the internal structure of an S, but for all practical purposes they are NPs appearing in argument positions in a matrix S. This problem of indeterminacy vanishes when we identify nominalizations like (14) as maximal projections of INFL.

(15)



'That Ali read the book'

Now the difference between the S in (13) and the nominalization in (15) is in the INFL. In the former both the tense and the AGR are morphologically of the verbal type. In (15) they are of the nominal type. They both have the internal structure of S because of the V projection they contain, but only (15) is nominal for being the maximal projection of a nominal INFL.

### 1.3.3 Case Theory

"Case theory is concerned with assignment of abstract case and its morphological realization" (Chomsky, 1981:6). It provides principled answers to the following questions:

- (16)    a. What types of case are there?  
        b. What are case assigners?  
        c. What if any are the structural properties of case assignment?

The answer to (16a) is that types of cases are distinguished along two parameters. Abstract and morphological case on the one hand and structural and inherent (perhaps also semantic) case on the other. These correlate with different structural properties as we explain in Chapter 2.

The answer to the second question is that lexical categories and AGR in INFL assign case. (See Kornfilt (1984) for discussion). Additionally, we will assume that nominal tenses may assign NOMINATIVE case on their subjects when AGR is missing in INFL.

Finally the answer to the third question in (16) is a set of principles and parameters. For example, structural case is assigned only under government, but inherent case requires that the case assigner θ-mark the NP that receives case. Direction of case assignment is a parameter to be specified for each language. Turkish requires assigners to be to the right in all types of case assignment. Still another parameter is the adjacency of the NP receiving case to its assigner. This special type of case assignment discussed by Kornfilt (1984) for Turkish, has interesting consequences that we will discuss in Chapter 2.

The central principle of case theory, however, is the case filter.

(17) The Case Filter

Every phonetically realized NP must be assigned (abstract) case.

We will see how these principles interact to account for the well-formedness of syntactic structures in Turkish.

4. The Binding Theory

The theory of binding deals with the relations, of anaphors and pronominals to their antecedents. Central to this interest is the establishment of structural configurations (i.e. domains) within which anaphors and pronominals must be bound or free.

The basic principles that restrict binding relations are the following:

- (18) a. An anaphor is bound in a local domain.
- b. A pronominal is free in a local domain.
- c. An r-expression is free (Chomsky, 1986a:166).

In chapter 4 of this study we will attempt to establish such binding domains for pronominals and anaphors. Particularly we will define the domain of the pronominal o within which it must be free.

Following Kornfilt (1984) we will assume that relative clauses have an empty operator that A-binds its trace. We will demonstrate that a special relation exists between the empty operator and the empty category it binds. This, we will show interacts in an interesting way with the government by AGR of the same empty category or the minimal domain that contains it. In such cases we will consider government by INFL a form of A binding, and argue that some form of the bijection principle of Koopman and Sportiche (1982) is operative in Turkish.

Having set the stage with broad outlines of theoretical preliminaries we will now proceed with the issues themselves.

#### **ABBREVIATIONS**

The following are the abbreviations used in the text.

---

ACC	Accusative	LOC	Locative
ADV	Adverb	NEG	Negative
AOR	Aorist	NOM	Nominalizer
CAUSE	Causative	O	Operator
COM	Comitative	PART	Participle
COMP	Complementizer	PAST	Past
CONT	Continuous	PROG	Progressive
COP	Copula	PRT	Preterite
DAT	Dative	Q	Question
DUB	Dubitative past	REF	Reflexive
FUT	Future	SG	Singular
GEN	Genitive	SUB	Subjunctive
INF	Infinitive	VN	Verbal noun

## CHAPTER TWO: ON THE LEXICON

2.0      Introduction

In this chapter we will attempt to present some basic aspects of a possible lexical component for Turkish, along the general lines set by Chomsky (1981, 1986a), Zubizaretta (1987), Jackendoff (1990), and Grimshaw (1990). In section 2.1 we will state the general properties of Predicate Argument Structures (PAS) for Turkish verbs. We will discuss the consequences of s-selection versus c-selection of Chomsky (1986a) in determining complement clause types, and we will consider some types of word formation in the lexicon.

In section 2.2 we will inquire into case assignment of various types and how they relate to certain structures.

Section 2.3 will be wholly devoted to the lexical derivation of passive verbs as well as to the impersonal verbs derived by passive morphology. In this context we will also discuss the relevance of the unaccusative hypothesis of Perlmutter (1978). Finally in section 2.4 we will suggest a lexical analysis of Turkish causatives, and in particular, address the issue concerning the interaction of causatives and passives.

2.1      Thematic and Argument Structures

We will begin by assuming without much comment that every lexical entry has associated with it a thematic structure that represents the thematic roles of the participants in an event in which that lexical item expresses some relation. For example the verb oyna

'play' assigns an agent and an instrument role to the participants in the act of playing.

(1) Agent      Instrument      oyna-      'play'

Ali	top-la	oynu-yor
	ball-COM	play-CONT-3SG

'Ali is playing with the ball.'

The thematic structure is where conceptual relations among the participants of events are represented. In the current GB theory, however, thematic roles like Agent, Theme, etc., are given a special status. As duly observed by Jackendoff (1990:55), "Thematic role...is...a term for argument position in conceptual structure; the particular  $\theta$ -roles such as Agent and Theme now are particular structural positions, with conceptual content."

In various frameworks today, however (See Rappaport and Levin (1986), Zubizaretta (1987), Grimshaw (1990) among others), an a-(rgument) structure is distinguished from the thematic structure. In the former, theta roles are not represented. Syntactic processes, for one, are not sensitive to the information on the thematic structure but can take into account the formal features of the  $\theta$ -structure.

### 2.1.1 Arguments and $\theta$ -roles

Following Grimshaw (1990) we will take the argument structure to represent a hierarchical relationship among the arguments of a head, without direct reference to thematic roles. For example, the verb ver- 'give' has the following thematic and a-structures:

(2)    θ-structure	<u>agent</u>	<u>goal</u>	<u>theme</u>	
a-structure	(x	(y	(z)) )	ver- 'give'
	Ali	ban-a	kitab-i	ver- di
	I-	DAT	book- ACC	give-PAST-3SG
'Ali gave me the book.'				

Actually, the nature of the correspondence between θ-roles of the θ-structure and the arguments of a-structure is far from being uncontroversial. In certain theories, Grimshaw (1990) for one, hierarchical organization of the a-structure partially follows from the hierarchy of thematic roles, agent being most prominent and theme the least. To what extent the a-structure hierarchy is based on thematic hierarchy will be left an open question in the present study.

We will assume that agents are always external arguments and that themes are always the least prominent. As indicated in (2), the most prominent argument will be the least embedded, and the least prominent would be the most deeply embedded. In representing the hierarchy of the arguments in θ-structure we will observe the well-known distinction between unergative and unaccusative verbs. Where the former will have external arguments, the latter will have only internal arguments. For want of a clear syntactic diagnostic in distinguishing between unergativity and unaccusativity in Turkish, we will rely on the agentivity of the argument in question, thus assigning a prominent role to thematic hierarchy in establishing θ-structure hierarchy.

Moreover, the a-structure representations adopted here distinguish arguments only relative to one another. The two structures in (3a,b), below, will have the same a-structure indicated in (c), and (d) will be avoided.

(3) a. Agent    theme

Ali        kuş-u        vur-du.  
 A.        bird-ACC    shoot-PAST

'Ali shot the bird.'

b. Agent    goal

Ali        kuş-a        bak-tı.  
 A.        bird-DAT    look-PAST

'Ali looked at the bird.'

## c. (x        (y))        bak-    'look'

(x        (y))        vur-    'shoot'

## d. \*(x    (y    ( )))        bak-    'look'

(3d) will be disallowed since it is the direct representation of thematic hierarchy in disguise. Following Grimshaw (1990:41) the argument prominence relations for different types of verbs will be expressed as in (4) below.

(4) a. Transitive

(x        (y))

Agent    Theme

b. Ditransitive

(x        (y    (z)))

Agent    Goal    Theme

c. Unergative

(x)

Agent

d. Unaccusative

(x))

e. Intransitive with indirect object

(x (y))

2.1.2 Case Properties

Another sort of information that must be provided with a lexical entry that is a head is whether or not it assigns structural case. This is equivalent to marking a verb ± transitive in standard theory of Chomsky (1965). For example, we wish to know that of the two verbs çimdikle--'to pinch'--and çimdik at--'to throw a pinch'--the first is transitive and assigns structural case on its internal argument, while the second assigns inherent or semantic case.

- (5) a. Ayşe Ali'yi çimdikle-di.  
       A. A-ACC     pinch-PAST-3SG

'Ayşe pinched Ali.'

- b. Ayşe Ali'ye çimdik at-tı.  
       A. A-DAT     pinch throw-PAST-3SG

'Ayşe pinched Ali.'

We will discuss different types of cases at some length in section 2.2 of this chapter. What we would like to emphasize here is that transitivity, which we take to be equivalent to structural case assignment property of verbs in Turkish, must be marked as an idiosyncratic property of the lexical item.

### 2.1.3 From Thematic Roles to Structure

In this subsection we will return to thematic structure and explore some interesting consequences of s(emantic)-selection suggested by Chomsky (1986a). We will suggest that certain structural properties of complement clauses can best be read off from thematic roles.

#### 2.1.3.1 c-selection, s-selection

In the standard theory of Chomsky (1965), heads select not only semantic roles but the syntactic categories and syntactic structures which would carry those semantic roles. For example the verb persuade would have the following subcategorization frame:

- (6) persuade, (+V, + NP (of Det N)S') Chomsky (1965:94)

This would then permit the following expressions:

- (7) a. John persuaded Bill that we should leave.  
b. John persuaded Bill of the necessity for us to leave.

(Chomsky (1965:95)

Ever since Chomsky (1965), how much categorical information must be represented in the lexicon has been a controversial issue. This naturally correlates with the question, How much categorical information is predictable from semantic roles and how much of it is idiosyncratic?

Chomsky (1986a) reconsiders this issue and suggests that if the verb hit- s(emantically) selects a patient θ-role, then it would be redundant for it to c(ategorically) select an NP that would carry this θ-role. By some independent mechanism the c-selection of the NP for hit-

may be inferred. Chomsky (1986a) then introduces a set of canonical structural realization (CSR) functions, like (8) below:

- (8) CSR (patient) = NP

Now, when hit s-selects patient it also c-selects an NP through (8).

This mechanism of CSR's is extended to cover more complex cases. The verb persuade appears in the following contexts.

- (9) a. \_\_\_\_\_ John that he should go to college  
 b. \_\_\_\_\_ John to go to college  
 c. \_\_\_\_\_ John of the importance of going to college

It is suggested that persuade only s-selects a goal and a proposition.

Independent CSR functions can then be set up to dispense with the stipulation that persuade directly c-selects NP's or S's.

- (10) a. CSR (goal) = NP  
 b. CSR (proposition) = clause or NP

Notice that (10) indicates that the second NP will receive a propositional interpretation. Chomsky (1986a) suggests that along these lines direct c-selection may be dispensed with in the lexicon.

Whether or not all categorical selection may be read off directly from thematic roles is a rather controversial issue which we will not enter here. However, in the next section we will inquire into the extensions of the possibility of determining various structural properties directly from thematic roles.

### 2.1.3.2 Act and Fact

Consider the following examples:

- (11) a. [Ali-nin gel-diğ-in-i] doğrula-di-m  
          A-GEN come-PART-3SG-ACC confirm-PAST-1SG

'I confirmed that Ali came.'

- b. \*[Ali-nin gel-me-sin-i] doğrula-di-m.  
          A-GEN come-VN-3SG-ACC confirm-PAST-1SG

'I confirmed Ali's coming.'

- (12) a. \*[Ali-nin gel-diğ-in-i] destekle-di-m.  
          A-GEN come-PART-3SG-ACC support-PAST-1SG

'I supported Ali's coming.'

- b. [Ali-nin gel-me-sin-i] destekle-di-m.  
          A-GEN come-VN-3PSG-ACC support-PAST-1SG

'I supported Ali's coming.'

In the (a) sentences of (11) and (12), the complement clauses are participial, or fact-type nominalizations. In the corresponding (b) sentences, the complement clauses are act or nominal type. This was initially observed by Lees (1965).<sup>1</sup>

Returning to the examples just discussed, we notice that while doğrula- 'confirm' takes only fact complements, deslekle- 'support' only selects act complements. The question to ask here is whether or not such information should be directly represented in the lexicon. If this selectional peculiarity is idiosyncratic to certain heads then there must be categorical selection for the type of the complement clause. If, however, it can be shown that there is a semantic relationship

between the head and the type of the clause it selects, we may be able to infer the type of the clause from this property.

The selectional properties just discussed are not only peculiar to verbs. Some predicate adjectives show the same behavior.

- (13) a. [Ali'nin kazan-acağ-ı] açık.  
A-GEN win-PART-3SG clear

'It is clear that Ali will win.'

- b. \*[Ali-nin kazan-ma-sı] açık.  
A-GEN win-VN-3SG clear

'Ali's winning is clear.'

- (14) a. \*[Ali'nin konuş-acağ-ı] sakıncalı.  
A-GEN speak-PART-3SG improper

'It is improper that Ali will speak.'

- b. [Ali'nin konuş-ma-sı] sakıncalı.  
A-GEN speak-VN-3SG improper

'Ali's talking is improper.'

'It is improper for A. to talk.'

Lees (1965) also observed that while some nouns only select fact type complements as appositive clauses, the others select the act type.

Observe below.

- (15) a. [Ev-in yan- diğ- ı] iddia-sı  
house-GEN burn-PART-3SG claim-3SG

'The claim that the house burned down'

- b. \*[ev- in yan- ma-sı] iddia-sı  
house-GEN burn-VN-3SG claim-3SG

'The claim the house's burning down'

- (16) a. \*[iş-in bitir-il-dig-i] mesele-si  
           job-GEN finish-PASS-PART-3SG issue-3SG

'The issue that the job's being finished'

- b. [iş-in bitir-il-me-si] mesele-si  
           job-GEN finish-PASS-VN-3SG issue-3SG

'The issue of finishing the job'

What is meant by the act/fact distinction may be intuitively clear already. The clauses in the (a) sentences of (11)-(16) refer to a statement of fact, an actuality, an assertion that can be affirmed or denied. Act complements, on the other hand, do not have this property. They denote the act itself rather than the actual happening. This somewhat vague distinction should be enough to explain the semantic incompatibilities between the complement clauses and the heads in the ungrammatical examples. In (11b) an act is incorrectly confirmed, because acts do not have the property of being true or false. Similarly, in (12a) a fact is being supported. One can side with a possible act, but siding with or supporting a statement of fact is meaningless, and so on.

Furthermore, notice below that when both types of complements appear with the same predicate, the heads are necessarily interpreted as distinct in meaning.

- (17) a. [Ali-nin git-tiğ-i] doğru değil.  
           A-GEN go-PART-3SG true not

'It is not true that Ali left.'

- b. [Ali-nin git-me-si] doğru değil.  
 A-GEN go-VN-3POSS right not

'Ali's leaving is not right/correct.'  
 'It is not right for Ali to leave.'

The adjective doğru has two senses, 'morally right' and 'true' (the opposite of 'false'). In (17a) doğru can mean only 'true', since only a fact as expressed by its clause can be true or false. In (17b) only the 'correct behavior' reading can refer to the act.

#### 2.1.3.3 Sentential Subjects of Transitive Sentences

The distribution of act/fact clauses is such that the sentential subjects of transitive clauses with experiencer objects are always of the act type. Consider the following:

- (18) a. [Birisi-nin karşı-m-da burn-un-u karıştır-dığ- 1] ben-i  
 someone-GEN opposit-1SG-LOC nose-3SG-ACC pick-PART-3SG I-ACC  
 deli ed-er.  
 crazy do-AOR

'That someone picks his nose in front of me drives me crazy.'

- b. [Birisi-nin karşı-m- da burn-un- u karıştır-ma-sı]  
 someone-GEN opposite-1SG-LOC nose-3SG-ACC pick- VN-3SG  
 ben-i deli ed-er.  
 I-ACC crazy do-AOR

'Someone's picking his nose in front of me drives me crazy.'

Here again (18b) is well-formed because what naturally affects a person is the act itself rather than the statement of a fact.

#### 2.1.3.4 Act and Fact as Semantic Roles

Let us now exploit the possibility suggested by Chomsky (1986a) that we have already alluded to, namely, that complements may be assigned semantic roles. Let us further assume that certain verbs and adjectives select the thematic roles of either act or fact. We will then posit the following CSR functions:

- (19) a. CSR (fact) = DIG/YECEG clause
- b. CSR (act) = VN clause

Notice that (19) go further than Chomsky's (1986a) suggestion. There, CSR's determine the syntactic category, NP, S, that carries the semantic role in question. Here, CSR's determine the structural properties of complement clauses.

We will interpret (19) as analogous to semantic cases which we will discuss in the next section. For example, goal is consistently dative, source is regularly ablative, etc. In such cases there is a direct link between the semantic role and the morphological case. -DIG/-YECEG and -VN clauses in Turkish exhibit similar properties; that is, a construction type regularly reflects a general semantic role.

#### 2.1.4 Word Formation in the Lexicon

Here we will take the position without much comment that all derivational morphology is confined to the lexicon, whether productive or not. This position, which is usually called the Extended Lexicalist Position (Jackendoff (1972), Chomsky (1988b) and others) relegates inflectional morphology to syntax. In this section we will discuss some properties of verbal derivation and compound verbs within our basic set

of assumptions. We will illustrate how the elements of the argument structure are manipulated in the process of derivation.

#### 2.1.4.1 Some Examples

We will operate under the assumption that ordinarily derivations do not make reference to thematic structures but only to the argument structure. Consider initially the two deverbal adjectives çalışkan 'hard-working' and solgun 'faded'.

(20)	a.	$\begin{array}{c} (x) \\   \\ ((x)) \end{array}$	çalış	'work'
			çalış-kan	'hard-working'
	b.	$\begin{array}{c} ((x)) \\   \\ ((x)) \end{array}$	sol-	'fade'
			sol-gun	'faded'

Now in (20a) the argument that the adjective çalışkan 'hardworking' is predicated on is an agent of the verb çalış- 'work'. In (20b) the argument of the adjective solgun 'faded' is a theme corresponding to the same θ-role of the verb sol- 'fade'. In the present framework this thematic correspondence between the verb and the derived adjective is indirectly captured. We will say that in (20a) the sole argument of çalışkan corresponds to the external argument of the source verb çalış-, while in (20b) the argument of the adjective corresponds to the internal argument of the source verb, sol-.

#### 2.1.4.2 Incorporating Compounds

Turkish has two types of compound verbs. The one we will call incorporating compounds involves the incorporation of the theme argument

into the verb. What this means is that in [N+V] compounds the N corresponds to the theme argument of V. Observe below:

- (21)    örnek al-        'take example/to pattern after something'  
           demir al-        'take anchor/weigh anchor'

The verb al- ordinarily takes one external and two internal arguments

- (22)    (x        (y        (z)))    al-  
           Agent    source    theme  
           Ben Ali'den    bir    kitap    al-    di-    m  
           I    A-ABL      a    book    take-PAST-1SG  
           'I took a book from Ali.'

In the type of compounds cited in (21), the nouns örnek 'example' and demir 'anchor' correspond to the most deeply embedded argument of the verb al. The general pattern may be expressed as follows:

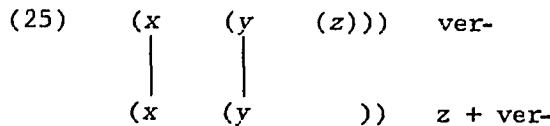
- (23)    (x    (y    (z)))        al-  
           (x    (y        ))        z+al

The compound derived this way has one external, and one internal, source, argument. This is true of the compounds in (21). Notice again that the process does not directly refer to any thematic roles.

We will illustrate the same type of compounding with the verb ver- 'give' that takes an external argument and two internal arguments, a goal and a theme.

- (24)      *kulak ver-*        'listen carefully'  
             'ear give'
- anlam ver-*        'to find a sense'  
             'meaning give'
- zarar ver-*        'to damage'  
             'harm'give'

In the compound verb in (24), the N corresponds to the most deeply embedded (i.e. theme) argument of the verb. The compound then takes an internal argument corresponding to the goal argument of the source verb.



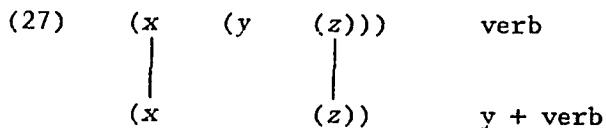
(25) shows the pattern of this type of compounding.<sup>2</sup> We are assuming here that *al-* 'take' does not select goal and *ver-* 'give' does not select source arguments, so the θ-role represented by (y) is uniquely interpretable in each case.<sup>3</sup> We will identify this as the unmarked, incorporating compound.

#### 2.1.4.2.1 Incorporating Non-themes

There are compounds in Turkish where the incorporated argument is not the most deeply embedded one. Typically in such cases the incorporated noun appears in the morphological case that identifies its thematic status: goal/Dative, source/Ablative, etc.

- (26)      *yaban-a at-*  
             wild-DAT throw        'disregard'
- el-e ver-*        'to tell on someone'  
             hand-DAT give

As expected, these verbs select a theme argument corresponding to the most deeply embedded argument of the source verb. The pattern of incorporation is as follows:



- (28)    a. Ali ben-i    el-e    ver-di.  
          A    I-ACC   hand-DAT   give-PAST

'Ali turned me in.'

- b. Bu kitab-i    yaban-a    at-ma.  
   This book-ACC   wild-DAT   throw NEG

'Do not disregard this book.'

#### 2.1.4.3 Summary

We have observed so far that in incorporating compound verbs no argument is added or suppressed in the argument structure of the source verb. One argument is incorporated into the verb. The resulting compound is then intransitive as in (21) and (25) above when the incorporating argument is the most deeply embedded one that receives ordinarily the direct object case. The compound remains transitive if the incorporating argument is one that is not most deeply embedded, since the compound directly inherits the most deeply embedded argument of the source verb, which renders it transitive.<sup>4</sup>

#### 2.1.4.4 Adding, Suppressing Arguments

Most lexical derivations involve the addition or suppression of an argument of the source lexical entry. Grimshaw (1990) argues that

there are suppressed argument positions that can license argument adjuncts.

The typical case is the lexical derivation of passive verbs.

There has been in the literature a controversy surrounding the by-phrases in passive clauses. In one sense they behave like adjuncts. They are optional and display various syntactic properties peculiar to adjuncts (Zubizaretta, (1985)). But they also display an argument property in providing information that is expressed by arguments, namely the agent of a verb. Grimshaw (1990) suggests that they should be considered a(rgument)-adjuncts. They are represented in the argument structure without being available for  $\Theta$ -marking purposes, which makes them implicit arguments.

We find this approach quite insightful and explore its implications for Turkish. For example, we will assume that passive in Turkish suppresses the external argument of a verb.

(29)	(x	(y))	oku-	'read'
	(x	(y))	oku-n-	'be read'

We will deal with passives and related phenomena in Section 2.3 of this chapter.

While passive derivation involves suppressing the external argument, causative derivation adds an extra argument to the source verb.

(30)	(x	(y))	oku-	'read'
	(z	(x	(y))	oku-t-

'make read'

We will present a lexical analysis of Turkish causatives in Section 2.4, below.

### 2.1.5 Summary

In this section we have outlined some basic properties of a possible lexicon for Turkish. Specifically we emphasized the relationship between thematic and argument structures. We suggested how s-selection may predict the structural properties of act and fact clauses. Finally, we illustrated how various lexical derivations manipulate the elements of the argument structure.

## 2.2 Argument Structure and Case

In this section we will outline the general properties of a case theory for Turkish. Following Kornfilt's (1984) seminal work on this topic we will attempt to clarify the distinction between abstract and morphological cases on the one hand, and structural and non-structural cases on the other. After having specified the status of inherent case, we will argue for case-by-adjunction that assigns case to internal arguments at s-structure. Finally we will explain the ACCUSATIVE case assignment in derived nominals.

### 2.2.1 The Case Filter

The central requirement of Case theory is the case filter of Chomsky (1986a: 74).

- (31) Every phonetically realized NP must be assigned  
 (abstract) Case.

Case is assigned to an argument by a head that selects it. As we will see below verbs, adjectives and postpositions are Case assigners.

The case filter (31) is functionally related to the visibility requirement which itself is related to the theta-criterion. An NP can be identified as an argument if it is assigned a theta role, and to be assigned a theta role an NP must be visible. Now it is Abstract case that renders an NP visible. Case in fact designates an NP as an argument.

#### 2.2.2 Abstract and Morphological Case

Consider (32) below.

- (32)    a. Linda remembered John
- b. Linda remembered him

In both (32a) and (32b) the verb remembered assigns case to the object. It is reasonable to think that the direct object in each example is uniformly assigned the same Case. But John is nominative whereas him is accusative. Whatever case is assigned to the direct object is not uniformly manifested morphologically.

This confusion is avoided by distinguishing between Abstract and morphological case. It is assumed that in English transitive verbs assign ACCUSATIVE Case to their objects. This is the so-called abstract Case, which is overtly manifested only in pronouns as accusative, since lexical N's do not bear overt accusative case in English.

Morphological case, then, is what we know case to be in traditional grammar: certain affixes that are identifiable as

nominative, accusative, dative, etc. Abstract Case, on the other hand, is an abstract property assigned to an argument which is represented by some morphological case within the limitations on the N's of that language to bear such overt cases.

#### 2.2.2.1 Abstract and Morphological Case in Turkish

The same distinction between abstract and morphological case is relevant in Turkish since the expected uniformity of Case assignment by a head is not always directly reflected by morphological cases.

Consider the following.

- (33) a. Ali (\*nin) için  
A.(-GEN) for

'For Ali'

- b. On-un için  
he-GEN for

\*O için  
he for

'For him'

In (33a) Ali may not bear the morphological genitive case, and in (33b) the pronoun o(n) has to be in the genitive.

We believe it is safe to assume that the postposition icin 'for' in each example assigns the same case-call it GENITIVE. When assigned by a postposition, this abstract GENITIVE case is morphologically represented with pronouns but not with lexical N's.<sup>5</sup>

Finally, it is important to note how morphological case variation is differently motivated in Turkish than in English. In English lexical NP's that are marked ACCUSATIVE cannot bear

morphological accusative because that case is restricted to pronouns. In Turkish, however, a lexical NP can independently be marked in the genitive. It is when governed by a postposition that this genitive nominative ( $\emptyset$ ) alternation is observed. It follows from this that surface morphological case alternation on an argument that is uniformly Case-marked may be contextually motivated. We will mention more such cases further below.

We will assume in what follows that Turkish predicates assign three abstract Cases, NOMINATIVE, GENITIVE and ACCUSATIVE. The morphological cases we will refer to are the following seven: nominative, accusative, genitive, dative, ablative, locative, and comitative. We will consider all of these in the following sections.

### 2.2.3 Types of Case Assignment

Government and Binding Theory distinguishes between structural and inherent case (Chomsky, 1986a). Baker (1988) introduces a third type of case assignment called Semantic Case. These three are distinguished with respect to the special relationship between the case-assigner and the argument the case is assigned. In this section we will investigate the properties of each type.

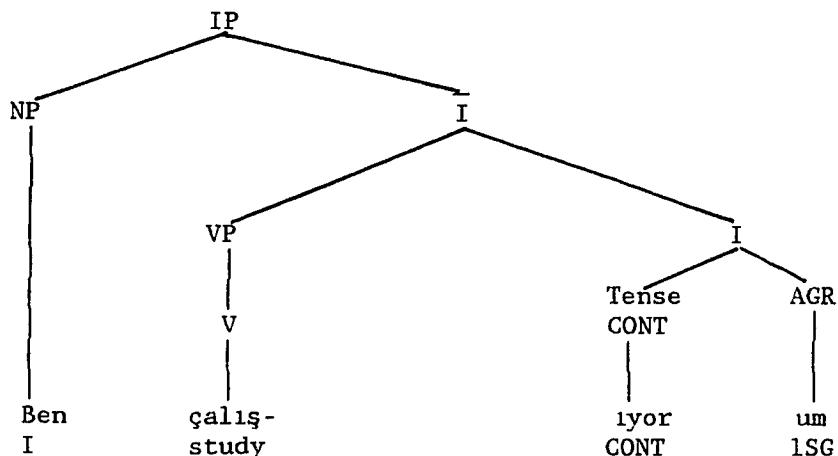
#### 2.2.3.1 Structural Case

Structural case is assigned to an NP by a governing case assigner. In this kind of case the sufficient condition between the assigner and the assignee is that the former be a case assigner and govern the latter. We will assume that, in Turkish, AGR under INFL, transitive verbs, and some postpositions assign structural case.

### 2.2.3.1.1 AGR as a Case-Assigner

Following Kornfilt (1984) we will assume that the AGR under INFL assigns nominative case to the subject it governs. Observe below.

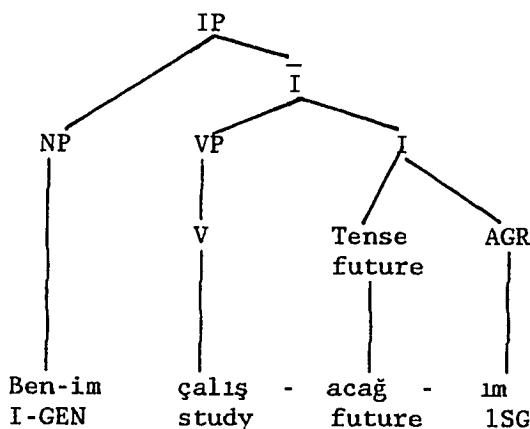
(34)



'I am studying.'

Two kinds of AGR must be distinguished in Turkish: finite as in (34) above, and nominal as in (35) below.

(35)



'That I will study.'

First, observe below that finite and nominal AGR are morphologically distinct.

(36)	<u>Finite AGR</u>	<u>Nominal AGR</u> (Possessive)
	<u>With Past and Conditional Tenses</u>	<u>With Other Finite Tenses</u>
SG.	1. - m	- I <sub>m</sub>
	2. - n	- s <sub>in</sub>
	3. - Ø	- Ø
PLR	1. - k	- (y)I <sub>z</sub>
	2. - nI <sub>z</sub>	- s <sub>iñiz</sub>
	3. - lEr	- (d̄r)-lEr
		- lEr-I

The finite AGR paradigm in the second column is unstressable attracting the primary stress on the immediately preceding syllable.

#### 2.2.3.1.2 Government

An appropriate definition of government is necessary at this point. As a first approximation we will suggest (37) below to be modified later on.

(37) A governs B iff.,

- (i) A is a potential governor, and
- (ii) A m-commands B.

A m-commands B iff A does not dominate B and every maximal projection that dominates A also dominates B.

Potential governors are lexical categories and INFL with AGR.<sup>6</sup>

In both (34) and (35), [AGR]I which is a potential governor governs the subject [NP]IP, since every maximal projection (IP) that dominates [AGR]I also dominates [NP]IP.

Now we will say that the [AGR]I in (34) assigns NOMINATIVE case to its subject while the [AGR]INFL in (35) assigns GENITIVE case.

NOMINATIVE always surfaces as nominative which is morphologically Ø.

The GENITIVE assigned by the nominal AGR is realized as an overt morphological genitive morpheme just in case the clause, that is the IP in (35), is a noun clause.<sup>7</sup>

#### 2.2.3.1.3 Exceptional Case Marking

Consider the following:

- (38) a. Ben [sen git-ti-n] san-di-m  
          I you go-PAST-2SG think-PAST-1SG  
          'I thought you left'
- b. Ben [sen git-ti] san-di-m  
          I you leave-PAST think-PAST-1SG  
          'I thought you left.'
- c. Ben [sen-i git-ti] san-di-m  
          I you-ACC leave-PAST think-PAST-1SG  
          'I thought you left.'

Following Kornfilt (1984) we will assume that in (38a) the AGR, 2SG -n, assigns NOMINATIVE case on sen. In (38b) the complement subject is not assigned case since there is no AGR in the complement. This results in a violation of the case filter. In (38c), the matrix verb, san- 'think' assigns ACCUSATIVE case on the subject under government (as we will discuss shortly) thus satisfying the case filter.<sup>8</sup>

#### 2.2.3.1.4 A New Definition of Government

Since structural case is assigned by a case-assigner under government, we have to consider the examples in (38) to see what type of government exists between the matrix verb and the complement subject.

The definition of government we will adopt here is basically that of Rizzi (1990) as modified by Haegeman (1991:152).

(39)     Government

A governs B iff.,

- (i) A is a governor
- (ii) A m-commands B
- (iii) minimality is respected

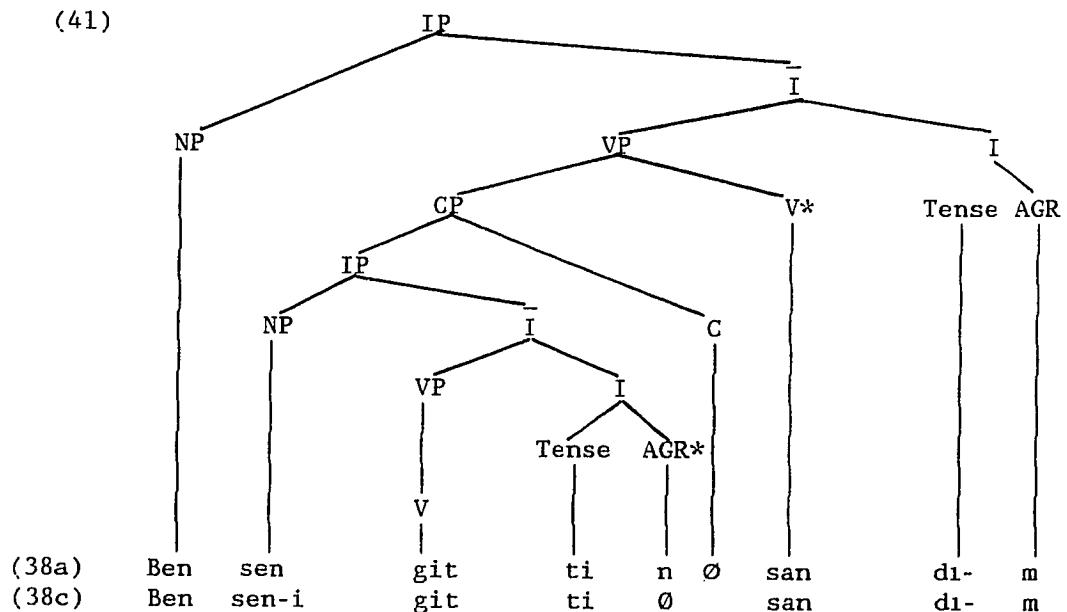
Governors are lexical categories and [AGR]I.<sup>9</sup>

(40)     Minimality

A governs B iff there is no node Z such that

- (i) Z is a potential governor for B
- (ii) Z m-commands B
- (iii) Z does not m-command A

Let us see now how (39) and (40) relate to Exceptional Case marking constructions represented in (41) below.



In (38a) under (41), AGR\*, a governor, m-commands the subject sen and assigns Case to it. Notice that in this structure V\* cannot govern the complement subject because of the minimality condition.

AGR\*, a potential governor, does m-command the complement subject but not V\*. In (38c), V\* does govern the complement subject, since with the AGR missing, there is no potential governor that would violate the minimality condition (40).<sup>10</sup>

#### 2.2.3.1.5 The Case of the Direct Object

We have seen in (41) an example of a transitive verb assigning ACCUSATIVE case under government. This abstract case is further represented by the overt accusative morphology. Not all direct objects bear the accusative case, however. Observe the following:

- (42) a. Ali kitab-1 oku-du.  
          A. book-ACC read-PAST-3SG

'Ali read the book.'

- b. Kitab-1 Ali oku-du.  
 book-ACC A. read-PAST-3SG  
 'Ali read the book.'
- c. \* Kitap Ali oku-du.  
 book A. read-PAST  
 'Ali read a book/books.'
- d. Ali oku-du kitab-1.  
 A. read-PAST book-ACC  
 'Ali read the book.'
- e. Ali cok ilginc bir kitap oku-mus.  
 A. very interesting a book read-DUB-3SG  
 'Ali read a very interesting book.'
- f. \*Ali oku-mus cok ilginç bir kitap.  
 A. read-DUB very interesting a book

How case theory predicts all of the examples in (42) is by no means straightforward. In this section we will consider the problems involved and suggest a solution.

First, notice that in (42a) the verb oku- 'read' assigns ACCUSATIVE case to its direct object, kitap, which bears the morphological accusative case. Such direct objects need not remain in their d-structure position, and can scramble away from the immediate left of their verbs, as in (42b). In (42e) the direct object is not marked in the morphological accusative. As we observe in (42f), such objects may not move away from the immediate left of their verbs, which is their d-structure position.

Second, the presence and absence of accusative morphology correlates with specificity; while an accusative object has specific interpretation, the nominative direct object is non-specific. We will

ignore this point in the present discussion.<sup>11</sup> Now the question is: Is the object, cok ilginc bir kitap, assigned case, and if so, which case? Let us begin by assuming that the verb okumus 'read' assigns ACCUSATIVE case to its object, but the morphological accusative does not show up for semantic reasons.

Now consider the passive sentence (43), below.

- (43) Derste    cok enteresan bir kitap    oku-n-mus.  
Lesson-LOC very interesting a book read-PASS-DUB

'I understand a very interesting book was read in class.'

What assigns case to cok enteresan bir kitap in (43)? Let us begin by observing that the thematic relation between the verb and cok enteresan bir kitap is one and the same in (42c) and in (43). Furthermore, in both of these sentences the object NP cannot be moved away from the immediate left of the verb. All of these would lead one to assume that cok enteresan bir kitap is assigned the same case in both instances. But this case cannot be ACCUSATIVE in (43), because passive verbs do not assign ACCUSATIVE case.

With these observations in mind let us explore a somewhat different explanation to the problem at hand. Let us start with the observation that the objects in question must remain adjacent to their verbs. We will say that such NP's are left-adjoined to the verbs. We will ignore the details of the exact structural properties of this adjunction. Let us assume that it is [...NP V]V̄. Following Kornfilt (1984) we will assume that V assigns case to the NP under "strict adjacency," but we will also refer to this as "case-by-adjunction."

### 2.2.3.1.6 Case by Adjunction

There still remains the question, however, as to what case is assigned here. Assuming that case is assigned uniformly by the verbs in (42c) and (43) to the internal argument of the verb oku-, and knowing that it cannot be the ACCUSATIVE case in (43), let us call this simply CASE-by-adjunction. By this we mean that the NP's in question are case-marked by virtue of their relative position with respect to the verb.

Now is this compatible with the case theory? Baker (1988:112) notes that NP's must get case, to be interpreted in a given structure. In other words case helps identify which argument is represented by that NP. The case-by-adjunction proposed here identifies such case-marked NP's as internal arguments, and they are rendered visible by their relative position to their case-assigner.

One final question we will address is: If the nominative internal arguments we have been discussing here are rendered visible by their relative position, do they need to be assigned case at all? In fact, Baker (1988) argues that incorporated N's, which have properties similar to the internal arguments we have been discussing, do not need case. The NP's under question do in fact need case in Turkish, because case-by-adjunction exhausts the structural case assignment property of a transitive verb. For example (44), below, is ruled out.

(44)	*	Ben	Ali'yi	kitap	oku-	t-	tu-	m
		I	A-ACC	book		read-CAUSE-PAST-1SG		

The causative verb okut- 'make read' is transitive and it must assign its case. The Cause-agent, Ali, can possibly be assigned ACCUSATIVE in similar constructions.

- (45) Ben Ali'yi      gül-dür-dü-m  
       I      A'ACC      laugh-CAUSE-PAST-1SG

'I made Ali laugh.'

The reason why (44) is ruled out is because oku assigned two structural cases, ACCUSATIVE and by-adjunction. We will interpret this as an indication of the fact that case-by-adjunction is an abstract structural case.

Let us now summarize our claims concerning the structural case assigned by verbs.

- (46) a. All verbs transitive or intransitive can assign case-by-adjunction to an internal argument.  
       b. A verb may assign at most one structural case.  
       c. Transitive verbs must assign structural case.

Now, (44) above is ruled out by (46b).

We will see further on when we discuss passives and causatives that (46) have far-reaching consequences.

#### 2.2.3.2 Inherent Case

We indicated in the previous section that structural case was assigned by a possible case assigner to an NP under government. A different kind of case assignment, inherent case, was proposed by Chomsky (1986a), which in addition to government also requires theta role assignment by the case assigner to the NP.

## (47) Inherent Case

If  $\alpha$  is an inherent case-assigner, then  $\alpha$  assigns inherent case to NP if and only iff it assigns a theta role to NP.<sup>12</sup>

What (47) says in effect is that an NP may receive inherent case only by virtue of having received a theta role from a case assigner. Therefore, since this case is a sign of having been assigned a particular theta role by the case-assigner, we expect inherent case to be permanent once assigned. Moreover, since inherent case is based on the special relationship of theta assignment and not on any special configurational property to be obtained by movement or restructuring, it should be able to apply in d-structure. Structural case assignment, on the other hand solely depends on configurational properties and has to apply in s-structure, following move- $\alpha$ .

Let us see how this takes place in the following passive sentence.

- (48) Kitap Ali'ye ver-il-di-Ø  
book A.-DAT give-PASS-PAST-3SG

'The book is given to Ali.'

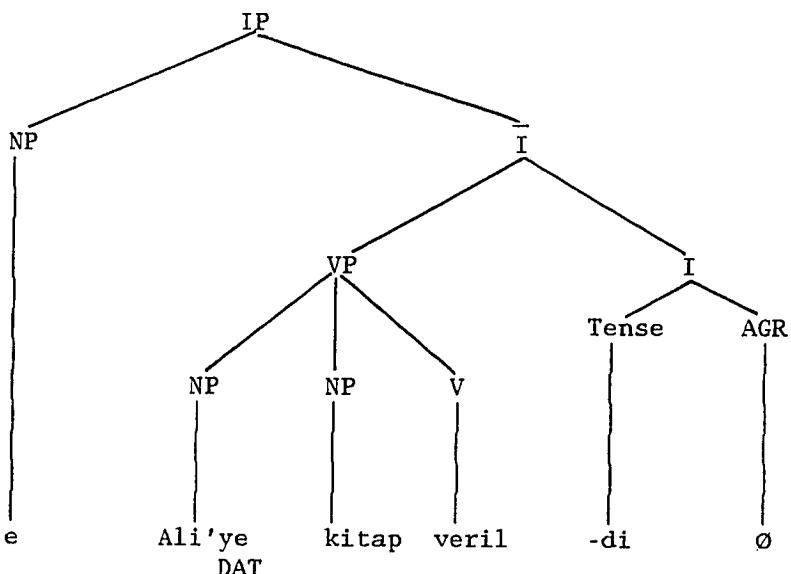
The argument structure of the passive verb veril is as in (49).

- (49) goal theme

(Ø (x (y)) ver-il-

Let us assume that ver-il- inherently assigns dative case to its goal argument. Being inherent this happens in d-structure as we assumed above.

(50)



The passive verb, veril, being intransitive, cannot assign ACCUSATIVE case to kitap. Therefore, kitap will either move to the subject position by move-NP to be assigned NOMINATIVE case by [AGR]I, in which case we will have (48), or it will adjoin to V to receive case-by-adjunction, to yield (51), below.

- (51)     Ali'ye    kitap    ver- il- di.  
           A.-DAT    book     give-PASS-PART-3SG

'Ali was given a book/books.'

#### 2.2.3.2.1 Inherent Case Assigners in Turkish

Ordinarily, inherent case assigners in Turkish are adjectives, verbs and postpositions. Observe the following.

- (52) a. Ayşe içtenlik-ten kok-uyor.  
       A. sincerity-ABL fear-CONT-3SG

'Ayşe fears sincerity.'

- b. Ali Ayşe'ye aşık.  
       A. A.-DAT lover

'Ali is in love with Ayşe.'

- c. Ali Ayşe'yle nişanlan-dı.  
       A. A.-COM engage-PAST-3SG

'Ali is engaged to (with) Ayşe.'

- d. O ben-den önce git-ti.  
       he I-ABL before go-PAST-3SG

'He left before me.'

In (52a) kork-mak 'to fear' assigns ablative case to its source/cause argument. In (b) the adjective aşık 'lover/in love' assigns DAT to its internal goal/target argument. In (52c) nisanlan 'to get engaged' assigns comitative case to its reciprocal argument. Finally, in (d) önce assigns ablative to its source argument.<sup>13</sup>

#### 2.2.3.2.2 Inherent Case by Default

Turkish also assigns inherent case by default typically in causative constructions. We will argue in Section 2.4.2 of this chapter that the dative in (53), below, is such a case.

- (53) a. Ali'ye kitab-ı oku-t-tu-m.  
       A-DAT book-ACC read-CAUSE-PAST-1SG

'I made Ali read the book.'

The reason why dative here is default is because not all causative verbs assign dative to one of their internal arguments.

### 2.2.3.3 Semantic Case

The third type of case that needs to be distinguished is the semantic case defined as follows:

- (54) If A assigns semantic case<sub>x</sub>, then B receives theta<sub>x</sub> from A if and only if B receives semantic case<sub>x</sub> from A.

Theta<sub>x</sub> is the specific thematic role associated with semantic case<sub>x</sub> (Baker 1988:113).

Semantic case is distinguished from inherent case in stipulating a direct relationship between thematic roles and morphological case.

Most probably Turkish has semantic case rather than inherent case, because thematic roles are ordinarily recoverable from morphological case. It is perfectly plausible to devise a set of Canonical Structural Representation functions to indicate this direct relationships between theta roles and cases, such as:

- (55) CSR(goal) = Dative  
CSR(source) = Ablative etc.

We will not comment further on this type of case.

### 2.2.3.4 What Assigns Case?

It is generally assumed that nouns and adjectives do not assign ACCUSATIVE case. First, observe the following.

- (56) a. Soldiers destroyed the city.  
b. \*Soldiers' destruction the city  
c. Soldiers' destruction of the city

It is argued by Chomsky (1981) that (56b) is ruled out because destruction being a noun cannot assign ACCUSATIVE case to its object, :the city, thus violating the case filter. In (c) the preposition of assigns ACCUSATIVE case to the city, to the satisfaction of the case filter.

In the following section we will consider similar cases from Turkish where nouns ostensibly assign ACCUSATIVE case to their objects.

#### 2.2.4 Derived Nominals in Turkish

First, consider the following:

- (57) a. Düşman-ın şehr-i istilâ-sı  
enemy-GEN city-ACC invasion-3SG

'The enemy's invasion (of) the city'

- b. Doktor-un hasta-yı muayene-si  
doctor-GEN patient-ACC examination-3SG

'The doctor's examination (of) the patient'

In both (57a) and (b), we have a direct object in the accusative, but no verb to assign such a case; both istilâ 'invasion' and muayene 'examination' are nouns not derived from recognizable verbal bases. But these are the only candidates for assigning the ACCUSATIVE to their direct objects. How is this possible?

Let us begin unravelling this puzzle by observing that the nouns istilâ and muayene are the nominal parts of the compound verbs, istilâ etmek 'to invade' and muayene etmek 'to examine' respectively.

Second, both of these verbs are transitive.

- (58) a. Düşman    şehr-i    istilâ    etti.  
          enemy    city-ACC invasion do-PAST-3SG

'The enemy invaded the city.'

- b. Doktor    hasta-yı    muayene    et-ti.  
          doctor patient-ACC examination do-PAST-3SG

'The doctor examined the patient.'

It seems natural to assume that if it is the N that assigns the ACCUSATIVE on the direct object it must somehow have inherited this property from the compound verb.

In this context observe below in (59) that act-type nominalizations are distinct from the derived nominals of (57).

- (59) a. Düşman-in    şehr-i    istilâ    et-me-si  
          enemy-GEN    city-ACC invasion do-VN-3SG

'The enemy's invading the city'

- b. Doktor-un    hasta-yı    muayene    et-me-si  
          doctor-GEN patient-ACC examination do-VN-3SG

'The doctor's examining the patient'

As expected, while nominalizations in (59) are fully productive, the derived nominals in (57) are extremely limited.

- (60) a. Sekreterin    yazı-yı    daktilo    et-me-si  
          secretary-GEN writing-ACC type-writer do-VN-3SG

'The secretary's typing the writing'

- b. \*Sekreter-in    yazı-yı    daktilo-su  
          secretary-GEN writing-ACC type-writer-3SG

'The secretary's type the writing'

#### 2.2.4.1 A Possible Explanation

One way to account for the derived nominals considered so far is to assume that they are derived from compound verbs having inherited their case assignment properties. Observe below.

- (61) a. (x (y))            [[istilâ]<sub>N</sub> et]<sub>V</sub> + ACC  
               (x (y))            [istilâ]<sub>N</sub> + ACC
- b. (x (y))            [muayene]<sub>N</sub> et]<sub>V</sub> + ACC  
               (x (y))            [muayene]<sub>N</sub> + ACC

If these derivations are correct istilâ 'invasion' in (57a) and muayene 'examination' in (57b) may now assign ACCUSATIVE case to their internal arguments.

#### 2.2.4.2 The Internal Structure of Derived Nominals

We have yet to apply one last test to the derived nominals, and that involves checking to see if in fact they have the internal structure of a sentence. It is well known from Chomsky (1970) that derived nominals may be modified by adjectives, but not by adverbs.

- (62) a. \* John's thoroughly criticism of the book  
       b. John's thorough criticism of the book

When we apply a similar test to (57a) and (b), we observe that the nominals prefer adverbs over adjectives.

- (63) a. Düşman-ın şehr-i hunhar-\*(ca) istila-s<sub>i</sub><sup>14</sup>  
          enemy-GEN city-ACC cruel -(ly) invasion-3SG  
       Lit: 'The enemy's cruelly invasion of the city'

- b. Doktor-un kasta-yı \*dikkatli muayene-si  
 doctor -GEN patient-ACC careful examination-3SG  
 dikkatle  
 carefully

Lit: 'The doctor's \*careful/carefully examination of the patient'

What (53) shows is that what look like derived nominals are in fact behaving like verbs in allowing adverbial rather than adjectival modifiers.

#### 2.2.4.3 A Second Explanation

In order to capture the verbal nature of the derived nominals we will propose the following derivation:

- (64) a. (x (y)) [[istilâ]\_N et]<sub>v</sub> + ACC  
 (x (y)) [[istilâ]\_N Ø]<sub>v</sub> + ACC
- b. (x (y)) [[muayene]\_N et]<sub>v</sub> + ACC  
 (x (y)) [[mayene]\_N Ø]<sub>v</sub> + ACC

Derivations in (64) are different from (61), above, in that they do not alter the lexical category of the compound verb. Notice that since the derived nominal retains the lexical category of the source, the preservation of the structural case assignment property of the source need not be stipulated. It will be automatically copied to the derived verbal form.

We can now safely maintain the condition that nouns, by themselves, may not assign ACCUSATIVE case in derived nominals; only verbs can.

### 2.2.5 Summary

In this section we distinguished between abstract and morphological case in Turkish. We also distinguished between structural case, and inherent and semantic case, and discussed some of their properties. We suggested that transitive verbs, [AGR]I, and perhaps some postpositions are structural case assigners. As for inherent case, we claimed that adjectives, most postpositions, and intransitive verbs can assign inherent case. Furthermore, we crucially distinguished case-by-adjunction and explained how it relates to structural case. Finally, we looked at some properties of derived nominals that apparently assign ACCUSATIVE case to their objects, but argued that the derived nominals in such cases are in fact syntactically verbal.

## 2.3 Lexical Passives

In this section we discuss passive derivation within the framework laid out so far. we look into the differences between unergative and unaccusative passives and conclude that the latter do not involve passive derivation as predicted in our framework.

### 2.3.1 Personal Passives

We will continue assuming that passive verbs are derived in the lexicon by suppressing the external argument of a verb. Additionally the transitive verb loses its property to assign ACCUSATIVE case. This last characteristic is said to follow from a general principle referred to as "Burzio's generalization."

(65) Burzio's generalization

A verb which lacks an external argument fails to assign ACCUSATIVE CASE.

In a passive derivation, inherent/semantic case assignment remains intact.

With these observations in mind let us consider a sample derivation of a passive verb.

(66)	(x	(y	(z)))	<u>ver-</u>	'give' + ACC
	( $\emptyset$	(y	(z)))	<u>ver-il-</u>	'be given' - ACC

In (66), the external argument is suppressed, but all other arguments remain intact, within the same hierarchical relation to one another. For example, ver 'give' assigns the inherent dative case to the argument that is immediately higher in the hierarchy following the most deeply embedded argument. This property is retained in ver-il 'be given'.

The major difference between a passive verb and its active counterpart is that since the passive verb may not assign ACCUSATIVE case the most deeply embedded argument, (z), must somehow move to a case-marked position. As we have already demonstrated in the preceding section it will either move to subject position to receive Nominative or Genitive case from the AGR or adjoin to the verb to receive case by adjunction. Since all other arguments of the passive verb will have received inherent/semantic case in d-structure, they will not interfere with this process.

Finally, we have to consider the status of the agent phrase in Turkish. As it is noted repeatedly in the literature (Lewis (1968),

Underhill (1976), Breckenridge (1975), etc.), the suppressed agents of the passive verb may, though rarely, appear in tarafından-phrases.

- (67) a. Bu öneri (bakanlık tarafından) redded-il-di.  
     This proposal ministry by reject-PASS-PAST-3SG  
     'This proposal was rejected by the ministry.'
- b. \*/?? Bu öneri sen-in tarafından redde-il-di.  
     This proposal you-GEN by reject-PASS-PAST  
     'This proposal was rejected by you.'

The overt tarafından phrase in Turkish is extremely limited by various pragmatic and semantic characteristics which we are unable to identify at present. We will assume following Grimshaw (1990), however, that where it does occur it may be licensed by the suppressed external argument.

### 2.3.2 Derived Intransitives

Turkish, in addition to true passive derivation, also employs the passive morpheme to derive intransitive verbs from transitives. These derived impersonals may be of the unaccusative type, that is, with no external argument, as well as the unergative type with an external argument. We will consider both of these in turn.

#### 2.3.2.1 Unaccusatives

Consider the well-known contrast in English.

- (68) a. John opened the door.  
     b. The door opened.

In (68a) open is transitive and selects an external argument. In (68b), it is intransitive and selects only an internal argument.

In Turkish, such pairs are usually derivationally related to one another, in that the intransitive verb is derived from the transitive verb by passive morphology.

- (69) a. Ali kapı-yı aç-tı.  
A. door-ACC open-PAST-3SG

'Ali opened the door.'

- b. Kapı aç-il-dı.  
door open-PASS-PAST

'The door opened.'

Observe that (69b) is ambiguous between passive and intransitive readings. In the passive reading an agent is implied. In the intransitive reading a cause is implied. Such sentences are disambiguated by the overt representation of the external argument.

- (70) a. Kapı rüzgár-dan aç-il-dı.  
door wind-ABL open-PASS-PAST-3SG

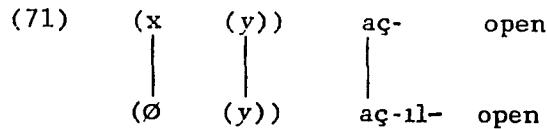
'The door opened on account of the wind.'

- b. Kapı birisi tarafından aç-il-dı.  
door someone by open-PASS-PAST-3SG

'The door was opened by someone.'

In Turkish the tarafından phrase always represents the agent. Therefore, (70a), above, would be ungrammatical with ruzgár tarafından 'by the wind'. The ablative, in such contexts, represents the thematic role cause.

We will assume that the intransitive aç-il 'open' is also derived from the verb aç 'open' by suppressing the external argument.



It is not clear from (71) whether this is a derivation of passive or intransitive. In fact we will claim that (71) represents the derivation both for passives and derived unaccusative intransitives. They are however distinguished at the level of thematic structure. In other words both passive and derived intransitives involve the same derivational process of attaching passive morphology to the verb and suppressing the external argument. If this suppressed external argument is agent then the resulting verb is passive, if it is a cause as in (72), below, then the resulting verb is intransitive.

- (72)      Rüzgâr    kapı-yı      aç-tı.  
             wind      door-ACC    open-PAST-3SG

'The wind opened the door.'

Notice, again, that the derivational process itself need not refer to the thematic content of the suppressed external argument at all. But if this argument is to be explicitly represented then reference has to be made to the thematic roles in question, possibly in the form of a Canonical Structural Representation functin.

This way we capture in the present framework the similarities and differences between passives and derived unaccusative intransitives in a straightforward way. They are alike, in that both have only internal and no external arguments, and they are different in that while

one implies agent argument the other implies a cause.<sup>15</sup>

### 2.3.2.2 Derived Unergatives

Turkish also uses passive morphology to derive unergative intransitives from transitive verbs by suppressing the internal argument. Observe the following.

- (73) a. Ali adam-in üst-ün-e atıl-dı.  
           A. man-GEN top-3SG-DAT jump-PASS-PAST-3SG  
           'Ali jumped on the man.'
- b. Ayşe çek-il-di.  
       A. pull-PASS-PAST  
       'Ayşe withdrew.'

We will suggest that such intransitive verbs with passive morphology and an external agent argument are derived as follows.

- (74)      agent    goal    theme
- a.      (x            ((y            (z)))            at-        'throw'  
           |            |            |            |  
           (x            (y            (Ø)))            at-il-     'jump on'
- b.      (x            (y))            çek-        'pull'  
           |            |  
           (x            (Ø))            çek-il-    'withdraw'

It is generally true that unergative derived intransitives have a reflexive sense. For example (73a) also means 'Ali threw himself on the man,' and (73b) means 'Ayşe pulled herself (back).' Notice that this insight is directly accounted for in (74), because morphological

reflexive formation normally involves suppressing the least prominent argument.

- (75) a. Ali kendin-i yıka-dı.  
           A. self-ACC wash-PAST

'Ali washed himself.'

- b. Ali yıka- n -dı.  
           A. wash -REF-PAST

'Ali washed(himself)'

### 2.3.3 The Passive Morpheme

We have considered so far three derivations with the passive morpheme. The unifying aspect of all these derivations is the suppression of an argument. In true passives and derived unaccusatives this is the most prominent one.<sup>16</sup> The second common aspect of all derivations with the passive morpheme is intransitivity. Second, as we have already noted true passives involve only the suppression of an external argument that is an agent. Derived unaccusatives on the other hand suppress external cause arguments (see footnote 15).

### 2.3.4 Impersonal Passives

Impersonal passives derive from intransitive verbs. If the observation that passive derivation can only suppress an external argument is correct then we would expect to find impersonal passives with unergative verbs but not with unaccusative verbs; since only the former will have external arguments.

Consider the following.

- (76). a. Dün gece burada sabah-a kadar dans ed-il-di.  
yesterday night here morning-DAT till dance do-PASS-PAST

'Last night it was danced here until the morning.'

- b. \* Dün gece burada çok kötü düs-ül-dü.  
yesterday night here very badly fall-PASS-PAST

'Last night it was fallen here very badly.'

In the present framework, we explain this by disallowing the derivation of the passive verb düs-ül- 'be fallen', while considering dans ed-il 'be danced' as well-formed.

- (77) a. (x) dans et 'dance'  
(Ø) dans ed-il 'be danced'
- b. ((x)) düs 'fall'  
\*((Ø)) düs-ül 'be fallen'

So the well-formedness of (76a) follows from the well-formedness of (77a), where passive correctly suppresses an external argument. The ill-formedness of (76b), on the other hand is predicated by the illicit passive formation in (77b), where an internal argument is suppressed.

#### 2.3.4.1 The 1-AEX

It was Perlmutter (1978) who first observed that languages that allowed impersonal passives did so only with unergative verbs. In his seminal work Turkish was cited among the languages that rendered support to this prediction. Perlmutter (1978) claimed that his observations followed directly from general principles of relational grammar.

Of particular interest here is the One Advancement Exclusiveness Law (1-AEX) which states, in effect, that in a given clause only one

argument can advance to subjecthood. Now, in examples like (76b), first the internal argument of düş 'fall' of (77b) advances to subjecthood. Then the passive rule demotes this argument from subjecthood to assign (advance) a dummy subject to the clause; thus giving rise to two advancements, violating the 1-AEX, while (76a), involves only one advancement to subjecthood, that of the dummy.

#### 2.3.4.2 Apparent Counter-Examples

Perlmutter's (1978) data for Turkish came to be challenged by Özkaragöz (1980), showing felicitous impersonal passives of unaccusative verbs. Furthermore, Özkaragöz (1986) and Knecht (1986a) claimed that Turkish even allowed the double passivization of a verb in a single clause.

Such claims attracted a good deal of attention by theorists of different persuasions who wished to maintain the 1-AEX effects in some fashion. Özkaragöz (1986) challenged the validity of the 1-AEX, while Knecht (1986a) suggested that the advancement analysis of passive should be abandoned. Postal (1986) concluded that Turkish did not have impersonal passives of any kind so the counter-examples were only apparent. Within the Government and Binding Theory, Baker (1988) suggested a solution to accomodate the unaccusative passives.

We will here observe the status of these counter-examples and argue, based on observable facts, that Turkish does not normally derive passive verbs from unaccusatives as we have predicted in our framework, and that the counter-examples are in fact apparent.

#### 2.3.4.3 The Tense Restriction

All of the counter-examples to 1-AEX in Özkaragöz (1986) are in the aorist tense. We might add that all the impersonal passives from Turkish exemplified by Perlmutter (1978) except one are in the aorist also.

A closer look at impersonal passives reveals that while unergative passives can felicitously occur in a variety of tenses, acceptable unaccusative passives can only be in the aorist.

- (78) a. Dikkat et, burada çok fena kay-ıl- ir.  
attention do here very badly skid-PASS-AOR  
'Be careful, one skids here very badly.'
- b. \*Ay, dün burada çok fena kay-ıl- di.  
Oh, yesterday here very badly skid-PASS-PAST  
'Oh, yesterday, it was skidded here very badly.'
- (79) a. Bu yetimhane-de çabuk büyü-n-ür  
This orphanage-LOC quickly grow-PASS-AOR  
'One grows fast in this orphanage.'
- b. \*Şimdi-ye kadar bu yetimhane-de çabuk büyü-n-dü.  
now-DAT until this orphanage-LOC quickly grow-PASS-PAST  
'Until now one grew fast in this orphanage.'
- c. \*Tabii ki bun-dan sonra da çabuk büyü-n-ecek-tir.  
surely this-ABL after also quickly grow-PASS-FUT-COP  
'Surely from now on one will grow fast also.'

Unergative passives are not subject to such a restriction.

(80) a. Unergatives

- Dün burada ne oldu?  
 'What happened here yesterday?'
- oyna-n-di 'it was played,'  
 çalış-il-di 'it was studied,'  
 hayal kur-ul-du 'it was daydreamed,'  
 avla-n-il-di 'it was hunted.'

b. Unaccusatives

- Dün burada ne oldu?  
 'What happened here yesterday?'
- \* tökezlen-il-di 'it was stumbled,'  
 \* boğul-un-du 'it was drowned,'  
 \* öl-ün-dü 'it was died,'  
 \* kaybol-un-du 'it was gotten lost,'  
 \* ihtiyarla-n-di 'it was gotten old.'

The second general function of the aorist is to denote permissive-possible or impermissible-prohibitive actions.

(81) a. Küçük çocuk ağla-r  
 little kid cry-AOR

'Little kids cry.'

b. İnsan büyükler-le böyle konuş-maz.  
 one elders-COM thus talk-NEG.AOR

'One does not talk to elders like this.'

Now unaccusative passives regularly have the permissive-possible or impermissible-impossible reading rather than the habitual reading. This

is true at the level of native intuition but it is quite difficult to construct examples that would bring it about.

- (82) a. Böyle bir yer-de ölü-ün- ür.  
       Thus a place-LOC die-PASS-AOR  
          'One can die in a place like this.'
- b. \*Bu bölge-de yıllar-dir ölü-ün- ür.<sup>17</sup>  
       This place-LOC years-COP die-PASS-AOR  
          'In this place for years people die.'

#### 2.3.4.4 Conclusion

In the light of the foregoing discussion it appears rather clearly that there is an important distinction between unergative passives and unaccusative passives, contrary to the claims of Özkaragöz (1980) and (1986). While unergative passives are possible in all tenses and moods, unaccusative passives are restricted to the permissive-prohibitive reading of the aorist. What seems to be the case is that unaccusative passives cannot have event readings. In this respect, they are more adjectival than verbal.

Let us mention in this context that the aorist suffix in Turkish does in fact derive substantives from verbs.

- (83) a. Çal- ar saat  
       ring-AOR clock  
          'alarm clock' Lit. 'ringing clock'
- b. Tükend- mez kalem  
       exhaust -NEG.AOR pen  
          'ballpoint pen' Lit. 'nonexhausting pen'

Before closing this section we will finally observe that while unergative passives can felicitously nominalize, unaccusative passives may not.

- (84) a. [Burada oyna-n- diğ- in- i] bil-mi-yor-du- m.  
here play-PASS-PART-3SG-ACC know-NEG-CONT-PAST-1SG

'I didn't know that it was played here.'

- b. \*[Burada öl- ün -düğ -ün -ü] hiç duy-ma- di m.  
here die-PASS-PART-3SG-ACC never here-NEG-PAST-1SG

'I never heard that it was died here.'

On this evidence we will conclude that Turkish does not derive passives from unaccusative verbs in the sense that it derives passives from unergatives. Although their exact nature eludes us here, we suggest that unaccusative passives are not verbal but adjectival in nature.<sup>18</sup>

#### 2.4 Lexical Causatives

In this section we will propose a lexical analysis for causative verb derivation in Turkish along the general principles outlined so far. Turkish causatives are quite extensively studied within various theoretical frameworks by Aissen (1974a,b), Zimmer (1976), Aissen and Hankamer (1980), Gibson and Özkaragöz (1981), Knecht (1986a,b). We will only address here some of the general properties of Turkish causatives, assuming that various controversial aspects of this issue can be possibly resolved in a way not contradicting the project outlined here.

We will first address the issue of assigning case correctly to the arguments of the causative verb. Second we will consider two

arguments that are claimed to support biclausal analysis for Turkish causatives. Third we will remark that the so-called "missing subject causatives" find a natural explanation in the present framework. And finally we will consider the well-known problem of causative-passive interaction. We will particularly address Baker's (1988) solution to this problem and point out its inadequacies. We will finally close with some speculations on this issue.

#### 2.4.1 Lexical Derivation of Causatives

Consider first the following lexical derivations:

(85)	a.	<u>agent</u>	<u>theme</u>	
		(x )	(y ) )	<u>oku-</u> 'read'
		(z (x )	(y ) )	<u>oku-t-</u> 'cause to read'
	b.	<u>agent</u>	<u>goal</u>	
		(x )	(y ) )	<u>bak-</u> 'look'
		(z (x )	(y ) )	<u>bak-tır-</u> 'cause to look'
	c.	<u>agent</u>		
		(x )		<u>kos-</u> 'run'
		(z (x ))		<u>kos-tır-</u> 'cause to run'

In (83a-c) the verb is attached to the correct allomorph of the causative suffix, and the argument structure gains an extra external argument.<sup>19</sup> All other arguments remain within their hierarchical relation to one another. It is noted by Aissen (1974b), among others, that causative constructions behave as simplex sentences. This observation is captured here directly. The argument structures of causative verbs are like that of ordinary non-causative verbs: okut- 'cause to read' and baktır- 'cause to look' are typical diadic verbs,

'cause to read' and baktır- 'cause to look' are typical diadic verbs, while kostur- 'cause to run' has the a-structure of a typical transitive verb.

Finally we should add that all causative verbs are transitive, that is they are ACCUSATIVE case assigners. We will say that the causative morpheme inherently carries this property. But transitivity is also a property with respect to which verbs must be marked plus or minus. Therefore, the causative of an already transitive does not become doubly transitive.

#### 2.4.2 Case Assignment in Causatives

One of the most recalcitrant problems in morphological causatives is to account for the assignment of case to the arguments of a causative verb. Ideally such case assignments should follow from a set of independently motivated principles. We will here propose one such analysis based on our general assumptions so far.

First observe the following:

- (86) a. Ali çocuğ-a kitab-i oku-t-tu.  
A. child-DAT book-ACC read-CAUSE-PAST

'Ali made the child read the book.'

- b. Ali çocuğ-u resm-e bak-tır-dı.  
A. child-ACC picture-DAT look-CAUSE-PAST

'Ali made the child look at the picture.'

- c. Ali çocuğ-u koş-tur-du.  
A. child-ACC run-CAUSE-PAST

'Ali made the child run.'

Traditionally, case properties of causative verbs are expressed in formulations based on a bi-clausal analysis. According to these

generalizations the subset of a non-causative transitive verb becomes the indirect (dative) object of the corresponding causative verb. And the subject of a non-causative intransitive verb becomes the direct (accusative) object of the corresponding causative verb. Other arguments receive the same case as they do with the non-causative source verb.

These properties are sometimes summarized by using the cover terms "ergative" and "absolutive" (Aissen and Hankamer (1980)). According to this, ergative arguments (direct objects of transitives, subjects of intransitives) appear as the accusative object of the corresponding causative verb. Absolutives (subjects of transitives) appear as the indirect (dative) argument of the corresponding causative verb. Such generalizations are simply observational statements that need to be incorporated into a case theory in a principled way.

Notice that in the present framework we do not have access to the argument structure of the non-causative verb. We will present a case analysis for causatives that take into account only the a-structure of the causative verb, and a set of independently motivated principles.

Let us first see what these principles are:

(87)     a. The Case Filter

Every overt NP must be assigned (abstract) case.

b. The Inherent Case Principle

Inherent case is assigned in d-structure observing properties of semantic case (i.e. goal is dative, source is ablative, etc.)

c. Case Assignment Requirement

All transitive verbs must assign exactly one structural case.

d. Structural Case Interpretation

Transitive verbs assign structural case either as ACCUSATIVE or by adjunction.

Let us now see how the principles (87a-d) account for some relevant examples.

- (88) a. \*Ali-ye resm-e bak-tir-di-m.  
A.-DAT picture-DAT look-CAUSE-PAST-1SG

'I made Ali look at the picture.'

- b. \*Ali-yi resm-i bak-tir-di-m.  
A.-ACC picture-ACC look-CAUSE-PAST- 1SG

'I made Ali look at the picture.'

- c Ali-yi resm-e bak-tir-di-m.  
A.-ACC picture-DAT look-CAUSE-PAST-1SG

'I made Ali look at the picture.'

- d. \*Ali-ye resm-i bak-tir-di- m.  
A.-DAT picture-ACC look-CAUSE-PAST-1SG

'I made Ali look at the picture.'

In (88a) the goal argument resim 'picture' is correctly assigned inherent case in d-structure, but no structural case is assigned, in violation of (87c). In (88b) two structural cases are assigned in violation of (87c) and the inherent case is not assigned on resim 'picture' resulting in goal getting accusative. In (88c) resim is

correctly assigned inherent/semantic case, and the verb assigns accusative case to the only remaining internal argument. Finally in (88d), one inherent and one structural case is assigned, but (87b) is violated with goal getting assigned ACCUSATIVE case.<sup>20</sup>

Now in order to predict case assignment facts with causative verbs that do not inherently case-mark an argument, we will assume (89) below.

(89)     The Default Case Principle

Assign dative case to an argument in the context  
 $(x \ (\underline{\quad} \ (z)))$  in s-structure.

Let us further stipulate that (89) is a last resort strategy to fulfill the case filter. We will discuss the nature of (89) shortly. But let us first see how it helps to determine the case properties of an additional set of examples.

- (90)     a. \*Ali-yi    kitab-1    oku-t-tu-m.  
           A.-ACC   book-ACC   read-CAUSE-PAST-1SG  
           'I made Ali read the book.'
- b. \*Ali-yi    kitab-a    oku-t-tu-m.  
           A.-ACC   book-DAT   read-CAUSE-PAST-1SG  
           'I made Ali read the book.'
- c. \*Ali-ye    kitab-a    oku-t-tu-m.  
           A.-DAT   book-DAT   read-CAUSE-PAST-1SG  
           'I made Ali read the book.'
- d.   Ali-ye    kitab-1    oku-t-tu-m.  
           A.-DAT   book-ACC   read-CAUSE-PAST-1SG

'I made Ali read the book.'

- e. Ali-ye kitap oku-t-tu-m.  
A.-DAT book read-CAUSE-PAST-1SG

'I made Ali read books.'

- f. \*Ali-yi kitap oku-t-tu-m.  
A.-ACC book read-CAUSE-PAST-1SG

'I made Ali read books.'

In (90a) two structural cases are assigned by the verb, a violation of (87c). In (90b) kitab 'book' is inherently marked dative by oku 'read' that does not assign inherent case. Here (87b) is also violated because the theme argument is marked dative. In (90c), no structural case is assigned in violation of (87c). Finally (90d) and (e) are well formed because no principle is violated. In both these instances Ali've is assigned dative by The Default Case Principle (89). In (d) the structural case is ACCUSATIVE, in (e) it is assigned by adjunction.

Finally, (90f) is ruled out because the causative verb has assigned two structural cases; ACCUSATIVE to Ali and case-by adjunction to kitap.

#### 2.4.2.1 Explaining the Default Case

In order to be able to account for all of the facts of case assignment in causative constructions, we had to resort to the Default Case (89). A few words are in order concerning the independent plausibility of such a move.

First we stipulated that the default case is assigned to an argument in the context of  $(x (z))$ , where arguments bearing inherent dative case hierarchically appear in transitive structures. Thus the

default case is in agreement with the a-structure hierarchy assumed in the present study.

Second, and related to the first, is the fact that causative verbs that are di-transitive behave like other di-transitive verbs in appearing with dative and accusative objects. The Default Case Principle (89) insures this case pattern with the di-transitive-causative verbs.

We should immediately add, however, that here there is a crucial difference between di-transitive verbs and derived causatives. In the former, the dative case is inherently assigned to an argument theta-marked by the verb. This theta role is predictably goal/target, and the inherent dative case assignment does not interfere with the assignment of cases to the other argument in the a-structure of the verb. In the derived causatives, whether or not the default case will be required depends on the result of the structural case assignment which takes place in s-structure.

Finally, there remains the important question as to whether the Default Case is inherent or structural. The way it is formulated and put to use here assumes that it shares both the properties of inherent and structural case assignment. It is like inherent cases in being assigned to a particular argument theta-marked by the verb. It is also like structural cases in that it applies in s-structure.

#### 2.4.3 Some Properties of Turkish Causatives

In this section we look into various properties of Turkish causatives within the lexical framework advocated in the preceding sections.

#### 2.4.3.1 The Missing Subject Causatives

It was noted by Aissen (1974b) that while some causee arguments might be missing the others might not.

- (91) a. Ev-i boy-a- t- ti- m.  
house-ACC paint-CAUSE-PAST-1SG

'I had the house painted.'

- b. \* Koş-tur-du-m.  
run-CAUSE-PAST-1SG

'I made run.'

These clauses turned out to be particularly problematic for by-clausal analysis. Aissen (1974b) and Zimmer (1976) pursued the insight that intuitively (91a) had passive flavor. While Aissen (1974a) related these constructions to passives, Zimmer (1976) actually derived them from underlying passive clauses.

In the present framework boya-t- 'cause to paint' is derived as follows.

- (92)        (x)              (y)        )              boya-     'paint'  
               |              |        )              boya-t- 'cause to paint'  
               (z (Ø)              (y)        )        )

In this derivation while an external argument is being added to the a-structure of boya- its original external agent argument is being suppressed, which is a sure sign of passive derivation. It now becomes perfectly clear why (91a) has a passive flavor without passive morphology. Furthermore, as expected, (91a) always implies a second

agent, that does the act of painting, which is what we expect from suppressed arguments.

The second issue here is to explain why (91a) but not (91b) is well-formed. As Aissen and Hankamer (1980) suggest, causative verbs being transitive must have a direct argument. This is the sufficient condition for causative constructions.<sup>21</sup> In this sense we can say that the argument structure of (91a) but not that of (91b) is complete. And furthermore this provides strong support for the claim we are making here that causative verbs are entries in the lexicon with their own argument structure.

#### 2.4.3.2 Binding and Control in Causative Constructions

First observe the following.

- (93) a. Cocuk<sub>i</sub> [PRO<sub>i</sub> ekmek al-may-i] unut-tu.  
child bread buy-INF-ACC forget-PAST

'The child forgot to buy bread.'

- b. Cocuğ-a<sub>i</sub> [PRO<sub>i</sub> ekmek al-may-i] unut-tur-du-m.  
child-DAT bread buy-INF-ACC forget-CAUSE-PAST-1SG

'I made the child forget to buy bread.'

In (93a) the PRO subject of the complement clause is controlled by the subject of the matrix clause. The verb unut 'forget' therefore is designated as a subject control verb. In (93b) the same control relation is between PRO and the matrix direct object. In a bi-clausal analysis of causatives (93b) contains (93a). Aissen (1974b) argued that uniformity of control can be attained by allowing it to apply in the embedded cause clause between subject and PRO. In turn this state of affairs was taken to provide evidence for a bi-clausal analysis.

This claim is primarily based on the assumption that there is basically only subject control in Turkish. The same assumption is made by Gibson and Özkaragöz (1981). But consider the following.

(94)

- a. Ali-yi [PRO<sub>i</sub> okul-a git-mey-e] ikna et-ti-m.  
A-DAT school-DAT go-INF-DAT persuade-PAST-1SG  
'I persuaded Ali to go to school.'
- b. Ayşe-ye<sub>i</sub> [PRO<sub>i</sub> sokag-a çıkış- may- i] yasakla-di-  
A-DAT street-DAT exit-INF-ACC forbid-PAST-1SG  
'I forbid Ayşe to go out to the street.'

Therefore, there is nothing that precludes cocuk-a 'to the child' from binding the PRO of the complement clause in (93a) directly. In our analysis unut- 'forget' and unuttur- 'cause to forget' are separate lexical entries. Furthermore, it is not clear in such instances as (93a,b) whether grammatical or thematic control is called for. In case of the latter, cocuk 'the child' in both (93a) and (b) are agents, providing unity of control in both examples.

Now there are independent instances in Turkish where the PRO of the complement clause must in fact be subject controlled.

- (95) a. Ali<sub>i</sub> [PRO<sub>i</sub> birinci gel-mek] için koş-tu.  
A. first come-INF for run-PAST  
'Ali ran to come first.'
- b. Cocuk<sub>i</sub> [PRO<sub>i</sub> iste-yerek] yürü-dü.  
child want-ADV walk-PAST  
'The child walked willingly.'

But when such clauses are embedded under causative constructions PRO can only be bound by the matrix subject.

- (96) a. Ben<sub>i</sub> Ali-vi<sub>j</sub> [PRO<sub>i</sub>/\*<sub>j</sub> birinci gel-mek] için koş-tur-du-m  
I A.ACC first come-INF for run-CAUSE-PAST-1SG  
'I made Ali run in order to come first.'
- b. Ben<sub>i</sub> cocuğ-u<sub>j</sub> [PRO<sub>i</sub>/\*<sub>j</sub> iste-yerek] yürü- t- tü- m.  
I child want-ADV want-CAUSE-PAST-1SG  
'I made the child walk willingly.'

The fact that PRO in (96a) and (b) may not be controlled by Aliyi and cocuğu, respectively, casts a serious doubt on the subjecthood of these arguments at any syntactic level.

It is not, on the other hand, the case that the PRO in control clauses of (96a,b) must be controlled by matrix subjects. Observe the following.

- (97) a. Ben<sub>i</sub> [cocuğ-un<sub>j</sub> [PRO<sub>\*i</sub>/<sub>j</sub> birinci gel-mek için] koş-tuğ- un- u]  
I child-GEN first come-INF for run-PART-3SG-ACC  
iddia ed-iyor-um.  
claim- CONT-1SG  
'I claim that the child ran in order to come first.'

The second set of facts presented by Aissen (1974b) concern binding theory. There is a dialect of Turkish in which reflexive pronouns are clause bounded and subject controlled for the first person. Observe the following.

- (98) a. Ali ban-a ayna-da ben-i /\* kendim-i göster-di.  
       A. I-DAT mirror-LOC I-ACC myself-ACC show-PAST

'Ali showed me myself in the mirror.'

- b. Ayşe ban-a \*ben-i / kendim-i anlat-tır-di.  
       A. I-DAT I-ACC myself-ACC explain-CAUSE-PAST

'Ayşe made me explain myself.'

These facts, if sufficiently general, are difficult to account for in the present analysis as it is. All we can say at the moment is that the binding of the first person reflexive may be thematically oriented rather than subject oriented in the syntactic sense. Let us assume that this is true. And following on an independent suggestion by Grimshaw (1990), let us also assume that first person reflexive binding in Turkish is sensitive to thematically maximally prominent arguments like agent and experiencer. In (98b) there are two such prominent arguments Ayşe and ban-a. If our position here is correct, then both such arguments can serve as antecedents to the first person reflexive pronoun.

We will leave this issue on this note knowing that both the facts themselves and the structure of the present theory should be further looked into in this matter.

#### 2.4.4 Passives and Causatives

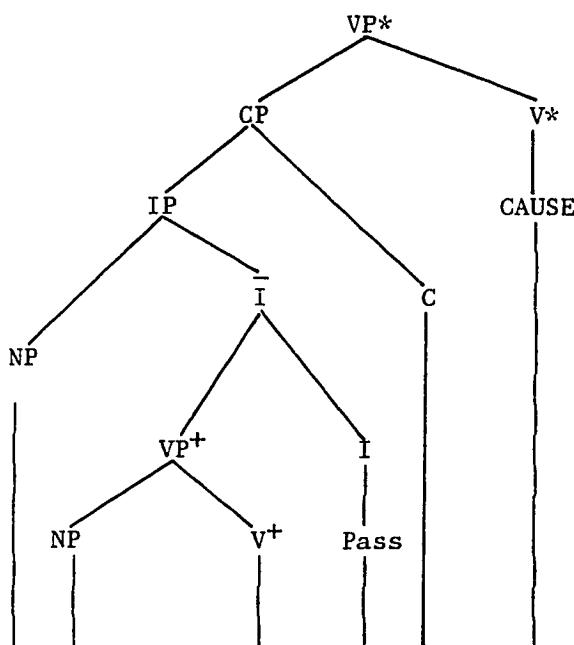
The interaction of passives with causatives in Turkish has presented serious problems. As is well-known by now, Turkish does not allow causatives of passives. In Aissen's (1974b) framework causative formation is pre-cyclic and passive is cyclic. This way causative always misses the passive, but passive can correctly apply to causative

stems. In Aissen and Hankamer (1980) the same effect is achieved by assigning causatives to the lexicon and keeping passive a cyclic rule.

The most recent attempt to have causative-passive facts fall directly from the organization of the theory is by Baker (1988). In this theory both causative and passive derivations happen in syntax. Baker observes that Japanese but not Turkish never causatives of passives.

Let us see how Baker's (1988) theory addresses these facts. In (99), below, we schematically represent the internal structure of a causative construction for both Japanese and Turkish.

(99)



In this theory the passive morpheme is generated under I and passivation involves the movement of  $V^+$  to I to pick up this morpheme. Baker stipulates that in Turkish  $VP^+$  directly moves to C, before  $V^+$  joins the CAUSE morpheme, by-passing the passive morpheme in I. In

Japanese, on the other hand,  $V^*$  first moves to I, then to C and then to  $V^*$  which accounts for the possibility of the passive + causative morphemes appearing in that order.

This suggestion runs into serious difficulties at the start. Since Turkish allows ordinarily passivization in embedded clauses,  $V^*$  must be able to raise to I in such cases. In fact, for Turkish it must be stipulated that  $VP^+$ -to-C movement happens only in causative constructions.

#### 2.4.4.1 Towards A Solution

In this section we will suggest a certain direction along which an explanation to the facts just discussed may be found. Let us begin by observing that passive and causative morphemes are incompatible in that order. It will be recalled that in Section 2.3 we discussed three derivations involving the passive suffix. These were passives, derived unaccusatives and derived unergatives. Now while passive morphology may be interpreted syntactically, because of its productivity, the other two derivations are too unproductive to be syntactic. But causatives of all derivations with the passive morpheme is disallowed in Turkish.

- (100) a. Passive

\* Çocuğ-u sev-il-dir-di m.  
child-ACC love-PASS-CAUSE-PAST-1SG

'I made the child be loved.'

- b. Derived unaccusative

\* Adam-ı boğ-ul-dur-du m.  
man-ACC drown-PASS-CAUSE-PAST-1SG

'I caused/let the man to drown.'

- c. Derived unergative

\* Adam-ı kız-in üstün-e at-il-dir-di m.  
man-ACC girl-GEN top-DAT throw-PASS-CAUSE-PAST-1SG

'I made/let the man jump on the girl.'

No independent evidence seems to suggest itself for this state of affairs. For example, causatives formed on unaccusative verbs, like those in (100a) and (b) turn out to be felicitous.

- (101) a. Çocuğ-u düş-ür-dü m.  
child-ACC fall-CAUSE-PAST-1SG

'I caused/let the child fall.'

- b. Çiçeğ-i sol-dur-du m.  
flower-ACC wilt-CAUSE-PAST-1SG

'I caused/let the flower wilt.'

One thing that is common to all derivations involving the passive morpheme is that it attaches to transitive verbs and renders them intransitive--taking transitivity as the ability to assign ACCUSATIVE case. Let us further assume that transitivity once suppressed may not be regained. If these assumptions are correct, then

the causative morpheme may not transitivize an already intransitivized verb. But we know independently that an indispensable property of a causative verb is its transitivity. Notice that these assumptions may explain why in Turkish reflexive middles may not have causatives.

- (102) \* Kiz-i hamam-da yikan-dir-di-m.  
girl-ACC bath-LOC wash-CAUSE-PAST-1SG

'I made/let the girl wash in the bath.'

Reflexive middles lexically derive from transitive verbs losing their transitivity in the process, which the causative has to reassign.

If the assumption that passive irrecoverably suppresses transitivity, how can we explain the fact that Japanese, for one, can allow causatives of passives. In fact, the difference between Turkish and Japanese seems to lie here. In Japanese, passive does not necessarily suppress transitivity, i.e. ACCUSATIVE case assignment, and causatives are not necessarily transitive in the sense we are using the term here. Observe below,

- (103) a. Gakusei-tati wa kendoo o sikoma-re-te i-ta.  
student-PLR TOP k. ACC teach-PASS-CONJ be-PAST

'The students were being taught kendo.'

- b. Hanako ga Taroo ni ika-se- ta.  
H. NOM T. AGT/DAT go-CAUSE-PAST

'Hanako had Taro go.' (Shibatani 1990)

In (103a) the passive verb sikoma-re, 'be taught', does assign ACCUSATIVE, while in (103b) the causative verb ika-se, 'make go', does not. Therefore passive + causative is not incompatible in Japanese.

We will close here with hope that the present suggestions are on the right path and that there exists some meaningful cause from which they naturally follow.

## NOTES TO CHAPTER TWO

1. This distinction in Turkish syntax and its further implications were originally observed by Lees (1965). He coined the terms "factive" and "active" to refer to these clauses. We alter particularly the term "factive" to avoid confusion with the same term used to denote "presupposed" in Kiparsky and Kiparsky (1970).
2. It will be noticed that y in (22) represents source but y in (25) is goal. It is assumed that thematic hierarchy does not distinguish between goal, source and location (See Grimshaw (1990) for discussion).
3. There are some isolated examples where the thematic structure of the compound verb may be rearranged. For example,

- (i) tavr al- 'take position'  
 tertibat al- 'take precautions'

unpredictably select a goal/target argument rather than source.

4. We assume here that incorporation takes place in the lexicon. This is by no means an uncontroversial issue. It may be that in Turkish theme incorporation is lexical and non-theme incorporation is syntactic, because in the latter case the incorporated element bears morphological case. Since the incorporated element is not anymore an argument, it is difficult to explain how it gets morphological case after lexical incorporation; unless we assume that such cases are lexical. We are also ignoring here compound verbs with the N in the accusative.

- (i) Kafa-yı çek-mek  
 head-ACC pull

'To booze it up.'

5. There are two other postpositions in Turkish that behave like için 'for' in this respect. They are gibi 'like' and ile 'with'. The third person plural pronoun onlar 'they' does not take the genitive with these postpositions as expected, perhaps because of the nominal plural -ler suffix. Non-personal pronouns kim 'who', ne 'what' may or may not appear in the genitive. The reflexive and reciprocal pronouns kendi + person and birbiri + person, respectively do not allow genitive with these postpositions.

6. Again we are following Kornfilt (1984) on designating AGR under INFL as a governor. For further consequences of this assumption in binding theory see Kornfilt (1984).

7. The presence or absence of the morphological genitive on the clause subject is too complex to be taken up here. It seems to be the case that if the clause is substantival (nominal or adjectival) genitive on the clause-initial subject is obligatory. All act type complements, relative clauses with AGR, and all argument clauses belong to this group. Consider the following.

(i) Relative clause

[Ayşe \*(-nin) oku-duğ-u]      kitap  
 A    \*(GEN)    read-PART-3SG    book

'The book that Ayşe read'

(ii) Postpositional complement

Ali \*(nin)    anla-ma-sı    için  
 A \*(-GEN)    understand-VN-3SG    for

'For Ali to understand'

## (ii) Postpositional complement

Ali \*(nin) anla-ma-sı için  
 A \*(-GEN) understand-VN-3SG for

'For Ali to understand'

## (iii) Sentential subject

(Sen \*(-in) git-tiğ-in] duy-ul-du  
 You (GEN) go-PART-2SG hear-PASS-PAST-3SG

'That you left is heard'

Complements to subordinating conjunctions and adverbial adjuncts do not allow overt genitive on their clause-initial subjects.

(iv) [Biz (\*im) git-tiğ-imiz] halde  
 we (GEN) go-PART-1PL although

'Although we left'

(v) [Ayşe (\*nin) çalış-ma-dıg-ı] için  
 A. (GEN) study-NEG-PART-3SG because

'Because Ayşe did not study'

(vi) Siz (\*-in) ara-dıg-ınız-da  
 you-GEN call-PART-2PLR LOC

'When you called'

(vii) [Ben (\*im) git-tiğ-im] zaman  
 I (GEN) leave-PART-1SG time

'When I left'

In (vii) Zaman 'time' is best considered a subordinating conjunction.

Some of these clauses may appear with genitive on their clause-initial subjects perhaps with analogy with relative clauses like (i), above, as suggested by Hankamer (1972).

8. The properties of Exceptional Case Marking constructions are discussed by Aissen (1974b) and Kornfilt (1976), (1977) within Standard Theory, by George and Kornfilt (1981) within Extended Standard Theory, and by Kornfilt (1984) within Government and Binding Theory.

9. In some cases where nominal AGR is missing under INFL the nominal tense must be allowed to assign case to clause subject. One such case we will refer to in Chapter 4 is the following relative clause structure.

(i) [[e;ogl-u] okul-a gid-ecek] adam;

son-3SG school-DAT go-PART man

'The man whose son will go to school'

Here we will assume that the clause subject [e ogl-u] is marked NOMINATIVE Case by the future participle suffix ecek of the relative clause.

10. See Kornfilt (1984) for a treatment of ECM within the framework of Chomsky (1981).

11. The semantic properties of the accusative suffix is discussed by Sezer (1972), Hankamer and Knecht (1976), Dede (1986) and Enç (1991).

12. This is slightly modified from Chomsky (1986a:194).

13. It is not clear whether or not postpositions assign theta roles to their arguments. We are assuming here without comment that they do, knowing full well that even so it is not always intuitively clear what such individual theta roles are.

14. The notation X - \*(Y) indicates that the string is ill-formed without Y.

15. As noted by Kononov (1956) and Babby (1981), it is not correct that these derived intransitives always imply cause. Consider:

(i) Kapi kendi kendine aç-il-di.  
door by itself open-PASS-PAST-3SG

'The door opened by itself.'

One possibility to remedy this in the present framework is to assume that the external argument may be suppressed or just erased, to yield,

(ii) ((y)) aç-il- 'be opened'

It is also possible that the suppressed argument is optionally erased. This will require a general principle for true passives to the effect that agents being most prominent arguments both in a-structure and in thematic hierarchy may never be erased.

16. Babby (1981) addressed the passive and derived unaccusative function of the passive morpheme as valency reduction. This insight finds a natural explanation in the present framework.

17. We are indebted to Jaklin Kornfilt (personal communication) for a discussion of such examples. Final judgements, however, are our own.

18. We will ignore here the double passives mentioned by Özkaragöz (1986) and Knecht (1986a). Examples presented in these works are extremely controversial and defy confirmation. See Kornfilt (1989) for some comments.

19. We are assuming here that the theta role of the external argument is assigned compositionally by the verb and its internal arguments. Generally, such a theta role may be agent or cause; hence the ambiguity in (i) below.

(i) Ali ben-i kız-dır-dı.  
A I-ACC get mad-CAUSE-PAST-3SG

'Ali made me mad' (Intentionally or unintentionally)

Notice that assigning a theta role to the new external argument does not result in altering the thematic roles assigned to the arguments of the source verb. Therefore, ben 'I' is the experiencer argument of kız- 'get made' in (ii).

(ii) Ben kız-dı-m.  
I get-mad-PAST-3SG  
'I got mad.'

and it retains the same thematic role in (i).

20. This sentence may be grammatical in the sense 'I had Ali examine the picture.' We will ignore this reading here.

21. Aissen and Hankamer (1980) suggest that a causative verb is strictly subcategorized for a direct object, and that subjects as well as other arguments are optional in the argument structure of the verbs.

Therefore, (91a) is ruled in but (91b), with the missing direct object, is ruled out.

## CHAPTER THREE: ON THE RELATIVE CLAUSE

3.0 Introduction

Relative clauses in turkish are one of the following two types.

- (1) a. [kedi-nin e<sub>i</sub> yakala-dığ- <sub>i</sub>] fare<sub>i</sub><sup>1</sup>  
           cat- GEN      catch- PART-3SG      mouse

'The mouse that the cat caught.'

- b. [e<sub>i</sub> fare-yi yakala-yan] kedi<sub>i</sub>  
       mouse-ACC catch-PART

'The cat that caught the mouse.'

Underlying the RC in (1a) and (b) is the sentence

- (2) Kedi fare-yi yakala-di.  
       cat mouse-ACC catch-PAST

'The cat caught the mouse.'

In (1a), above, the head noun fare 'mouse' is the direct object in the relative clause, and in (1b) the headnoun kedi 'cat' is the subject of the RC.

The target NP in the RC shows up as an empty category, e, the nature of which need not concern us at this point, and all RC's contain a participial suffix on their verbs like -DIG and -(y)EN in (1a) and (b), respectively. Notice also that whereas (1a) has a genitive on the clause subject and a possessive on the clause verb, (1b) displays no such morphology.

In Turkish linguistics, since Underhill (1972) the type of RC displayed in (1a) is called the Object Participle Type (OP), for the

simple reason that the target of relativization is the object of the RC. The RC displayed in (1b), on the other hand, is called the Subject Participle Type (SP), since the target of relativization is the subject of the RC. We will use these terms to refer to the types of RC's displayed in (1a) and (b), respectively. It is also important to notice that essentially what distinguishes OP type RC from an SP type RC is the presence or absence of the Genitive...Possessive morphology, where possessive marks the agreement. Observe, below, in (3) that both types of RC's appear with the same future participle suffix.

- (3) a. [Kedi-nin e<sub>1</sub> yakala-yacağ-ı] fare<sub>1</sub>  
           cat- GEN         catch- PART- 3SG        mouse

'The mouse that the cat will catch.'

- b. [e<sub>1</sub> fare- yi yakala-yacak] kedi<sub>1</sub>  
       mouse-ACC    catch- PART                    cat

'The cat that will catch the mouse.'

In (3a) and (b), the OP and SP type relativizations are distinguished only with respect to the presence or absence of the genitive...possessive morphology.

The problem in Turkish relativization has been to determine whether an RC is going to turn out to be the OP type or the SP type. In what follows, we will present a summary of earlier work on this subject (namely that of Underhill (1972) and Hankamer and Knecht (1976)).

### 3.1 Underhill (1972)

Underhill (1972) was the first to notice that in simple cases like (1a) and (b), above, the RC is of the OP type if the target NP is the object, and SP type when it is the subject of the RC. Underhill

(1972) further observed that genitive modifiers of NP can also be relativized as in (4a) and (5a), below.

- (4) a. [Oğlan-in e<sub>i</sub> mekteb-in- e git-tiğ-i] adam<sub>i</sub>  
 boy- GEN school-3SG-DAT go-PART-3SG man

'The man to whose school the boy goes.'

from,

- b. [Oğlan adam-in<sub>i</sub> mekteb-in- e gid-en] adam<sub>i</sub>  
 boy man-GEN school-3SG-DAT go-PART man

- (5) [e<sub>i</sub> oğlu mekteb-e gid-en] adam<sub>i</sub>  
 son-3SG school-DAT go-PART man

'The man whose son goes to school.'

In (4a), above, the target of relativization is the genitive modifier of the indirect object, mektep 'school', and the RC is of the OP type. In (5), however, the target NP is the genitive modifier of the subject of the RC, oğlu 'son', and the RC is of the SP type. Underhill (1972), then formulated a tentative generalization which I quote in full.

- (6) It turns out then, that when the head noun is genitive in the underlying sentence, a subject participle is used if the head noun is in the subject noun phrase, and an object participle if the head noun is in some other noun phrase.

Underhill, in his final analysis, relinquished this very insightful generalization, for reasons that will become clear shortly. At this point, though, we will consider another important observation of Underhill's, that the type of RC formation is sensitive to the #Definiteness of the RC subject. Observe the following.

- (7) a. [Suy- un e<sub>i</sub> alt- in- dan ak- tiğ- 1] kapi<sub>i</sub>  
           water-GEN      under-3SG-ABL     flow-PART-3SG     door

'The door that the water is flowing under.'

- b. [e<sub>i</sub> alt-in-dan suy-un ak- tiğ- 1] kapi<sub>i</sub>;  
       under-3SG-ABL water-GEN flow-PART-3POSS     door

'The door that the water is flowing under.'

- c. [e<sub>i</sub> alt- in- dan su ak- an] kapi<sub>i</sub>  
       under-3SG-ABL water flow-PART door

'The door under which water is flowing.'

- d. \*[su e<sub>i</sub> alt- in- dan ak- an] kapi<sub>i</sub>  
       water under-3SG-ABL flow-PART door

(Bad in the sense of (7a) or (7c))

Underhill observed that the genitive-marked RC subjects in (7a) and (b) are definite whereas the nominative subject of the RC in (7c) is indefinite. He further noticed that while a genitive marked RC subject could occur both in clause-initial, (7a), and immediate preverbal position (7b), the nominative RC subject can only occur in immediate preverbal position as in (7c) since (7d) is ungrammatical. Underhill accounts for these facts in the following manner. First, he posits two independent rules that move subjects to immediate pre-verbal position: One the Indefinite Subject Movement Rule (ISMР) which applies before relativization to move an indefinite subject to immediate pre-verbal position, the second, which he calls Ordinary Scrambling, applies after relativization. He then replaces the generalization, (6), above with (8), below.

- (8) Use SP type RC when the target NP is clause-initial at the time of relativization, and OP type RC elsewhere.

Let us now see how Underhill (1972) accounts for (7a-d) with the principles just outlined. In (7a), the ISMR has not applied so the target kapl 'door' is not clause initial at the time of relativization. Hence according to (8), above, the OP type is used. In (7b), ISMR did not apply, either. In fact, (7b) is derived from (7a) by a later rule of scrambling after the RC formation. In (7c), ISMR moves the RC subject su, 'water', to immediate pre-verbal position leaving the target kapl 'door' in the clause-initial position. Then (8) correctly assigns the SP type RC. Finally, (7d) is out because although the target, kapl is not clause-initial, the SP type RC is used in violation of (8).<sup>2</sup>

Before we look at Underhill's final analysis there is yet to consider one crucial case.

- (9) a. \*[e<sub>i</sub> danalar gir- en] bostan<sub>i</sub>  
          calves enter-PART garden

'The garden that calves enter(ed).'

from,

- b. [Bostan-a, danalar gir-] bostan<sub>i</sub>  
garden-DAT calves enter garden

'[calves enter the garden] garden'

- (10) a. [e<sub>i</sub> iç-in-e danalar gir-en] bostan<sub>i</sub>  
          in-3SG-DAT calves enter-PART garden

'The garden into which calves are enter(ing).'

from

- b. [Bostan-in iç-in-e danalar gir-iyor] bostan  
          garden-GEN in-3SG-DAT calves enter-CONT garden

'[calves are entering the garden] garden'

Underhill conjectured that the reason why (9a) is not derivable from (9b) is because the target, although clause-initial at the time of relativization, is in the dative, whereas in the well-formed (10a) the clause-initial target is in the genitive, (10b). Hence to account for these facts (8), above, had to be replaced with (11), below.

- (11) A subject participle is used if the target NP is clause-initial at the time of relativization and is either in the nominative or genitive, and the OP is used otherwise.

Underhill noticed one drawback of this analysis, namely, the cases in (12), below.

- (12) a. [e<sub>i</sub> güneş gir-me-yen] ev-e<sub>i</sub> hekim girer.  
          sun enter-NEG-PART house-DAT doctor enters

'Doctor enters (goes to) the house that does not let in sunlight.'

- b. [e<sub>i</sub> ateş ol-ma-yan] yer-den<sub>i</sub> duman çıkış.  
          fire be-NEG-PART place-ABL smoke emerge-NEG.AOR

'No smoke comes out of a place where there is no fire.'

Notice that (11), above, cannot properly account for the examples in (12), since the clause-initial NP's at the time of relativization are not nominative or genitive. In (12a) *girmek* 'enter' governs dative, and the initial NP in (12b) is locative.

Let us now summarize Underhill's analysis of Turkish relativization.

- (13) a. An indefinite Subject Movement Rule applies before relativization to move the indefinite subject of the RC to immediate preverbal position.
- b. (11), above, determines the correct RC type.
- c. Scrambling optionally moves the RC subject to immediate preverbal position.

### 3.2 Hankamer and Knecht (1976)

Hankamer and Knecht (1976) (henceforth HK) provide bona-fide counterexamples to Underhill's analysis outlined in (13). They show, for instance, that whatever relativizes out of a sentential subject calls for an SP type RC whether or not the target is clause-initial.

- (14) a. [[e<sub>i</sub> kabağ-i ye- diğ- i] şüpheli ol-an] yılan<sub>i</sub>  
           squash-ACC eat-PART-3SG doubtful be-PART snake  
           'The snake which it is doubtful that (it) ate the squash.'
- b. [[Yilan-in e<sub>i</sub> ye- diğ- i] şüpheli ol-an] kabak<sub>i</sub>  
           snake-GEN eat-PART-3SG doubtful be-PART squash  
           'The squash which it is doubtful that the snake ate (it).'

Underlying the RC's of both (14a) and (b) is the sentence with a sentential subject.

- (15) [Yilan-in kabag-1 ye- diğ- i] şüpheli  
 snake-GEN squash-ACC eat-PART-3SG doubtful  
 'It is doubtful that the snakes ate the squash.'

Now, notice that Underhill's analysis (13) can predict (14a) but not (14b), since in the latter the target is not clause-initial, (13) would predict OP type relativization here to the exclusion of the SP type.

HK propose to account for cases like (14a) and (b) with what they call the Mother Node Principle, which I quote below.

- (16) HK's Mother Node Principle

If a subconstituent of a major constituent of the RC is relativized, the participle [RC type] is chosen which would be appropriate for relativization of the major constituent itself (that is for simple cases, if the mother node dominating the target is the subject of the RC, the SP [type of RC] is chosen; otherwise the OP [type RC] is chosen). (HK 1976: 205)

So the SP type is chosen in both (14a) and (b) because the target NP's are ultimately dominated by the subject NP node of the RC.

### 3.2.1 The No-Subject Principle

Secondly, HK observe that out of clauses where the indefinite subject appears in immediate pre-verbal position, not only the clause-initial ones, but all NP's relativize with the SP type. That is, out of a clause like (17), below,

- (17) Kapi-nin alt-in-dan yer-in üs- tün- e su akiyor.  
 door-GEN under-3SG-ABL floor-GEN top-3SG-DAT water flowing  
 'Water is flowing (to) on top of the floor from under the door.'

both the clause-initial kapi 'door' and the non-initial, yer 'floor' relativize in the SP type RC, as in (18a) and (b), respectively.

- (18) a. [e<sub>i</sub> alt- in- dan yer-in üst-ün-e su ak-an] kapi<sub>i</sub>  
 under-3SG-ABL floor-GEN top-3SG-DAT water flow-PART door  
 'The door from under which water is flowing on top of the floor.'  
 b. [ kapinin altindan e<sub>i</sub> üzerin-e su ak- an] yer<sub>i</sub>  
 door's under-3SG-ABL on top-DAT water flow-PART floor  
 'The door on top of which water is flowing from under the door.'

Once again, Underhill's analysis outlined in (13) above can account for (18a) but not for (18b), which it would predict to be in an OP type RC because the target is not clause-initial. But note that the Mother Node Principle (MNP) cannot predict (18a) and (b) either. According to MNP, we would expect the RC's in (18) to be the OP type, since in both cases the mother nodes dominating the targets are non-subjects.

NK attempt to solve this problem by formulating the additional No-Subject Principle, which I quote.

- (19) The No Subject Principle

If there is no subject in the RC at the time of the RC formation, the OP construction is impossible and only the SP construction is chosen. (HK 1976: 215)

HK assume that there is a rule of subject demotion which moves the indefinite subject to immediate preverbal position and renders the

sentence subjectless. This rule which in effect is the same rule as Underhill's ISMR, applies before relativization. Thus at the time of relativization, the RC's in (18a) and (b) are already subjectless, in which case they fall under the prediction of the NSP, (19).

As an independent motivation for the NSP, HK observe that out of impersonal passives (constructions known to be surface subjectless) all NP's relativize with SP type RC's.

- (20) a. [e<sub>i</sub> sokag- a çik- il- an] kapi<sub>i</sub>  
street-DAT exit-PASS-PART door

'The door from which one exits to the street.'

- b. [Bu kapı-dan e<sub>i</sub> çik- il- an] sokak<sub>i</sub>  
this door-ABL exit-PASS-PART street

'The street to which one exits through this door.'

The sentence that underlies the RC's in (20) is

- (21) bu kapı-dan sokag-a çik- il- ir.  
this door-ABL street-DAT exit-PASS-AOR

'One exists to the street from this door.'

In summary then HK's analysis of Turkish relativization is as follows.

- (22) a. A subject demotion rule that applies before relativization moves an indefinite subject to immediate preverbal position and has the effect of rendering a sentence subjectless.
- b. The No-Subject Principle (NSP), (19).
- c. The Mother Node Principle (MNP), (16).

### 3.2.2 A Critique of HK (1976)

The validity of the NSP crucially depends on the exact nature of the subject demotion rule. HK assume that all sentences with indefinite subjects undergo subject demotion:

- (23) ... In general no (emphasis original) NP in an indefinite subject sentence relativizes with the OP. HK (1976: 215)
- (24) In fact, no matter what is relativized out of a clause with an indefinite subject, the RC is constructed with SP. HK (1976: 217)

For (23) and (24) to be true it must be the case that all clauses with indefinite subjects undergo subject demotion so that both (23) and (24) follow from NSP.

Such a strong version of the subject demotion rule cannot be maintained. As Sezer (1972) observed both (25a) and (b) are grammatical.

- (25) a. [e<sub>i</sub> iç-in-de bir doktor ara- n- an] kasaba<sub>i</sub>  
in-3SG-LOC a doctor looked for-PASS-PART county  
'The country in which a doctor is being looked for.'
- b. [e<sub>i</sub> iç-in-de bir doktor-un ara- n- dığ- 1] kasaba<sub>i</sub>  
in-3SG-LOC a doctor-GEN looked for-PASS-PART-3SG county  
'The country in which a (specific) doctor is being looked for.'

In both sentences, above, bir doktor is indefinite but (25a) is formed with SP while (25b) is formed with OP. HK can predict (25a) but not (25b).

Observe further that HK have a counterexample to (23), (24), above.

(26) (Their 14)

- a. [e<sub>i</sub> kabağ- in- i bir yılan-in ye- diğ- i] adam<sub>i</sub>  
 squash-3SG-ACC a snake-GEN eat-PART-3SG man

'The man whose squash a snake ate.'

- b. \*[e<sub>i</sub> kabağını bir yılan yiye] adam<sub>i</sub> (HK 1976:207)

The RC in (26) has an indefinite subject bir yılan but the RC with SP is ungrammatical, while the construction with OP (26a) is not.

Such examples show that the subject demotion rule, like Underhill's ISMR, is too general.

Secondly, HK's analysis requires further statements on the distribution of the MNP and NSP. Given a subjectless clause what prevents MNP from applying to it to yield the wrong relativization.

- (27) \* [e<sub>i</sub> çıkış- il- diğ- i] dağ<sub>i</sub>  
 climb-PASS-PART-3SG mountain

'The mountain (which) was climbed.'

Now (27) is ruled out because although the clause is subjectless OP rather than the SP is used. But (27) is allowed by the MNP, on account of the fact that the target is a non-subject NP. In order to avoid this either the two principles must be extrinsically ordered or a condition must be stated to the effect that relativization first determines whether or not the clause has a subject, which also entails ordering in an implicit way.

- (28) If the RC has a subject at the time of relativization choose MNP; otherwise choose NSP.<sup>3</sup>

Furthermore, in both Underhill (1972) and HK (1976) RC morphology is assigned en bloc, that is, the SP and OP types are treated like discontinuous morphemes. Some OP and SP type relative clauses however share interesting properties with nominalization as we shall indicate shortly. In Sezer (1972) attention is drawn to the fact that both in gerundive clauses and RC's the non-specific subject ends up without a genitive marker. In the latter case the lack of genitive correlates with SP type relativization. Dede (1978) also claims that genitive assignment on the RC subject must be separated from the rest of the RC morphology.<sup>4</sup> Most recently, Kornfilt (1984) focuses on the presence and absence of agreement morphology in RC's as their distinguishing marker. (We will refer to Kornfilt's insightful observation later.)

### 3.2.3 What are SP and OP?

Let us try to characterize somewhat more exactly what SP and OP type relativizations are.

- (29) a. [Ben-im e<sub>i</sub> oku- dug- um]      kitap<sub>i</sub>  
           I-GEN        read-PART-1SG        book

'The book that I read.'

- b. [Ali-nin e<sub>i</sub> evlen-eceğ-i]      kız<sub>i</sub>  
       -GEN        marry-PART-3SG        girl

'The girl that Ali will marry.'

- (30) a. [e<sub>i</sub> kitab-i yaz-an] adam<sub>i</sub>  
 book-ACC write-PART man

'The man who wrote the book.'

- b. [e<sub>i</sub> Ali'yle evlen-ecek] kız<sub>i</sub>  
 -COM marry-PARK girl

'The girl who will marry Ali.'

- c. [e<sub>i</sub> dünya-yı dolas-mış] adam<sub>i</sub>  
 world-ACC travel-PART man

'The man who traveled the world.'

In the OP type RC's the overt subject is always in the genitive and the participle contains possessive morphology that agrees in person and number with the RC subject.

In (30), where we have SP type RC, nothing is assigned genitive and the participial verb shows no agreement morphology.

The following possibilities come to mind. The two types of relativizations,

(31) (a) are accidental.

(b) they follow from some morphologically idiosyncratic property of the participial suffixes involved.

(c) they follow from independent principles.

If either (a) and (b) are correct then the SP and OP types are morphologically unanalyzable. But if (c) is correct we would wish to know what it is that accounts for the presence or absence of genitive...possessive morphology in RC's.

We will put aside (31a) for the moment because we do not wish to believe that some regularity is accidental unless we have to. Now, (b) may be shown to be incorrect: first compare (29b) and (30b). In both we have the same future participle suffix but the former is with agreement while the latter is not.

Secondly, the participial suffixes in (30a) can appear with agreement suffixes in headless relatives.

- (32) a. [Ben- im ev- im- e gid-en gel- en- im]  
          I -GEN house-1SG-DAT go- PART come-PART-1SG

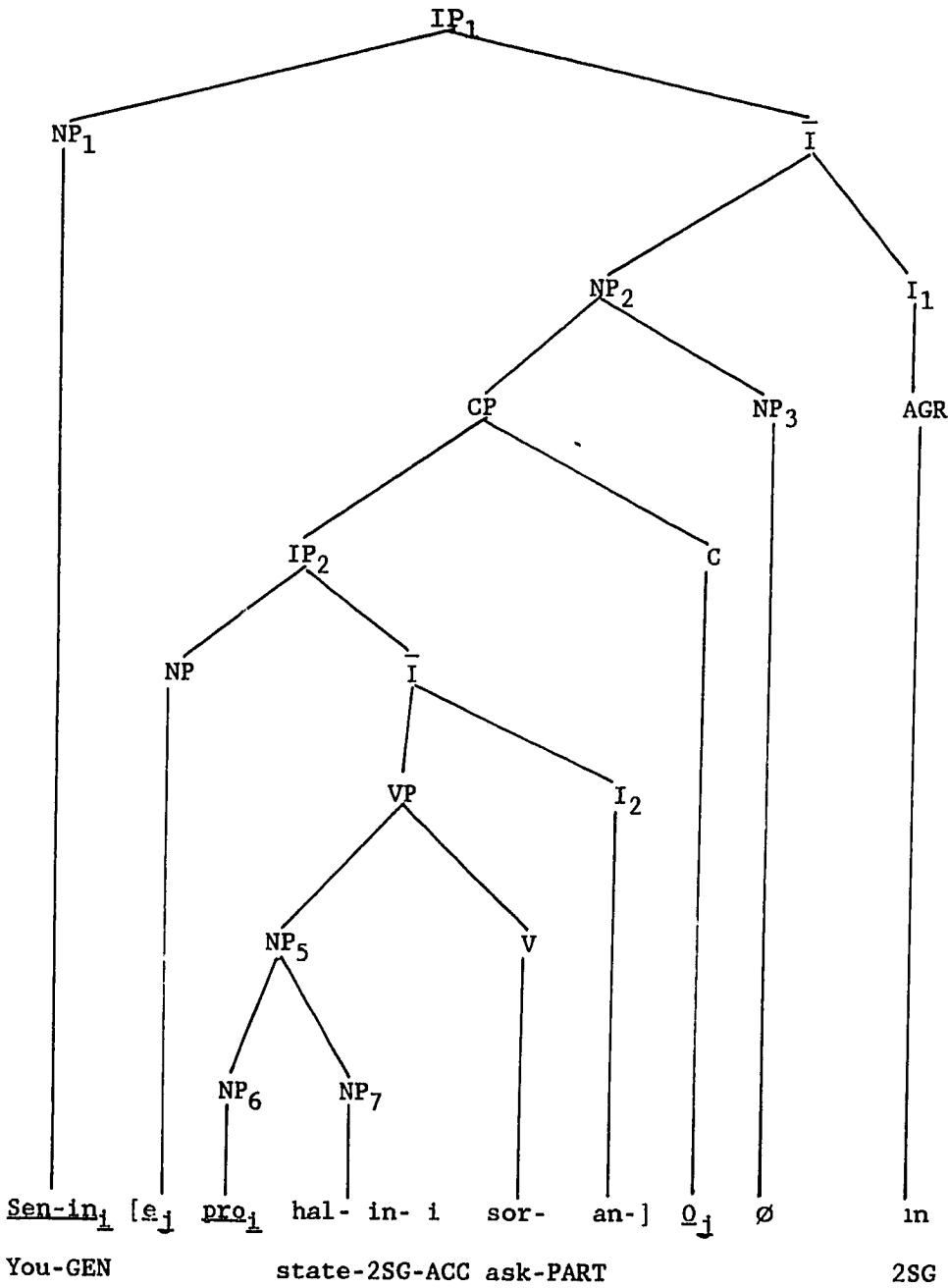
Lit. 'My (people) (who) come and go to my house.'

'Those of my (people/friends) who visit me.'

- b. [Sen-in hal- in- i sor-an- in] var mi?  
       you-GEN state-2SG-ACC ask-PART-2SG exist a

'Do you have (people) who inquire your well-being?'

(33)



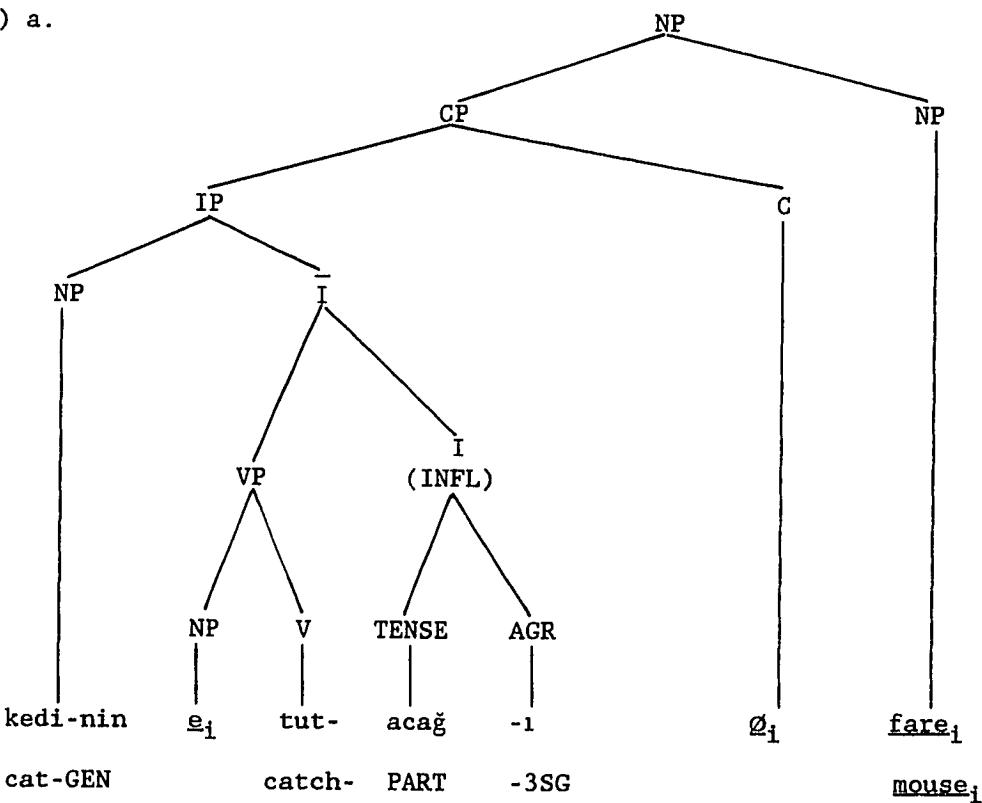
In (33)  $NP_2$  is a headless relative construction. The agreement morphology under  $I_1$  is not associated with the relative clause,  $[IP_2]CP$ . This agreement morphology would have appeared on  $NP_3$  had it not been empty.

Another interesting question we will pose in our analysis is the following. Take, for example, HK's NSP, which states that SP type relativization is used if at the time of relativization the RC is subjectless. The question is, does this follow from independent principles or is it an unanalyzable stipulation? We will, in what follows, pursue these interesting questions and present a modular analysis of Turkish relativization and other closely related phenomena.

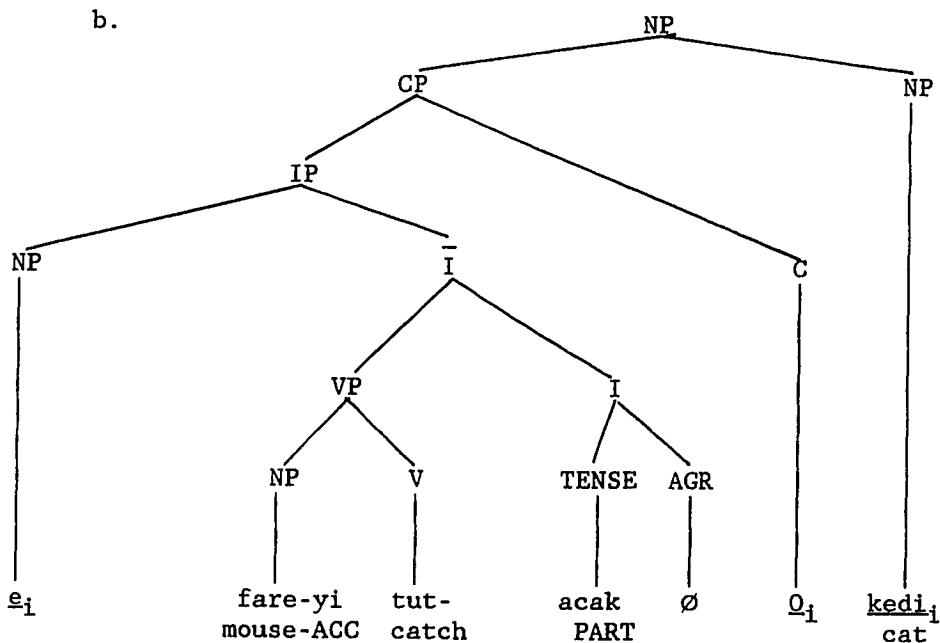
### 3.3 A Theory of Turkish Relative Clauses

We will assume here that an NP with an RC modifier has the following structure.

(34) a.



'The mouse that the cat will catch.'



'The cat that will catch the mouse.'

Following Kornfilt (1984) we will assume that the empty element  $\epsilon$  which occupies the place of the target of relativization is  $\bar{A}$ -Bound by an empty operator in  $C(OMP)$ . Furthermore, in the present analysis, the participial suffixes that mark the RC verbs are dominated by the tense node of INFL. This way we both capture the fact that the participial suffixes are, albeit impoverished tense markers, and that in the absence of AGR they may act as case assigners on their subjects.

We further assume that after assigning case to its object the V moves to INFL to pick up the participial and personal suffixes, although nothing follows empirically from this in the present study.

The Empty Category Principles (ECP) of Chomsky (1986) requires that an empty category be governed in a special way. In (34a), for instance,  $\epsilon$  is properly governed by the verb tut 'catch', a case of  $\theta$ -

government, and in (34b), the subject *e* is properly governed by the empty operator in COMP, a case of antecedent government.

### 3.3.1 A Set of Principles

We will assume the following general principles to be relevant for Turkish RC's.

#### (35) The Genitiveless Subject Filter

\* [ $\alpha^{NP^j} \dots ]$   
-Gen

Where  $\alpha$  is an RC, and NP is its subject cosuperscripted with agreement morphology but has no overt genitive case.

What (35) says, in effect, is that subjects of RC's cosuperscripted with agreement morphology must be obligatorily assigned genitive case. The genitiveless subject filter, (35), follows from the requirement of case realization. The GENITIVE case assigned by a supercoscripted AGR must be morphologically realized as genitive case on the relative clause subject.

Second, we will argue that Turkish employs a special case of what is known as the Bijection principle of Koopman and Sportiche (1982) which states that the binding relation between operators and variables must be one-to-one. The relevance of this constraint for us is that it disallows the multiple  $\bar{A}$ -binding of an empty variable in RC's. We will refer to this special restriction as the Multiple  $\bar{A}$ -Binding Ban, and for reasons that will become clear shortly, we will define it in the following way.<sup>5</sup>

(36) Multiple  $\overline{A}$ -Binding Ban
$$* [\alpha [ \underset{\text{IP}}{[\beta X e_i Y]} ]^j \dots \text{AGR}^j ] \Omega_i]$$

where,  $\alpha$  is RC that immediately contains IP,  $\beta$  is NP or S, and X and Y may be null.

We will further stipulate that the possessive AGR on the RC verb must govern an NP.

(37) The Idle AGR Filter

$$* [\alpha \dots [\text{AGR} ] I]$$

where  $\alpha$  is an RC and AGR is a non-cosuperscripted AGR of  $\alpha$ .

Why (37) is expressed this way should not concern us at this point. We will come to this issue later. What (37) says in effect is that a possessive agreement on the verb of an RC that contains no superscript is ruled out.<sup>6</sup> Next we will mention the case filter that rules out NP's missing case by a designated case assigner.

(38) The Case Filter

\* NP

- Case

And finally we will stipulate the case sanctioning principle (39), below.

(39) The Case Sanctioning Principle

Case must be sanctioned by a designated assigner.

Let us now see how our principles (35)-(39) make the correct well-formedness predictions for RC's. We will, for the moment, confine ourselves to RC's with future participle to highlight the effects of the principles (35-39).

- (40) a. [[Ali-nin e<sub>i</sub> oku- yacağ-i] O<sub>i</sub> kitap<sub>i</sub>  
           -GEN      read-PART- 3SG    book

'The book that Ali will read.'

- b. [[e<sub>i</sub> Ali'yle evlen-ecek] O<sub>i</sub> kız<sub>i</sub>  
       COM      marry-PART          girl

'The girl who will marry Ali.'

- c. \*[e<sub>i</sub> Ali'yle evlen-eceğ-i] O<sub>i</sub> kız<sub>i</sub>  
       -COM      marry-PART-3SG    girl

'The girl who will marry Ali.'

- d. \*[e<sub>i</sub> Ali'yle evlen-eceğ-i] kız<sub>i</sub>  
       -COM      marry-PART-3SG    girl

'The girl who will marry Ali.'

- e. \*[Ali<sup>j</sup> e<sub>i</sub> oku- yacağ-i<sup>j</sup>] kitap<sub>i</sub>  
           read-PART- 3SG    book

'The book that Ali will read.'

- f. \*[Ali-nin e<sub>i</sub> oku-yacak] kitap<sub>i</sub>  
           -GEN      read-PART    book

'The book that Ali will read.'

(40a) and (b) are sanctioned by (35)-(39) by default. (40c) violates (36), the empty variable e is  $\bar{A}$ -bound by the O and the AGR of the RC, and (d) violates (37). Finally in (40e), the genitive filter (35) is violated.

Now in (40f), the future participle yecek which we assume to be in INFL may assign NOMINATIVE case to the subject Ali'nin.<sup>7</sup> The genitive case on this subject, however, may not be sanctioned by tense. It is empirically the case that in Turkish the genitive on the subject is assigned by nominal (possessive) type agreement that governs the subject. This is to say that in Turkish genitive on a subject always correlates with an overt nominal agreement.

We will say then that in (40f) the GENITIVE case on the subject is not sanctioned because it has no assigner, a violation of (39).

Finally consider (41), below.

(41) \*[[Ali e<sub>i</sub> oku-yacak] Q<sub>i</sub>] kitap<sub>j</sub>  
read-PART book

'The book that Ali will read.'

Now, (41) does not violate any of the principles stated so far. The future participle yacak assigns NOMINATIVE case on the subject Ali. Then why is (41) still ill-formed? We will say that (41) is ruled out because it does not contain agreement for no obvious reason. Considering that Turkish has rich agreement morphology, presence of agreement should be the unmarked case. Where agreement may not occur, there must be a reason, like our Multiple A-Binding Ban (36), above.

#### (42) Lack of Agreement Condition

Lack of agreement in IP's must be syntactically motivated.

In (41), then, this expected agreement is missing. But when it shows agreement it reduces to (40d) or (e).

Notice also how we predict the type of the RC where the target NP is a genitive modifier of the subject.

- (43) a. [[[\_e<sub>i</sub>] oğl-u<sup>j</sup>] gel-ecek] O<sub>i</sub>] adam<sub>i</sub>  
          son-3SG      come-PART    man

'The man whose son will come.'

- b. \*[[\_e<sub>i</sub>] oğl-u<sup>j</sup>-nun] gel- ecek] O<sub>i</sub>] adam<sub>i</sub>  
          son-3SG-GEN   come      -PART    man

'The man whose son will come.'

- c. \*[[\_e<sub>i</sub>] oğl-u<sup>j</sup>-nun]<sup>k</sup> gel- eceğ- i<sup>k</sup>] O<sub>i</sub>] adam<sub>i</sub>  
          son-3SG-GEN   come-PART- 3SG    man

'The man whose son will come.'

In (43a) the subject of the RC, [\_e oğl-u] is assigned NOMINATIVE case by the participial tense in I, ecek. In (43b) the same subject of the RC has genitive case with no AGR assigner, a violation of the Case Sanctioning Principle (39). In (43c) the Multiple  $\bar{A}$ -Ban is violated, with the AGR of the RC being one of the  $\bar{A}$ -binders. We will return later to the status of  $e_{ij}$  in (43a-c) and its bearing on the Multiple  $\bar{A}$ -Binding Ban.

### 3.3.2 Subjectless clauses: A First Approximation

We have yet to incorporate the so-called "subjectless clauses" into our analysis. First of all, assuming the extended projection principle we will say that the subjectless clauses do in fact contain an empty element in their subject position.<sup>8</sup> The question now is, given (44), below,

- (44) e dağ- a çıkış- il- di.  
 mountain-DAT climb-PASS-PAST

'The mountain was climbed' Lit. 'It was climbed the mountain.'

how can we account for the fact that (45a) is ruled in while (45b) is ruled out?

- (45) a. [[e e<sub>i</sub> çıkış- il- an] Ø<sub>i</sub>] dağı  
 climb-PASS- PART mountain

'The mountain which was climbed.'

- b. \*[ [ e<sup>j</sup> e<sub>i</sub> çıkış- il- diğ- i<sup>j</sup>] Ø<sub>i</sub>] dağı  
 climb-PASS-PART-3SG mountain

This issue is related to the nature of the empty element in the subject position of (44). Put differently, the question is, does the verb in (44) contain a third person Ø morpheme that governs the empty subject e or no agreement at all? Let us look at the consequences of these possibilities in turn.

If there is 3SG Ø morpheme in (44) then this must govern the empty subject e. Then e must be pro. But if this is the case, then (44) and (46) below, will have the same structure represented by (47), below.

- (46) pro<sup>j</sup> dağ- a çıkış- ti- Ø<sup>j</sup>  
 mountain-DAT climb-PAST-3SG

'(S)he climbed the mountain.'

- (47) [ pro<sup>j</sup> I [ NP-DAT V ] ] [ [ Tense ] I [ AGR<sup>j</sup> ] ]

Given (47) as the structural representation of both (44) and its passive (46), there remains no reasonable explanation to the fact that relativization targeting dağ-a 'to the mountain' yields different clause structure for (44) than it does for (46). Observe below.

- (48) a. \*[[pro    e<sub>i</sub>    çik-    an]    0<sub>i</sub>]    dağ<sub>i</sub>  
                    climb- PART                          mountain

'The mountain that (s)he climbed.'

- b. [[pro<sup>j</sup>    e<sub>i</sub>    çik-    tıg-    i<sup>j</sup>]    0<sub>i</sub>]    dağ<sub>i</sub>  
                    climb- PART-3SG                          mountain

'The mountain which (s)he climbed.'

Now, (48) contain (46), and (45) contain (44). Notice that while relativization on (44) yields an agreementless RC, (45a), (46) yields an RC with agreement in (48b). But this is incompatible with the assumption that (44) and (46) have the same structure, which we are forced to accept if we assume that (44) contains third person singular agreement.

Let us now exploit the possibility that in (44) there is no AGR morphology. Given the typology of empty categories of Chomsky (1982), the consequence of this assumption is that the empty category cannot be pro which must be governed by AGR and assigned person and number features. Is this something desirable? What if any are the properties of this e that would justify its not being governed by AGR? First observe that the e in (44) is semantically different from the pro subject in (46). While the latter has referential content, the former does not. The empty subject in e in (44) contributes nothing to the meaning of the sentence. In fact it displays typically the properties of pleonastic elements.

First observe below that the e in (44) and (45a) may not be questioned, as we illustrate in (49a) and (b), respectively.

- (49) a. \* Kim/ne dağ- a çık- il- d1?  
who/what mountain-DAT climb-PASS-PAST

'Who/what it was climbed the mountain?'

- b. \*[Kim/ne e<sub>i</sub> çık- il -an] 0<sub>i</sub>] dağ  
who/what climb- PASS- PART mountain

'The mountain (which) was climbed (by) who/what?'

But the pro in (46) and (48b) can be questioned.

- (50) a. Kim dağ- a çık- t1?  
who mountain-DAT climb-PAST

'Who climbed the mountain?'

- b. [[Kim-in e<sub>i</sub> çık- tıg- 1] 0<sub>i</sub>] dağı  
who-GEN climb- PART 3SG mountain

'The mountain which who climbed?'

We will relate this state of affairs to the fact that the subject position of (44) is not a theta position. Now pro with person and number features does have referential content. Furthermore, since this empty element does not originate in a theta position it will never get theta-marked in (44). Consequently e in (44) may not be cosuperscripted with AGR to be assigned person and number features.<sup>9</sup>

Assuming this line of argumentation is justified we can now understand why impersonal passive constructions always yield the agreementless type relative clauses. Let us repeat the crucial examples here.

- (51) a. [[e e<sub>i</sub> çik- il- an] 0<sub>i</sub>] dağ  
climb pass- PART mountain

'The mountain (which it) was climbed.'

- b.\* [[e<sup>1</sup> e<sub>i</sub> çik- il- diğ- i<sup>1</sup>] 0<sub>i</sub>] dağı  
climb- PASS- PART- 3SG mountain

'The mountain (which it) was climbed.'

- c.\* [[e e<sub>i</sub> çik- il- diğ- i] 0<sub>i</sub>] dağ  
climb- PASS- PART- 3SG mountain

'The mountain (which it) was climbed.'

In (51a) the clause subject e is a pleonastic empty element in a non-theta position and it is correctly not assigned referential content by any AGR. The type of the RC guarantees this. In (51b), the subject e is a pro which is excluded from this position. Finally in (51c) the idle AGR filter is violated.

This is then our modular explanation for the RC's formed on impersonal passives, an instance of the so-called "subjectless clauses." We will suggest later that all clauses designated as subjectless at the time of RC formation are like impersonal passives in having a pleonastic element with no person and number features.<sup>9</sup>

### 3.3.3 Back to Participles

What we have done so far is to analyze relativization into several general conditions that apply cumulatively to account for the total well-formedness of the various types of RC's. We have, by no means, however, exhausted the well-formedness conditions on RC's in Turkish. In order to be able to make our point we gave examples of RC's with future participles throughout.

We also wished to emphasize the point that the participle itself in RC's did not necessarily have an indispensable functional load; that is, the differentiation of RC types did not crucially depend on the type of the participle.

But in non-future tense the participles are split down the middle and they are never interchangeable. Thus when the RC shows GEN...POSS morphology the DIG participle is used, when there is no such morphology, -(y)En or -mIs or -mEz are used. This led both Underhill (1972) and HK (1976) to consider RC types indivisible unities. According to HK, for example, the distribution of types are predicted in the following manner.<sup>10</sup>

(52) (i) MNP

$$[\underset{\text{RC}}{[ \dots [ \alpha \dots e_i \dots ] \dots ]} \underset{\text{NP}}{N P_i}]$$

Choose SP if  $\alpha$  is the subject of RC

(ii) NSP

$$[\underset{\text{RC}}{[ \dots [ \dots e_i \dots ] \dots ]} \underset{\text{NP}}{N P_i}]$$

Choose SP, where RC contains no subject.

(iii) Otherwise choose OP.

Then, a list of RC templates must be marked as either SP or OP.

(53) (i) [GEN ... -DIG +AGR] = OP

(ii) . . . V-(y)En] . . . V(y)-ECEK } = SP

In the present study the question is how will our analysis predict the fact that -DIG always appears with the AGR and -yEn always without it. Or rather how are the following to be ruled out.

- (54) a. \*[e<sub>i</sub> gel-dik] adam<sub>i</sub>

'The man who came'

- b. \*[Ben-im<sup>j</sup> e<sub>i</sub> oku- yan- im<sup>j</sup>] O<sub>i</sub> kitap<sub>i</sub>  
I-GEN read-PART-1SG book

'The book that I read'

Let us exploit the fact that in non-future RC's DIG appears with AGR and -(y)En without it, and formulate the two conditions.

- (55) (a) \*[ $\alpha$  [IP ... [VP ... V-] [I [<sub>T</sub>DIG] [<sub>AGR</sub> Ø] ] ]]

- (b) \*[ $\alpha$  [... V-(y)En-Agr<sup>j</sup>] O<sub>i</sub>] NP<sub>i</sub>

Where  $\alpha$  is an RC

(55a) says that in an RC DIG is incompatible with the lack of AGR.

(55b) is stated somewhat differently: with -(y)En; the AGR cannot govern anything inside the RC. Therefore in

- (56) Ben-im<sup>j</sup> [e<sub>i</sub> gel-en gid-en] im<sup>j</sup> O<sub>i</sub>  
I-GEN  $\alpha$  COME-PART go-PART 1SG

'Those (people) of mine who visit me.'

the agreement does not govern any NP inside the RC,  $\alpha$ , and thus it escapes the filter (55b).

### 3.3.4 Multiple $\bar{A}$ -Binding Ban Reconsidered

In accounting for the well-formedness of Turkish relative clauses we introduced the Multiple  $\bar{A}$ -Binding Ban which we will copy here as (57), below.

$$(57) \quad *[\alpha [IP [\beta X \underline{e}_i Y]^\dagger AGR^\dagger] Q_i]$$

Where  $\alpha$  is an RC that immediately contains IP,  $\beta$  is an NP or S, and the AGR is dominated by the INFL of  $\alpha$ , and X and Y may be null.

It is due to (57) that we get no agreement on the verb of the relative clause in the following.

$$(58) \quad a. \quad [[\underline{e}_i \text{ kitab- } 1 \text{ oku- } \text{yan}] Q_i] \text{ adam}_i$$

'The man who is reading the book.'

$$b. \quad [[[ \underline{e}_i \text{ baş- } 1 ] \text{ ağrı-yan}] Q_i] \text{ adam}_i$$

'The man whose head is aching.'

$$c. \quad [[[ \underline{e}_i \text{ ölü- } \text{düğ- } \text{ ü}] \text{ söyle-n- } \text{en}] Q_i] \text{ adam}_i$$

'The man who is said to have died'

In (58a)  $\underline{e}$  is not governed by AGR in accordance with (57). In (58b) and (c), however, the  $\underline{e}$ 's seem to be governed by the 3SG on their heads. If this is the case, that is if these nominal agreements are not idle, this would not be in violation of (57), which disallows multiple  $\bar{A}$ -binding when the AGR of the RC is involved and not otherwise. We

will, in this section, however, point to some striking facts that will require in some cases a strong version of the Multiple  $\bar{A}$ -Binding Ban which will disallow multiple  $\bar{A}$ -binding of an  $\bar{A}$ -bound variable by any AGR inside the relative clause.

### 3.3.4.1 The Strong Version of the Multiple $\bar{A}$ -Binding Ban

Consider

$$(59) \quad *[\alpha[\beta e_i^j \dots AGR^j] X] O_i$$

Where  $\alpha$  is the domain of the operator,  $O$ , and  $\beta$  is NP or S, and X is not null.

What (59) says, in effect, is that once an empty variable is  $\bar{A}$ -bound, that variable and NP or S that contain it becomes opaque to second  $\bar{A}$ -binding by any AGR not adjacent to the operator.

Let us consider this issue in the light of some new evidence not considered in earlier studies. In Turkish, unlike English, non-restrictive relative clauses are extremely common, and they are fairly common as appositive clauses to personal pronouns.

Observe the following.

(60)

a. [[e<sub>i</sub> bu iş- te hiç çıkar- 1] ol-ma- yan] O<sub>i</sub> sen<sub>i</sub>  
this matter-LOC no interest-3SG be-NEG-PART you

'You, who have no interest in this matter'

b. [[e<sub>i</sub> gözler-in- den] yaşlar ak- an] O<sub>i</sub> zavallı ben<sub>i</sub>  
eyes- 3SG-ABL tears pour-PART poor I

'Poor me from whose eyes tears were coming down'

- c. [[e<sub>i</sub> ev-i bark-1] yık- il- an] O<sub>i</sub> sen<sub>i</sub>  
 house-3SG collapse-PASS-PART you  
 'You whose house collapsed'
- d. [e<sub>i</sub> ev- in- in kapı-sı herekes- e açık ol-an] O<sub>i</sub> ben<sub>i</sub>  
 house-3SG-GEN door-3SG everyone-DAT open be-PART I  
 'I, whose door is open to everyone'

The examples in (60) are striking. In each case the e bound by the operator is the subject of a possessive phrase but the agreement on the head of this possessive NP is an invariant third person that does not agree with the e. This is not possible when the possessive NP's in question are taken out of their respective contexts in (60).

- (61) a. Sen- in bu iş- te çıkar- in/\*çikar- i yok.  
 your-GEN this matter-LOC interest-2SG interest-3SG exist-NEG  
 'You have no interest in this matter'
- b. Ben-im gözler-im- den/ -\*in-den yaşlar ak-iyor.  
 I-GEN eyes- 1SG-ABL 3SG-ABL tears flow-CONT  
 'Tears are coming down from my eyes.'
- c. Sen-in ev- in bark- in/ \*ev-i bark-1 yıkıl-di.  
 You-GEN house-2SG house-2SG -3SG -3SG collapse-PAST  
 'Your house collapsed.'
- d. Benim ev-im-in / \*ev-im-in kapı-sı herkes- e açıktır.  
 My house-1SG- GEN house-1SG- door-3SG everyone-DAT open  
 'The door of my house is open to everyone.'

The sentences in (61a-d) correspond to the RC's in (60a-d), respectively. In the former the correct first or second person agreement is obligatory. Consider the following additional cases.

(62)

- a. [[e<sub>i</sub> yillardır kötü kadınlar-la yat- tığ- <sub>i</sub>] o<sub>i</sub> iddia  
 for-years bad women- COM sleep-3SG-PART claim  
 ed- il- en] ben<sub>i</sub>  
 do- PASS- PART I

'I, who (it) was claimed to have slept with lewd women for years.'

- b. [[e<sub>i</sub> komunist partisin-e üye ol-düğ-u] söyle-n-en] o<sub>i</sub> bizler<sub>i</sub>  
 communist party- DAT member be-PART-3SG say-PASS-PART we

'We who are said to be members of the communist party'

In (62) the target of relativization is the subject of the sentential subject of the RC. The agreement on the verb of the sentential subject is third person while the subjects are first person singular and first person plural in (62a) and (b), respectively. Clearly then the possessives on the sentential subject of the RC's are idle. This means that these sentential subjects do not have agreement. Recall that idle possessives are allowed on the verbs of argument clauses and on the subjects of NP's but not on the verbs of RC's. The lack of agreement on the verbs of the sentential subjects in (62a) and (b) must be due to the strong version of the Multiple  $\bar{A}$ -Binding Ban, according to which an empty variable  $\bar{A}$ -Bound by an operator may not be  $\bar{A}$ -Bound by any AGR. Notice further that the lack of agreement is legitimized and an ungrammatical result does not follow for lack of agreement for no reason.

Let us now return to the issue of idle nominal agreement. The first evidence is from the so-called impersonal passives discussed earlier.

- (63)      a. ban-a    vur- ul- du  
              I- DAT hit-PASS-PAST  
              'I was hit'  
  
     b. Siz-e    ates    ed-il- di  
       you-DAT fire    do-PASS-PAST  
              'You were fired at.'

We argued earlier that in (63a) and (b) there are no AGR. But when (63a,b) are nominalized as (64a) and (b), respectively, the third person morphology appears on the clause verb. We will say that these AGR are idle, that is they do not bind the subject, a case allowed in nominalizations.

- (64)      a. [e ban-a vur-ul- duğ- u]         anlaşıl- di.  
              I-DAT hit-PASS-PART-3SG         realize- PAST  
              'It was realized that I was hit.'  
  
     b. [e siz-e    ates    ed-il- diğ-i]         doğru mu?  
       you-DAT fire    do-PASS-PART-3SG         true Q  
              'Is it true that you were fired at?'

Second, in exceptional case marking environments we have the following pairs.

- (65)      a. Onlar [[ben-im para- m] var]    san- iyor-lar.  
              they    I-GEN money-1SG exist    think-CONT-3PLR  
              'They think I have money.'  
  
     b. Onlar [[ben-i    para- s1] var]    san- iyor-lar.  
       they    I-ACC money-3SG exist    think-CONT-3PLR  
              'They think I have money.'

In (65a) 1SG governs and assigns GENITIVE Case on its subject, ben-im. In (65b) the 3SG on para-sı does not govern beni. This is the reason why the matrix verb saniyorlar can govern into the embedded clause and mark beni in the accusative. Compare now param 'my money' and parası 'his money' in (65a) and (b), respectively. The latter shows an idle third person that does not agree with its subject.

We wish to claim here that the third person possessives in (60) and (62) above, are likewise idle.

### 3.3.4.2 Further Evidence

The Multiple  $\bar{A}$ -Binding Ban (59) receives further support from an interesting set of facts. In the exceptional case marking environments, just discussed, the nominative subject correlates with overt AGR on the complement verb, and the accusative subject with no overt AGR. Observe the following.

- (66) a. Biz [sen gel-ecek-sin] san- di- k.  
we you come-FUT-2SG think-PAST-1PLR

'We thought you would come.'

- b. Biz [sen-i gel-ecek] san- di- k.  
we you-ACC come-FUT think-PAST-1PLR

'We thought you would come.'

Furthermore, in some dialects, (67) is absolutely perfect.

- (67) Biz [sen-i gel-ecek-sin] san- di- k  
we you-ACC come-FUT-2SG think-PAST-1PLR

'We thought you would come.'

Now, when sen is relativized in (66) and (67), we have the following two possibilities.

- (68) [Biz-im [<sub>ə<sub>i</sub></sub>] gid-ecek-∅ (-sin<sup>1</sup>?/?/\*)] san- diğ- lmiz] <sub>0<sub>i</sub></sub> sen<sub>i</sub>  
 we-GEN go- FUT-3SG (2SG) think-PART-1PLR you  
 'You, who we thought would leave.'

In these dialects, although (67) is perfect, (68) with agreement on the direct complement is almost totally out, in violation of the strong version of the Multiple  $\bar{A}$ -Binding Ban.

#### 3.3.4.3 Summary

We have argued in this section that a weak ban on Multiple  $\bar{A}$ -Binding of the empty variable in the relative clause, once by the Operator and then by the AGR of the RC does not sufficiently account for all the relevant facts and that a stronger version is called for.

#### 3.3.4.4 Evidence from Welsh

The Multiple  $\bar{A}$ -Binding Ban seems to account for the relevant cases rather well. If it is in fact correct we might expect to find some similar cases in other languages that would fall under its prediction. One such language seems to be Welsh as described by Harlow (1981).

Welsh is an SOV language which does not show overt wh-movement. Usually a gap appears in place of the target NP in the relative clause. In some cases the site of the target is occupied by a relative pronoun. A base-generated complementizer participle a or y appears in the COMP position. Observe the following typical examples.

- (69) a. y dyn [[a<sub>i</sub> [werthodd e<sub>i</sub> y byd]]]  
           S          S  
       the man Comp   sold         the world

'The man who sold the world.'

- b. y llong [a<sub>i</sub> [werthodd y dyn e<sub>i</sub>]]  
           S          S  
       the boat Comp   sold         the man

'The boat that the man sold.'

Welsh is a rich agreement language but in the examples just cited the verb werthodd 'sold' does not show person or number agreement. We will not be concerned with this point here. Now consider the following set of examples.

- (70) a. y llyfr [y<sub>r<sub>i</sub></sub> [oeddw<sub>n</sub> i yn [e<sub>i</sub> ddrllen e<sub>i</sub>]]]  
           S          S          VP  
       the book Comp   was       I PRT AGR   read

'The book that I was reading.'

- b. y dyn [y<sub>i</sub> [soniai<sub>s</sub> i [amdan-o<sup>j</sup> e<sub>i</sub>]]]  
           S          S          VP  
       the man Comp   talked   I about-EMS

'The man I talked about.'

- c. y dyn [y<sub>i</sub> [gwelai<sub>s</sub> i [ei<sup>j</sup> fab e<sub>i</sub>]]]  
           S          S          VP  
       the man Comp   saw       I AGR   son

'The man whose son I saw.'

- d. y llong [y<sub>i</sub> [gwanaeth John [ei<sup>j</sup> werthu e<sub>i</sub>]]]  
           S          S          VP  
       the boat Comp   did       3SG sell

'The boat that John sold.'

In all of (70) the empty variable  $\emptyset$  is  $\bar{A}$ -bound once by the COMP element  $y/yr$ , and once by the clitic agreement marker in the VP, which in well defined cases provides object agreement.

This is not to say, however, that empty variables may be multiply  $\bar{A}$ -bound freely. Observe the following.






Observe that while (71a) is not acceptable with multiple A-Binding of the empty variable, its counterpart with no agreement on the variable, is perfect. Harlow (1981:242) notes that "S structures like (71a) can in fact occur in relative clauses provided that the S containing the extraction site is not adjacent to the head NP." Harlow is saying in effect that (71a) is ruled out with agreement on the variable because the S minimally containing the extraction site is adjacent to the head NP, y dydion 'the man'. The agreementless version is however felicitous. Now consider (72), below.

According to Harlow (1981), (72) is grammatical with the variable being bound by agreement (multiply  $\bar{A}$ -bound in our analysis) because the minimal S containing the extraction site is not adjacent to the head NP, y dynion 'the man'.

But now reconsider (70a-d) above. In each of these sentences the empty variable is multiply  $\bar{A}$ -bound and the minimal S containing the variable is adjacent to the head NP of the relative clause. Nevertheless, the sentences are grammatical. Harlow's adjacency principle cannot predict these cases.

But notice that the ungrammaticality of (71a) as well as the grammaticality of all the other examples given in this section fall under the prediction of the weak version of the Multiple  $\bar{A}$ -Binding Ban, which disallows multiple  $\bar{A}$ -binding only when the two  $\bar{A}$ -Binders are adjacent, as is the case in (71a), where the Comp y and the plural verb are adjacent. In all the other cases the two  $\bar{A}$ -binders are intermediated by other structures.

### 3.3.4.6 Evidence from Quechua

Some Quechua relative clause facts seem to be strikingly similar to Turkish.<sup>11</sup> As reported by Lefebvre and Muysken (1988), three nominalizing suffices appear on the RC verbs. The agreement properties of these are given as follows.

- (73) a. -q Subject relativized, no person marker.
- b. -sqa Non-subject relativized, action realized, person marker.
- c. -na Non-subject relativized, action unrealized, person marker.

Now observe the following examples from Lefebvre and Muysken (1988:166-67)

- (74) a. [ [e<sub>i</sub> hamu - sha- q] O<sub>i</sub>] runa  
come PROG AGENTIVE-NOM man

'The man who is coming'

- b. [ [e<sub>i</sub> riku- sqa- y] O<sub>i</sub>] warma  
see- NOM 1 girl

'The girl I saw'

- c. [[Pagarin e<sub>i</sub> rima-na -yki] O<sub>i</sub>] ruma  
tomorrow speak-NOM- 2 man

'The man you'll be speaking tomorrow'

Notice in the above examples that the target of relativization is not an overt category. Furthermore, while the RC verbs with target in non-subject position, (74b, c), show agreement, but the RC's with the target in subject position show no such agreement. Lefebvre and Muysken (1988:197) observe that if RC of the (74a) type had agreement this would be in violation of the bijection principle of Koopman and Sportiche (1982). The data, however, do not include RC's where the target NP is some part of the subject NP or that of a sentential subject in the relative clause. If in such cases the RC does not show agreement, then the bijection principle will not suffice and something like our Multiple A-Binding Ban will be required.

### 3.3.4.7 The Concept of Closeness

Kornfilt (1984) developed a concept of closeness to account for the behavior of agreement morphology in Turkish, which in an interesting

way extends into relative clause facts as well. The concept of closeness here disallows and an empty category bound by AGR (i.e. a pro) to be too close to an operator that also binds it. Let us now consider the following.

- (75) a. [[e<sub>i</sub> okul- a gid- en] 0<sub>i</sub>] adam<sub>i</sub>  
           school-DAT go- PART      man  
           'The man who goes to school'
- b. [[çocuğ- un e<sub>i</sub> git-tiğ- i] 0<sub>i</sub>] okul<sub>i</sub>  
       child- GEN go- PART-3SG      school  
       'The school the child goes to'
- c.\* [[e<sub>i</sub>' okul- a gid- eceğ-i'] 0<sub>i</sub>] cocuk<sub>i</sub>  
       school-DAT go-PART- 3SG      child  
       'The child who will go to school'
- d.\* [[e<sub>i</sub> oğl-u- nun okul- a gid-eceğ-i] 0<sub>i</sub>] adam  
       son-3SG-GEN school-DAT go- PART-3SG      man  
       'The man whose son will go to school'

In (75a,b) e is not bound by AGR and is therefore not a pro. Hence, the concept of closeness does not arise here. In (75c) e is a pro being governed by AGR and it is too close to its operator. In (75d) the e may or may not be pro. If the 3SG on oğl-u is not idle then e is pro, and again too close to its operator. If the possessive on oğl-u is idle, then the concept of closeness must be properly revised to accommodate such cases.

We may, though, refer to a different sort of closeness to reformulate the weak version of the Multiple  $\bar{A}$ -Binding Ban, which insight is also captured by Kornfilt (1984). Recall that we crucially

referred to the AGR of the RC as the disallowed second  $\bar{A}$ -binder. In all of the cases where the weak ban is operative it also happens that the two  $\bar{A}$ -binders are adjacent to each other as in (76), below.

(76)

- a.\* [[e<sup>j</sup>] okul-a gid-eceğ-i]<sup>j</sup> o<sub>i</sub> ] cocuk  
 school-DAT go- PART-3SG child

'The child who will go to school'

- b.\* [[Ali-nin<sup>j</sup> e<sub>i</sub> yaz- diğ- i<sup>j</sup> -nin]<sup>k</sup> san- il- acağ-ı<sup>k</sup>] o<sub>i</sub> kitap  
 -GEN write-PART-3SG-GEN think-PASS-PART-3SG book

'The book which it will be thought (that) Ali wrote it'

In (76a)  $e$  is  $\bar{A}$ -bound by two adjacent binders. In (76b),  $e$  and the S that immediately dominates it are again bound by two adjacent  $\bar{A}$ -binders. As we noted earlier there is no exception to this principle. Observe again how the weak ban may correctly allow multiple  $\bar{A}$ -binding when the two  $\bar{A}$ -binders are not adjacent.

- (77) [[[e<sup>j</sup>] hiç oğl-um<sup>j</sup>] ol- ma- yan] o<sub>i</sub> ] ben<sub>i</sub>  
 no son-1SG have-NEG-PART

'I who have no son(s)'

In (77)  $e$  may be multiply  $\bar{A}$ -bound because the  $\bar{A}$ -binders in question are not adjacent to each other.

On the other hand, the strong Multiple  $\bar{A}$ -Binding Ban, a dialectal/idiialectal variant of the weak ban does not make reference to this adjacency requirement and while disallowing or marginally accepting (77), above, accepts (78) felicitously.

- (78) [[e<sub>1</sub>      hiç      oğl-u]      ol-    ma- yan]    0 ]    ben<sub>i</sub>  
           no      son-3SG      have-NEG-PART      I  
           'I who have no sons'

Thus the difference between the strong and weak versions of the Multiple  $\bar{A}$ -Binding Ban (which seems to be due to dialectal/idiolectal variation) is the presence or absence of the adjacency requirement on the two  $\bar{A}$ -binders in question.<sup>12</sup>

### 3.4 The Missing Subjects

In what follows we will almost totally ignore the semantics of the subjectless clauses. More specifically, we will not be concerned with how subjectlessness correlates with indefiniteness, specificity, agentness etc. It is assumed in related work (Underhill (1972), Sezer (1972) and Hankamer and Knecht (1976) that semantic properties of non-initial subjects determine their syntactic position in the sentence. For example, indefinite subjects move to immediate preverbal position, and so on. The reason for this was that in accordance with the standard theory of Chomsky (1965), it was assumed that all clauses had the same basic word-order in deep structure. For Turkish this was SOV. Then if a subject did not appear in initial position in the surface structure there had to be some motivation to displace it from its original position.

We will assume here that no subject moves to preverbal position in syntax, and that subjects that must remain in immediate preverbal position originate there owing to the argument structure of the verb. There may be movement to subject position, however. We are assuming

that all movement is upward bounded so that the moved element c-commands its trace a fact necessitated by the Empty Category Principle.

This type of movement must be clearly distinguished from the so-called "focus movement" which places subjects as well as other arguments of the sentence to immediate preverbal position. We are assuming here without comment that this movement does not happen in s-structure. It is most probably a stylistic rule that applies in PF. We believe that Underhill's (1972) insight that this kind of movement applies after RC formation and does not interact with it is correct. We will therefore not dwell on such cases where a subject in the genitive appears to the immediate preverbal position of the clause verb.

Let us now return to our original question: Why do we get agreementless relative clauses when elements of "subjectless" clauses are relativized? Our answer to this is: Because these sentences lack AGR. The lack of AGR explains the lack of genitive assignment as we saw earlier. The missing AGR also accounts for the -(y)En participial when the clause tense is non-future.

As we argued for impersonal passives, we will claim that subjectless clauses actually have an empty pleonastic subject which is not governed nor assigned person and number features by AGR. Instead of presenting hard core evidence for this claim, we will point to the fact that this assumption is consistent with other relevant observations.

We will further assume that both N and NP can adjoin to the verb somehow to be assigned case. Again the exact nature of this process will not concern us here. (See Section 2.2.3.1.5 above.) We accept as correct Knecht' (1986) observation that not all preverbal nominative N's/NP's are incorporated into the verb.

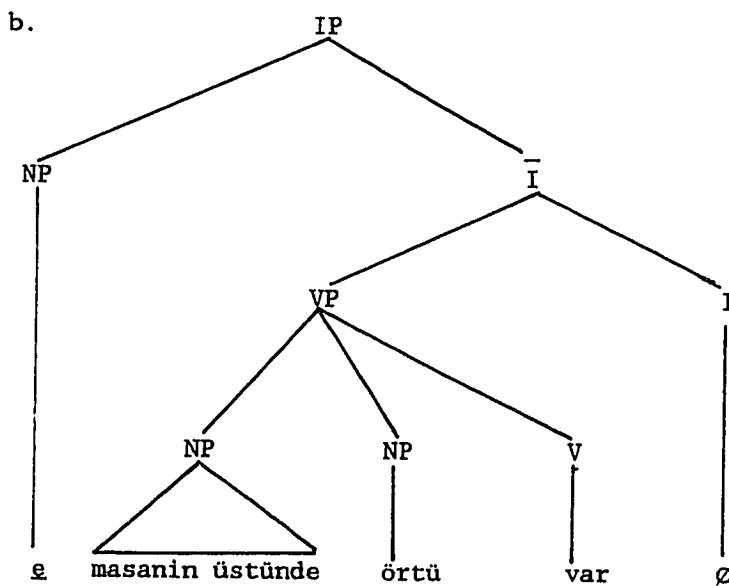
Finally, we should point out that we will not attempt here even a nearly comprehensive theory of the types of clauses involved in determining the RC shape. These constructions involve the interface of syntax and semantics in an extremely complex way. At times the syntactic structure can be identified by the logical form of the sentence in question. Our only purpose in what follows is to show how such constructions can be brought under the present analysis of RC's in a consistent way and to suggest a line of possible analysis for their derivation.<sup>12</sup>

### 3.4.1 Existential Clauses

We will assume that an existential sentence of the form (79a) has the s-structure representation (79b).

- (79) a. e Masa-nın üst-ün- de örtü var.  
           table-GEN top-3SG LOC cover exist

'There is (a)cover on top of the table'<sup>13</sup>



The nature of the empty element, e in the subject position is important. Given various facts of Turkish which we will refer to below, this empty category is best considered to be an expletive empty pronoun with no referential content, analogous to there in the comparable existential sentences in English. The subject position in such existential sentences does not represent a thematic role position and contribute nothing to the meaning of the sentence. What is more, the empty subject may not be bound by agreement.

Consider the following:

- (80) e Masa-nın üst-ün- de kitap-lar var- (\*lar)<sup>13</sup>  
 table-GEN top 3POS-LOC books-PLR exist-(PLR)

'There are books on top of the table.'

Therefore both gerunds and relative clauses formed on (79) and (80) will turn out to be agreementless.

- (81) a. e Masa-nın üst-ün- de örtü ol-dug- u  
 Table-GEN top-3SG-LOC örtü be-PART-3SG

'That there is cover on top of the table'

- b. [[e e<sub>i</sub> üst-ün- de örtü ol- an] Q<sub>i</sub>] masa<sub>i</sub>  
 top-3SG-LOC örtü be-PART table

'The table on which there is a cover'

(82)

- a. Masa-nın üst-ün- de kitap-lar ol-duğ- u (\*ol-duk- lar-i)  
 table-GEN top-3SG-LOC book- PLR be-PART-3SG (be- PART-PLR-3SG)

'That there are books on top of the table'

- b. [[e e<sub>i</sub> üst-ün- de kitap-lar ol-an] O<sub>i</sub>] masa  
 top-3POS-LOC book- PLR be-PART table

'The table on which there are books'

(82a,b) derive from (80). In (82a) the 3SG at the end is idle, that is it does not bind any NP. Hence kitaplar is not assigned genitive, an unmistakable sign of government by agreement in gerundive complement clauses. Similarly in (82b) both agreement on the RC verb and genitive marking on kitaplar is missing.

Consider now the following.

- (83) a. Örtü- nün<sup>j</sup> masa- nin üst-ün- de ol-dug- u<sup>j</sup>  
 cover-GEN table-GEN top-3SG-LOC be-PART-3SG

'That the cover is on the table'

- b. Masa-nin üst-ün-de örtü-nün<sup>j</sup> ol-dug-u<sup>j</sup>  
 -83a

- c. [[Örtü- nün<sup>j</sup> e<sub>i</sub> üst-ün- de ol-dug- u<sup>j</sup>] O<sub>i</sub>] masa<sub>i</sub>  
 cover-GEN top-3SG-LOC be-PART-3SG table

'The table which the cover is on to of'

- d. [[e<sub>i</sub> üst-ün- de örtü- nün<sup>j</sup> ol-dug-u<sup>j</sup>] O<sub>i</sub> masa<sub>i</sub>  
 = (83c)

In (83) the subject is governed by agreement and correctly assigned the genitive. Furthermore, the interpretation of the subject is definite, as opposed to the indefinite subjects of (81) and (82), and this subject may appear both in clause initial and immediate preverbal position;

whereas, the indefinite subjects of the clauses in (81) and (82) may not appear in clause initial position.

- (84) a. \* örtü masa-nın üst-ün- de ol-dug- u  
cover table-GEN top-3SG-LOC be-PART-3SG

'That there is a cover on the table'

- b. \* [ [ örtü e<sub>i</sub> üst-ün- de ol-an] o<sub>i</sub>] masa<sub>i</sub>  
cover top-3SG-LOC be-PART table

'The table that there is a cover on'

Now, (83a-c) are derived from underlying copulative clauses which ordinarily have initial definite subjects regularly triggering agreement on their verbs and assigning genitive on their subjects.<sup>14</sup> In (83b) and (d), on the other hand, the subjects have been moved to immediate preverbal position for focusing.

#### 3.4.2 Return to Impersonal Passives

It is usually assumed that personal passives, with derived subjects, contain underlyingly transitive verbs, whereas impersonal passives contain underlyingly intransitive verbs.

Let us define an impersonal passive construction as one in which no internal argument is moved to subject position. According to this definition we can have impersonal passives from underlying transitive verbs. Consider the following:

- (85) a. e kitab oku- n- du.  
book read-PASS-PAST

'Books were read' 'There was book reading.'

b. Kitap<sup>j</sup> oku- n- du- Ø<sup>i</sup>  
 book read-PASS-PAST-3SG

'The book was read.'

Now, (85a) is an impersonal passive with a nominative direct object. In such cases the object and the verb form a phonological phrase with no pause in between. Notice how the final *p* of the word *kitap* voices to *b* as it regularly does before vowel initial suffixes.<sup>15</sup> Furthermore, such nominative direct objects of passives have semantic diagnostic properties. They are non-specific, in the sense that they do not refer to a particularly distinguishable object. In (85a) *kitap* is generic. Thus in this sentence it is not clear whether a single book or a number of books are read.<sup>16</sup> And finally, with the intended reading the object *kitap* has to remain to the immediate left of its verb. In (85b), the subject *kitap* appears with rising comma intonation, peculiar to topics, and it is followed by a slight pause which does not exists in (85a). *Kitap* in (85b) is also unmistakably definite. Now, (85a) patterns with the impersonal passives discussed above while (85b) patterns with personal passives. We will assume as we did in Chapter 2 that in (85a) *kitab* is adjoined to the verb and is assinged case by adunction. Therefore, nothing moves to the subject position in this sentence. This is against the normal derivation of the sentences with *kitap* first moving to subject position and then incorporating into the verb. In (85b) *kitap* did not adjoin to the verb but moved to subject position to get case.

We further assume that in (85a) a pleonastic empty element is assigned to the subject position. Consistent with this assumption is

the conjecture that (85a), like all impersonal passives does not contain AGR.

Given these assumptions, we expect RC's and nominalizations formed on (85a) to be agreementless, and the ones formed on (85b) to be with agreement.

Consider the following.

(86) a. [e Oda-da kitap oku- n- duğ- un- u] bil- mi- yor- du- m.  
room-LOC book read-PASS-PART-3SG-ACC know-NEG-CONT-PAST-1SG

'I didn't know that there was book-reading in the room.'

" " " " book-reading was done in the room.'

b. [e e<sub>i</sub> kitap oku- n- an] Q<sub>i</sub> oda<sub>i</sub>  
book read-PASS-PART room

'The room in which book-reading was done.'

(86) contain (85a), and (87), below, contains (85b).

(87) [Kitab-in<sup>j</sup> e<sub>i</sub> oku- n- duğ- u<sup>j</sup>] Q<sub>i</sub> oda<sub>i</sub>  
book-GEN read-PASS-PART-3SG room

'The room in which the book is read'

In (85b) there must be agreement since there is an NP in subject position otherwise, the case filter would be violated. The presence of agreement is reflected in (87) that contain (85b), by the presence of genitive on the subject, a sure sign of agreement. Having accounted for the agreement and genitive morphology in the RC (87), this way, nothing more needs to be said on why (87) and (86b) display two types of relative clause structure.

### 3.4.3 Subject Incorporation

The syntax and semantics of subject incorporation in Turkish is a very involved and challenging phenomenon for any of the current syntactic theories. The work done so far by Sezer (1972), Hankamer and Knecht (1976) and Knecht (1986) laid out various basic properties of subject incorporation but no systematic theory of incorporation has yet been devised for Turkish that accommodates both semantic and syntactic facts in an interrelated way. In what follows, I will mention some core cases of subject incorporation in Turkish in a rather sketchy way justifying the claim that incorporated subjects never gain syntactic subject status. In this account, much like the impersonal passives the empty subject position is later filled with a pleonastic empty element that does not induce agreement, hence the agreementless relative and gerundive clauses formed from subject incorporating structures.

Let us first note that subject incorporating structures do not involve agentive arguments. Consider the following.

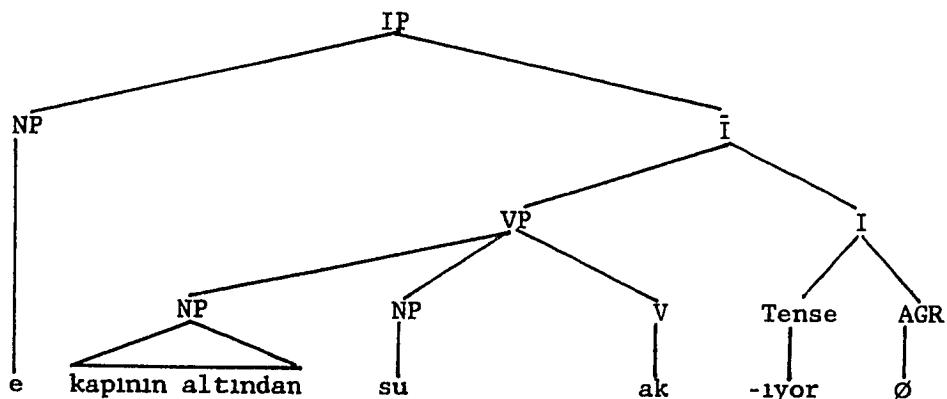
- (88) a. Su kapi-nin alt- in- dan ak- iyor-Ø  
           water-door-GEN under-3SG-ABL flow-CONT-3SG  
           'The water is flowing from under the door.'  
       b. e kapi-nin alt- in- dan su ak- iyor-Ø  
           door-GEN under-3SG-ABL water flow-CONT-3SG  
           'Some water is flowing/there's water flowing under the door.'<sup>17</sup>

We will assume that much like the unaccusative verbs of impersonal passive constructions ak- 'flow' selects only internal arguments of theme and goal. It will not select an external argument and will conform to the general pattern of unaccusative verbs in not assigning ACCUSATIVE Case to its theme argument. What this means is that ak-

'flow' will not license a syntactic direct object. It will certainly theta mark the theme argument, su, by semantically selecting it.

The d-structure representation of (88) above, will be (89), below.

(89)



To be case marked su must either go to the subject position and face definite interpretation--the mechanics of which we will not consider--or incorporate into or adjoin the verb and get assigned Case configurationally in [vN V] as in the case of direct object incorporation/adjunction in impersonal passives.<sup>18</sup> For (88b) the subject position will never be filled lexically and the clause will display no agreement. (88a), however, will have a lexical subject which will be bound by agreement. Consider now (90a, b) containing (88a), and (91a,b) containing (88b).

- (90) a. Suy-un<sup>3</sup> kapı-nin alt- in- dan ak- tığ- 1<sup>3</sup>  
           water   door-GEN under-3SG-ABL. flow-PART-3SG

'That the water is flowing under the door.'

- b. [[Suy-un<sup>1</sup> e<sub>i</sub> alt- in- dan ak- tīg- i<sup>1</sup>] o<sub>i</sub>] kap<sub>i</sub><sub>1</sub>  
 \*-0  
 'water-GEN under-3SG-ABL flow-PART-3SG door  
 'The door which the water is flowing under.'

- (91) a. [e Kapi-nin<sup>1</sup> alt- in- dan su ak- tīg- i<sup>1</sup>]  
 door-GEN under-POSS-ABL water flow-PART-3SG  
 'That water is flowing under the door'  
 b. [e e<sub>i</sub> alt- in- dan su ak- an] o<sub>i</sub>] kap<sub>i</sub><sub>1</sub>  
 under-3SG-ABL water flow-PART door  
 'The door under which water is flowing.'

Consider now the following pair.

- (92) a. Doktor kasaba-ya gir- di- Ø.  
 doctor county-DAT enter-PAST-3SG  
 'The doctor entered the county.'  
 b. e Kasaba- ya doktor gir- di- Ø.  
 county-DAT doctor entered-PAST-3SG  
 'The county got a doctor.'

In (92b) intuitively doktor is not agentive, in the sense alluded to earlier. It does not refer to a being that voluntarily moved to enter the county. In fact it has a generic reading of unspecified number of doctors. It represents a theme argument like mektup in (93).

- (93) e Ban-a mektup gel- di- Ø.  
 I- DAT letter came-PAST-3SG  
 Lit. 'Letter(s) came to me.'  
 'I got letters.'

In view of these observations we will say that gir-'enter' subcategorizes for two sets of thematic roles.

- (94) a. (agent (goal))      gir- 'enter'  
       b. (theme, goal)      gir- 'enter'<sup>19</sup>

Now, (92a) derives from (94a) where doctor ends up as the agent subject. Notice how the external argument is indicated in (94a). (92b) is from (94b). Notice that (94b) is an unaccusative configuration like for the verb ak- 'flow' above. It does not select an external argument and therefore cannot assign ACCUSATIVE Case to its internal argument. The internal argument, doktor then has two options to survive the case filter, either move to subject position, or to incorporate into the verb. If it moves to subject position it will be exactly like (92a) and will receive agentive interpretation of (94a). Theoretically, a non-agentive, definite reading should be possible for doktor in case it moves to subject position, much like (95), below.

- (95) Mek tup ban-a gel- di- Ø.  
       letter I- DAT come-PAST-3SG

'The letter came to me.'

But the agentive potential of doktor is so strong that it dominates in (92a) and forces the reading of (94a). The only other alternative for doktor then is to incorporate/adjoin.

Consider now the following.

- (96) a. [Doktor-un<sup>1</sup> kasaba-ya gir- diğ- i<sup>1</sup>]  
          doctor-GEN county-DAT enter-PART-3SG

'That the doctor entered the county'

- b. [Doktor-un<sup>j</sup> e<sub>i</sub> gir- diğ- i<sup>j</sup>] o<sub>i</sub> kasaba<sub>i</sub>  
 doctor- GEN enter-PART-3SG county

'The county that the doctor entered'

- (97) a. [e Bu kasaba-ya doktor gir- diğ- i] gör-ül- me-mış- tir.  
 this county-DAT doctor enter-PART-3SG see-PASS-NEG-PAST-RPT

'Nobody saw a doctor(s) enter (be in) this county.'

- b. [e e<sub>i</sub> doktor gir- en] o<sub>i</sub> kasaba-da<sub>i</sub> hastalik ol-maz  
 doctor enter-PART county-LOC disease be NEG

'There is no disease in a county that has doctors.'

Lit. 'There is no disease in a county where doctors have entered.'

In (96) and (97) RC and gerund formation is as predicted.

#### 3.4.4 Subject Incorporation in Transitive Clauses

Subject incorporation in Turkish transitive clauses was first observed by Sezer (1972:13).

- (98) a. Ali-yi ari sok-tu.  
 A.-ACC bee sting-PAST

'Ali got bee-stung'

- b. Çocuğ-u köpek isır-dı.  
 child-ACC dog bite-PAST

'The child got dog-bit.'

Sezer (1972) further observed that sentences like (98) are passive in nature with the initial objects sounding more like subjects of their respective sentences. Sezer (1972:14) then observes the following.

- (99) a. [Ali'yi ari sok- tuğ- un- u] öğren- di- m.  
 -ACC bee sting-PART-3SG-ACC find out-PAST-1SG

'I found out that Ali was bee stung.'

- b. [Ali'yi ari-nin sok- tuğ- un- u] öğren- di- m.  
 -ACC bee-GEN sting-PART-3SG-ACC find out-PAST-1SG

'I found out that the bee stung Ali.'

Let us assume for Turkish that transitive verbs may or may not select external arguments. If sok- 'sting' and ısr- 'bite' do not select external agent arguments then the agentless clauses (98 and 99) will result.

When they do select external arguments we will have

- (100) a. Ari Ali-yi sok- tu.  
 bee -ACC sting-PST

'The bee stung Ali.'

- b. Köpek çocuğ-u ısr-dı.  
 dog child-ACC bite-PAST

'The dog bit the child.'

Let us also point out the possibility that the external arguments of (98) may optionally incorporate in the lexicon, leaving in the relevant cases no external argument.<sup>20</sup>

### 3.4.5 Summary

Our survey of the so-called subjectless clauses here has been very sketchy. We simply made various suggestions along which a principled analysis may be developed. Our argument was based on the assumption that all so-called subjectless clauses lack agreement, and it is this that determines the RC's and nominalizations formed from them.

## NOTES TO CHAPTER THREE

1. In reviewing in the earlier accounts of Turkish relative clauses we will identify the relative clause, its modified head, and the target of relativization, as e, because no other structural property of the RC is relevant in the ensuing discussion.
2. Notice that (7d) in the sense of (7c) is out because the Indefinite Subject Movement Rule has failed to apply to the indefinite subject su 'water'.
3. This is the position taken by Knecht (1979).
4. But see also Knecht (1979) for a criticism of Dede (1978).
5. This principle is also captured by Kornfilt (1984: 280), to which we will return.
6. We will see later that idle possessive morphology may appear on the heads of gerundive clauses.
7. This move is certainly warranted by such examples as,

(iii) [ [e<sub>1</sub> baş- <sub>1</sub>] ağrı-yan] o<sub>1</sub> adam<sub>1</sub>  
head-3SG ache-PART man

'The man whose head is aching.'

Now what assigns NOMITIVE Case to the subject NP of the relative clause?

The only likely candidate is the tensed participle marker, -yan. But see Kornfilt (1984) where this type of RC is assumed to contain an invisible AGR that assigns case to the subject.

8. That such impersonal passives are subjectless is extensively argued by Breckenridge (1975). Knecht (1986a) assumes that they should have empty subjects.

9. The exact nature of this empty element will remain unclear in the present study. Notice that NP trace and wh-trace are excluded right away. The remaining possibilities within the typology of empty elements of Chomsky (1982) are pro and PRO. Both of these choices would present problems in the present context. Unless we allow an ungoverned pro in such positions as a pleonastic empty pronoun we cannot justify this empty element without licensing by AGR. PRO which is ungoverned by definition can normally appear in such contexts. But notice that we assumed that in RC's with agreement the participial tense marker assigns case on the clause subject. This was necessitated by examples like (i), below.

(i) [[e<sub>i</sub> oğl-u] okul- a gid-en] 0<sub>i</sub> adam<sub>i</sub>  
 son-3SG school-DAT go- PART man

'The man whose son goes to school.'

Under this assumption, a PRO subject will be governed by the participial tense suffix of the RC. We might add that the infinitive clauses in which PRO occurs contain no tense or agreement morphology. Certain

adverbial clauses where PRO occurs (See Özkaragöz (1980) for one) also lack tense and agreement. If this is significant it may well be the case that PRO must be excluded from the subject position of tensed nominalizations. We will leave this issue aside here with the expectation that the typology of empty categories can possibly be altered to accommodate an empty pleonastic element, which is also suggested by Burzio (1988) for Italian.

10. (52) are my formalizations from HK's generalizations.

11. As Lefvre and Muysken (1988) report, Quechua also has head-internal relative clauses which we will ignore here.

12. See Baker, Hankamer and Moore (1990) for novel suggestions in this direction.

13. It would certainly be worthwhile to inquire into the probable principles and parameters from which the Multiple  $\bar{A}$ -Binding Ban may follow. One relevant observation in this context is the Bijection Principle of Koopman and Sprache (1982), which disallows a multiply bound variable. We will not attempt a theoretical analysis of this condition, but it seems promising that some explanation may be available within binding theory.

After the completion of this analysis several studies came to our attention which have a bearing on the empirical claims made by the Multiple  $\bar{A}$ -Binding Ban. Czató (1985), Barker, Hankamer and Moore (1990), and Zimmer (1991) offer challenging examples based on various

dialects or idiolects. We will not discuss here the empirical and theoretical merits of their analyses but we will briefly comment on the relevance of the crucial instances.

In the light of the new data, what we called the "Weak ban," that is the version that disallows multiple binding by adjacent binders, may have to be analyzed into two parts.

- (i)  $*[\alpha[e_i^j \dots AGR^j] Q_i] NP_i$
- (ii)  $*[/_\beta[[e_i^j \dots]^\beta \dots AGR^j] Q_i] NP_i$

Where  $\alpha$  is an RC and  $\beta$  is an IP that minimally contains  $e$ .

It seems that (i) is truly exceptionless. Now for speakers like myself, who do not allow (ii), (i) and (ii) may be collapsed into the single weak ban. Those speakers who do not have the constraint (ii) seem to allow instances of the following sort.

- (iii) [[e<sub>i</sub> kiz- in- in]<sup>j</sup> Faust'u çevir- dig- i]<sup>j</sup> Q<sub>i</sub> adam<sub>i</sub>  
 daughter-3SG-GEN F.-ACC translate-PART-3SG man

'The man whose daughter translated Faust.' (Zimmer (1991))

- (iv) [[Biz-im e<sub>i</sub> güven-eceğ-imiz- in]<sup>j</sup> şüpheli ol-duğ- u]<sup>j</sup> Q<sub>i</sub> adam<sub>i</sub>  
 I-GEN trust-PART-1PLR- GEN doubtful be-PART-3SG man

'The man (who) it is doubtful that we will trust.'

Various subtle judgements remain outside this initial evaluation. But we think that there are good reasons to believe that the answers to these puzzles on the type of RC formation in Turkish lies in a modular analysis that breaks down the relative clause structure into its component parts of agreement and case (as initially suggested by Kornfilt (1984)), rather than in analyses that take the relevant structures as indivisible strategies. Another line of analysis that

would shed some guiding light on the adequacy of different approaches would be psycholinguistic evidence. See Slobin (1986) for an initial study of RG acquisition in Turkish.

14. Kuno (1971) argues that existential clauses in most languages, including Turkish, have the basic deep work order of (79a).

15. This we believe denies subjecthood to NP whose existence is being predicated. There is also no reason to believe that the empty pleonastic element that will eventually occupy the subject position should contain person and number features. In English for example there in existential sentences may induce plural agreement and therefore must contain person and number features. No such argument may be constructed for Turkish (See Sezer (in preparation) for a discussion). What we are also ignoring here is the existential type sentences with definite subjects in pre-var position: "Burada ben var-im." 'I am here.' with first person singular agreement. Furthermore Turkish also allows definite subjects with var in initial position. "Ben her komite-de var-im." 'I am in every committee,' again with agreement on var. Sezer (in preparation) argues that these are not true existentials and that their syntactic derivation is predictable in comparison to corresponding copulative sentences.

16. This insight on the facts presented by Underhill (1972) is due to Kuno (1971).

17. Knecht (1986) argues to the contrary but her crucial examples are not pertinent in this case.

18. Sezer (1972) and Knecht (1986a) are somewhat unclear in this respect. The incorporated N must usually be regarded as not having specific reference. Sometimes a generic interpretation may result in poorly understood circumstances.

19. We are here again ignoring a very important issue, namely the relation between existential sentences and (88b). In (88b) there is also a definite reading of su which we assume is due to focusing, a stylistic rule.

20. We are again assuming that NP movement of su is blocked by some mechanism most probably semantic. Such a strategy will require the proper enrichment of the semantic representation. But notice also such considerations enter into all theories of incorporation. The persisting question is under what strict semantic conditions incorporation occurs? Therefore the fact that su may not move to subject position should not be taken as a failure of the syntactic framework we are employing here. It is just that we have not been able to develop a full semantic theory of incorporation. In fact the present analysis should be commended in correctly identifying semantic and syntactic aspects of the issue as well as their interaction.

21. We will leave the issue as to whether or not (94a) and (b) represent different lexical entries, which they most probably do.

22. This way the passive flavor of (98) will follow from the suppression of the external agent argument. But we are here leaving aside the problem of case assignment on the two NP's in (98).

## CHAPTER FOUR: ON ANAPHORA

### 4.0 Introduction

In this chapter we will deal with the general characteristics of Turkish anaphora. Specifically, we will consider the binding properties of (i) the third person pronoun o(n), (ii) the reflexive kendisi 'himself, herself,' kendi 'himself, herself,' and (iii) the reciprocal anaphor birbir 'each other.' In sections 4.1.1 through 4.1.4 we will consider on in simplex sentences and demonstrate the adequacy of different types of command.

In sections 4.1.5 through 4.1.5.6 we shall investigate the obviative properties of o and demonstrate in detail how obviation operates in Turkish.

Finally in sections 4.2 through 4.2.3.1 we will investigate the binding properties of the anaphors. We shall show that the requirement that anaphors be bound in well-defined syntactic domains is too strong.

### 4.1 The Story of O

#### 4.1.1 Reinhart's Anaphora Conditions

Reinhart (1976) specifies a set of conditions on bound anaphora. I will quote here from Reinhart (1983:50):

- (1)
  - a. A non-pronominal NP must be interpreted as noncoreferential with any NP that c-commands it. (This entails that a pronoun must be interpreted as non-coreferential with any full NP it c-commands.)
  - b. A reflexive or reciprocal pronoun (an R-pronoun) must be interpreted as coreferential with (and only with) a c-commanding NP within a specified syntactic domain.

- c. A non-R-pronoun must be interpreted as non-coreferential with any c-commanding NP in the syntactic domain which is specified for (1b) above.

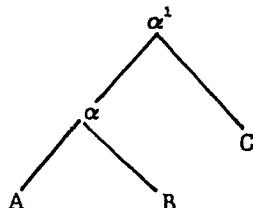
The definition of c-command which the conditions (1a-c) are based on is as follows:

(2) Reinhart's Definition of c-command

A node A c-(onstituent) commands a node B iff the first branching node that dominates A either dominates B or is immediately dominated by a node which dominates B, where  $\alpha$  and  $\alpha^1$  are of the same category type (e.g., S and  $\bar{S}$ ).

According to this definition, then, in (3), below,

(3)



if  $\alpha$  and  $\alpha^1$  are of the same category type, each of A, B and C c-command the other two terminal nodes. If  $\alpha$  and  $\alpha^1$  are not of the same category type, then A and B c-command each other, and C c-commands both A and B. Now, (1a) predicts obligatory non-coreference between a full NP and a c-commanding pronoun.

(4) \* I told him<sub>i</sub> that John<sub>i</sub> was sick.

But (1a) cannot say why in (5), below, the pronoun cannot be coreferential with its c-commanding antecedent.

- (5) \* John<sub>i</sub> [loves him<sub>i</sub>]<sub>VP</sub>

Reinhart's (1c) predicts that a pronoun is obligatorily disjoint from a c-commanding NP in the syntactic domain where obligatory reflexivization is required. The syntactic domain in (5) is a simplex S or, in the terms of Chomsky (1981), a minimal governing category where a c-commanding subject can bind only an R-(reflexive or reciprocal) pronoun.

- (6) John<sub>i</sub> loves himself<sub>i</sub>.  
They<sub>i</sub> love each other<sub>i</sub>.

In such domains, then, bound pronominal anaphora are excluded.

#### 4.1.2 The Role of VP

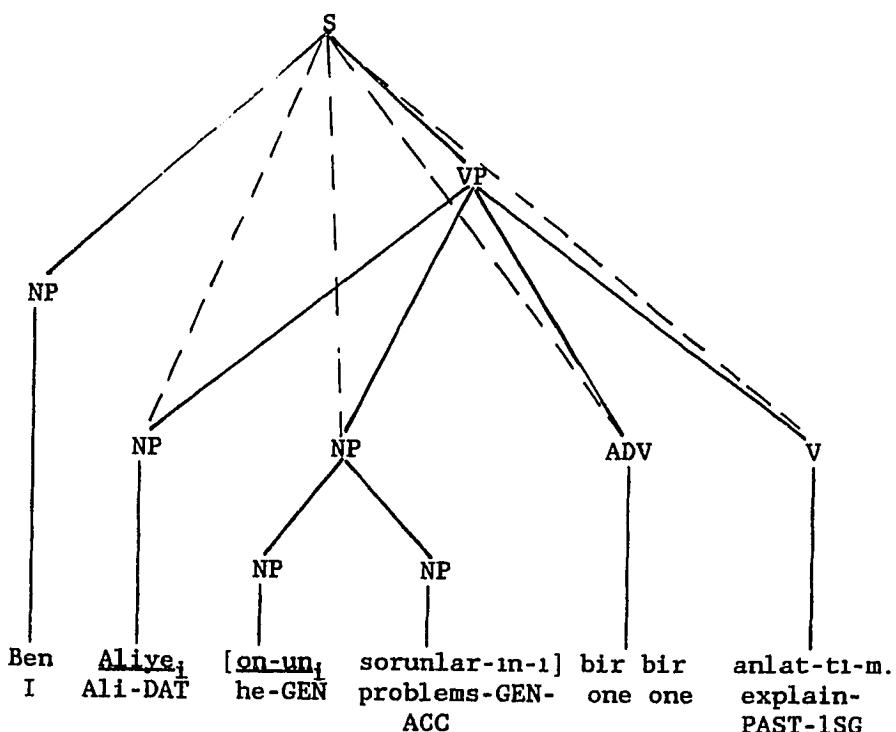
Consider first the following:

- (7) a. Ali<sub>i</sub> kendini-i as- t<sub>i</sub>.  
 self-ACC hang-PAST  
 'Ali<sub>i</sub> hanged himself<sub>i</sub>.'
- b. Cocuklar<sub>i</sub> birbir-lerini-i gör-dü- ler.  
 children<sub>i</sub> each other-3PLR-ACC see-PAST-3PLR  
 'The children<sub>i</sub> saw each other<sub>i</sub>.'
- c. \* Ali<sub>i</sub> on-u as- t<sub>i</sub>  
 he-ACC hang-PAST  
 'Ali hanged him.'

(7a,b) are predicted by (1b) if we take the specified syntactic domain as a minimal S within which R-pronouns are coreferential with the c-commanding subject in each case. (7c), then, is predicted by (1c), which disallows a coreferential interpretation between a non-R-pronoun (in this case onu) and a c-commanding NP (Ali) within the domain specified for obligatory reflexive binding as in (7a) and (b).

Our second example with bound anaphora will be the following:

(8)



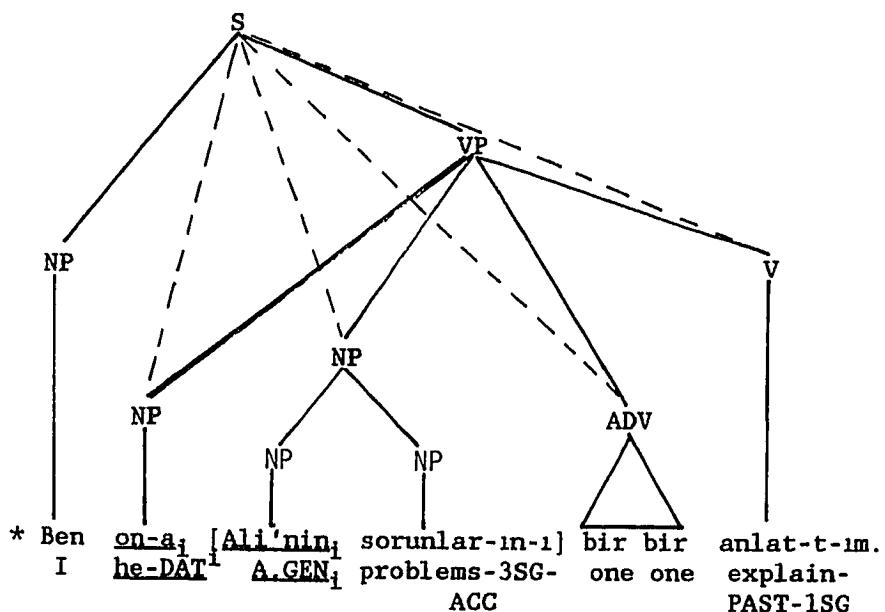
'I explained to Ali, his, problems one by one.'

The possible anaphoric relation between Alive and onun is not precluded by Reinhart's (1a) since the non-pronominal NP is not c-commanded by the pronoun onun regardless of the presence or absence of a VP node. If the sentence had a flat (VP-less) structure (indicated by the dotted lines) Alive would still not be c-commanded by the pronoun. This (i.e., the

relevance of the presence or absence of a VP node) is an issue which we will keep referring to as we proceed, and observe how various formulations of anaphoric relations depend on it.

Now in (8) whether or not the intended coreference is sanctioned by (1c) depends on how we interpret syntactically the NP containing the pronoun, onun. If this NP is designated as the syntactic domain in which an R-pronoun must obligatorily find its antecedent, that is the specified syntactic domain of (1b), then (1c) allows coreference between Aliye and onun, but not if the specified syntactic domain is designated as the minimal S containing the pronoun.<sup>1</sup>

(9)

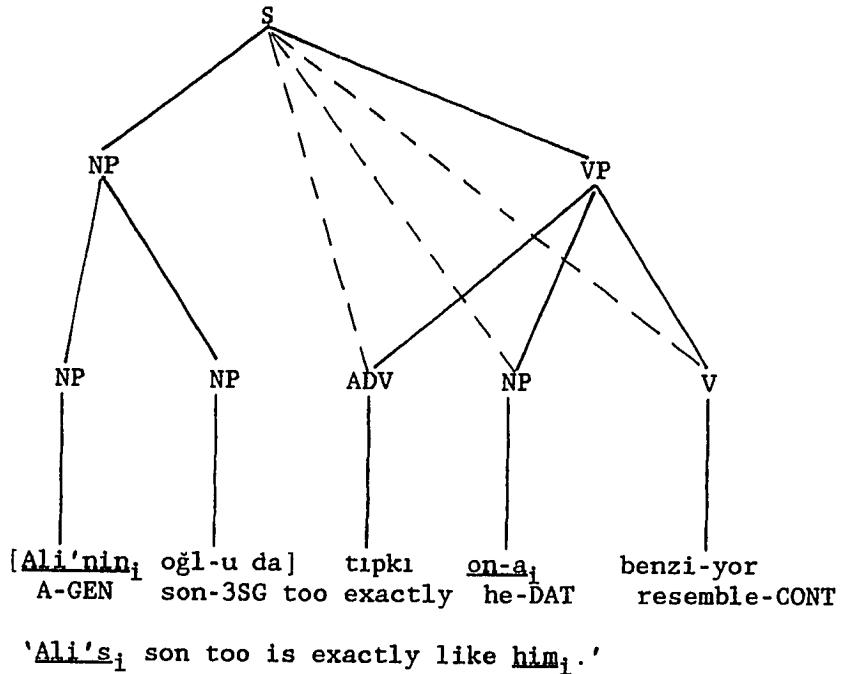


'I explained to him Ali's problems one by one.'

In (9), once more the presence or absence of VP is irrelevant. In each case, a full NP (Ali'nin) is c-commanded by a pronoun, onun. And according to (1a) the two must be correctly interpreted as non-coreferential.

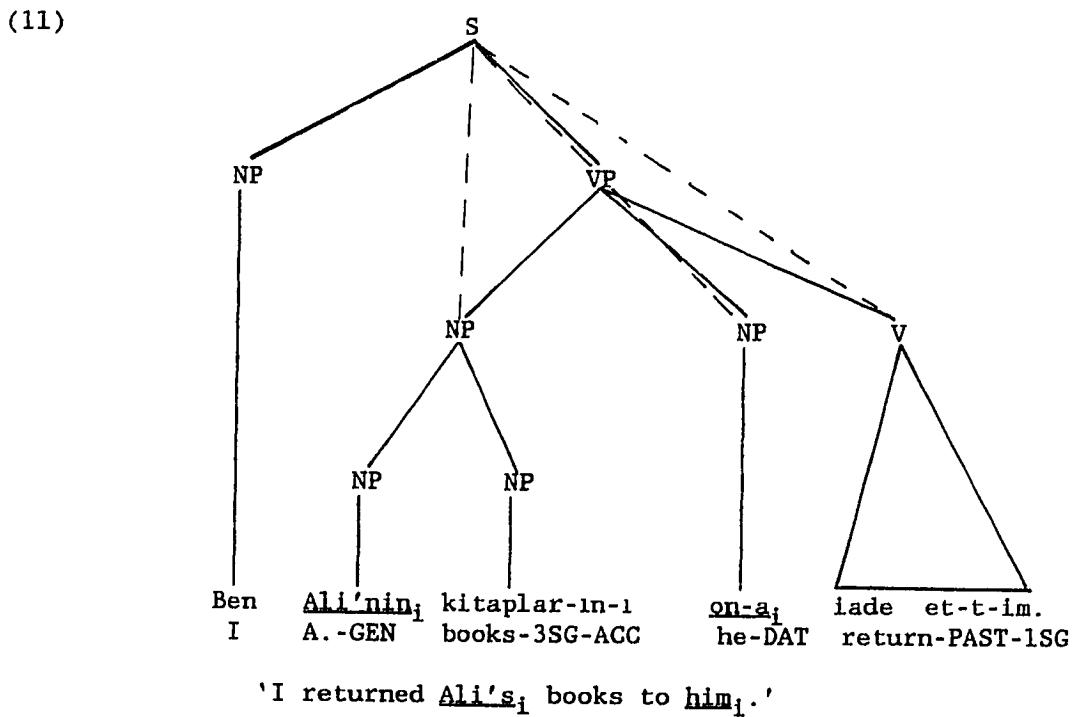
On to our third example:

(10)



Now, in (10), above, possible coreference will be predicted by (1a) only if we assume that the S has a VP node, in which case the first branching node dominating the pronoun (i.e., the VP) will not contain Alinin, the intended antecedent. If, however, we assume a flat structure for this sentence then the S node will be the first branching node dominating the pronoun which will also dominate the full NP, allowing the pronoun to c-command its antecedent, thus requiring non-coreferential interpretation between the two NP's.

Next we will consider (11):



In (11), obligatory non-coreferential interpretation is predicted by (1a) with or without a VP node. Because in either case the full NP, Alinin, will fall within the c-command domain of the pronoun, ona. But this prediction is patently false, since coreference is possible here.

#### 4.1.2.1 A Discussion of Reinhart's Anaphora Conditions

Of the three conditions on anaphora (1a-c), the first and the last are conditions on obligatory non-coreference and the second (which we mostly left aside to consider later in connection with anaphor binding) is a condition on obligatory coreference.

Reinhart's claim is that obligatory coreference and obligatory non-coreference conditions are determined structurally. Where there is no violation of an obligatory coreference, or its lack thereof, whether

or not there is coreference depends on non-structural (i.e., functional) considerations. For instance, in (10), above, copied here as (12),

- (12) [Ali'nin<sub>i</sub> oğl-u] da tipki on-a<sub>i</sub> benzi-yor.  
       -GEN son-3SG too exactly he-DAT resemble-CONT  
       'Ali's<sub>i</sub> son and resembles him<sub>i</sub> exactly.'

no obligatory non-coreference is stipulated. Therefore, if in some context functional considerations forced a non-coreferential interpretation for this sentence, (1a) would still not have been violated. But a serious violation of (1a) occurs in (11), above, where coreferential interpretation is possible in spite of the obligatorily stipulated non-coreference.

Comparing now our relevant examples repeated here as (13):

- (13) a. \*Ben on-a<sub>i</sub> [Ali'nin<sub>i</sub> kitaplar-in-i] iade et-ti-m.  
       I he-DAT A-GEN books-3SG-ACC return-PAST-1SG  
       'I returned him Ali's books.'
- b. Ben [Ali'nin<sub>i</sub> kitaplar-in-i] on-a<sub>i</sub> iade et-ti-m  
       I A.-GEN books- 3SG-ACC he-DAT return-PAST-1SG

We observe that the order between the pronoun and its ante- (or post-) cedent is relevant important for Turkish. Reinhart's order-independent constraints on coreference, namely the disjoint reference rules of (1), above, will not be able to accommodate this property.<sup>2</sup>

#### 4.1.3 The Binding Principles of Chomsky (1981)

We will, in this section, consider two of the by now well-known binding principles of chomsky (1981) and observe how they predict the

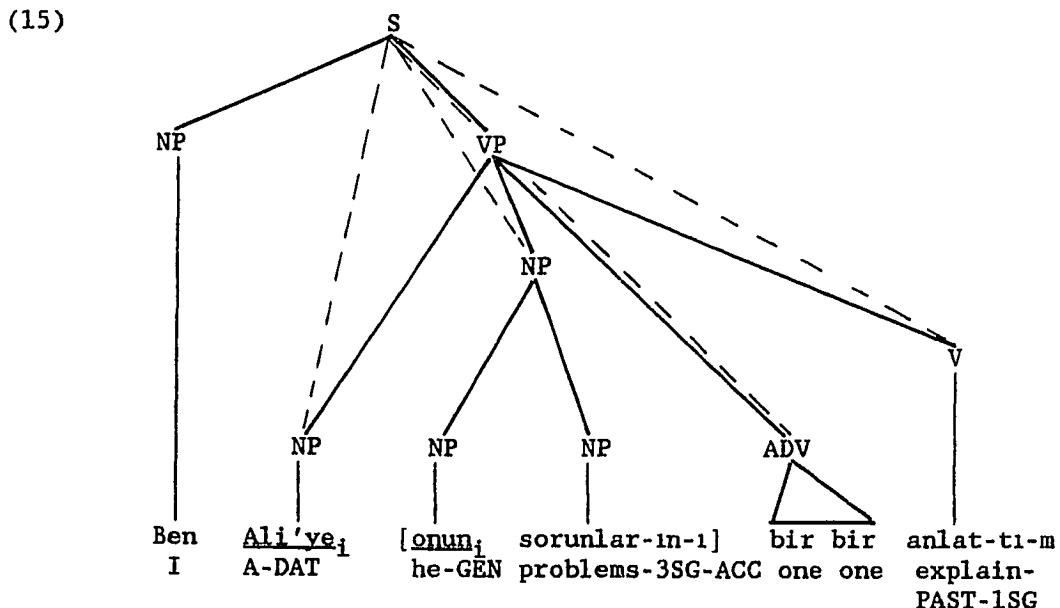
anaphoric relations in the small sample of Turkish sentences we gave in the preceding section.

Since the first of Chomsky's Binding Principles concerns anaphors, which are not under consideration here, we will consider the second and third principles.

- (14) Principle B. A pronoun is free in its governing category.  
 C. An R-(eferential) expression is free everywhere.

For our purposes here we will take both S and (following Kornfilt (1984)) NP as governing categories. And crucially "free" means not bound (i.e. not coindexed by a c-commanding antecedent).

In (8), which we copy here as (15),



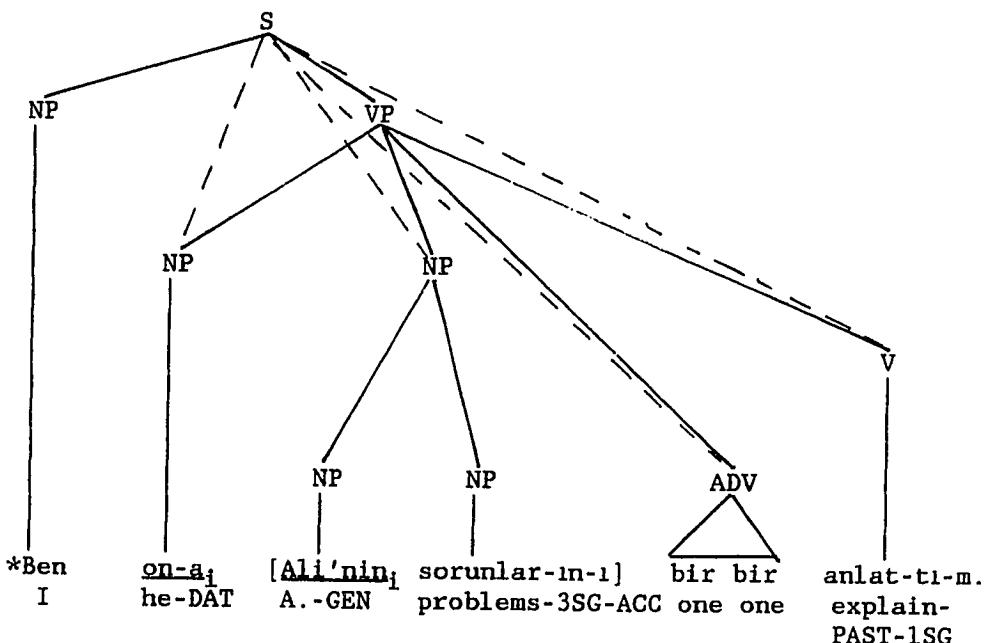
'I explained his<sub>i</sub> problems to Ali<sub>i</sub> one by one.'

the pronoun onun is free (not coindexed) in its governing category, which we assume here to be the boxed NP. Therefore, condition-B is met.

The R-expression Ali've is also free since it is not coindexed with any c-commanding NP. Hence the possible coreference.

Let us now look at (9) repeated here as (16).

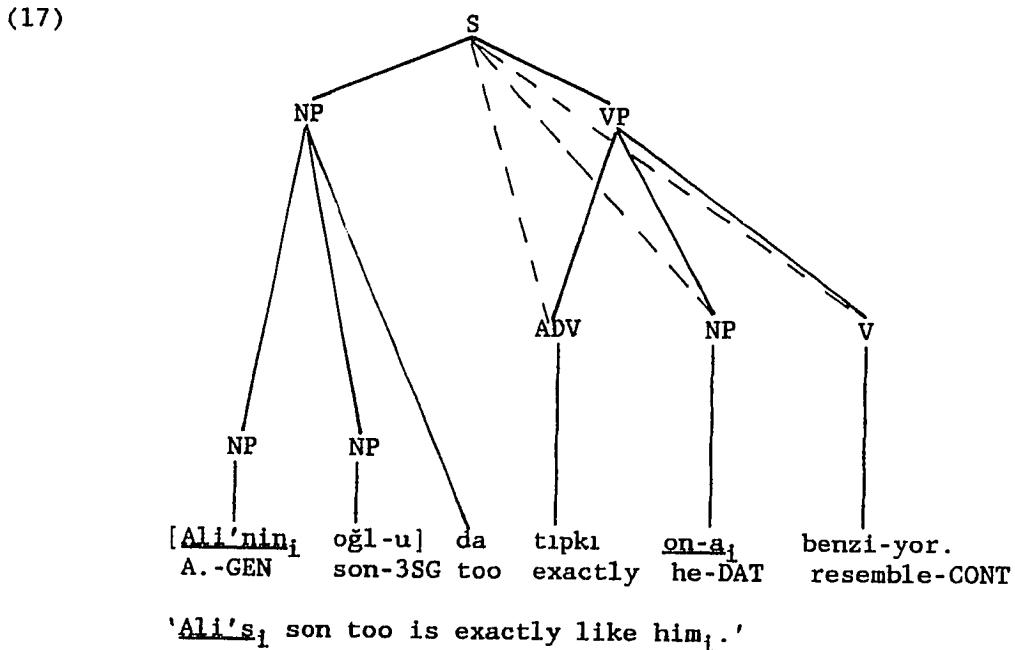
(16)



'I explained to him<sub>i</sub> Ali's<sub>i</sub> problems one by one.'

In (16) above, Principle-B is met since the pronoun ona is not bound by a c-commanding NP in its minimal governing category, the S. But principle-C is violated since the R-expression Alinin is not free, being bound by the c-commanding pronoun ona. Therefore, the intended coreference is correctly ruled out.

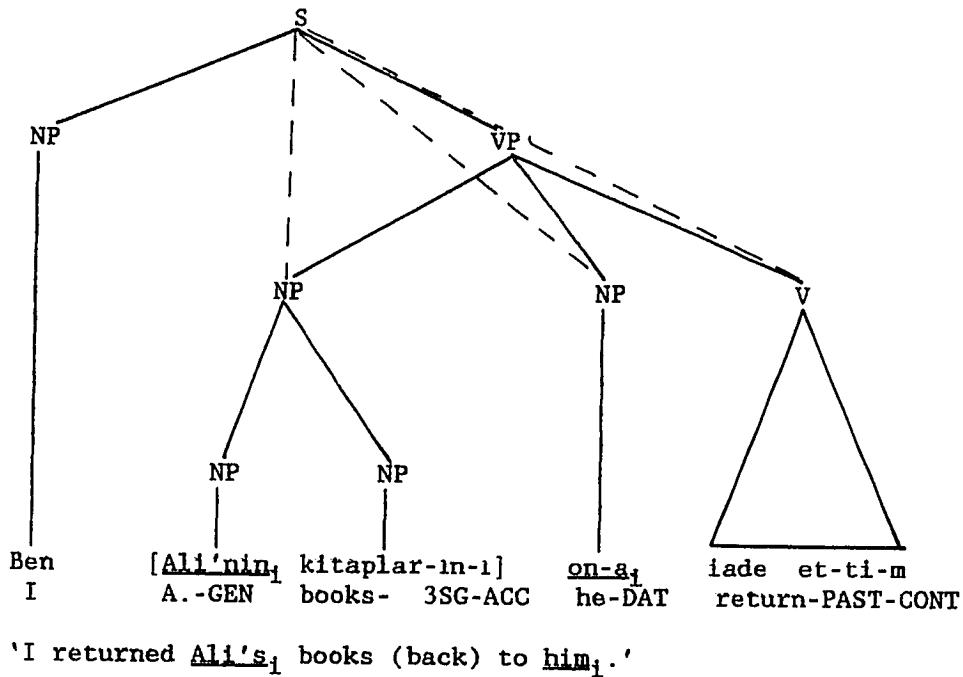
Notice also that the same prediction would be made if we assumed a flat structure for (16), because ona would still c-command Alinin. For (10), repeated here as (17), the correct prediction of coreference is possible only if we assume that this sentence contains a VP node.



In (17) the pronoun again is free in its governing category, which is the topmost S. Now Principle-C will be violated if we assume a flat (VP-less) structure for (17). Because in that case the R-expression, Alinin, will not be free (being bound by a c-commanding NP). Therefore, for (21) we have to assume a VP node dominating the pronoun.

Now we observe below that our crucial example which created problems for Reinhart's principles will also pose the same problem to principle-C.

(18)



In (18) above, VP or no VP the R-expression Alinin will be bound by the c-commanding pronoun ona, thus predicting obligatory disjoint reference.

#### 4.1.3.1 Summary

We have seen in this section that Chomsky's Principle-A and Principle-B make exactly the same predictions for our test cases as Reinhart's disjoint reference rules. This is because both principles carry the implicit claim that the order of the coindexed NP's are irrelevant in determining the well-formedness conditions of anaphora. An R-expression must be free in the sense of Chomsky (1981) from a preceding NP; it certainly does not have to be free from a following NP. Examples can be enumerated to show that disjoint reference rules, like that of Reinhart's (1983) and the Principle-C of Chomsky (1981), based on a symmetrical notion of c-command will not be adequate to predict

relevant anaphora facts of Turkish. Consider the following additional examples:

- (19) a. \* Ben on-a<sub>i</sub> [[Ali'nin<sub>i</sub> otur-acağ-1] yer-i] göster-di-m.  
           I he-DAT A-GEN sit-PART-3SG place-ACC show-PAST-1SG  
           'I showed him<sub>i</sub> the place (where) Ali<sub>i</sub> would sit.'
- b.    Ben [[Ali'nin<sub>i</sub> otur-acağ-1] yer-i] on-a<sub>i</sub> göster-di-m.  
       I      A-GEN     sit-PART-3SG place-ACC he-DAT show-PAST-1SG  
       'I showed Ali<sub>i</sub> the place where he<sub>i</sub> would sit.'
- (20)
- a. \* Ben on-a<sub>i</sub> [Ayse<sub>i</sub> genç bir kız- ken] deliler gibi aşık- ti- m.  
       I she-DAT     young a girl-when fools like in love-PAST-1SG  
       'I was in love with her<sub>i</sub> like mad when Ayse<sub>i</sub> was a young girl.'
- b.    Ben [Ayse<sub>i</sub> genç bir kız- ken] on-a<sub>i</sub> deliler gibi aşık-ti-m.  
       I      A.    young a    girl-when she-DAT fools like in-love-PAST-1SG  
       'I was in love with her<sub>i</sub> when Ayse<sub>i</sub> was a young girl.'

In (19) and (20), again, the (a) sentences are correctly predicted to be ruled out by the c-command-based rules of Reinhart (1983) and Chomsky (1981), but the (b) sentences are incorrectly ruled out also by the same conditions.

The third person singular pronoun o(n) '(s)he' which appeared in the examples we have considered so far has this idiosyncratic property to be preferred in intersentential rather than intrasentential anaphoric relations. Therefore, in out-of-the-blue situations, native judgements tend to prefer discourse-bound interpretations for the third person singular pronoun.

#### 4.1.4 Lasnik's Principle of Disjoint Reference

Lasnik (1976) proposed the following rule of disjoint reference:

- (21) If  $NP_1$  precedes and commands  $NP_2$  and  $NP_2$  is not a pronoun, then  $NP_1$  and  $NP_2$  are disjoint in reference.

Definition: A commands B if the minimal cyclic node dominating A also dominates B.

We will assume, as we did before, that both NP's and S's are cyclic nodes in Turkish, and check Lasnik's disjoint reference principle against the representative sentences of Turkish anaphora, which we repeat here for convenience.

(22)

- a. Ben Ali'ye<sub>i</sub> [on-un<sub>i</sub> sorunlar-in-1] bir bir anlat- ti- m.  
I A.-DAT he-GEN problems-3SG-ACC one one explain-PAST-1SG

'I explained to Ali<sub>i</sub> his<sub>i</sub> problems one by one.'

- b. \*Ben on-a<sub>i</sub> [Ali'nin<sub>i</sub> sorunlar-in- 1] bir bir anlat- ti- m.  
I he-DAT-GEN problems-3SG-ACC one one explain-PAST-1SG

'I explained to him<sub>i</sub> Ali's<sub>i</sub> problems one by one.'

- c. [Ali'nin<sub>i</sub> oğl-u] da tipki on-a<sub>i</sub> benzi- yor.  
's son-3SG too exactly he-DAT resemble-CONT

'Ali's son too is exactly like him.'

- d. Ben [Ali'nin<sub>i</sub> kitaplar-in- 1] on-a<sub>i</sub> iade et-ti- m.  
I GEN books- 3SG-ACC he-DAT return-PAST-1SG

'I returned Ali's<sub>i</sub> books to him<sub>i</sub>.'

In (22a) Aliye ( $NP_1$ ) precedes and k-commands  $NP_2$ , which is a pronoun.<sup>3</sup> No disjoint reference is predicted, hence the possible coreference. In (22b) ona ( $NP_1$ ) precedes and k-commands  $NP_2$  (Alinin), which is not a

pronoun. Hence coreference is correctly blocked. In (c) Alinin ( $NP_1$ ) precedes but does not k-command  $NP_2$  (ona), since the minimal cyclic node Alinin oğlu does not contain the pronoun. Hence the possible coreference.

Finally in (d), the  $NP_1$ , Alinin, again precedes but does not k-command  $NP_2$ , ona, because the minimal cyclic node that contains  $NP_1$ , Alinin kitapları, excludes  $NP_2$  ona. Therefore the Disjoint Reference Principle does not apply, and coreference becomes possible between the two NP's.

It will be recalled that both Reinhart's and Chomsky's principles of anaphora incorrectly ruled out a coreferent reading for this sentence. We will assume that Lasnik's Disjoint Reference Principle is correct for the simple cases discussed so far.

#### 4.1.5 The Obviative Nature of $\emptyset$

In Turkish, as observed by Erguvanlı-Taylan (1986), Özsoy (1987) and Kornfilt (1984), the binding conditions of the third person pronoun  $\emptyset$  cannot fully be accounted for by any of the existing binding principles. We will in this section investigate the obviative behavior of  $\emptyset$  in detail. We will show that the grammatical function of both the pronoun and its antecedent and the order in which they appear, though crucially relevant, do not suffice to exhaustively determine the nature of the obviation. We will argue that obviation holds within a well-defined syntactic domain.

Let us begin by observing the following:

- (23) a. \* Ali<sub>i</sub> [on-un<sub>i</sub> anne- sin-i] çok sev- iyor.  
 he-GEN mother-3SG-ACC very love-CONT

'Ali<sub>i</sub> loves his<sub>i</sub> mother very much.'

- b. \* [Ali'nin<sub>i</sub> [on-un<sub>i</sub> ceb- in- de] para- si] var.  
 A.-GEN he-GEN pocket-3SG-LOC money-3SG exists

'Ali has money in his pocket.'

The unacceptability of (23a,b) cannot be due to some constraint that disallows an overt pronoun as the genitive modifier of an NP. Although that position in Turkish is usually occupied by pro, an overt pronoun is also possible in that position.

Consider the following:

- (24) a. Ben [Ali've<sub>i</sub> [on-un<sub>i</sub> resimler-in- i] göster-di- m  
 I Ali-DAT he-GEN pictures-3SG-ACC show- PAST-1SG

'I showed Ali<sub>i</sub> his<sub>i</sub> pictures.'

- b. \* Ali<sub>i</sub> ban-a [on-un<sub>i</sub> sorunlar-in- i] anlat-tı.  
 I- DAT he-GEN problems-3SG-ACC tell- PAST

'Ali<sub>i</sub> told me (about) his<sub>i</sub> problems.'

- c. Ali<sub>i</sub> Ayse've<sub>j</sub> [on-un resimler-in- i] göster-mis.  
 -DAT he-GEN<sub>\*i/j</sub> pictures-3SG-ACC show- DUB

'Ali<sub>i</sub> showed Ayse<sub>j</sub> her<sub>\*i/j</sub> pictures.'

An obvious generalization that suggests itself is (25) below:

- (25) The pronoun on is disjoint from a subject antecedent.

We will see in the remainder of this section that (25) is far from being the adequate disjoint reference principle that truly characterizes the obviative nature of o(n), and we will keep modifying it as we proceed.

Now, (25) correctly accounts for the following, also:

(26)

- a. \* Ali<sub>i</sub> [on-un<sub>i</sub> bir dahi ol-duğ- un- u] zanned-iyor.  
he-GEN a genius be-PART-3SG-ACC think- CONT

'Ali<sub>i</sub> thinks he<sub>i</sub> is a genius.'

- b. \* Ali<sub>i</sub> [on-un<sub>i</sub> sev- diğ-i] kadınlar-1 hiç aldat- maz  
he-GEN love-3SG-PART women-ACC never deceive-AOR-NEG

'Ali<sub>i</sub> never cheats on the women that he<sub>i</sub> loves.'

Examples (26) are parallel to (24b). And we obtain possible coreference in (27) where there is a non-subject antecedent.

(27)

- a. Ben Ali'ye<sub>i</sub> [on-un<sub>i</sub> çok dikkatli davranış-ma-sın-1] söyle-di- m.  
I -DAT he-GEN very careful behave-VN-3SG-ACC say- PAST-1SG

'I told Ali<sub>i</sub> that he<sub>i</sub> should behave very carefully.'

- b. Biz Ayşe'yı<sub>i</sub> [on- un<sub>i</sub> da başarılı olabil-eceğ-in-e] inandır-dı-k  
we -ACC she-GEN too successful can be-PART-3SG- persuade-  
DAT PAST-1PLR

'We convinced Ayşe<sub>i</sub> that she<sub>i</sub> too could be successful.'

This striking property of the o(n) was first observed in literature by Erguvanlı-Taylan (1986), with the following examples:

(28)

- a. Ahmet<sub>i</sub> Erol'a<sub>j</sub> [on-un<sub>i/j</sub> kari-sın- 1] sor-du.  
-DAT he-GEN wife-3SG-ACC ask-PAST

'Ahmet<sub>i</sub> asked Erol<sub>j</sub> (about) his<sub>i/j</sub> wife.'

- b. Erol<sub>i</sub> [on-un<sub>i/j</sub> kari-sı] için hersey- i yap-ar.  
he-GEN wife-3SG for everything-ACC do-AOR

'Erol<sub>i</sub> does everything for his<sub>i/j</sub> wife.'

- c. Erol<sub>i</sub> ban-a [on-un<sub>i/j</sub> toplanti-ya geleme-yeceğ-in-i] söyle-di.  
 I-DAT he-GEN meeting-DAT can not-come-3SG-ACC say-PAST

'Erol<sub>i</sub> told me that he<sub>i/j</sub> would not be able come to the meeting.'

- d. Erol<sub>i</sub> Ahmed<sub>j</sub> [on-un<sub>i/j</sub> gid-eceğ-i] yer- e götür-dü.  
 -ACC he-GEN go- PART-3SG place-DAT took-PAST

'Erol<sub>i</sub> took Ahmet<sub>j</sub> to the place where he<sub>i/j</sub> was going.'

In (28a) the pronoun onun cannot be bound by the subject, Ahmet, but it can refer to Erol as well as a third party not mentioned in the sentence. In (28b) the pronoun must have a referent outside the sentence since Erol, being a subject, is not eligible by (26), above. Similarly in (c) and (d) the subject is excluded as a possible referent.

Erguvanlı-Taylan (1986) also mentions the interesting cases of backwards anaphora which will be considered shortly. At the moment we will concentrate on forwards anaphora with on and propose further elaborations on (25) to accommodate the interestingly complicated binding conditions for this pronoun.

Let us first observe that not all pronouns must be disjoint from all subject antecedents.

(29)

- a. Ayse<sub>i</sub> [ben-im on-a<sub>i</sub> hayran ol-duğ- um- u] bil- iyor.  
 I- GEN she-DAT admire be-PART-1SG-ACC know-CONT

'Ayse<sub>i</sub> knows that I admire her<sub>i</sub>.'

- b. Ali<sub>i</sub> ban-a [kimse- nin on-dan<sub>i</sub> hoşlan-ma-dığ- in- i] söyle-di.  
 I-DAT no one-GEN he-DAT not-like-PART-3SG-ACC say- PAST

'Ali<sub>i</sub> told me that no one like him<sub>i</sub>.'

In (29a,b) the object pronoun in the embedded clause is disjoint from its minimal subject (which is the subject of the embedded clause) but it

can be bound by the subject of the higher clause, as shown. What this shows is that (25) is too strong as it stands, and a modification along the following lines will be necessary:

- (30) The pronoun on in a subject position cannot be bound by a subject.

Now, (30) will allow the possible binding of the pronoun in (29) by the matrix subject by default, since in these examples the pronoun is not in a subject position and hence (30) does not apply to rule out coreference. We will, furthermore, keep assuming that genitive phrases are cyclic categories with subjects (the genitive NP), and as such, the pronoun o(n) in the subject position has to be disjoint in reference from a subject.

Now, (30) correctly predicts the outcome of binding in (23)-(28) without ruling out (29). But further examples can be constructed to show that (30) is still less than perfect.

(31)

- a. Ali<sub>i</sub> [ben-im [on-un<sub>i</sub>, gel- diğ-in-i] duy- duğ-um-u] bil- mi- yor.  
     I-GEN   he-GEN come-PART-3SG   hear-PART-1SG   know-NEG-CONT  
               -ACC                            -ACC

'Ali<sub>i</sub> doesn't know that I heard that he<sub>i</sub> arrived.'

- b. Ali<sub>i</sub> [biz-im [on-un<sub>i</sub>, iyiliği] için çalış-tığ-ımız-ı] anla- mi- yor.  
     we-GEN   he-GEN good       for work-PART-1PLR understand-NEG-CONT  
               -ACC    CONT

'Ali<sub>i</sub> does not understand that we are working for his<sub>i</sub> well-being.'

In (31a) and (b) above, the pronoun in a subject position is bound by a subject of the highest clause and the outcome is perfectly acceptable in

s spite of the prediction of (30) to the contrary. Let us then the relevant condition to (30).

- (32) The pronoun o(n) in subject position is disjoint from a minimally c-commanding subject.<sup>4</sup>

It seems that we have now modified our obviation principle properly to predict all of the examples we have dealt with in this section so far. Notice that (32) also predicts possible and impossible anaphora in the following pairs:

- (33)

- a. Hasan<sub>i</sub> [biz-im on-u<sub>i</sub>; çok sev- diğ- imiz-i] zanned-iyor.  
we-GEN he-ACC very like-PART-1PLR-ACC think-CONT  
'Hasan<sub>i</sub> thinks that we like him<sub>i</sub> very much.'
- b. \* Hasan<sub>i</sub> [on-un<sub>i</sub>; sev- il- diğ- in- i] zanned-iyor.  
he-GEN like-PASS-PART-3SG-ACC think-CONT  
'Hasan<sub>i</sub> thinks that he<sub>i</sub> is liked.'

- (34)

- a. \* Ali<sub>i</sub> [on-un<sub>i</sub>; bir dahi ol- dug-un- a] inan- di.  
he-GEN a genius be-PART-3SG-DAT believe-PAST  
'Ali<sub>i</sub> believed that he<sub>i</sub> is a genius.'
- b. Ben Ali'y<sub>i</sub> [on-un<sub>i</sub>; bir dahi ol-dug- un- a] inandır- di- m.  
I A-ACC he-GEN a genius be-PART-3SG-DAT convince-PAST-1SG  
'I convinced Ali<sub>i</sub> that he<sub>i</sub> is a genius.'

In (33a), the obviation principle does not apply because the pronoun is not a subject. In (33b), passivization turned the direct object pronoun of (a) into the subject of its clause. The obviation condition of (32)

is met and the sentence is ruled out. In (34a), again, we have a subject pronoun bound by the immediately higher subject, and the result is ruled out by the obviation principle (32). Now (34b) is a causative clause containing (a), where the matrix subject of (a) appears as the direct object of (b). Hence the binder is no more a subject and the outcome is grammatical.

#### 4.1.5.1 The Status of Empty Subjects

In the obviation principle (32), above, we referred to the immediately higher subject. It is crucial to observe that on in subject position is disjoint from empty subject as well.

(35)



In (35a) onun has to be disjoint from the matrix object Aliyi. This, however, is not due to an independent constraint. What rules out the intended anaphora here is again the Obviation Principle (OP) (32). The matrix verb zorla 'force' is an object control verb requiring PRO to be controlled by the matrix object Aliyi. Now onun cannot be bound by PRO according to (32). And, therefore, it cannot be bound by Aliyi which obligatorily controls the PRO. In other words, the binding of onun with

Aliyi will obligatorily result in binding it with PRO, which will violate (32). In (35b), on the other hand onun can be bound by the matrix subject Ali, because it is disjoint from the subject of the clause immediately containing the NP of which onun is the subject. The empty subject in this case is the first person pro.

Now let us observe the following:

- (36)

a. *Ben<sub>i</sub>* *Ayse'ye<sub>j</sub>* [PRO<sub>i</sub> [on-un, işler-in-i] bitir-mey-i] vaadet-ti-m.  
 I -DAT she-GEN work-3SG-ACC finish-VN-ACC promise-PAST  
 -1SG

'I<sub>i</sub> promised Ayse<sub>j</sub> PRO<sub>i</sub> to finish her<sub>j</sub> work.'

(36) is analogous to (35a) in that onun is bound by the matrix object, but the result is acceptable. This is because the PRO subject of the infinitive clause, unlike (35a), is subject controlled by Ben 'I', hence the binding of onun by Alive does not result in coreference between onun and the PRO subject.

Now, let us observe (37a):

- (37)

  - a. \* Ali<sub>i</sub> [on-un<sub>i</sub> [pro<sub>i</sub> paralar-in-1] Akbank'a yatır-dığ-in-1] söylü-yor.  
 he-GEN (his) moneys-3SG-ACC A-DAT deposit-PART- say-CONT  
 3SG-ACC
  - 'Ali<sub>i</sub> says that he<sub>i</sub> deposited (his<sub>i</sub>) money in Akbank.'
  - b. \* Ali<sub>i</sub> [pro<sub>i</sub> [on-un<sub>i</sub> paralar-in-1] Akbank'a yatır-dığ-in-1] söylü-yor.  
 (he) he-GEN moneys-3SG-ACC A-DAT deposit-PART- say-CONT  
 3SG-ACC
  - 'Ali<sub>i</sub> says that (he<sub>i</sub>) deposited his<sub>i</sub> money in Akbank.'

- c. Ali<sub>i</sub> [pro<sub>j</sub> [on-un<sub>i</sub> paralar-in-1] Akbank'a yatır-dığ-in-1] söylü-yor.  
 he-GEN moneys-3SG-ACC A-DAT deposit-PART- say-CONT  
 3SG-ACC

'Ali<sub>i</sub> says that (he<sub>j</sub>) deposited his<sub>i</sub> money in Akbank.'

(37a) and (b) is actually the same sentence showing the two possible distributions for onun. In one reading onun may be interpreted as the complement clause subject with pro as the NP subject. In (b), we can assume that the complement clause has a pro subject and the overt pronoun onun is the NP subject. Sentence (a) does not allow a coreferent reading between onun and Ali. It is acceptable if onun picks an inter-sentential antecedent. In (b), coreference between onun and pro is again not possible because of (32).

In (37c) coreference between Ali and onun is possible because the intervening pro is not bound by Ali, hence onun is disjoint from the minimally c-commanding subject pro<sub>j</sub>, analogous to (38), below:

(38)

- a. Ali<sub>i</sub> [pro [on-un<sub>i</sub> paralar-in-1] Akbank'a yatır-dığ-imiz-1] söylü-yor.  
 (we) he-GEN moneys-3SG- -DAT deposit-PART- say-CONT  
 1PLR-ACC

'Ali<sub>i</sub> says that we deposited his<sub>i</sub> money in Akbank.'

Let us now go back to examples like (37a) and (b).

(39)

- a. \* Ayse<sub>i</sub> [on-un<sub>i</sub> ne zaman [e<sub>i</sub> tez-in-1] bitir-eceğ-in-1] bil-mi-yor.  
 she-GEN what time thesis-3SG finish-PART- know-NEG-  
 -ACC 3SG-ACC CONT

'Ayse<sub>i</sub> doesn't know when she<sub>i</sub> will finish her<sub>i</sub> thesis.'

- b. Ayse<sub>i</sub> [on-un<sub>i</sub> ne zaman [pro<sub>i</sub> tez-in-i] bitir-eceğ-in-i] bil-mi-yor.  
 (s)he- what time his/her thesis- finish-PART- know-NEG-  
 GEN 3SG-ACC 3SG-ACC CONT

'Ayse<sub>i</sub> doesn't know when (s)he<sub>i</sub> will finish (his/her<sub>i</sub>) thesis.'

(40)

- a. Ayse<sub>i</sub> [pro<sub>i</sub> ne zaman [on-un<sub>j</sub> tez-in-i] bitir-eceğ-in-i] bil-mi-yor.  
 (she) what time (s)he- thesis- finish-PART-3SG know-NEG-  
 GEN 3SG-ACC -ACC CONT

'Ayse<sub>i</sub> doesn't know when (she)<sub>i</sub> will finish his/her<sub>j</sub> thesis.'

- b. \*Ayşe [pro<sub>i</sub> ne zaman [on-un<sub>i</sub> tez-in-i] bitir-eceğ-in-i] bil-mi-yor.  
 he/she what time (s)he- thesis- finish-PART-3SG know-NEG-  
 GEN 3SG-ACC -ACC CONT

\*'Ayşe doesn't know when (s)he<sub>i</sub> will finish his/her<sub>i</sub> thesis.'

In (39a) onun is clearly the subject of the complement clause because of the Wh-phrase that intervenes between it and the head of the NP, [e tezini], and the sentence is ruled out with the indicated coreference, as predicted by (32). Notice that nothing prevents the indicated coreference in (39b).

Now the word order in the complement clauses in (40) indicates that the pro subject in each case is in clause-initial position. This is because, ordinarily, a wh-phrase like ne zaman 'what time, when' does not appear in absolute initial position of a complement clause.

(41)

- a. ??/\* Ali [ne zaman ben-im gel-eceğ-im- i] bil- iyor.  
 what time I-GEN come-PART-1SG-ACC know-CONT

'Ali knows when I am coming.'

- b. Ali [ben-im ne zaman gel-eceğ-im- i] bil- iyor.  
 I-GEN what time come-PART-1SG-ACC know-CONT

'Ali knows when I am coming.'

(41a), with wh-phrase preceding the embedded subject, is very awkward as opposed to (41b).

Returning now to (40a), we notice that this sentence is perfectly felicitous unlike its analogue (41a). We will decide on this evidence that in (40) the pro is separated from onun by the intervening wh-phrase as indicated. And we can safely say that the intended coreference in (40b) represents just the case ruled out by (32). Let us now look at cases where the antecedent is an object in the matrix clause.

(42)

- a. Ben Ali-ye<sub>i</sub> [on-un<sub>i</sub>] ne zaman [pro<sub>i</sub> tez-in-i] bitir-eceğ-in-i] sor-du-m.  
 I -DAT he- what time his thesis- finish-PART ask-PAST  
 GEN 3SG-ACC 3SG-ACC 1SG

'I asked Ali when he was going to finish his<sub>i</sub> thesis.'

- b. Ben Ayşe'ye [onun<sub>i</sub>] ne zaman [pro<sub>i</sub> tez-in-i] bitir-eceğ-in-i] sor-du-m.  
 I -DAT (s)he- what time his/her thesis- finish-PART-3SG ask-PAST  
 GEN 3SG-ACC -ACC 1SG

'I asked Ayşe when (s)he was going to finish his/her thesis.'

- c. \*Ben Ayşe'ye<sub>i</sub> [pro<sub>i</sub>] ne zaman [onun<sub>i</sub>] tez-in-i] bitir-eceğ-in-i] sor-du-m.  
 I -DAT she what time she- thesis- finish-PART-3SG ask-PAST-  
 DAT 3SG-ACC -ACC 1SG

'I asked Ayşe<sub>i</sub> when (s)he<sub>i</sub> was going to finish her<sub>i</sub> thesis.'

In example (42), (c) is the only coreference ruled out by (32), where the subject pronoun onun is bound by the minimally c-commanding pro subject of the higher clause.

One last type of example we will consider for empty subjects will be the following:

(43)

- a. \* Ali<sub>i</sub> [[on-un, sev-diğ-i] kadınlar-i] hep terket-ti.  
 he-GEN love-PART women-ACC always leave-PAST  
 ACC

'Ali<sub>i</sub> always left the women who he<sub>i</sub> loved.'

- b. Ali<sub>i</sub> [e<sub>j</sub> on-u<sub>i</sub> sev-en] kadınlar-i<sub>j</sub> hep terket-ti.  
 he-ACC love-PART women-ACC always leave-PAST

'Ali<sub>i</sub> always left the women who loved him<sub>i</sub>.'

In (43a) intended coreference is not possible because the antecedent is the minimal subject c-commanding the pronoun. In (b), however, the empty category e is bound by the head NP that the relative clause modifies. The nature of this empty element does not concern us here, but we will assume that there is some empty element in the RC that occupies the subject slot representing the target of relativization. The pronominal onu in the RC is disjoint from this minimally c-commanding subject, and (32) is not violated; therefore, it can pick its referent outside the RC.

Compare (43a) with (44) below where an intervening pro makes coreference possible between the pronoun and the subject Ali.

(44)

- a. Ali<sub>i</sub> [pro [on-un, sev-diğ-i] kadınlar-i tanı-dığ-imiz-i] zannediyor.  
 (we) he-GEN loves-PART women-ACC know-PART-1PLR think-CONT  
 -3SG -ACC

'Ali<sub>i</sub> thinks we know the women he<sub>i</sub> loves.'

#### 4.1.5.2 Clauses Without Accessible Subjects

In the preceding section we discussed examples where the third person pronoun o was disjoint from a minimally c-commanding subject. In

these sentences, it was such that the minimal subject was the subject of S that was immediately superordinate to the S or NP that contained the pronoun. There is, naturally, the question as to what happens if such as S does not have an accessible subject.

(45)

- a. Ali<sub>i</sub> [[on-un<sub>i</sub>; araba-sı-nın] kaza yap-tığ-in-i] henüz öğren-me-di.  
he-GEN car-3SG-GEN accident do-PART-3SG-ACC yet learn-NEG-PAST  
'Ali<sub>i</sub> has not heard yet that his<sub>i</sub> car made an accident.'
- b. Ali<sub>i</sub> [[on-un<sub>i</sub>; teoriler-in-in] çürüt-ül-düğ-ün-ü] bir gün anla-yacak.  
he-GEN theories-3SG debunk-PASS-3SG- one day understand-FUT  
-GEN ACC  
'Ali<sub>i</sub> will understand one day that his<sub>i</sub> theories were debunked.'
- c. Ali<sub>i</sub> [[on-un<sub>i</sub>; yaz-dığ-ı] makaleler-in ne zaman basıl-acağ-in-i] sor-uyor.  
he-GEN write- articles- when publish-PASS- asks-CONT  
PART-3SG GEN 3SG-ACC  
'Ali<sub>i</sub> asks when the articles that he<sub>i</sub> wrote will be published.'

It should be noticed immediately that according to our definition of footnote 4, Ali in each of (45a-c) is the minimally c-commanding subject for the pronoun it binds. And there is, therefore, something wrong with our Obviation Principle (32) that disallows the o pronoun to be bound by a c-commanding minimal subject.<sup>5</sup>

Before attempting a further modification of the OP, let us consider another set of relevant examples.

(46)

- a. \* Ali<sub>i</sub> [[on-un<sub>i</sub>; casus ol-düğ-u]s iddialar-in-i]<sub>wp</sub> redde-diyyor.  
he-GEN spy be-PART- claims-3SG-ACC deny-CONT  
3SG  
'Ali<sub>i</sub> denies the claims that he is a spy.'

- b. \* Ali<sub>i</sub> [[on-un<sub>i</sub> yaz-diğ-1] makalaler-i]<sub>NP</sub> henüz bastır-ma-mış.  
 he-GEN write-PART articles-ACC yet publish-NEG-DUB  
 -3SG

'Ali has not yet published the articles that he wrote.'

- c. \* Basbakan<sub>i</sub> [[on-un<sub>i</sub> istifa et-me-sin-in] sebeb-in-i]<sub>NP</sub> açıkladı.  
 prime he-GEN resign-VN-3SG-GEN reason-3SG-explain-PAST  
 minister ACC

'The prime minister explained the reason for his resignation.'

Examples like (45) show that the disjoint-reference domain is not identical to the c-domain of a minimal subject as we claimed so far. Let us refer to the S or NP that immediately contains the pronoun as its host. In (45) the pronoun is hosted by an NP and in (46) by an S. Another obvious difference between the two sets of sentences is that in (45) the host is immediately contained in an S, but in (46) in an NP. We will suggest that the difference in grammaticality between the two groups of sentences is due to this, and formulate the following principle:

- (47) The pronoun on, in subject position, is disjoint from the subject of the minimal S that contains its host (if this S has a subject).

where host = the NP/S that minimally contains the subject pronoun.<sup>6</sup>

In (45a,b) above, the pronoun onun is not bound within the minimal S that contains its host; therefore, it can pick Ali as its referent from outside this domain. In (46a-c) the minimal S containing the host is the matrix sentence. Therefore, onun cannot be bound by the subject of this S.

#### 4.1.5.3 Obviation Principle Within GB Framework

In an interesting study, Yang (1983) attempts to present an account of obviative pronouns within GB framework. We will here discuss the implications of his Marked Pronominal Disjoint Reference Principle (MPDRP) in the context of Turkish facts presented so far.

(48) Yang's MPDRP

A pronominal is free in the c-domain of its c-commanding minimal SUBJECT.<sup>7</sup>

(i) SUBJECT is parametrized:

(a) SUBJECT = AGR or subject (for Norwegian etc.)

(b) SUBJECT = AGR only (for Icelandic etc.)

(ii) [+ marked] pronominal = [+ subject obviation]

What (48) says is that the obviative pronoun is disjoint from a subject (if there is one) in the syntactic domain that is defined by the minimally c-commanding lexical subject or AGR for some languages, and only by AGR for others. We will not attempt to illustrate how (48) works for the languages it is intended for. Instead we will demonstrate its inadequacy in dealing with the Turkish facts.

Given (48) the first task is to determine how SUBJECT is parametrized for Turkish. There are three possibilities (including (49a) not considered by Yang).

- (49)
- (a) subject only
  - (b) AGR only
  - (c) subject or AGR

We can rule out (49a) immediately, since this is basically the position we have adopted in (32), which has been demonstrated to be wrong considering the examples in (45).

Let us now consider (49b), namely the claim that the obviation (disjoint reference) domain of on is the minimal c-domain of its minimally c-commanding AGR only. Observe the following:

(50)

- a. Ayse<sub>i</sub> ben-i<sub>j</sub> [PRO<sub>j</sub> [on-un<sub>i</sub> kitaplar-in-1] oku-mak-tan] menet-ti.  
-ACC he-GEN books-3SG-ACC read-INF-ABL prohibit-PAST

'Ayse<sub>i</sub> prohibited me from reading her<sub>i</sub> books.'

In the infinitive clause in (50), "[PRO...okumaktan]", there is no AGR. Therefore, according to (49b) the c-domain of the pronoun must be the whole sentence, in which it has to be disjoint from the matrix subject Ayse. But in (50) this is not borne out. Therefore, in Turkish the obviation domain cannot be solely determined by a minimally c-commanding AGR. In (50) this domain is established by the PRO subject. There remains the third possibility (49c), namely that for Turkish the c-commanding minimal SUBJECT that establishes the obviation domain must be subject or AGR. We will now see how this fares with the critical cases we have considered so far.

First, let us be reminded again that in Turkish NP's as well as S's contain AGR.

- (51) a. On-un        araba-s<sub>i</sub>  
      s(he)-GEN      car-3SG
- b. Ben-im        ev-im  
      I-GEN         house-1SG

In (52), below, the obviation domain cannot be the c-domain of the c-commanding minimal AGR,

- (52) a. \* Ali<sub>i</sub> [on-un<sub>i</sub> araba-sin-1] sattı.  
A he-GEN car-3SG-ACC sold

'Ali<sub>i</sub> sold his<sub>i</sub> car.'

- b. \* Ali<sub>i</sub> [on-un<sub>i</sub> kazan-acağ-in-1] tahmin et-mi-yor-du.  
he-GEN win-PART-3SG-ACC guess- NEG-CONT-PAST

'Ali<sub>i</sub> did not guess that he<sub>i</sub> was going to win.'

because if it were, then the pronoun would be free to choose its antecedents outside this domain. But this is not the case: the obviation domain in (52) is the whole S. So for (52), SUBJECT = subject. This is also the case for (46); we repeat (46c) as (53), below:

(53)

- \* Başbakan<sub>i</sub> [[onun<sub>i</sub> istifa et-me-sin-in], sebeb-in-i]<sub>NP</sub> açıkladı.  
prime he-GEN resign-VN-3SG-GEN reason-3SG-ACC explain-PAST minister

'The prime minister<sub>i</sub> explained the reason why he<sub>i</sub> resigned.'

Now consider (54), below:

(54)

- Ali<sub>i</sub> [[on-un<sub>i</sub> teoriler-in-in] çürüt-ül-düğ-ün-ü], bir gün anla-yacak  
he-GEN theories-3SG- debunk-PASS-PART- one day understand-TUT  
GEN ACC

'Ali<sub>i</sub> will one day understand that his<sub>i</sub> theories are debunked.'

In our informal statement of the obviation principle in (47), we state the condition that in establishing the obviation domain of the pronoun o(n) the NP or S which immediately hosts it should not be

counted. Let us assume here that this is built into Yang's framework also. Now, both of the structures in (53) and (54) that immediately contain the host have AGR corresponding to (52a) and (b) respectively, but this AGR does not establish an obviation domain for (53), while it does in (54).

But here we are in a bind since the AGR morpheme on the NP in (53) is of the same type as the one on the S of 54. They are both of the nominal type discussed in Chapter 1. Hence, they are maximal projections of nominal INFL and cannot be distinguished as S and NP as we have been assuming so far. To further complicate matters let us note that in (46a) and (b) the NPs minimally containing the host of the pronoun on do not contain AGR. In (46b) there is no AGR morphology on the NP. In (46a), if the 3SG were indeed AGR we would have expected it to assign genitive case on the sentential subject "onun...olduğu." The real distinction between (45a-c) and (46a-c) is that in (45) the minimal maximal projection containing the host of on has tense in INFL. The participial suffixes in (45a) and (b) indicate non-future and the one in (45c) indicates future tense.

Let us call an AGR "strong" if it occurs with tense under INFL, and "weak" if it does not. It then turns out to be the case that only strong AGR establishes an  $\alpha$ -domain.<sup>8</sup>

- (55) (a) The pronoun *o(n)* in subject position is disjoint from a c-commanding subject (if there is one) in its o-domain.<sup>9</sup>
- (b) The o-domain of *o(n)* is the c-domain of the SUBJECT that minimally c-commands the host of *o(n)*.
- (c) where SUBJECT = subject or strong AGR.

Actually, (55) makes a different empirical claim from (47). The latter requires that the minimal S containing the host be the o-domain for the pronoun. In (55) there is no such restriction. Examples like the following show that (55) is the correct formulation of the obviation principle:

- (56)  
Ayse<sub>i</sub> [benim [on-un<sub>i</sub>] ban-a vermiş ol-duğ-u] gömlekler-im-i] geri al-di.  
 she-GEN I-DAT had given-PART- shirts-1SG-ACC back take  
 -3SG -PAST
- 'Ayse took back all of my shirts that she had given me.'

In Turkish possessive phrases allow relative clauses that complement the head NP which in this case is the S (i.e. the host) that immediately contains the pronoun. Now, (47) predicts that the o-domain of the pronoun would be the minimal S that contains the host, which is the matrix S in (56). But this is not borne out since the pronoun can be bound by the matrix subject. But (55) correctly predicts that the o-domain of the pronoun in (56) is the NP that minimally contains the host S, because this NP has the subject, benim.

Informally, what (55) says is that the o-domain of *o(n)* is the first cyclic domain that contains the host of the pronoun, which contains subject or strong AGR.

#### 4.1.5.4 The c-commanding Subject

In our finally perfected version of the Obviation Principle (55) above, we claimed without any direct support that  $\alpha(n)$  is disjoint in its  $\alpha$ -domain, from a c-commanding subject. Let us consider the following:

(57)

- a. [Ali'nin<sub>i</sub> kari-sı] [on-un<sub>i</sub>] her is-in-i] yap-ar.  
-GEN wife-3SG he-GEN every work-3SG-ACC do-AOR  
'Ali's<sub>i</sub> wife does his<sub>i</sub> every work.'
- b. [Pikasso'nun<sub>i</sub> baba-sı] [on-un<sub>i</sub>] büyük bir sanatçı ol-acağ-in-a]  
p. -GEN father-3SG he-GEN great one artist be-PART-3SG-DAT  
inan-ma-mış.  
believe-NEG-DUB  
'Picasso's<sub>i</sub> father did not believe that he<sub>i</sub> was going to be a great artist.'
- c. [Ali'nin<sub>i</sub> o anda burada ol-ma-ma-sı] [on-un<sub>i</sub>] suçlu ol-dug-un-u]  
-GEN that moment here be-NEG-VN-3SG he-GEN guilty be-PART-3SG-ACC  
göster-mez.  
show-NEG.AOR  
'(The fact) that Ali<sub>i</sub> is not here at this moment does not show that he<sub>i</sub> is guilty.'

In each of (57), both the antecedent and the pronoun are in the subject position of their minimal categories. Moreover the subject antecedent in each case is in the  $\alpha$ -domain of the pronoun, according to the definition given in (55), above. But (55) correctly allows for the intended coreference in (57) by stating that  $\alpha(n)$  is disjoint in its  $\alpha$ -domain from a c-commanding subject, which the antecedents in (57) are not.

#### 4.1.5.5 Backwards Obviation

By "backwards obviation" we mean the necessary disjoint reference between a pronoun and its antecedent (rather the post-cedent) that appears to the right of the pronoun, and that the obligatory disjoint reference cannot be accounted for solely by precedence and command.

Not much, so far as I know, has been written on backwards obviation in modern linguistic literature. Yang (1983) has representative examples of forward obviation from six languages, but no case of backwards obviation.

Huang (1982) discusses some interesting cases of backwards obviation in Chinese.

- (58) a. \* [ta<sub>i</sub> de mama] xihuwan Zhangsan<sub>i</sub>  
           he     mother    likes      Z.  
           'His<sub>i</sub> mother likes Z<sub>i</sub>.'
- b. [[ta<sub>i</sub> de mama] neng-bu-neng lai] dui Zhangsan<sub>i</sub>  
       he     mother    can-not-can come to    Z.  
       'It does not matter to Z<sub>i</sub> whether his<sub>i</sub> mother can come or not.'
- c. Zhangsan<sub>i</sub> xihuuan [ta<sub>i</sub> de mama]  
       loves    his     mother

Huang observes that coreference is not possible in (58a), because in this sentence ta cyclic c-commands its antecedent Zhangshan; which is not the case in (58b). Informally, a node A cyclic-c-commands another node B if the minimal cyclic node (NP or S) that contains A c-commands B. In (58a) the NP that minimally contains ta c-commands

Zhangshan and therefore ta cyclic c-commands Zhangshan. In (58b), however, the minimal cyclic node, the NP, that contains ta does not c-command Zhangshan; therefore, the former does not cyclic c-command the latter. But (58c) shows that ta in Chinese is not obviative in the sense that its Turkish counterpart o(n) is, since the Turkish counterpart of this sentence is ungrammatical.

That o(n) in Turkish shows obviative properties in backwards anaphora was first observed by Erguvanlı-Taylan (1986) with examples like the following:

- (59) a. Ahmet<sub>i</sub> [on-un\*<sub>i</sub>/<sub>j</sub> kari-sın-i] Erol'<sub>a</sub><sub>j</sub> sor-du.  
he-GEN wife-ACC-3SG -DAT ask-PAST  
'Ahmet<sub>i</sub> asked Erol<sub>j</sub> (about) his\*<sub>i</sub>/<sub>j</sub> wife.'
- b. Erol<sub>i</sub> [[on-un\*<sub>i</sub>/<sub>j</sub> gideceği] ye-re] Ahmet'<sub>i</sub><sub>j</sub> götür-dü.  
he-GEN go-PART-3SG place-DAT -ACC take-PAST  
'Erol<sub>i</sub> took Ahmet<sub>j</sub> to where he\*<sub>i</sub>/<sub>j</sub> was going.'  
Lit. Erol<sub>i</sub> took Ahmet<sub>j</sub> to the place that he\*<sub>i</sub>/<sub>j</sub> was going to.'
- c. \*[On-un<sub>i</sub> is-e al-dığ-i] kızlar Ahmet'<sub>i</sub><sub>j</sub> sev-er-ler.  
he-GEN job-DAT take-PART- girls -ACC like-AOR-3PLR  
3SG  
'The girls that he<sub>i</sub> hired like Ahmet.'

Erguvanlı-Taylan's (1986) analysis makes the following predictions:

- (60) (a) O(n) in subject position is disjoint from a subject NP regardless of the position of the subject.  
(b) O(n) in subject position may not be bound by a non-subject that follows it.

(60) predict all of (59) and more. In (59a-c) onun cannot find an antecedent because (60) rules out subjects as possible antecedents, Ahmet and Erol in (59a) and (b) respectively. Erola in (59a) and Ahmeti'i in (59b) and (c) are ruled out as possible antecedents by (60b).

We will argue in this section that (60) hold within the o-(obviation)-domain of the pronoun and not outside it.

It may have been noticed that (55) overstates the data because it implies that the pronoun o is disjoint from the c-commanding subject of the obviation domain without considering sentences where the subject follows the pronoun it binds. If (55) is correct, we will expect that of the subject NP's that follow a pronoun only those within the o-domain of the pronoun will be disjoint from it. Observe the following:

- (61) a. \* [On-un<sub>i</sub> araba-sin-i] sat-ti Ali<sub>i</sub>.  
he-GEN car-3SG-ACC sell-PAST A

'Ali<sub>i</sub> sold his<sub>i</sub> car.'

- b. \* [On-un<sub>i</sub> araba-sin-i] Ali<sub>i</sub> sat-ti.  
he-gen car-3SG-ACC sell-PAST

'Ali<sub>i</sub> sold his<sub>i</sub> car.'

Here we illustrate two kinds of rightward movement in Turkish. In (61b) the subject is focused by being moved to the left of the verb. In (a) it is defocused by being moved to the right of the verb. In either case the intended coreference is not possible. But subject o(n) can be bound by a following subject outside its o-domain:

(62)

- a. [[On-un<sub>i</sub> araba-sin-in] kaza yap-tığ-in-i] Ali<sub>i</sub> bil-iyor mu?  
 he-GEN car-3SG-GEN accident do-PART-3SG-ACC know-CONT Q  
 'Does Ali<sub>i</sub> know that his<sub>i</sub> car made an accident?'
- b. [[Onun<sub>i</sub> teoriler-in-in de] qürüt-ül-düg-ün-ü] bir gün anla-yacak] Ali<sub>i</sub>.  
 he-GEN theories-3SG too debunk-PASS-PART one day realize-FUT  
 -GEN -3SG-ACC  
 'Ali will one day realize that his theories are too debunked.'

According to (55) the o-domain of the pronoun in (62) is the S represented by the outside brackets. Ali in each case can bind the pronoun because it is outside this domain. But now observe the following:

(63)

- a. \* Ben [Ali'nin<sub>i</sub> [on-un<sub>i</sub> kitaplar-in-i] sat-tığ-in-i] san-iyor-du-m.  
 I -GEN he-GEN books-3SG-ACC sell-PART-3SG think-CONT-PAST  
 -ACC -1SG  
 'I thought that Ali sold his books.'
- b. [Ben [t<sub>i</sub> [\*on-un<sub>i</sub> kitaplar-in-i] sat-tığ-in-i san-iyor-du-m] Ali'nin<sub>i</sub>]  
pro<sub>i</sub> he-GEN books-3SG-ACC sell-PART-3SG think-CONT-PAST -GEN  
 3SG-ACC -1SG

(63a) is easily predicted by the OP (55), since onun has to be disjoint from the c-commanding subject in its o-domain, which is the larger brackets. But (b) is not so straightforwardly predicted. In (b), the defocusing rule moved the binder Ali'nin to the right of the topmost clause, and it is clearly outside the o-domain of the pronoun. Yet coreference is still not possible with the overt pronoun. The felicitous reading with pro shows that the unallowed coreference with onun is not due to the defocusing of Ali'nin.

Two possible mechanisms come to mind to explain this in addition to the OP. The first may be to assume that any bound movement leaves traces and to make OP sensitive to the trace of Alinin. In which case (63b) will be ruled out because of the intended coreferences between  $t_1$  and onun.<sup>10</sup> The other solution is to mark disjoint reference prior to movement rules like defocusing. Then a subject once marked disjoint will remain disjoint in whatever structural position it ends up.

#### 4.1.5.6 Backwards Obviation with Non-Subject NP's

We have already seen in (59), above, examples where a following non-subject NP had to be disjoint from o(n). A possible generalization based on such examples, however, would be incorrect since non-subject NP's can be bound by a preceding o.

(64)

- a. [Biz-im [on-un<sub>i</sub> yazılıar-in-a değer ver-me-me-miz] Ali'<sub>i</sub><sub>j</sub> çildirt-iyor.  
We-GEN he-GEN writings-3SG value give-NEG-VN-1PLR -ACC exasperate-CONT  
-DAT  
  
'Our not caring about his<sub>i</sub> writings exasperates Ali<sub>i</sub>.'
- b. [On-un<sub>i</sub> yap-tığ-1] heykel-in] birinci gel-me-si] Aliyi<sub>i</sub> çok sevindir-di.  
he-GEN make-PART sculpture-GEN first come-VN-3SG -ACC much please-PAST  
-3SG  
  
'It pleased Ali<sub>i</sub> very much that the sculpture that he<sub>i</sub> made came first.'
- c. [[Benim on-a<sub>i</sub> ver-diğ-im] kitaplar Ali'nin<sub>i</sub> hayat-in-i kurtar-mış.  
I-GEN he-DAT give-PART-1SG books -GEN life-3SG-ACC save-DUB  
  
'The books that I gave him saved Ali's life.'

In each of (64) the antecedent is outside the o-domain of the pronoun. In (46a and b) the domain is the sentential subject. In (c) it is the relative clause modifying the matrix subject.

Thus what seems to be the case is that o in subject position is disjoint from a following non-subject NP within its o-domain, as defined in (55). The following further show that the disjoint non-subject does not have to c-command the pronoun:

(65)

- a. \*[On-un<sub>i</sub> icad et-tiğ-i] ilaç] Ali'nin<sub>i</sub> hayat-in-i kurtar-mış.  
He-GEN invent-PART-3SG medicine -GEN life-3SG-ACC save-DUB  
'The medicine that he invented saved Ali's life.'
- b. \*[Onun<sub>i</sub> çok hasta ol-duğ-un-u] Ali'nin<sub>i</sub> kari-sın-a söyle-me-mış-ler.  
He-GEN very sick be-PART-3SG-ACC -GEN wife-3SG- tell-NEG-DUB-3PLR  
DAT  
'They didn't tell Ali's wife that he was very sick.'

In both cases Alinin is a non-c-commanding antecedent within the o-domain of o(n). When the following NP lies outside the o-domain of the pronoun o(n) coreference is possible even when the antecedent does not c-command the o(n).

(66)

- Bizim [onun<sub>i</sub>, karşı-sın-da] sakız çiğne-me-mız] Osman Bey-in<sub>i</sub> asab-in-i  
we-GEN he-GEN front-LOC-3SG gum chew-VN-1PLR -GEN nerve-3SG-ACC  
boz-du.  
ruin-PAST

'Our chewing gum in his<sub>i</sub> presence made OB<sub>i</sub> mad.'

Backwards obviation then can be formulated as follows:

- (67) The pronoun o(n) in subject position is disjoint from any NP following it in its obviation domain. Obviation domain is as defined in (55b).

#### 4.1.5.7 Summary and Conclusion

Let us begin here by citing the Obviation Principle for Turkish in full.

- (68) In its  $\alpha$ -(bviation) domain the pronoun  $\alpha(n)$  in subject position is disjoint in reference from a subject antecedent and any NP to its right.

The obviative behavior of  $\alpha(n)$  has been noted first by Erguvanlı-Taylan (1986) as we have illustrated in (59) and (60). Our analysis crucially differs from Erguvanlı-Taylan's (60) in that obviation has to be stated within an obviation domain. For example in complex structures Erguvanlı-Taylan observes (69), below, to be grammatical.

- (69)  
 Ben [pro [on-un] kitab-in-i] kaybet-tiğ-im-i] Erol'a i söyle-me-di-m.  
 I he-GEN book-3SG lose-PART-1SG -DAT tell-NEG-PAST  
 ~ACC ~ACC -1SG

'I did not tell Erol that I lost his book.'

This is not predicted by (60b), which states that  $\alpha(n)$  is disjoint from any non-subject that follows it. Erguvanlı-Taylan (1986) further observes that  $\alpha(n)$  may be bound by a following non-subject NP in case the anaphoric expression on is part of a genitive construction which is not the subject of an embedded S. This is illustrated with (69). Our analysis predicts such cases because the antecedent Erol'a lies outside the  $\alpha$ -domain of the pronoun, which is the S that contains [pro...kaybettiğimi]. Our (68) also predicts that onun in subject

position can be bound by a following NP if again this NP is outside the  $\alpha$ -domain of the pronoun.

(70)  
 [Biz-im [on-un<sub>i</sub>] birinci gel-eceğ-in-e] yürekten inan-ma-mız]  
 we-GEN he-GEN first come-PART-3SG sincerely believe-VN-1PLR

Ali'yi heycanlandırdı.  
 A.-ACC excite-PAST

'Our believing that he<sub>i</sub> would come first excited Ali<sub>i</sub>.'

In (70) Ali'yi is outside the  $\alpha$ -domain of the pronoun, which is the whole sentential subject.<sup>11</sup>

Erguvanlı-Taylan (1986) also deserves credit for adequately observing that binding involves an asymmetrical relation between a binder and a bindee, as well as the fact that grammatical categories like subject, non-subject are crucial.

We have incorporated Erguvanlı-Taylan's (1986) asymmetry and subject non-subject distinctions but integrated it into a domain which we called the  $\alpha$ -domain. The idea of domain within which obviation works is the central idea in Yang (1983). But strict reliance on the notion of SUBJECT = subject or AGR) in defining the  $\alpha$ -domain does not work for Turkish. We crucially had to refer to the host of a pronoun, namely, the immediate cyclic node that contains it.

There is another issue in Yang's (1983) analysis which we have not considered so far. Yang intends his analysis to replace condition B of Chomsky (1981).

We are not in a position to evaluate whether or not this is the case in the languages Yang considers, but for Turkish, we will argue

that the obviation principle cannot eliminate Principle B of Chomsky (1981) or its equivalent.

Consider first the following:

- (71) a. Ayse<sub>i</sub> Ali'ye<sub>j</sub> [on-un<sub>\*i/j</sub> çiplak resimler-in-i] göster-mış.  
           A     A-DAT    he-GEN    naked pictures-3SG-ACC show-DUB  
           'Ayse<sub>i</sub> showed Ali<sub>j</sub> his<sub>\*i/j</sub> nude pictures.'
- b. \* Ayse<sub>i</sub> ayna-da on-u<sub>j</sub> gör-müş.  
           mirror-LOC she-ACC see-DUB  
           'Ayse<sub>i</sub> saw her<sub>j</sub> in the mirror.'

In (71a), disjoint reference between Ayse and onun is predicted by the OP, since Ayse, the antecedent, is a subject within the  $\underline{o}$ -domain of the pronoun. In this domain onun can only be bound by a non-subject NP. But what about (71b)? Is this to be ruled out with the OP also? If so, then there must be something wrong with our formulation of the OP, since according to our definition, Ayse in (71b) is not in the  $\underline{o}$ -domain of the pronoun, for the simple reason that to reach the  $\underline{o}$ -domain we have to skip the first cyclic node that dominates the pronoun, which in (71) is the whole sentence. Besides only  $\underline{o}(n)$  in subject position has  $\underline{o}$ -domain.

Suppose now that in order to subsume both (a) and (b) of (71) under the same principle we changed the definition of  $\underline{o}$ -domain in such a way that both (a) and (b) become the  $\underline{o}$ -domain of the pronoun. In other words the  $\underline{o}$ -domain of a non-subject pronoun becomes the S that immediately contains it. We will not attempt such a definition of  $\underline{o}$ -domain here, but even if it could be done we would still fail to predict the following:

- (72) a. \* Ben Ali've<sub>i</sub> on-dan<sub>i</sub> uzun uzun bahset-ti-m.  
           I     -DAT he-ABL long long talk-PAST-1SG

'I talked to Ali<sub>i</sub> about him<sub>i</sub> for a long time.'

- b. \* Ben Ayse've<sub>i</sub> ayna-da on-u<sub>i</sub> göster-di-m.  
           I     -DAT mirror-LOC she-ACC show-PAST-1SG

'I showed Ayşe her in the mirror.'

If in (72a,b) the o-domain of the pronoun is the whole S in each case, the pronoun is disjoint from a non-subject NP within this domain.

We will maintain the position that (71b) and (72) are predicted by the disjoint reference constraint of Lasnik (1976) which is distinct from the obviation principle. The former applies to cases when the pronoun is in a non-subject position while the latter exclusively applies to pronouns in subject positions.

#### 4.2 The Anaphors

##### 4.2.1 Kendisi, Reflexive or Pronoun

There are languages which have reflexives that are bound by antecedents that lie outside the S that contains them. For example, Icelandic (Thrainsson (1979), and Maling (1984)).

Representative examples from a fair number of languages have been reviewed in Yang (1983), who observes that the so-called 'marked reflexives', i.e. reflexives that can choose their antecedents from outside their own clause, are always bound by a subject. Yang's analysis is actually quite complex, and we will have occasion to discuss it in detail further on. We will see in this section how kendisi behaves as a non-clause-bounded reflexive. Consider first the following:

- (73) a. Ali<sub>i</sub> kendisin-i<sub>i</sub> çok beğen-ir.  
           himself-ACC much admire-AOR  
           'Ali<sub>i</sub> admires himself<sub>i</sub> very much.'
- b. Ben Ayse<sub>i</sub>'ve<sub>i</sub> kendisin-den<sub>i</sub> bahset-ti-m.  
       I -DAT herself-ABL mention-PAST-1SG  
       'I talked to Ayse<sub>i</sub> (about) herself<sub>i</sub>.'

In (73) kendisi behaves like an ordinary reflexive, that may or may not be bound by a subject NP. Kendisi also appears in the subject position in embedded sentences to choose its antecedent from outside its minimal S.

- (74)
- a. Ali<sub>i</sub> [kendisin-in<sub>i</sub> birinci gel-eceğ-in-i] san-iyor.  
       himself-GEN first come-PART-3SG-ACC think-CONT  
       'Ali thinks that he will come first.'
- b. Ben Ali'ye<sub>i</sub> [kendisin-in<sub>i</sub>, bu ist-e haksız ol-dug-un-u] anlat-tim.  
       I -DAT himself-GEN this matter-LOC wrong be-PART-3SG-ACC explain-PAST-1SG  
       'I explained to Ali that he was wrong in this matter.'

In (74) kendisi can pick its antecedent from outside its minimal clause and this antecedent does not have to be a subject.

What is also interesting is that when kendisi is in a non-subject position it can skip the subject of its minimal clause to choose its antecedent from outside.

- (75)
- a. Ayse<sub>i</sub> [ben-im kendisin-den<sub>i</sub> hoşlan-diğ-im-i] anla-di.  
       I-GEN herself-ABL be fond-PART-1SG-ACC understand-PAST  
       'Ayse<sub>i</sub> realized that I am fond of her<sub>i</sub>.'

- b. Sen Ayse'ye<sub>i</sub> [benim kendisin-den<sub>i</sub> hoşlan-dığ-im-1] söyle-miş-sin  
 you -ABL I-GEN herself-ABL be fond of-PART say-DUB-2SG  
 -1SG-ACC

'You told Ayse<sub>i</sub> that I am fond of her<sub>i</sub>.'

- c. Hasan<sub>i</sub> Ali'ye<sub>j</sub> [Erol'un<sub>k</sub> kendisin-e<sub>i/j/k</sub> kız-dığ-in-1] söyle-miş.  
 -DAT -GEN self-DAT be mad-3SG-ACC say-DUB

'Hasan<sub>i</sub> told Ali<sub>j</sub> that Erol<sub>k</sub> was mad at him<sub>i/j-self</sub><sub>k</sub>.'

As (75c) shows, skipping the subject is not due to the impossibility of choosing the clausemate subject as in (a) and (b), above, since the former is three ways ambiguous.

Notice also that kendisi can pick its antecedent intersententially in discourse.

- (76) a. Speaker A. Ali bey<sub>i</sub> hastalanmış.  
 Mr. is sick

- b. Speaker B. Yazık, kendisin-i<sub>j</sub>, iyi tanır-im.  
 pity himself-ACC well know-AOR-1SG

or        Kendisi<sub>i</sub> bizi-m çok eski dost-umuz-dur  
 himself we-GEN very old friend-1PLR-COP

'Pity, I know him<sub>i</sub> well.' or 'He<sub>i</sub> is very old friend of ours.'

So in (76), kendisi behaves like a genuine pronoun. In (75) it is like a long-range reflexive, and in (73) it is a clause bounded reflexive (unmarked reflexive in Yang's terms).

Let us also point out here that kendisi does observe the precede and command constraint.

- (77) \* Ben kendisin-e<sub>i</sub> Ali'nin<sub>j</sub> kitaplar-in-1 iade et-ti-m.  
 I self-DAT 'GEN books-3SG-ACC return-PAST-1SG

'I returned him<sub>i</sub> Ali's<sub>j</sub> books.'

where kendisi precedes and commands its antecedent Ali'nin. Kendisi, however, can command a preceding antecedent.

- (78) Biz [Ali'nin<sub>i</sub> kitaplar-in-i] kendisin-e<sub>i</sub> ver-di-k.<sup>12</sup>  
 we -GEN books-3SG-ACC himself-DAT give-PAST-1PLR  
 'We gave Ali's books to him.'

#### 4.2.1.1 Yang's Analysis of Marked Reflexives

Yang (1983) after considering representative examples from numerous languages, suggests the following binding principle for marked reflexives.

#### (79) Marked Reflexive Binding Principle

A marked reflexive is bound in the c-domain of its c-commanding minimal SUBJECT

- (i) SUBJECT = AGR only
- (ii) AGR is parametrized
  - (a) INFL of a finite clause for Russian, Hindi, Norwegian, Gothic, Latin, etc.
  - (b) INFL of indicative clause for Icelandic, Italian, etc.
  - (c) Comp for Dutch, etc.
- (iii) [+marked] reflexive = [+subject control]

What (79) says in effect is that,

- (80) (a) There is a well-defined (albeit language specific) syntactic domain within which a marked reflexive must be bound.
- (b) A marked reflexive must be subject-controlled.<sup>13</sup>

In Russian, Hindi, Norwegian, Gothic, Latin, etc., the binding domain for the marked reflexive is the minimal finite clause that contains it. For Icelandic and Italian, this is the minimal indicative clause, and for Dutch it is the minimal S with COMP.

Yang also observes that the marked reflexive in Icelandic, (sig), behaves like an unmarked reflexive within a minimal S when it is not the subject and can choose a non-subject antecedent. In other words sig can have a non-subject antecedent only within its minimal clause.

- (81) a. Jon<sub>i</sub> skipadi Harold<sub>j</sub> [ad PRO<sub>j</sub> raka sig<sub>i/j</sub>]  
                   ordered              to            shave self  
                   'John<sub>i</sub> ordered Harold<sub>j</sub> PRO<sub>j</sub> to shave him/himself<sub>i/j</sub>.'  
 b. Jon<sub>i</sub> sendi Harold<sub>j</sub> föt a sig<sub>i/j</sub>  
                   sent              clothes for self  
                   'John<sub>i</sub> sent Harold<sub>j</sub> clothes for him/himself.'

Yang further adds that sig plays a double role as a marked and unmarked reflexive, and that Icelandic does not have an unmarked clause-bounded reflexive.

What is important for Turkish is that kendisi does behave both like a marked and unmarked reflexive although there is another form kendi which ordinarily behaves like an unmarked reflexive. Secondly, kendisi can be bound by a non-subject, as we have seen, in the marked domain, that is outside the minimal S that contains it. Therefore, (79ii) cannot be maintained for Turkish, even with the special proviso allowed for Icelandic.

As for (80a), it is not difficult to show that kendisi has no binding domain.

(82)

- a. Ali<sub>i</sub> [Ayşe kendisin-i<sub>i</sub>/j sev-sin] isti-yor.  
           self-ACC love-SUB want-CONT  
           'Ali wants Ayşe to love him/herself.'
- b. Ben Ali-ye<sub>i</sub> [pro kendisin-den<sub>i</sub>, hoşlan-ma-dığ-im-i] söyle-di-m.  
       I -DAT (I) self-ABL fond-of-NEG-PART-1SG-ACC say-PAST-1SG  
           'I told Ali that I was not fond of him.'
- c. Hasan<sub>i</sub> san-iyor [ki biz kendisini<sub>i</sub>, koru-yacağ-iz]  
       think-CONT that we himself-ACC defend-FUT-1PL  
           'Hasan<sub>i</sub> thinks that we will defend him<sub>i</sub>.'
- d. Ben Ali'-ye<sub>i</sub> [pro [sen-in kendisin-den<sub>i</sub>, hoşlan-ma-dığ-in-i]  
       I -DAT (I) you-GEN himself-ABL be-fond-of-NEG-PART-2SG-ACC  
           bil-diğ-im-i] söyle-di-m.  
       know-PART-3SG-ACC say-PAST-1SG  
           'I told Ali that I knew that you were not fond of him.'

In (82a) the embedded clause has a subjunctive verb. In (b) it is a tensed gerundive clause that contains the reflexive. In (c) it is a tensed clause with an overt complementizer, *ki*. And finally in (d) the antecedent of kendisi is an object two clauses up. This shows that kendisi is not a marked reflexive, but it is a form that has the properties of pronouns, marked reflexives and unmarked reflexives. If we consider its behavior in simpler sentences, being bound by subject or non-subject, it looks like an ordinary reflexive. In such contexts it is unlike pronouns in being bound in a minimal S. But its ability to be bound by an antecedent outside the clause makes it a pronoun. Furthermore, kendisi, like a pronoun, may choose a non-c-commanding antecedent.

(83)

- a. [Ali'nin<sub>i</sub> kari-s<sub>1</sub>] kendisin-i<sub>1</sub> üç defa aldat-mış.  
     -GEN wife-3SG himself-ACC three times cheat-DUB  
     'Ali's<sub>i</sub> wife cheated him<sub>1</sub> three times.'
- b. [Ayse'nin<sub>i</sub> arkadaşlar-i] kendisin-den<sub>i</sub> yaka silk-iyor-lar.  
     -GEN friends-3SG herself-ABL lapelle shake-CONT-3PLR  
     'Ayse's<sub>i</sub> friends detest her<sub>i</sub>.'
- c. [Alin-in<sub>i</sub> bu yap-tık-lar-i] kendisin-e<sub>i</sub> çok pahalı-ya otur-acak.  
     -GEN this do-PART-3PLR himself-DAT very dear-DAT sit-FUT  
     'These things that Ali<sub>i</sub> did will cost him<sub>i</sub> dearly.'

We will suggest that kendisi is unmarked for the feature

± Pronoun or ± Anaphor, and therefore, its selection of an antecedent is not constrained by any syntactic domain or by the grammatical functions of its antecedent.

What this shows is that kendisi cannot be classified lexically as either a pronoun or reflexive. All we know about it is that it is a non-referential form in terms of Chomsky (1981) that has to take its reference from an antecedent that binds it.

#### 4.2.2 The Reciprocal Anaphor

The reciprocal anaphor in Turkish has the base from birbir--'each other, one another'--which shows number and person agreement with its antecedent.

- (84)           birbir-imiz    'We each other'  
               birbir-iniz    'You each other'  
               birbir-leri    'They each other'

In the third person plural agreement is optional but person agreement is obligatory. We will see later that this will have a bearing on the native judgements.

Some typical examples of reciprocals follow.

- (85) a. Biz<sub>i</sub> birbir-imiz-i çok eski-den tanı-r-iz.  
we each other-1PLR-ACC very old-ABL know-AOR-1PLR  
'We<sub>i</sub> have known each other<sub>i</sub> a long tim.'
- b. Onlar<sub>i</sub> birbir-lerin-den<sub>i</sub> çok kork-ar-lar.  
they each-other-3PLR-ABL very fear-AOR-3PLR  
'They<sub>i</sub> are very scared of each other<sub>i</sub>.'
- c. Siz<sub>i</sub> birbir-iniz, için hersey-i yap-ar-sın-iz.  
you each other-2PLR for everything-ACC do-AOR-2PLR  
'You<sub>i</sub> do everything for each other<sub>i</sub>.'
- d. Ben cocuklar-a, birbir-lerin-i, göster-di-m.  
I children-DAT each-other-3PLR-ACC show-PAST-1SG  
'I showed the children<sub>i</sub> each other<sub>i</sub>.'

Kornfilt (1984) observes that the reciprocal anaphor occurs freely in the subject position of NP, which looks like an apparent violation of Principle A. Since in Turkish NP's can also contain AGR, they should define governing categories for the reciprocals they contain. And by Principle A we would expect the reciprocal to be bound in such governing categories. Some examples follow.

- (86) a. Ayse ile Hasan<sub>i</sub>, [birbir-lerin-in<sub>i</sub>, sırt-in-i] kasi-mış-lar.  
and each other-3PLR-GEN back-3SG-ACC scratch-DUB-3PLR  
'Ayse and Hasan<sub>i</sub> scratched each other's<sub>i</sub> backs.'

b. Biz-e, [birbir-imiz-in] kazağ-in-i] giydir-di.  
we-DAT each other-1PLR-GEN sweater-3SG-ACC put on-PAST

'(He) put on us, each other's, sweaters.'

c. Onlar, [birbir-ler-in-in] kiç-in-dan] ayrılmaz.  
they each other-3PLR-GEN ass-3SG-ABL PART-AOR-NEG

'They don't get away from each other's asses.'

If it is true that the governing category of the anaphor in (86) is the NP in brackets, then Principle A is violated because the anaphor is not bound within this NP. Kornfilt (1984), however, also observes the striking fact that in cases like (86) the nominal agreement on the head of the NP is always defective. Consider the following.

(87) a. Bizim kitab-imiz  
we-GEN book-1PLR

b. Siz-in ev-iniz  
you-GEN house-2PLR

c. Onlar-in saç-ları  
they-GEN hair-3PLR

(88) a. birbir-imiz-in kitab-i (\*miz)  
each other-1PLR-GEN book-3SG (-1PLR)

b. birbir-iniz-in ev-i (\*niz)  
each other-2PLR-GEN house-3SG 2PLR

c. birbir-lerin-in saç- (\*lar)-i  
each other-3PLR-GEN hair PLR GEN

The agreement on the head of an NP whose subject is a reciprocal anaphor is the invariant third person singular agreement form. Kornfilt (1984) then notes that an NP is never the governing category for its anaphor subject, since the impoverished AGR in such constructions does not provide an accessible SUBJECT for the anaphor. Thus in (86) the

governing category for the anaphor is the S, within which it is bound as expected by Principle A.

This property of the reciprocal anaphor not being governed by full AGR manifests itself in S's also. Observe the following.

(89)

- a. İkimiz<sub>i</sub> de [birbir-imiz-in<sub>i</sub>] ne mal ol-duğ-un-u  
we two also each other-1PL-GEN what quality be-PART-3SG-ACC

(\*ol-duğ-umuz-u)] bil-iyor-du-k.  
be-PART-1PLR-ACC know-CONT-PAST-1PLR

'We<sub>i</sub> both knew what each other<sub>i</sub> was like.'

- b. İkimiz<sub>i</sub> de [birbir-imiz-in<sub>i</sub>] casus ol-duğ-un-dan/\* ol-duğ-umuz-dan]  
we two also each other-1PLR spy be-PART-3SG-ABL be-PART-1PLR-ABL  
-GEN

emin-di-k.  
sure-PAST-1PLR

'We<sub>i</sub> were both sure that each other<sub>i</sub> were spies.'

- c. Onlar<sub>i</sub> [birbir-lerin-in<sub>i</sub>] ölü-düğ-ün-den / \*öl-dük-lerin-den]  
they each other-3PLR die-PART-3PLR-ABL die-PART-3PLR  
-GEN

emin-di-ler.  
sure-PAST-3PLR

'They<sub>i</sub> were sure that each other<sub>i</sub> had died.'

It can be maintained here that the embedded clause because of the impoverished AGR does not act as an accessible SUBJECT for the anaphor thus making the matrix S in each case the governing category for the anaphor. Examples can be enumerated to show that the reciprocal anaphor can appear as the subject of a gerundive construction.

(90)

- a. Biz<sub>i</sub> hiçbir zamam [birbir-imiz-in, büyük adam ol-acağ-in-a]  
we never each other-1PLR-GEN great man be-PART-3SG-DAT

inan-ma-dik.  
believe-NEG-PAST-1PLR

'We<sub>i</sub> never believed that each other<sub>i</sub> would be great men.'

- b. İkimiz<sub>i</sub> de [birbir-imiz-in, casus ol-duğ-un-a] yemin  
we two each other-1PLR-GEN spy be-PART-3SG-DAT swear  
edebil-ir-di-k.  
can do-AOR-PAST-1PLR

'We<sub>i</sub> could swear that each other<sub>i</sub> were spies.'

- c. Sanki onlar<sub>i</sub> [birbir-lerin-in, ne kalleş ol-duğ-un-u]  
as if they each other-3PLR what treacherous be-PART-3SG-ACC  
bil-mez-ler-mis gibi  
know-NEG-AOR-3PLR-DUB like

'As if they don't know how treacherous each other are.'

- d. O herifler-in hepsi<sub>i</sub> [birbir-in-in, aptal ol-duğ-un-u] san-ıyor.  
that guys-GEN all each other- idiot be-PART-3SG- think-CONT  
3SG-GEN ACC

'All those guys<sub>i</sub> think that each other<sub>i</sub> are idiots.'

- e. İkimiz<sub>i</sub> de [birbir-imiz-in, yaz-dığ-i] bütün kitaplar-ı  
we two each other-1PLR-GEN write-PART-3SG all books-ACC  
oku-du-k.  
read-PAST-1PLR

'Both of us<sub>i</sub> read all the books that each other<sub>i</sub> wrote.'

(91)

- a. İkisi<sub>i</sub> de [birbir-lerin-in<sub>i</sub>] küçük bir hata yap-ma-sın-1] both each other-3PLR-GEN small a mistake do-VN-3SG-ACC

bekli-yor.  
wait-CONT

'Both of them<sub>i</sub> are waiting for each other<sub>i</sub> to make a small mistake.'

- b. Biz<sub>i</sub> [birbir-imiz-in<sub>i</sub>] sevin-me-sin-e] tahammül we each other-1PLR-GEN rejoice-VN-3SG-DAT can

ede-me-yiz.  
stand-NEG-1PLR

'We<sub>i</sub> cannot stand each other's<sub>i</sub> rejoicing.'

- c. İkiniz<sub>i</sub> de [birbir-iniz-in<sub>i</sub>] için dua  
both of you each other-2PLR-GEN die-VN-3SG for prayer

ediyor-sunuz.  
do-CONT-2PLR

'Both of you are praying for each other to die.'

The complement clauses in (90) are of the gerundive type that contain a nominal tense marker. The ones in (91) have no tense. Kornfilt (1984) notes that the reciprocal anaphor is significantly more felicitous in the subject position of tenseless gerunds than in the same position of gerunds with tense operator. Kornfilt then suggests that the infelicity of the latter may be due to the fact that in the absence of full AGR governing the reciprocal anaphor, the INFL containing the tense operator nevertheless acts as an accessible SUBJECT to establish the gerundive S as a governing category for the anaphor. Of course whatever the effect of the tense operator in the gerundive clauses may be it can at best be a weakly accessible subject, and that for some speakers more than others. We believe that the sentences with tensed

gerundive clauses in (90) are perfectly felicitous. For us in such cases the tense operator does not seem to play a crucial role.<sup>14</sup>

If our grammaticality judgements are properly motivated then the tense operator in cases like (90) should not play any role in the determination of the governing category for an anaphor.

Therefore, all the cases we have discussed so far fall under the prediction of the Principle A of Chomsky (1981), where SUBJECT = subject or AGR.

#### 4.2.2.1 Principle A Violations

It has been observed by Kuno (1987) that the reciprocal anaphor can be bound outside its governing category as in

- (92) They<sub>i</sub> made sure [that nothing would prevent [each other's<sub>i</sub>  
pictures from being put on sale]]

The governing category for the anaphor in (92) is the that clause with an accessible SUBJECT. Kuno also observes that (92) cannot be explained away by the i-within-i condition like some apparent counter-examples to Principle A mentioned by Chomsky (1981).

Kuno then notes that the governing category based on the concept of accessible subject does not go far enough to the whole matrix S in (92). We will show that similar violations exist in Turkish and we will present an explanation for such cases.<sup>15</sup>

Observe the following:

(93)

- a. İkimiz, de [anahtar-in birbir-imiz-de, ol-duğ-un-u]  
 both the key-GEN each other-1PLR-LOC be-PART-3SG-ACC  
 san-iyor-du-k.  
 think-CONT-PAST-1PLR  
 'We both thought that the key was on each other.'
- b. Pro, [o an-da söylenen-en her söz-ün birbir-imiz-de,  
 that moment-LOC say-PASS-PART every word-GEN each other-1PLR-LOC  
 ters etki yap-acağ-in-dan] emin-di-k.  
 reverse reaction do-PART-3SG-ABL sure-PAST-1PLR  
 'We were sure that every word said at that moment would produce the  
 opposite effect on each other.'
- c. Biz, [o davranışlar-in birbir-imiz-in, hayatı-n-da] nasıl  
 we that attitudes-GEN each other-1PLR-GEN life-3SG-LOC how  
 derin yaralar aç-tığ-in-1] çok sonraları anlayabil-di-k.  
 deep scars open-3SG-ACC very later can-understand-PAST-1PLR  
 'We could understand much later what deep scars those attitudes  
 left on each other's, lives.'

In each of (93) the anaphor is bound from outside its governing category. There is no syntactic condition against selecting anahtarın 'the key' in (93a), o anda söylenen her sözün 'every word said at that moment' in (93b), and o davranışların 'those behaviors' in (93c) as accessible SUBJECTS in their respective clauses. Clearly, the embedded clauses in these sentences are governing categories (or binding domains) for the anaphors they contain. Yet the anaphors are free in these domains, giving rise to serious violations of Principle A.

Notice that similar examples are quite good in English as well:

- (94) a. They both thought that the prisoner was in each other's  
 custody.

Kuno (1987) argues that anaphors do not have well-defined binding domains. He suggests that anaphors be allowed to be coindexed freely with NP's that k-command them. (We will see shortly that even the k-command requirement is too strong.) Then a chain-of-command principle, which acts according to certain semantic and or syntactic hierarchies, will filter out over generations. We will, for our purposes here ignore the possible syntactic scale suggested by Kuno, because it concerns the syntactic role of the anaphors, which we have nothing to say about.

The semantic scale involves the semantic/discourse properties of the intended controller of the anaphor. Kuno (1987) again tentatively suggests that the strongest candidate for a controller is a definite NP, next in line is the inanimate NP, and the weakest controllers are the Indefinite Unspecific pronouns like nothing, nobody, anybody, etc. The basic idea is that an anaphor cannot skip a k-commanding NP higher in the hierarchy to choose an NP lower in the hierarchy. As Kuno points out, such hierarchies themselves are, at best, tentative; rather they are intended to show the direction of approach that can be taken in anaphor binding. We will take this "direction of approach" seriously, and show that even the k-command condition for anaphor binding can be overridden by semantic roles.

Now notice that in (93) the NP's which minimally c-command the anaphors are definite inanimate NP's, which according to Kuno (1987) are weaker controllers than the animate NP's of the matrix clauses. But notice also that in (94), the prisoner, a possible candidate for the controller of the anaphor each other, is definite and animate.

We will suggest that the thematic role of the NP which is the candidate for the controller of the anaphor is crucially important in binding of anaphors, and that semantic features + animate are relevant to the extent that they allow the assignment of certain theta-roles.  
(Like agentness requires animateness, etc.)

Let us for the moment tentatively say that a non-agent, non-experiencer NP ranks very low in the hierarchy of anaphor controllers. Later on we will suggest that such nouns have the thematic role entity, which usually disqualifies them as controllers of anaphors. (We will return to this issue later.)

#### 4.2.2.2 Counter-examples to k-Command

Here we will present evidence that the reciprocal anaphor can be bound even by non-k-commanding NP's.

(95)

- a. [[pro<sub>i</sub> biz-im<sub>i</sub> düşün-me-den söyle-dig-imiz] bu sözler]  
we-GEN think-NEG-ABL say-PART-1PLR this words

birbir-imiz-in      üzer-in-de derin etkiler yarat-tı.  
each other-1PLR-GEN on-3SG-LOC deep reaction creat-PAST

'These words we<sub>i</sub> said without thinking left on each other<sub>i</sub> serious effects.'

- b. İşte [biz-im<sub>i</sub> bu yanlış hareketler-imiz] son-un-da  
thus NP we-GEN this wrong behaviors-1PLR end-3SG-LOC

birbir-imiz-in,      mahf-in-a sebebol-du.  
each other-1PLR-GEN ruin-3SG-DAT cause-PAST

'Thus our<sub>i</sub> wrongdoings in the end caused each other's<sub>i</sub> ruin.'

This is not just a peculiarity of Turkish; the following sentences are considered perfect by numerous native speakers:

- (96)      a. How could we<sub>i</sub> make up when our<sub>i</sub> thoughtless words had left such indelible scars on each other's<sub>i</sub> memories.
- b. Our<sub>i</sub> stupid little games over the years cost each other<sub>i</sub> a small fortune not to mention the excruciating trauma that we had to live through.

Certainly this is not to say that an anaphor can be bound by an NP to its left. Instead the k-command requirement for the controller of an anaphor can be overridden by some thematic property. Examples like (95) and (96) show that the subject of a subject that k-commands the anaphor can bind it if the k-commanding subject itself does not contain a major thematic role like agent, experiencer, etc.

This is certainly a very crude first observation, and we will not pretend to have an analysis for the sentences, which illustrate how theta theory and binding theory do intersect. We will return to this issue in the next section when we consider the reflexive anaphors in Turkish.

#### 4.2.3 Kendi. The Reflexive Proper?

We saw in Section 4.2.1 some interesting properties of kendisi, particularly its ability to act both like a pronoun and an anaphor. In this section we will consider kendi, the third person reflexive which is usually considered to be a clause-bounded reflexive. And we will demonstrate that although its distribution is much more limited than that of kendisi, kendi is far from being a clause-bounded reflexive, and it does allow Principle A violations.

In Sezer (1981), we have shown that kendi could choose its antecedents from outside its minimal clause. For example,

- (97) Ali<sub>i</sub> [kimsenin kendine<sub>j</sub>, kızmayacağından] emin  
no one self-to not-be-mad at sure  
'Ali is sure that nobody will be mad at him.'

Sezer (1981) also gave potentially ambiguous sentences with kendi where the primary interpretation is the non-clause bounded one.

- (98)
- a. Ayse<sub>i</sub> [Can'in, kendin-e<sub>j</sub>] aşık ol-dug-un-u] anlı-yor, pro<sub>i</sub>  
-GEN self-DAT in love be-PART-3SG-ACC realize-CONT  
sevinc-in-den gökler-e uç-uyor-du.  
joy-3SG-ABL skies-DAT fly-CONT-PAST  
'Ayse<sub>i</sub> was realizing that Can<sub>j</sub> was in love with her<sub>i</sub>, (and) was flying in the sky in joy.'
- b. Ayse<sub>i</sub> [herkes-in, kendin-e<sub>j</sub>] saygı duy-ma-sın-ı] bekli-yor,  
everyone-GEN self-GEN respect feel-VN-3SG-ACC expect-CONT  
pro<sub>i</sub> bun-u eld-e ede-me-yince çılgın-a dön-üyor-du.  
this-ACC hand-LOC get-NEG-when mad-DAT turn-CONT-PAST  
'Ayse<sub>i</sub> was expecting everyone to respect her/himself<sub>i/j</sub> and was getting exasperated when she could not attain this.'

It was observed by Aissen (1974a) that in causative sentences kendi may be coreferent with a preceding NP which is not a subject when there is only one morphologically possible antecedent. However, when there are two morphologically possible antecedents, then the only (and for some speakers the primary) interpretation is when kendi is bound by the subject. In Sezer (1981) we showed with examples like the following that given two possible candidates for a controller of kendi the object could be chosen over a subject.

(99)

- a. [Yeni tanı-dıg-ı] kadın Ali'ye, kendin-i, unut-tur-du.  
 new meet-PART-3SG woman -DAT self-ACC forget-CAUSE-PAST

'The woman that (he) recently met made Ali<sub>i</sub> forget himself<sub>i</sub>.'

- b. Arkadaş-ı Ali'yi, kendin-den<sub>i</sub>, bez-dir-di.  
 friend-3SG A-ACC self-ABL get-tired-CAUSE-PAST

'His friend made Ali get tired of himself.'

#### 4.2.3.1 Thematic Roles

To our knowledge, it was first observed by Underhill (1976) that kendi could refer to the genitive modifier of a subject.

- (100) a. [Orhan'in<sub>i</sub> oğl-u] kend-in-den<sub>i</sub>, büyük.  
 -GEN son-3SG self-3SG-ABL big

'Orhan's<sub>i</sub> son is bigger than him<sub>i</sub>.'

- b. [Ali'nin<sub>i</sub> karı-sı] kend-in-den<sub>i</sub>, çok yaşlı  
 -GEN wife-3SG self-3SG-from much old

'Ali's<sub>i</sub> wife is much older than him<sub>i</sub>.'

- c. [Hasan'in<sub>i</sub> maaş- ı] kend-in-e<sub>i</sub>, yet-iyor.  
 -GEN salary-3SG self-3SG-DAT suffice-CONT

'Hasan's<sub>i</sub> salary suffices for him<sub>i</sub>.'

- d. [Herkes-in<sub>i</sub> çocuk-u] kend-in-e<sub>i</sub>, güzel görünür.  
 everyone-GEN child-3SG self-3SG-DAT pretty seem-AOR

'Everyone's<sub>i</sub> child seems pretty to him/her<sub>i</sub>.'

Notice that in (100) the binder of kendi neither c-commands nor k-commands it. However, k-command violations for kendi is not as free as it is for kendisi. Observe below.

- (101) a. [Ali'nin<sub>i</sub> karıs-ı] kend-in-e<sub>\*i/j</sub> bir palto al-mış.  
-GEN wife-3SG<sub>j</sub> self-3SG-DAT a coat buy-DUB  
'Ali's wife<sub>j</sub> bought \*him<sub>i</sub>/herself<sub>j</sub>, a coat.'
- b. [Ayşe'nin<sub>i</sub> bebeğ-i] kend-in-i<sub>\*i/j</sub> avut-uyor.  
-GEN doll-3SG<sub>j</sub> self-3SG-ACC entertain-CONT  
'Avşe's<sub>i</sub> doll<sub>j</sub> entertains \*her/ itself<sub>j</sub>.'
- c. [Herkes-in<sub>i</sub> çocuk-u] kend-in-den<sub>\*i/j</sub> korkuyor.  
everyone-GEN child-3SG<sub>j</sub> self-3SG-ABL fear-CONT  
'Everyone's<sub>i</sub> child<sub>j</sub> is scared of \*-him<sub>i</sub>/ himself<sub>j</sub>.'
- d. [Herkes-in<sub>i</sub> resm-i] kend-in-e göster-il-di.  
everyone-GEN picture-3SG self-3SG-DAT show-PASS-PAST  
'Everyone's picture is shown to \*him/himself.'

We will attempt to explain the difference of acceptability between (100) and (101) by the different thematic-roles assigned to the subject NP's in both cases. In (101) where the whole subject is opaque to binding (in the sense that kendi cannot pick its antecedent from inside this subject), it has a major thematic-role (agent in (101a,b), experiencer in (c), and theme in (d)). In (100), however, the subject genitive NP's have the thematic-role entity, which is typically assigned by characterizational predicates. In (100) the predicates simply give us some characterization of this entity: bigger in (a), older in (b), sufficient in (c) and seems pretty in (d).

We will express this condition informally as follows:

- (102) The controller of an anaphor must possess a major thematic-role. If the syntactically designated controller NP lacks such a thematic-role the subject of that NP can control the anaphor.

(102) is intended to be nothing more than an unrefined working hypothesis. We neither have an appropriately developed θ-theory nor a carefully screened data to pursue this line of research here. It has been interesting to observe, however, that even k-command restrictions on anaphors can be overridden in some cases.

Putting aside the k-command violations we have just considered let us return to other conditions on kendi. We have seen that kendi in object position can be bound by k-commanding subjects outside its minimal S (98 etc.). Binding of kendi by non-subjects outside its minimal S mostly yields infelicitous sentences.

(103)

- a. \* Ben Ali<sub>i</sub>'ye<sub>i</sub> [birisin-in kend-in-e<sub>i</sub>; tuzak hazırla-diğ-in-i]  
I -DAT someone-GEN self-3SG-DAT trap lay-PART-3SG-ACC

söyle-di-m.  
say-PAST-1SG

'I told Ali<sub>i</sub> that someone layed a trap for \*him/himself<sub>i</sub>.'

It seems that unlike kendisi, kendi can be bound only by subject antecedents outside its minimal S.

We will close this section with the hope that the relevance of the thematic load of possible antecedents for anaphors can somehow be incorporated into the notion of local domains within which their binding properties are determined.

NOTES TO CHAPTER FOUR

1. We are ignoring here the fact that in Government and Binding Theory (Chomsky 1986a) the syntactic domain of (1b) is not considered to be identical to that of (1c).
2. Earliest work on pronominal anaphora, Ross (1967), Langaker (1969), among others, suggested generalizations that were crucially order-dependent, that is generalizations whose predictions depended on the order of the coindexed pronoun and its ante-/postcedent. Kuno (1987) argues extensively that in English coreference cannot be determined without reference to the order of the coindexed NP's.
3. We will follow Kuno (1987) in referring to Lasnik's kommand as k-command.
4.  $\alpha$  is the minimally c-commanding subject for  $\beta$  iff  $\alpha$  is a subject c-commanding  $\beta$  and there is no subject  $\gamma$  that c-commands  $\beta$  but not  $\alpha$ .
5. At this point in the discussion we are not employing GB formalism. It will be noticed that onun\_arabasi 'his car' in (45a) is indeed a subject but coindexing onun with this NP will result in a violation of the i-within-i filter of Chomsky (1981), which disallows an NP to have the same referential index with the NP that contains it.
6. Thus we do not intend the term "host" to be a distinct syntactic concept but an informal cover term for the minimal cyclic category

containing the pronoun. This is needed because the host has to be skipped in the formulation of the relevant domain.

7. The total of nodes c-commanded by an element constitute the c-domain of that element.

8. Kornfilt (1984) suggests a distinction along similar lines in determining binding domains. See also Chomsky (1988b) for the different behavior of strong and weak INFL in attracting verbs.

9. In (57a) what is intended by c-commanding subject is the subject of S.

10. There is, however, a very serious drawback for this strategy. Consider again (3.62a), copied here as (i),

(i) \* Ahmet [on-un<sub>i</sub> kari-sin-i] Erol'a<sub>i</sub> sor-du.  
he-GEN wife-3SG-ACC -DAT ask-PAST

'Ahmet asked his wife to Erol.'

and

(ii) Ahmet Erol'a<sub>i</sub> [onun<sub>i</sub> karisini] sordu.

The first question is which of these sentences represents the basic word order and which the derived one. Suppose that (ii) derives from (i) by the leftward movement of Erol'a<sub>i</sub> leaving a trace coindexed with onun<sub>i</sub>.

(iii) Ahmet Erol'a<sub>i</sub> [onun<sub>i</sub> karisini] t<sub>i</sub> sordu.

Now the coindexing between onun and the trace will be disallowed for the same reason that it is blocked in (i), above. Conversely, if we assume that (i) is derived from (ii), there will be a trace to the left of onun karısını.

(iv) Ahmet  $t_i$  [onun<sub>i</sub> karısını] Erol'a<sub>i</sub> sordu.

This time, the coindexing with the trace will be allowed but not that of onun and Erol'a.

11. Erguvanlı-Taylan (1986) does not contain examples like (70). In fact Erguvanlı-Taylan's analysis rules out binding of a subject  $\emptyset$  with any subject.

12. Notice that the contrasts between (77) and (78) are striking. Lasnik's Precede and Command Constraint predicts both correctly. Condition C, however, will rule out both since the R-expression Ali'nin is not free in either case. Thus correctly predicting (77) but not (78).

13. In Yang's (1983) terminology, the term "marked reflexive" designates a reflexive which obeys well-defined binding conditions. "Unmarked reflexive" refers to one that does not obey such well-defined conditions.

14. We believe that the felicity of the gerundive clauses with reciprocal subjects depends on some poorly understood factors. For example we get much better results with antecedents that are clearly marked as duals: ikimiz 'we two', ikiniz 'you two,' etc., in which case the anaphor clearly means 'each other' rather than 'one another.'

15. What is intended here is not an evaluation of Condition A of Chomsky (1981) by providing counterexamples from Turkish. It will be clear that long-range reciprocals like long-range reflexives do not fully fall under the prediction of primarily clause-bounded reflexives and reciprocals.

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