RAISING IN PERSIAN

RAISING IN PERSIAN

By

Linda M. Jones, B.A.

A Thesis

Submitted to the School of Graduate Studies

in Partial Fulfilment of the Requirements

for the Degree

Master of Arts

McMaster University

February   1983

MASTER OR ARTS (1983)   McMASTER UNIVERSITY
(anthropology)   Hamilton, Ontario

TITLE: Raising in Persian

AUTHOR: Linda m. Jones, B.A. (Waterloo)

SUPERVISOR: John Colarusso

NUMBER OF PAGES: vi, 67

ABSTRACT

'Raising', a rule of transformational syntax, is considered to be a language universal. This thesis challenges its universality on the basis of evidence from Modern Persian. Whereas in English the subject of the embedded sentence may be raised to object of the matrix verb, in Persian the embedded sentence is restructured, forming a noun phrase, and the S-node is pruned. This renders centre-embedding more manageable and precludes extrapositioning.

Interviews with native speakers and my own knowledge of Persian provide the data for these conclusions.

ACKNOWLEDGEMENTS

LIST OF ABBREVIATIONS

adj	adjective
Aux	auxilary
comp	complementizer
cop	copula verb
DOM	direct object marker
inf	infinitive
INF	infinitive
N	noun
NP	noun phrase
obj	direct object
pl	plural
pres	present tense
S	sentence
SC	structure change
SD	structure description
sg	singular
SOV	subject, object, verb word ordering
subj	subjunctive
SVO	subject, verb, object word ordering
V	verb
VP	verb phrase
1Ps	first person singular
1Pp	first person plural
2Ps	second person singular
2Pp	second person plural
3Ps	third person singular
3Pp	third person plural

TABLE OF CONTENTS

1.0 Introduction

In this thesis, I demonstrate that the prevalent
description of Raising (Postal 1974; Bresnan 1979: 173;
Rosenbaum 1967: 61; Burt 1971: 177) does not apply to certain
dialects of Persian, casting doubt on its stated, or implied,
universality (Postal 1974: 386; Burt 1971: 1; Rosenbaum 1967:
1). By focusing on this one rule of grammar, I substantiate
Comrie's claim (1981) that Chomsky's method (1965) of deriv-
ing abstract universals from the analysis of only one lan-
guage should be regarded with great skepticism. That is,
it would seem necessary to examine a number of languages
in depth in order to ascertain the appropriate degree of
abstraction or the actual universal rules of syntax.

Persian is an ideal source for testing the alleged
universality of Raising since it is an important member of
the Indo-European language family both historically and
linguistically: if it should deviate from the presumed
universal pattern, one must wonder how more distantly related
or unrelated languages conform to the stated norm.

The information necessary to complete this project
was obtained in two stages. I first acquired a basic
knowledge of Persian during a six-month stay in Iran with a
monolingual family, later improving my proficiency by
maintaining contact with Iranians living in Canada. This

enabled me to carry out the second stage of my work which consisted of extensive interviews with native speakers of Persian from Tehrān and the province of Māzandarān. There are many local variations of Persian and Raising might occur in some dialects (Moyne and Carden 1974: 221), however, the fact that it does not exist in all, weakens its universality and suggests that languages, proven to have Raising, may not employ it consistently in all dialects.

In order to acheive my goals I: 1) define Raising; 2) discuss Postal's work on Raising in English (1974); 3) provide background information on Persian grammar and syntax in general that is relevant to the present endeavour; 4) examine Moyne and Carden's data on Noun Phrase and Infinitive Raising in Persian (1974), demonstrating that the evidence for Noun Phrase Raising is questionable and that their appellation 'Infinitive Raising' is a misnomer; 5) show that a restructuring of the embedded sentence causes obligatory S-Node Pruning that is not equivalent to Raising.

1.1 Defining Raising

Raising has been referred to by a variety of names and described by different methods. I outline a few such analyses here to derive a common denominator and show that the core definition remains constant.

1.1.1 Rosenbaum

Labelled bracketing and the term Pronoun Replacement
are used by Rosenbaum (1967: 61) to describe Raising.
According to his method, string (1) generates string (2) after
the application of the Pronoun Replacement Transformation.

(1) I believe [[[it]$_N$][for[John]$_{NP}$ [to have convince+en Bill]$_{VP}$]$_S$

(2) I believe [John]$_{NP}$ [for [to have convince+en Bill]$_{VP}$]$_S$

John is moved out of the embedded sentence 'for
John to have convinced Bill' replacing 'it' in the matrix
sentence 'I believe it'. In other words, the subject of
the embedding is raised to be the object of the matrix verb.

1.1.3 Bresnan

Bresnan chooses the name Subject Raising for the
transformation under discussion. This term should not be
confused with Raising to Subject, a process not described in
this thesis, which refers to the raising of the the complement
subject to the subject position in the matrix sentence.

Tree diagram (3) exemplifies Bresnan's description
of Subject Raising (1979: 169). Again we see that the
subject NP of the embedded sentence is removed from under
the domination of the embedded S-node and placed under an
NP-node that is dominated by the same node as the matrix
verb (in this case the VP-node).

(3)

```
                        S
          NP                    VP
           |              V        NP
           |              |         |
                                    S
                                         VP
          he   believes  Bacon      be the real author
```
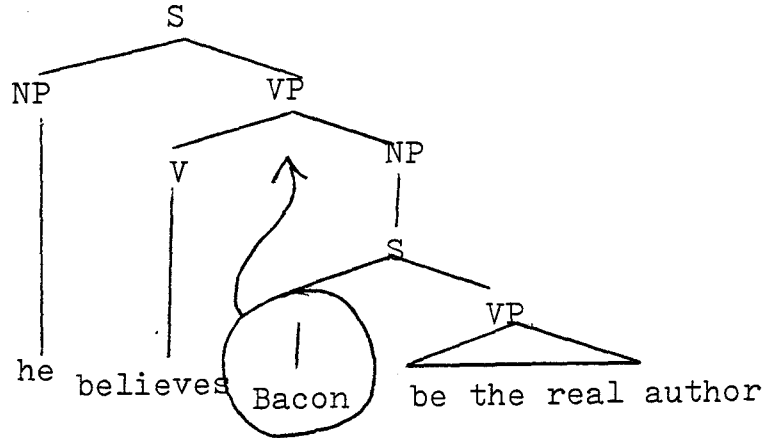
1.1.3 Burt

Two of Burt's many diagrams (1971: 186) are reproduced
here to demonstrate that the operation she refers to as
It-Replacement does not differ significantly from Bresnan's
Subject Raising and Rosenbaum's Pronoun Replacement.

(4)

```
                   S2
        NP  AUX            VP
        N    |         V      NP
        |   TNS        |       |
      John  pres       IT     S1
                 believe  NP AUX  VP
                 -END      N  TNS BE ADJP
                           |   |      |
                         John pres  cool
```

(5)

```
                 S2
       NP  AUX           VP
       N   TNS      V   NP    S1
       |    |       |    |   AUX  VP
     John  pres     |    N   |   BE ADJP
                 believe |  To      |
                 -END   John        ADJ
                        +REFL       |
                                   cool
```
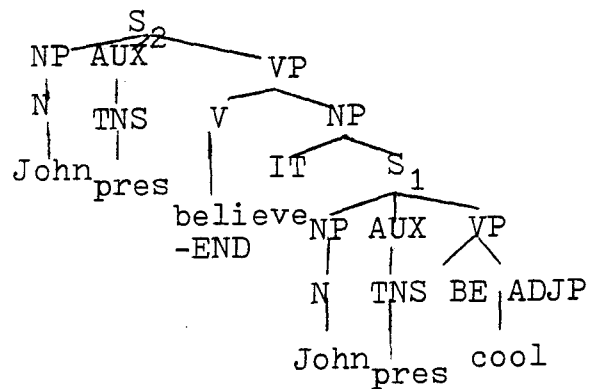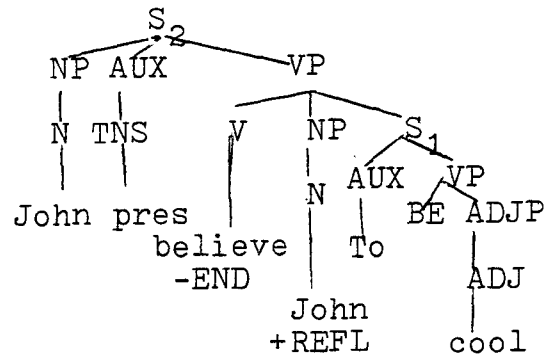
1.1.4 Postal

Postal's work is examined in greater detail in section (2). For the present, it is sufficient to point out that his basic definition does not contradict any described herein.

1.2 A Common Denominator

The common denominator of the above descriptions can be stated as: the subject of the embedded sentence, the NP directly dominated by the embedded S-node, is moved out from under that node and placed under an NP-node that is dominated by the same node that dominates the matrix verb -- variably the VP-node, the matrix S-node and an unspecified node -- making it, in effect, the direct object of the matrix sentence. Tree diagrams (6)a and b illustrate this core definition that serves for the remainder of the thesis.

(6) a)

b)

```
              V            NP₂          S
                                        |
                                        VP
```
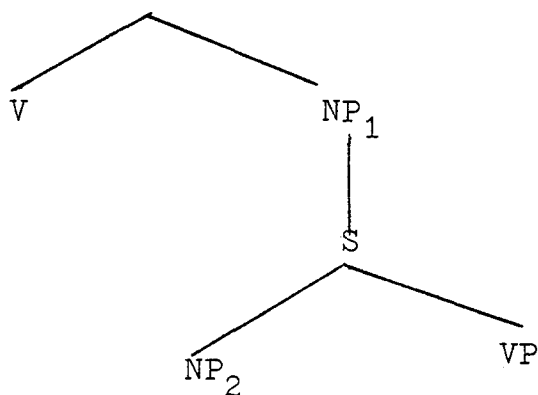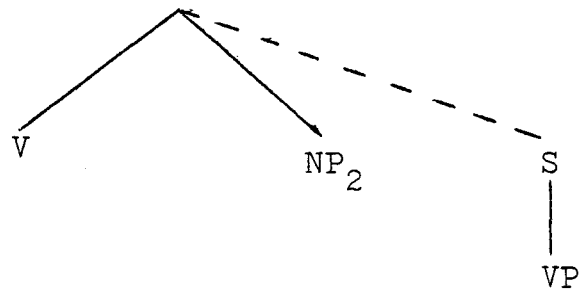
What happens to the remaining embedded sentence is
a point of debate that has not received a great deal of
attention, and, has no consequence for the outcome of my
work.

2.0 Raising in English

Following the generally accepted description of

Raising, outlined in the introduction, Postal's mammoth text

On Raising: One Rule of English Grammar and Its Theoretical

Implications (1974) represents the most thorough work that

has been done on this phenomenon. I in no way attempt to

refute his analysis of the English data, but his statements

that "Raising is not, in fact, a particular element of

English grammar but is rather only the English instantiation

of an operation of universal grammar" (2), and, "some of the

apparently ad hoc limitations on the classes of derivations

generated by language-particular manifestations of the

universal rule are themselves in part a function of

universally characterizable constraints" (386).

In this section, I briefly review Postal's work to

lay the foundation for a critique of Moyne and Carden's asser-

tions concerning the presence of Raising in Modern Persian (1974),

and, my own analysis of the material.

2.1 Postal's Intention

Postal deals with sentences related to (7), his '(i)',

to demonstrate that "English sentences like (i) have surface

structures in which Melvin is an object of the main verb,

though they have underlying structures in which Melvin is a

subject of the complement being mediated by a rule of

grammar called Raising" (xiii).

$$(7) \quad (i) \quad \text{Max} \begin{Bmatrix} \text{believed} \\ \text{proved} \\ \text{found} \end{Bmatrix} \text{Melvin to be immortal.}$$

2.2 Postal's Tree Diagrams

Postal's diagrams show that in the underlying structure (8), 'he' is the subject of the embedded sentence 'he is a genius', dominated by the S_1-node. Raising takes the NP 'he' out of the the embedded sentence, moving it up to be dominated by the S_0-node, which also dominates the matrix verb 'believes'. 'Him' then acts as the direct object of the matrix verb (see section 2.4 below) independent of the remaining embedded sentence 'to be a genius'.

(8) a)

b)

```
                    S₀
           ┌────────┼────┬──────┐
          NP       Verb  NP     NP
           │        │     │      │
           │        │     │      S₁
           │        │     │     ╱╲
           │        │     │    ╱  ╲
           │        │     │   ╱    ╲
         Joan   believes him to be a genius
```
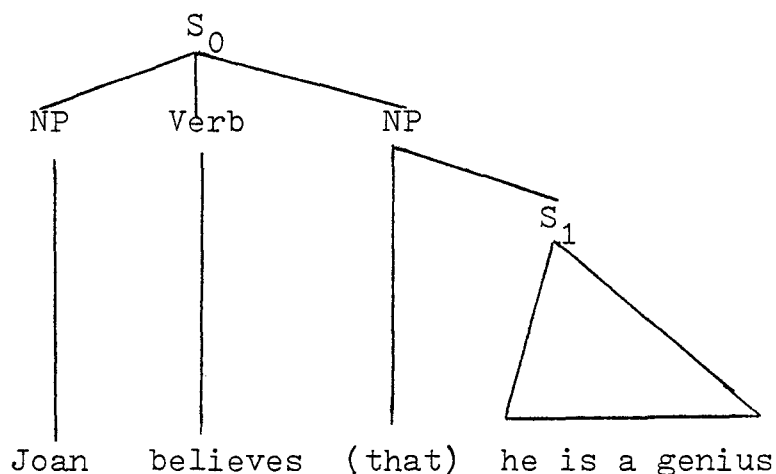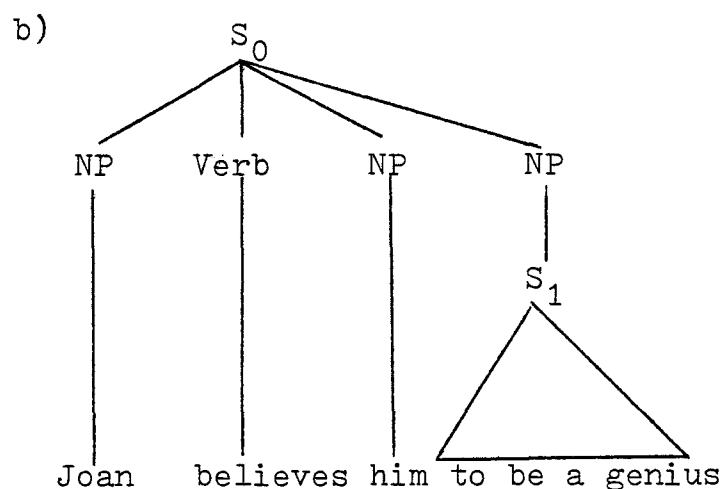
2.3 Postal's B-Verbs

Postal classifies the verbs that trigger Raising into
four groups: B-verbs, N-verbs and W-verbs that trigger
Raising to Object, and, A-verbs that trigger Raising to
Subject. His analysis is concentrated on the B-verbs to
counter Chomsky's claim that the contrasts of the infinitival
complement and the that-clause are a function of the
distinction between finite and infinite clauses, rather than
a result of the application of Raising (1971). Chomsky does
not dispute the occurrence of Raising to Subject, and he
does not analyze N-verbs or W-verbs, so Postal only
examines these three groups to support his proposal
concerning Raising for B-verb infinitival complement
derivations (Postal 1974: 176).

B-verbs can be contrasted with the other classes of
verbs, reviewed by Postal, according to the following points:
i) B-verbs exhibit two surface structures that are

equivalent in meaning, (a) that-clause and (b) infinitival complement:

(9) a) Mary believes that John is rich.

b) Mary believes John to be rich.

(10) a) I will prove that I am innocent.

b) I will prove myself to be innocent.

(11) a) Susan found that Bruce had left.

b) Susan found Bruce to have left.

ii) B-verbs are raised to the object of the matrix sentence whereas A-verbs are raised to the subject position. See examples (12) and (13) respectively.

(12) a) Mona imagined that Pat was going.

b) Mona imagined Pat to be going.

(13) a) It appears that Brian likes apple juice.

b) Brian appears to like apple juice.

iii) B-verbs do not undergo the Equi-NP Deletion transformation as W-verbs, represented by example (15), do:

(14) a) I believe myself to be angry.

b)*I believe to be angry.

(15) a) I want to draw.

b)*I want myself to draw.

iv) B-verbs do not precede 'from' and a subjectless gerund as N-verbs, (b), do:

(16) a)*I proved John from leaving.

    b) I stopped John from leaving.

2.4 Postal's Tests for Raising with B-Verbs

The tests that Postal employs to prove that Raising
has applied are interesting on two accounts: i) they can be
used, if applicable to Persian, to disprove his first
assertion that Raising is a universal; and ii) they cannot
always be applied to the Persian data, disproving his second
assertion that there are universally characterizable
constraints. I outline four of his proofs here, analyzing
them with reference to the Persian material in section 4.

2.4.1 Passivization

The different effect of passivization on English
sentences with that-clauses and infinitival complements is
easily seen in the following examples:

(17) a) Mary believed that Peter was innocent.

    b) That Peter was innocent was believed by Mary.

    c)*Peter was believed that was innocent by Mary.

(18) a) Mary believed Benjy to be smart.

    b) Benjy was believed to be smart by Mary.

    c)*Benjy to be smart was believed by Mary.

In the case of the that-clause, passivization acts upon the
whole embedded sentence 'that Peter was innocent', while in

the case of the infinitival complement, it acts only upon the
NP 'Benjy'. Since the passivization transformation can be
described as (19), one must conclude that 'that Peter was
innocent' and 'Benjy' are dominated by a single NP-node but
that 'Benjy to be smart' is not.

(19) SD: X NP V NP Y
           1 2 3 4 5

      SC: 1 4 3+be+en by#2 5

This indicates that 'Benjy' in (18) is no longer a member of
the embedding leading to Postal's conclusion that it is
raised out of its deep structure position within the
embedded sentence.

2.4.2 Reflexivization

Pronouns only undergo reflexivization when the
coreferential NP's are found within the same clause -- ie.
dominated by the same S-node with no intervening S-node.
This rule explains the grammaticality of (20)a and (21)a, and
the ungrammaticality of (20)b and (21)b, while giving support
to a Raising analysis.

(20) a) Paul knows that he is successful.

      b)*Paul knows that himself is successful.

(21) a) Paul knows himself to be successful.

      b)*Paul knows him (he) to be successful.

(21)b would be grammatical if 'Paul' and 'him' were not

coreferntial, but since coreference is intended, it is marked as ungrammatical. (21)a, however, is grammatical when 'Paul' and 'himself' are coreferents, demonstrating that they are clause mates and indicating that Raising has taken place.

2.4.3 Inclusion Constraint

This constraint does not allow clause mates to overlap in coreference, rendering (22)a-d ungrammatical when a degree of shared reference is intended.

(22) a)*I understand me.

b)*We see me.

c)*He laughed at them.

d)*They joked about him.

The application of this test to that-clauses and infinitival complements following B-verbs demonstrates that the latter behave as clause mates (hence they are raised and cannot be coreferents) and the former do not:

(23) a) I believe that we arrived late.

b)*I believe us to have arrived late.

c) We believe that I won.

d)*We believe me to have won.

(24) a) He proved that they knew the answer.

b)*He proved them to know the answer.

c) They proved that he was right.

d)*They proved him to be right.

As with (22)c and d, (24)b and d are only grammatical if there is not   overlap of reference and 'he' is not one of 'them'.

2.4.4 Reciprocal Marking

Reciprocal marking, like reflexivization, is clause internal and cannot be used in the embedded sentence to refer to a member of the matrix sentence. This explains the variation in acceptability of the following sentences, again proving that Raising is applied in the case of the infinitival complement and not in the case of the that-clause.

    (25) a) We believe each other to be intelligent.

           b) They imagined each other to sing beautifully.

    (26) a)*We believe that each other is intelligent.

           b)*They imagined that each other sings
              beautifully.

3.0 Background Information

The analysis of Raising in Persian cannot be understood without examining sentence embedding in general, word order and embedding in Persian, and the <u>ezāfe</u> construction. These three topics are reviewed here in a depth suitable to the present work.

3.1 Sentence Embedding

Sentence embedding is the process by which an S-node can be dominated by an NP-node and thus dominated by a higher S-node:

(27) a)

```
            S
          /   \
        NP      VP
       /  \
      N    S
```

b)

```
        S
       / \
     NP   VP
         /  \
        V    NP
            /  \
           N    S
```

c)

```
              S
            /   \
          /       \
        NP          VP
        |
        |
        S
```

d)

```
          S
        /   \
      NP      VP
             /  \
            V     NP
                  |
                  |
                  S
```
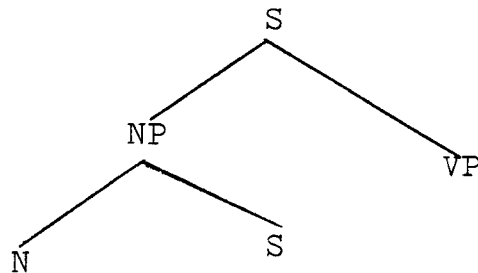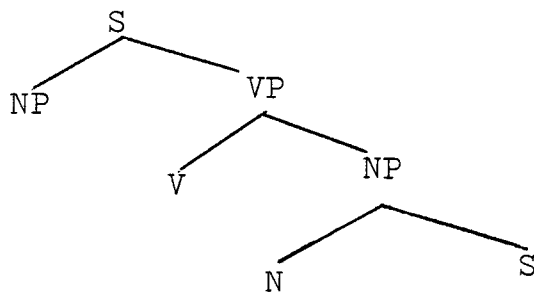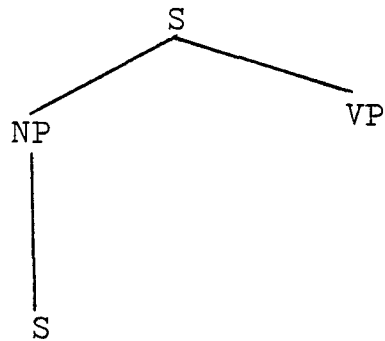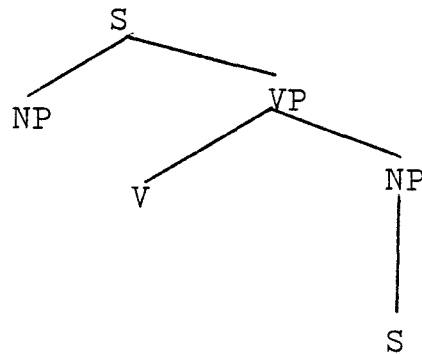
Diagrams (27)a and b represent sentences that exhibit a head noun, as in (28)a and b. Diagrams (27)c and d, on the other hand, illustrate sentences that have no head noun but a sentential subject or object exemplified respectively by (29)a and b.

(28) a) The claim that I am angry is absurd.

b) Rona holds the opinion that Michael is crazy.

(29) a) That Peggy left surprised Morris.

b) Mary heard that David was a teetotaller.

An NP-node can be dominated by an S-node which can in turn be dominated by an NP-node, making recursiveness

possible:

(30)   a) Right-embedding

S
    NP
        S
            NP
                S

b) Centre-embedding

            S
      NP
           S
              NP
                  S
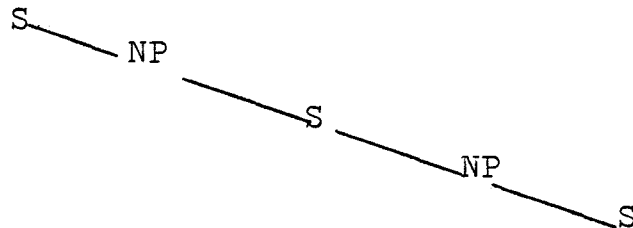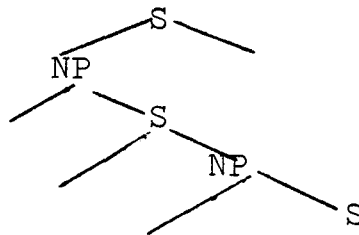
Recursion permits the formation of sentences with repeated

embedding such as (31)a and b, corresponding to the

diagrams (30)a and b.

(31)   a) I denied the claim that I knew that Peggy
said that she loved to dance.

b)*That that Sam is talkative is certain is
questionable.

While both are structurally correct, the right-embedding of

(31)a is easily comprehensible though the centre-embedding of

(31)b obscures the meaning.

Kuno (n.d.) has shown that centre-embeddings,

particularily those with the same clause boundaries (e.g.

that), generally reduce comprehensibility due to limitations

on human short-term memory. Persian examples demonstrate

corresponding acceptability:

(32) a) Right-embedding

man goftam ke kāve midānad   ke
I   said-1Ps that Kaveh know-3Ps that

ān mard   nemixāhad   beravad
that man not-want-3Ps subj-go-3Ps

= I said that Kaveh knows that that man
  doesn't want to go.

b) Centre-embedding

*In ke   in ke   ān mard nemixāhad
this that this that that man not-want-3Ps

biāyad   vaze ast be nazar miāyad
subj-come-3Ps clear is to appear   come-3Ps

= *That that that man doesn't want to come is
  clear appears.

English and Persian both use extrapositioning to
eliminate the problems of centre-embeddings, transforming the
unacceptable (31)b and (32)b to the more acceptable (33)a and
b.

(33) a) It is questionable that it is certain that
         Sam is talkative.

b) be nazar miāyad   ke vāze ast ke an
   to appear come-3Ps that clear is that that

   mard nemixāhad   biayad
   man not-want-3Ps subj-come-3Ps

= It appears that it is clear that that man
  doesn't want to come.

The problem of centre-embedding in Persian is also
alleviated through the formation of infinitival complements

which I shall discuss more fully below.

3.2 Word Order and Embedding in Persian

Persian is an SOV language with prepositions, post-nomial positioning of attributives and clause-initial conjunctions, illustrated by (34).

> (34) man be mard ke didi   tup-rā dādam
>   I to man that saw-2Ps ball-DOM gave-1Ps
>
> = I gave the ball to the man that you saw.

Ordinarily SOV languages use clause-final conjunctions, postpositions and attributives that precede the noun (Greenberg 1963: 110), avoiding the problem of centre-embedding. Persian, however, with its opposition on each point creates difficult centre-embeddings that must undergo heavy NP-shift (Colarusso 1975) or extrapositioning. In fact, prepositions, post-nomial positioning of attributives and clause-initial conjunctions are normally associated with VSO languages (Greenberg 1963: 110), the form which Persian resembles after undergoing extrapositioning, verb-person concord (suffixal) and PRO-deletion:

> (35) a) man in ke ānhā raftand rā midānam
>   I this that they went-3Pp DOM know-1Ps
>
>   = I know that they went.
>
>   b) midānam ke   raftand
>   know-1Ps that went-3Pp
>
>   = I know that they went.

The nominalization of the verb, creating an infinitival complement, is another way that Persian deals with the awkwardness of centre-embedding that is inherent in its structure. Although the application of nominalization is limited, it functions to lighten the centre-embedding as shown in the following.

(36) a) centre-embedded that-clause

man in ke sārā be tehrān raft   rā
I   this that Sarah to Tehran went-3Ps DOM

midānestam
knew-1Ps ·

= I knew that Sarah went to Tehran.

b) nominalization (infinitival complement)

man raftan-e-sārā be tehrān rā midānestam
I   to go   Sarah to Tehran DOM knew-1Ps

= (gloss) I knew of Sarah's going to Tehran.

This construction will be examined in greater detail in sections 4 and 5.

3.3 The Ezāfe

It is necessary to understand the function of the ezāfe in Persian before examining Moyne and Carden's work on Raising in that language (see section 4).

The 'ezāfe' refers to the 'e' that is used in Persian to join words of a phrase together as in (37).

(37) a) zan-e-zibā   = the (a) beautiful woman
         woman beautiful

b) bacče-hā-ye-bad   =(the) bad children
   child-pl   bad

c) nazdik-e-man
   beside   I   = beside me

d) ketāb-e-kāve   = Kaveh's book
   book   Kaveh

e) raftan-e-ali   = Ali's leaving
   to go   Ali

In traditional theory the ezāfe was considered to have two different functions: to adjoin the attribute to the head noun, exemplified by (37)c-e, or the description to the described, (37)a-b (Windfuhr 1979: 58). More recently, the case grammar approach has been used to derive one class of ezāfe constructions from an underlying relative clause containing either 'budan' (to be) or 'dāštan' (to have) -- roughly equivalent to the attributive and adjectival ezāfes of the traditional grammarians (Palmer1970). Thus, the a-sentences of (38) and (39) would be derived from the underlying b-sentences.

(38)   a) ketāb-e-kāve   = Kaveh's book
        book   Kaveh

      b) kāve ketāb dārad   = Kaveh has a book.
        Kaveh book have-3Ps

(39)   a) zan-e-zibā   = the (a) beautiful
        woman beautiful   woman

      b) zan   zibā   ast = the woman is beautiful
        woman beautiful   is

The 'dārad' (have) and the 'ast' (be) are regarded as

predictable and can consequently be omitted. While such an
argument may seem logical and coherent according to a
case theory approach to grammar, still no reason is given
for the presence of the ezāfe. If subjects and objects may
remain unmarked in the deep structure, why is it necessary
to introduce the ezāfe to mark them in the surface structure?
A functional explanation would appear more meaningful .

The traditional analysis of attribute and attributed
to, or description and described, is more in keeping with a
functional analysis of the problem. In a sense the underlying
structure is not that important in understanding the ezāfe:
it is a surface phenomenon, not present in the written
language, that serves to unite members of a noun phrase and
reduce ambiguity. In an SOV language noun phrases can occur
side by side resulting in ambiguities similar to those of (40)-
(44). The a-sentences are an imaginary unmarked form that
could be interpreted as either c or b, the actual marked
forms. The c-sentence is of course marked by the zero-morph
in contrast to the ezāfe of the b-sentence.

```
(40)  a) pesar boland ast
         boy   tall    is

      b) pesar-e-boland ast    = It is the tall boy.
         boy       tall    is

      c) pesar boland ast      = The boy is tall.
         boy   tall    is

(41)  a) doxtar mariam-rā did
         girl   Mary-DOM  saw-3Ps
```

b) doxtar-e-mariam-rā did
   girl   Mary-DOM saw-3PS

= He saw Mary's daughter.

c) doxtar mariam-rā did
    girl   Mary-DOM saw-3Ps

= The girl saw Mary.

(42) a) bačče-hā sārā vā ali hastand
         child-pl Sarah and Ali are

      b) bačče-hā-ye-sārā vā ali hastand
         child-pl   Sarah and Ali are

= They are Sarah and Ali's children.

      c) bačče-hā   sārā vā ali hastand
         child-pl Sarah and Ali   are

= The children are Sarah and Ali.

(43) a) dozd talā-rā did
         thief gold-DOM saw-3Ps

      b) dozd-e-talā-rā did
         thief gold-DOM saw-3Ps

= He saw the thief who stole the gold.

      c) dozd talā-rā did
         thief gold-DOM saw-3Ps

= The thief saw the gold.

(44) a) pezeški mādaram ast
         doctor mother-1Ps is

      b) pezeški-ye-mādaram ast
         doctor   mother-1Ps is

= He is my mother's doctor.

      c) pezeški mādaram ast
         doctor mother-1Ps is

= The doctor is my mother.

Thus, the ezāfe reduces ambiguities that would arise

in conversation, giving us a 'natural' explanation for this phenomenon.

In the case of the infinitival complement, examined in the next two sections, the nominalized verb can be considered the attributed to (i.e. the head noun), and the following noun, the attribute. The ezāfe merely joins the members of the phrase together, not being needed prior to the transformation since the components were directly dominated by an S-node with all its concomittant information, and not by an NP-node with its loss of information.

4.0 Moyne and Carden's Analysis

Moyne and Carden (1974) argue that NP Raising and
Infinitive Raising are present in Persian. I question their
assertions on the basis of their data for the former and their
analysis of the latter.

4.1 Moyne and Carden's NP Raising

Moyne and Carden concentrate their analysis of NP
Raising in Persian on sentences with the verb 'farmān dādan'
(to order). In English, this verb superficially appears to
be the same as B-verbs that trigger the Raising transformation.
However, more careful examination reveals that Equi-NP Deletion
has applied. Sentences with that-clauses and for-to complements
illustrate this fact:

> (45) a) I ordered Alice that she leave.
>
> b) I ordered Alice to leave.
>
> (46) a) I believed that Alice had arrived.
>
> b) I believed Alice to have arrived.

In the case of 'ordered', we cannot say that the presence of
'Alice' in the matrix sentence is a result of Raising since
it also exists with the that-clause. Rather, one must
explain the single reference to 'Alice' in the sentence with
the infinitival complement and this can be accomplished by

Equi-NP Deletion. It is not necessary to invoke this transformation in the examples with 'believed' since 'Alice' is referred to only once in each sentence.

I question if Raising takes place in Persian sentences with 'farmān dādan' and if Equi-NP might not be applied. They state that (47) is possible in Persian, which does suggest a Raising analysis, but my informants considered it to be archaic at best.

```
(47) ?man ali-rā  be āmadan  farmān dādam
      I   Ali-DOM to  to come  order gave-1Ps

   =  I ordered Ali to come.
```

Corresponding sentences with B-verbs, (48)-(53), are completely unacceptable after Raising has applied, casting doubt on Moyne and Carden's conclusions that are derived from such limited data.

```
(48)  a) man bāvar dāram       ke  kāve xub ast
         I   belief have-1Ps that Kaveh is good

      =  I believe that Kaveh is good.

      b)*man kāve-rā    be xub  budan bāvar  dāram
         I   Kaveh-DOM to good  to be belief have

      =  I believe Kaveh to be good.

(49)  a) sārā  tesavor mikonad  ke   ali  āmad
         Sarah imagine do-3Ps  that Ali came-3Ps

      =  Sarah imagines that Ali has arrived.

      b)*sārā ali-rā    be āmadan tesavor mikonad
         Sarah Ali-DOM to to come imagine do-3Ps

      =  Sarah imagines Ali to have arrived.
```

(50) a) bābā sābet kard ‿ ke māmān druq goft
          dad   proof did-3PS that mum lie said-3Ps

     = Dad proved that mum told a lie.

    b)*bābā māmān-rā be druq goftan sābet kard
        dad   mum-DOM to lie to say proof did-3Ps

     = Dad proved mum to have lied.

(51) a) mitrā fahmid   ke   zešt bud
          Mitra understood-3Ps that ugly was-3Ps

     = Mitra understood that she was ugly.

    b)*mitrā xodaš-rā be zešt budan fahmid
        Mitra self-s-DOM to ugly to be understood-3Ps

     = Mitra understood herself to be ugly.

(52) a) nešun dādand   ke   yāsamin asebāni bud
          show did-3Pp that Jasmine angry was-3Ps

     = They showed that Jasmine was angry.

    b)*yāsamin-rā be asebāni budan nešun dādand
        Jasmine-DOM to angry to be show did-3Pp

     = They proved Jasmine to be angry.

(53) a) midānim   ke   dāryuš māšin dārad
          know-1Pp that Darius car   have-3Ps

     = We know that Darius has a car.

    b)*dāryuš-rā   be māšin dāštan midānim
        Darius-DOM to car to have know-1Pp

     = We know Darius to have a car.

Since Moyne and Carden do not present such material one
cannot ascertain if this form of Raising would be present in
the dialect that they study. I doubt this possibility on
the basis of the strong negative reaction from my informants
who are familiar with other dialects of Persian, and, on the

lack of evidence to the contrary.

4.2 Moyne and Carden's Infinitive Raising

Moyne and Carden propose that ke-clauses and infinitive constructions are derived from the same underlying structure (54)a, producing (54)b as a result of Extrapositioning and (54)c through Infinitive Raising (1974: 217).

(54) a) man žāla āmad/-a- farmān-dādam
          I   Zhala come/comp   ordered

      b) man farmān-dādam ke žāla beyāyad
          I   ordered   that Zhala come(subj)

      = I ordered that Zhala come.

      c) man āmadan-e žāla   -rā farmān-dādam
          I come(inf) Zhala-obj   ordered

      = I ordered that Zhala come.

Their accompanying tree diagrams (218) are reproduced here to illustrate this idea.

(55) a)

b)

Extrapose
$\Longrightarrow$

Tree (b): S_0 branches to NP (man) and VP (farmān dādam), with dashed line to S_1. S_1 branches to ke, NP (zāla), and VP (beyāyad).

(56) a)

Tree: S_0 branches to NP (man) and VP. VP branches to NP and V (farmān dādam). NP branches to S_1. S_1 branches to [INF -an], NP (zāla), and VP (amad).
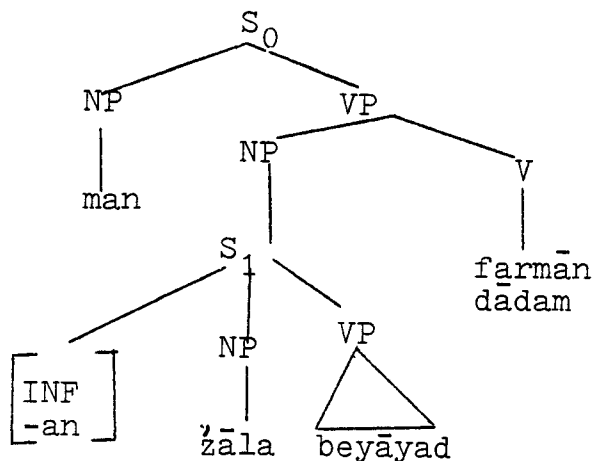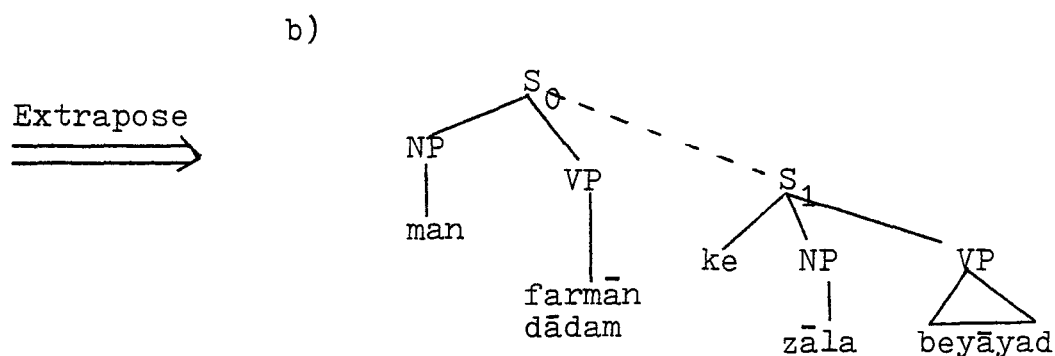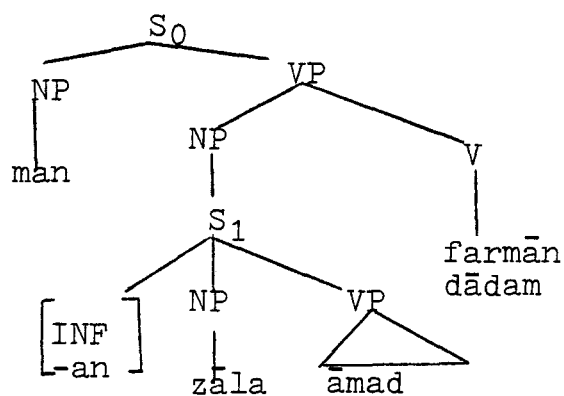
b)

Infinitive
$\Longrightarrow$
Raising
(Object Marking)

Tree: S_0 branches to NP (man) and VP. VP branches to NP and V (farmān dādam). NP branches to NP_e (āmadan-e-zāla) and -rā.
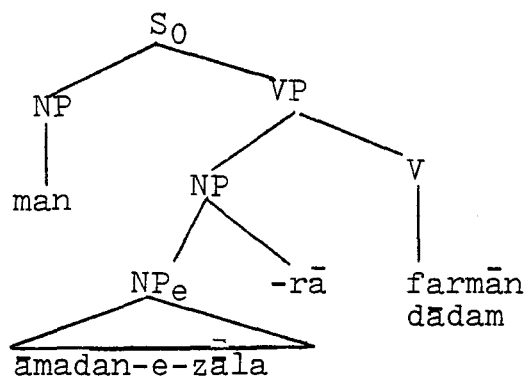
There are three serious objections to the
analysis of Infinitive Raising in Persian. First, it
overlooks another possible way of saying the above sentence
(54).

(57) a) man in   ke   zāla beyāyad   rā
         I   this that Zhala subj-come-3Ps DOM

farmān-dādam
ordered

= (gloss) I ordered that Zhala come.

This option demonstrates that without Extrapositioning or
Infinitive Raising the whole embedded sentence is governed by
the direct object NP-node that is marked with 'ra' and
diagrammed in (58).

(58)

S_0
NP   VP
   NP   V
  N S_1 DOM
man   in   zāla-āmad   ra   farmān dādam
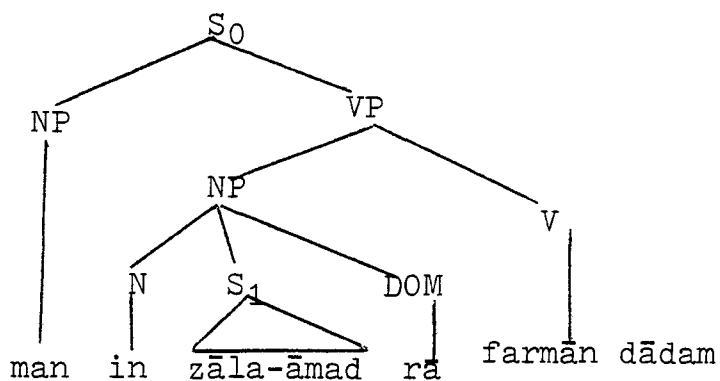
Bearing this in mind, one is more likely to predict an
underlying structure similar to the one proposed by
Akmajian and Heny for English (1975: 347):

(59)

S
NP   Aux   VP
     V   NP
       N $\bar{S}$
         Comp   S
believe   it   { for-to / that }
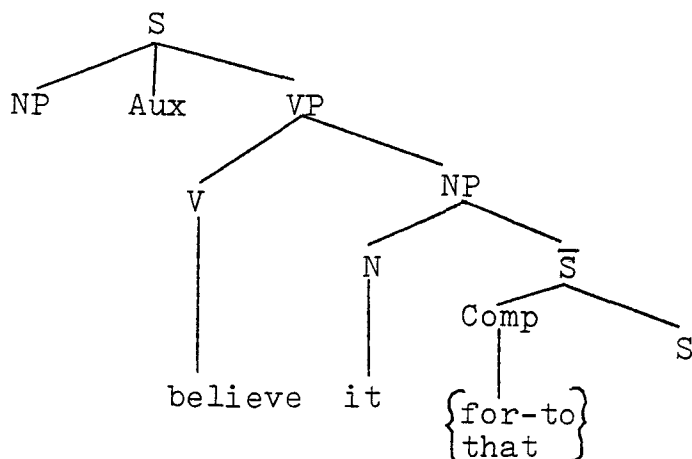
According to these authors, in order for something
to be raised, it must be removed from under the S̄-node and
placed under the N-node as shown in (60).

(60) a)

```
                    S
          ┌─────────┼─────────┐
         NP        Aux         VP
          │         │        ┌──┴────┐
          │         │        V       NP
          │         │        │      ┌─┴──┐
          │         │        │      N    S̄
          │       tense      │      │   ╱ ╲
         John     pres    believe  it Bill be a criminal
```

b)

```
                   S
          ┌────────┼────────┐
         NP       Aux        VP
          │        │      ┌───┼────┐
          │        │      V   NP   S̄
          │      tense    │   │   ╱ ╲
         John    pres  believe │  to be a criminal
                              Bill
```
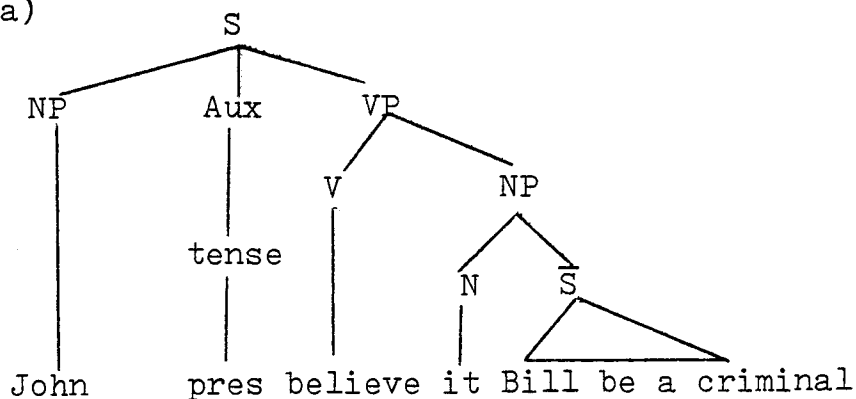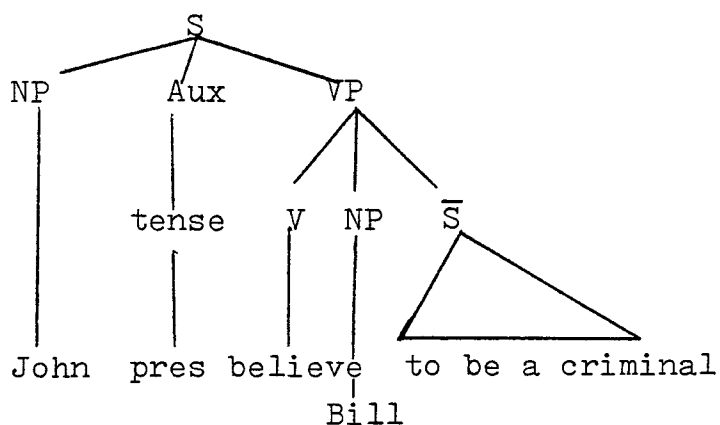
If one assumes the underlying structure for sentences
(54)b and c and (57) is similar to (59), taking into
consideration the SOV ordering of the language, one would
predict an underlying structure (61) being transformed to
(62)-(64).

(61)

Underlying
Structure

```
                        S
            ┌───────────┴───────────┐
           NP                      VP
            │            ┌──────────┴──────────┐
           man          NP                     V
                 ┌───────┼──────────┐          │
                 N       S̄         DOM     farmān
                 │    ┌──┴───┐      │       dādam
                in  Comp     S     -rā
                     │    ┌──┴──┐
                   {ke}   zāla-āmad
                   { ∅ }
```
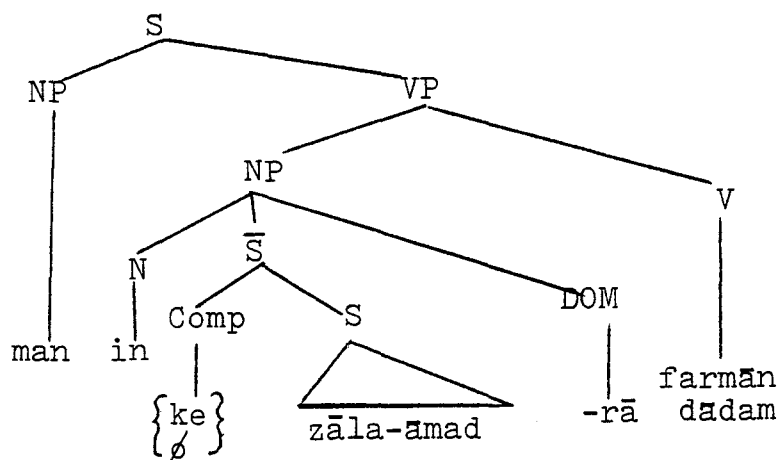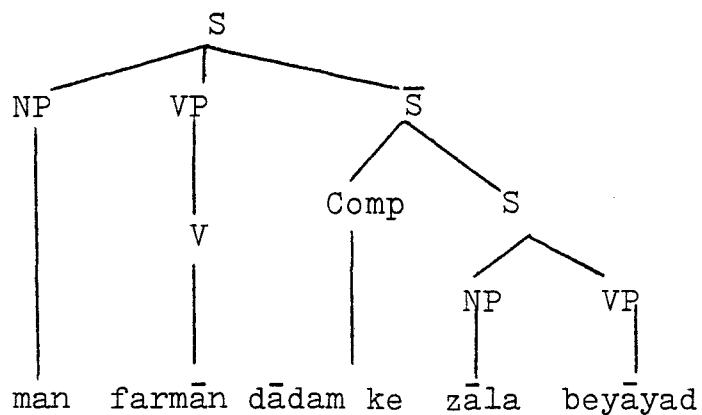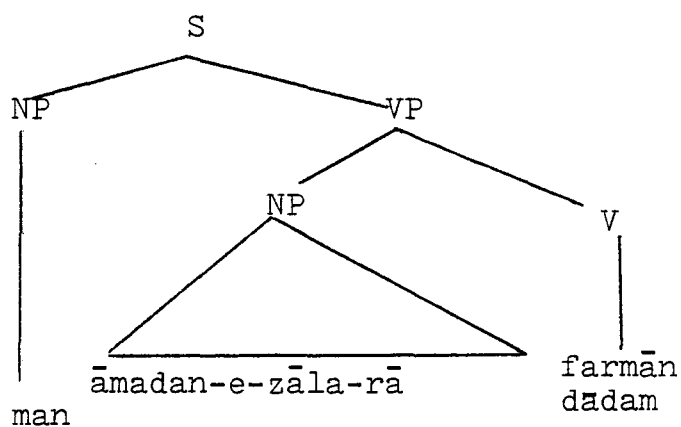
(62)

Ke-clause
Extraposed

```
                         S
            ┌────────────┼────────────┐
           NP           VP            S̄
            │            │        ┌────┴────┐
           man           V      Comp        S
                         │        │      ┌──┴──┐
                       farmān    ke     NP    VP
                       dādam            │     │
                                       zāla  beyāyad
```

man   farmān dādam   ke   zāla   beyāyad

(63)

Infinitival
Complement

```
                        S
            ┌───────────┴───────────┐
           NP                      VP
            │            ┌──────────┴──────────┐
           man          NP                     V
                   ┌─────┴─────┐               │
                 āmadan-e-zāla-rā           farmān
                                            dādam
```

man   āmadan-e-zāla-rā   farmān dādam

(64)

Ke-clause
Centre-embedded

```
                          S
                 ┌────────┴────────┐
                NP                 VP
                 │          ┌──────┴───────┐
                 │         NP               V
                 │    ┌────┼──────┐         │
                 │    N    S̄      DOM       │
                 │    │  ┌─┴─┐     │         │
                 │    │ Comp S     │         │
                 │    │  │  /\     │         │
   man    in    ke  žāla beyāyad  -rā    farmān
                                          dadam
```
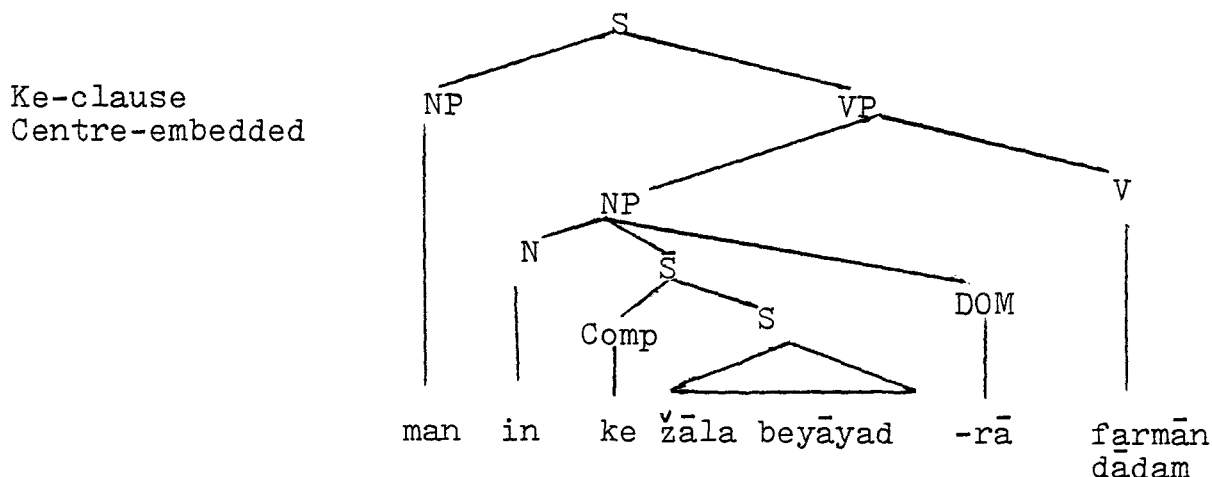
The second problem with Moyne and Carden's analysis is
that they state Infinitive Raising has taken place when their
diagram shows that **both** the VP and the NP have been removed from
under the S_1-node and placed under the newly created NP_e-node.
If one is raised, then the other must also be raised, unless
one can explain the restructuring in some other way. These
authors, however, offer no explanation for the NP_e which leads
to the third problem in their analysis: they make "no claims
about the internal structure of ezāfe constructions" (218). If
no explanation is, given for the ezāfe construction, statements
such as "a rule of Infinitive Raising nominalizes the verb
to an infinitive āmadan and attaches žāla to the resulting
NP in an ezāfe construction" are relatively meaningless.
How is 'žāla' attached to the NP and how can one determine
what has been raised?

4.3 Applying Postal's Tests

Postal's tests can be applied to see if NP Raising

or Infinitive Raising has taken place. If either of them has, one would expect the raised item to behave independently of the embedding from which it was raised, and, if it is an NP, to behave as a clause mate of the matrix NP. The tests outlined in section 2 are now applied to the Persian data provided by Moyne and Carden, and my informants.

4.3.1 Passivization

In Persian, the passive is not widely used (Windfuhr 1979: 106) and Moyne and Carden have chosen to call it the pseudo-passive (1974: 215). Passivization is often accomplished by taking a participle of the verb in the active sentence and following it with the appropriate form (tense, person, number) of the verb 'sodan' (to become). This transformation cannot be applied to all active, transitive sentences, as in English, and seems particularily unnatural when the agent is known. Sentences (65) and (66) illustrate the passive with and without an agent.

> (65) sārā be vasile-ye-mo?lem   zade šod
>   Sarah by means of   teacher   hit   became-3Ps
>
> = Sarah was hit by the teacher.
>
> (66) iraj va xosro   košte šodand
>   Iraj and Khosro   killed became-3Pp
>
> = Iraj and Khosro were killed.

Example (66) is considered quite normal, while (65), with a known agent, would seem more natural in the active

voice:

      (67)   mo?lem sārā-rā   zad
              teacher Sarah-DOM hit-3Ps

    =   The teacher hit Sarah.

Comparing sentences (65) and (66) to some B-verbs
that undergo the Passive Transformation (not always as
described above), it is evident that the whole infinitive
complement, and not the nominalized VP or the NP alone,
becomes the new matrix subject. This indicates that nothing
has been raised out of the complement and it is still
functioning as one unit.

      (68) a) kesi   bašande budan-e-bābak-rā sābet kard
              someone generous to be Bobak-DOM proof did-3Ps

          = Someone proved Bobak to be generous.

passivize   b) bašande budan-e-bābak sābet šode bud
========⟹   generous to be Bobak proof became was-3Ps

          = (literal:*Bobak to be generous was proven.)

          = (gloss) Bobak was proven to be generous.

      (69) a) kesi   motā?l budan-e-ali-rā fahmid
              soeone married to be Ali-DOM understood-3Ps

          = Someone understood Ali to be married.

passivize   b) motā?l budan-e-ali fahmide šod
========⟹   married to be Ali understood became-3Ps

          = (literal:*Ali to be married was understood.)

          = (gloss) Ali was understood to be married.

When passivization takes place, the direct object

marker is dropped, indicating that nothing remains as direct object, and, the ezāfe is maintained to link the infinitive and the following NP as one unit.

The effect of Passivization on the embedded in-ke clause exhibits completely parallel behaviour which supports the notion that the embedding is not broken up when Nominalization of the VP occurs:

(70) a) kesi   in   ke   bābak bašande ast rā
        someone this that Bobak generous is DOM

        sābet kard
        proof did-3Ps

  = Someone proved that Bobak is generous.

passivize
⟹
    b) in   ke   bābak bašande ast sābet šode bud
        this that Bobak generous is proof became was

  = That Bobak is generous was proven.

(71) a) kesi   in   ke   ali motā?l ast rā
        someone this that Ali married is DOM

        fahmid
        understood-3Ps

  = Someone understood that Ali is married.

passivize
⟹
    b) in   ke   ali motā?l ast fahmide
        this that Ali married is understood

        šod
        became-3Ps

  = That Ali is married was understood.

It is interesting to note that in both English and Persian the passivized forms are likely to undergo Extrapositioning so that sentences such as (71)b become:

(72) fahmide   šod   ke   ali motā?l ast
      understood became-3Ps that Ali married is

    = It was understood that Ali is married.

Another point that strengthens the argument that NP
Raising does not apply is that the verb of the matrix sentence
remains singular even after the passivization of an embedding
that has a plural subject. Thus, the singularity of the
verb is in agreement with the whole embedding and not just
the subject NP('s).

(73) a) kesi   xub budan-e-kāve vā bābak-rā
         someone good to be Kaveh and Bobak DOM

         sābet kard
         proof did-3Ps

       = Someone proved Kaveh and Bobak to be good.

passivize
========⟩ b) xub budan-e-kāve vā bābak sābet šode bud
             good to be Kaveh and Bobak proof became was

           = (literal:*Kaveh and Bobak to be good was
              proven.)

           = (gloss) Kaveh and Bobak were proven to be
              good.

           c)*xub budan-e-kāve vā bābak sābet šode budand
              good to be Kaveh   and Bobak proof became were

Thus, Passivization proves that Infinitive and Noun
Phrase Raising do not occur on the basis of four points: i)
the direct object marker is removed indicating that nothing
is left behind after Passivization acts upon the complement;
ii) the ezāfe is maintained to tie the members of the
complement together demonstrating again that no one part is

acting independently of the others; iii) the infinitival
complement behaves the same as the in-ke embedding, suggesting
that the restructuring during Nominalization has not affected
membership to a unit; and, iv) if the subject of the embedding
is plural, the verb of the matrix sentence remains singular
after passivization.

4.3.2 Reflexivization

Reflexivization seems to offer proof to the contrary:
the (in)ke-clause subject does not act as a clause mate of the
matrix subject although the NP of the infinitival complement
does. That is, one does not reflexivize the coreferent to
the matrix sentence subject in the embedded sentence, but one
does reflexivize a coreferent in the infinitive construction.
See examples (74) and (75).

(74) a) man bāvar dāram   ke   xiči   bad nakardam
         I belief have-1Ps that nothing bad neg-did-1Ps

     = I believe that I did nothing wrong.

   b)*man bāvar dāram   ke   xodam   xiči
        I   belief have-1PS that self-1Ps nothing

        bad nakardam
        bad neg-did-1Ps

     =*I believe that myself did nothing wrong.

(75) a) man fahmidan-e-   xodam- rā nešun dādam
         I   to understand self-1Ps DOM show gave-1Ps

     = I showed myself to understand.

   b)*man fahmidan-e-man   nešun dādam
        I   to understand I(me) show gave-1Ps

     =*I showed me to understand.

Although this would seem to support a Raising analysis, I demonstrate in section 5 that there is an explanation that accommodates the contrasting behaviour of the infinitive construction after the application of Passivization and Reflexivization.

4.3.3 Inclusion Constraint

This test also aims at establishing the matrix NP and the infinitival complement NP as clause mates. As explained in section 2, this constraint does not allow an overlap in coreference between NP's dominated by the same S-node with no intervening S-node. Yet, in Persian, the constraint simply cannot apply. Both sentences of (76) may or may not be coreferential and there is always a certain amount of ambiguity.

(76) a) sārā midānad ke   esteba mikonand
         sarah know-3Ps that error   make-3Pp

      = Sarah knows that they are wrong.

      b) sārā esteba kardan-e-ānhā-rā midānad
         Sarah error to make   they-DOM know-3Ps

      = Sarah knows them to be wrong.

In Persian, (76)a and b are both ambiguous while in English, according to Postal, (76)a is ambiguous -- i.e. it may or may not overlap in coreference -- but (76)b, strictly disallowing coreference, is not. One may argue that in Persian this constraint does not apply since in (76)b 'sārā'

and 'ānhā' are not, in fact, clause mates, the infinitival complement being dominated by an embedded S-node (as some authors suggest for the English gerundive, e.g. Akmajian and Heny 1974: 291). However, the constraint still does not apply in sentences that unquestionably contain clause mates that might overlap in reference, and ambiguity is retained:

(77)   sārā barāye ānhā xiči   naxaride
       Sarah for   them nothing not-bought-perfect-3Ps

   =   Sarah hasn't bought anything for them (the others).

 or = Sarah hasn't bought anything for them (herself included).

4.3.4   Reciprocal Marking

Reciprocal Marking, like Inclusion, cannot be applied as a constraint in Persian either. Sentences (78)a-c are all equally acceptable, even though (78)a is not acceptable in English.

(78)   a) mitrā vā sārā fahmidand   ke ān
           Mitra and Sarah understood-3Pp that that

           digare   dustāštāni bud
           other   friendly   was-3Ps

       = *Mitra and Sarah found that each other was friendly.

       = (gloss) Mitra and Sarah found each other to be friendly.

       b) mitrā vā sārā dustāštāni budan-e- ān
           Mitra and Sarah friendly   to be   that

           digare-rā   fahmidand
           other-DOM   understood-3Pp

  = Mitra and Sarah found each other to be
    friendly.

 c) mitrā vā sārā ān   digare-rā   didand
    Mitra and Sarah that other-DOM saw-3Pp

  = Mitra and Sarah saw each other.

    Although certain constraints are valid for the Persian
data, there are others that are meaningless. This leads one
to question if the constraints that appear to apply, really
indicate the same thing as they do in English. For example,
because Reflexivization occurs between the the matrix NP
and the infinitive construction NP but not between the matrix
NP and the embedded NP, does this necessarily prove anything
about clause membership in Persian? It seems that it does,
but, on the basis of the doubtful universality of rules and
constraints established in this thesis, each rule and
constraint warrants careful language-specific investigation.
The purpose of the present work is not to examine the putative
universals in question, but to point out their weaknesses.

4.4 Verb Raising in Japanese

    Verb Raising, found in some languages, is totally
unrelated to the phenomenon of Infinitive Raising as described
by Moyne and Carden. In this section I briefly examine Verb
Raising in Japanese to show that Persian does not employ this
transformation

    Kuno (1973: 334) illustrates the effect of the Verb

Raising Transformation in Japanese by the following diagrams:
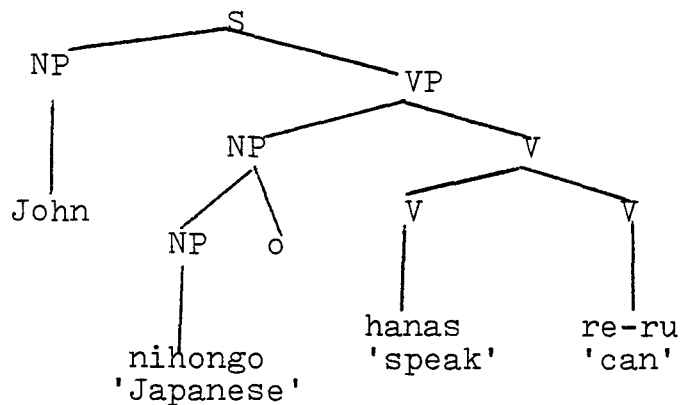
(79) a)

Before Aux
Deletion and
Verb Raising
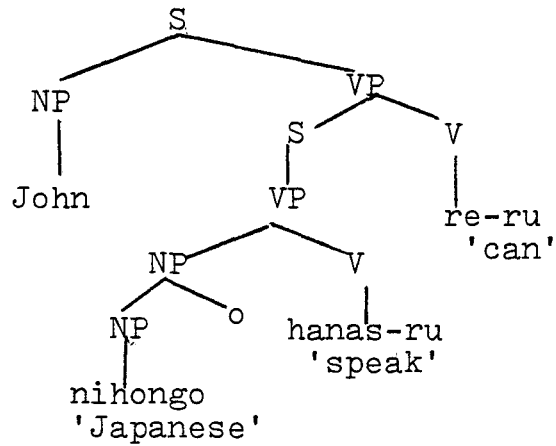
b)

After Aux
Deletion and
Verb Raising

First, Equi-NP Deletion operates to remove the embedded NP 'John'. Then the verb is raised out of the embedded sentence, its auxilary is deleted since it now shares the auxilary of the matrix verb, and the S-node is pruned.

The Infinitive Raising of Moyne and Carden cannot be a form of Verb Raising since equivalent NP's are not necessary, NP Deletion does not occur and the auxilary of the matrix verb is not shared.

5.0 Proposed Analysis

The previous section establishes that neither Noun Phrase Raising nor Infinitive Raising applies in Persian, although there is a transformation that causes the complement NP to behave as a clause mate of the matrix subject. I suggest that Nominalization of the embedded verb triggers S-Node Pruning so that a surface structure (80)b is derived from an underlying structure (80)a.

(80) a)

b)
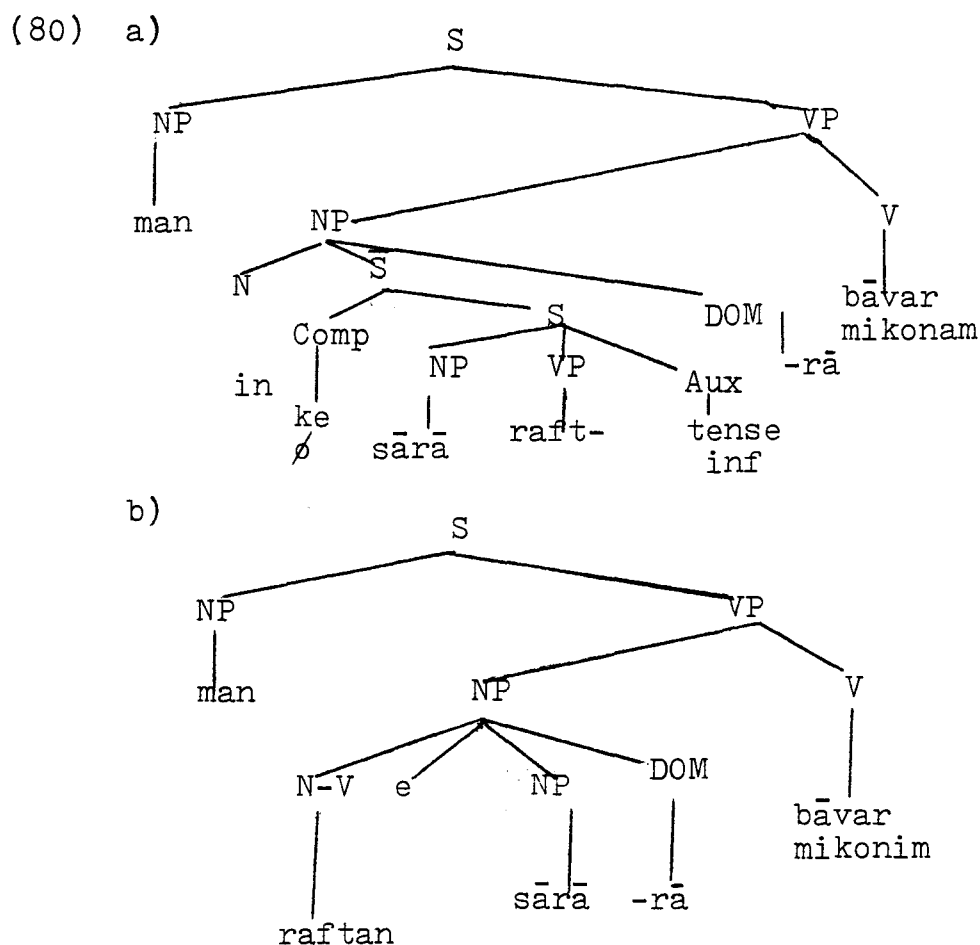
The embedded NP 'sārā', now lacks any S-node between itself and the matrix NP and acts as a clause mate though it

has not undergone Raising.

5.1 Structure Description

In order to undergo Nominalization and S-Node Pruning, the following structure description must be fulfilled:

(81) SD: X comp NP $\left\{\begin{array}{l}\text{adj-cop}\\\text{rā - V}\end{array}\right\}$(rā) Y

            1   2   3   4 5 6   7

This structure description yields a number of possibilities:

i) If neither the optional adjective nor the 'rā' of element 4 is chosen, the embedding would consist of either an intransitive verb or a transitive verb with an unspecified object. E.g.:

(82) a) in   ke   sārā raft
            this that Sarah left-3Ps

     = that Sarah left

    b) in   ke   rafi košt
           this that Raffi killed-3Ps

     = that Raffi killed

ii) If only the adjective of element 4 is chosen, the embedded verb would be the copula 'budan' (to be) and the NP of element 3 would be the subject of the embedding.

(83) in   ke   mā xub budim
        this that we good were-1Pp
   = that we were good

iii) If only the 'rā' of element 4 is chosen, the preceding NP would be the direct object of a transitive verb with an unspecified subject.

> (84) in ke ānhā-rā zad
> this that they-DOM hit-3Ps
>
> = that someone hit them

It should be noted here that it is impossible to chose both the adjective and the 'rā' of element 4 since it would produce ungrammatical sentences such as:

> (85) a)*pesar-rā xub budim
> boy-DOM good were-1Pp
>
> = *We were good the boy.
>
> b)*pesar-rā zešt didam
> boy-DOM ugly saw-1Ps
>
> = *I saw ugly the boy.

iv) The four possible structures of i-iii may be contained within a sentential subject or a sentential object, explaining the optionality of the 'rā', element 6. Thus, the examples (82)-(84) can appear as variants in (86) and (87).

> (86) Sentential Subjects
>
> a) in ke sārā raft be nazar miāyad
> this that Sarah went-3Ps to appear come-3Ps
>
> = (literal:*That Sarah left appears.)
>
> = (gloss) It appears that Sarah left.

b) in   ke   rafi   košt   vaze ast
    this that Raffi killed-3Ps clear is

=   (literal:*That Raffi killed is clear.)

=   (gloss) It is clear that Raffi killed someone.

c) in   ke   mā xub   budim   yāqin ast
    this that we good   were-1Pp sure is

=   (literal:?That we were good is sure.)

=   (gloss) It is sure that we were good.

d) in   ke   ānhā-rā   zad   mohaqqaq ast
    this that they-DOM hit-3Ps certain is

=   (literal: That someone hit them is certain.)

=   (gloss) It is certain that someone hit them.

(87) Sentential Objects

a) man in   ke   sārā   raft   rā bāvar
    I   this that Sarah went-3Ps DOM belief

    mikonam
    do-1Ps

=   I believe that Sarah left.

b) ma in   ke   rafi   košt   sābet   kardim
    we this that raffi killed-3Ps proof did-1Pp

=   We proved that Raffi killed someone.

c) šomā   in   ke   mā xub   budim   rā
    you-pl this that we good   were-1Pp DOM

    tesavor mikonid
    imagine do-2Pp

=   You imagine that we were good.

d) to   in   ke   ānhā-rā   zad   rā
    you-sg this that they-DOM hit-3Ps DOM

    fahmidi
    understood-2Ps

= You understood that someone hit them.

5.2 Structure Change

I propose that the structure (81) would change to (88) after the Nominalization of the verb and S-Node Pruning.

(88) SD: X comp NP $\begin{Bmatrix} \text{adj-cop} \\ \text{ra - V} \end{Bmatrix}$ (ra) Y

              1   2   3 4   5   6   7

      SC: 1 $\emptyset$ 4 5-e-3 6 7   delete 4 if 'ra' - V is chosen.

The condition placed on the structure change that element 4 must be deleted if 'ra'-V is chosen permits the formation of grammatical sentences like (89) and (90)b precluding the ungrammatical (90)a.

(89)   man bašande budan-e-kāve bāvar mikonam
      I   generous to be Kaveh belief do-1Ps

  = I believe Kaveh to be generous.

(90) a)*to   rā   didan-e-yāsamin rā   midāni
       you-sg DOM to see Jasmine DOM know-2Ps

    = *You know to see Jasmine you.

    b) to   didan-e-yāsamin rā midāni
       you-sg to see Jasmine DOM know-2Ps

    = You know someone to see Jasmine.

Although 'ra' (DOM) may appear in the deep structure embedding, it does not appear in the surface. This undoubtedly has a functional explanation: if the DOM of the complement remained after Nominalization of the verb and S-Node Pruning, sentences (91)a-b would be possible.

(91) a)*man koštan-e-ali-rā   rā sābet kardam
         I   to kill Ali-DOM   DOM proof did-1Ps

      = I proved the killing of Ali (Ali to be killed).

      b)*šomā zadan-e-kevān-rā   rā fahmidid
         you-pl to hit Kevan-DOM   DOM understood-2Pp

      = You understood Kevan to be hit.

The juxtapositioning of the two DOM's would be confusing and
this is probably reason enough to have a Ra-Deletion
Transformation. Yet, more essentially, the direct object of
the embedding is now an attribute, just as the subject of the
embedding is. Although at times this may create ambiguous
sentences, such as (92)a, equivalent to (92)b in English, the
fact remains that the attribute can no longer be considered
a direct object of the verb.

(92) a) zadan-e-sārā
         to hit Sarah

      = someone hit Sarah or Sarah hit someone

      b) the hitting of Sarah

      = someone hit Sarah or Sarah hit someone

Hence the sentences (86)-(87) given in the section
on structure description would change to (93)-(94) according
to the structure change (88).

(93) a)raftan-e-sārā be nazar miāyad
         to go Sarah to appear come-3Ps

      = Sara appears to leave.

    b) koštan-e-rafi vazeh ast
       to kill Raffi clear is

  = Raffi's killing is clear.

    c) xub budan-e-sārā yāqin ast
       good to be Sarah   certain is

  = Sarah is certain to be good.

    d) zadan-e-ali mohaqqaq ast
       to hit Ali sure   is

  = Someone is sure to hit Ali.

or = Ali is sure to hit (someone).

(94) a) man raftan-e-sārā-rā   bāvar mikonam
      I   to go   Sarah-DOM belief do-1Ps

  = I believe Sarah to have left.

    b) mā kostan-e-rafi-rā   sābet kardim
       we to kill Raffi-DOM prood did-1Pp

  = We proved Raffi to have killed someone.

or = We proved someone to have killed Raffi.

    c) šomā xub budan-e-sārā-rā   tesavor mikonid
       you-pl good to be Sarah-DOM imagine do-2Pp

  = You imagine Sarah to be good.

    d) to   zadan-e-ali-rā   fahmidi
       you-sg to hit Ali-DOM understood-2Ps

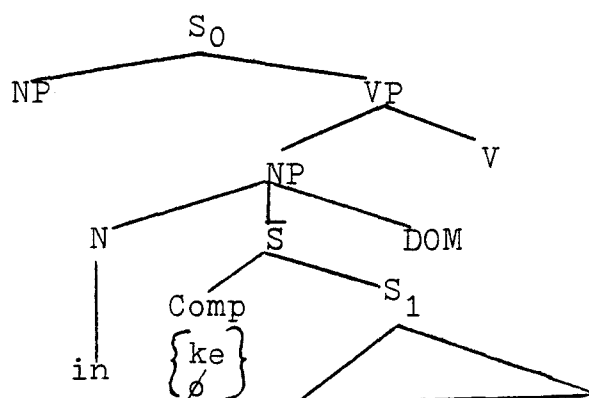 = You understood Ali to be hit.

or = You understood Ali to hit someone.
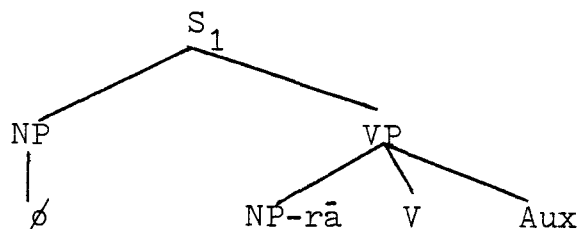

5.3 Tree Diagrams: Step by Step

In section 5.0, I state that I intend to show how (80)b is derived from (80)a. In this section, I do so with step by step tree diagrams for each transformation.

I believe the method of Akmajian and Heny (1975: 347) which provides alternate complementizers in the deep structure, each triggering different transformations, is best. This allows the deep structure the greatest degree of abstractness, without the questionable assumption that one surface structure is more natural than another. Thus, I chose (95) as the base form for my analysis, where S_1 may have the alternate structures, illustrated by (96)a-c, if Nominalization is to operate.
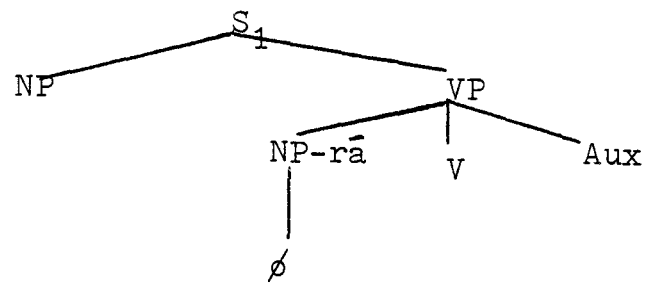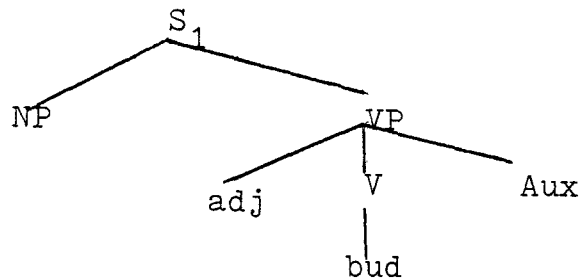
(95)

(96) a)

b)

```
                    S₁
        NP                    VP
                    NP-râ      V      Aux
                     |
                     ∅
```

c)

```
                 S₁
        NP               VP
                  adj     V      Aux
                          |
                         bud
```
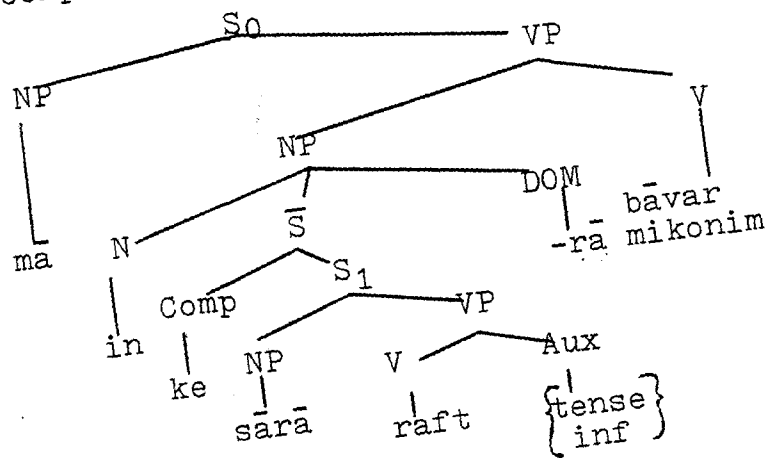
5.3.1 The Ke-Clause

If the complementizer 'ke' (that) is chosen, there are
two possible surface structures: one which results from the
application of Extrapositioning and the other which maintains
the centre-embedding. The former undergoes the following
transformations. (It should be noted that I am only dealing
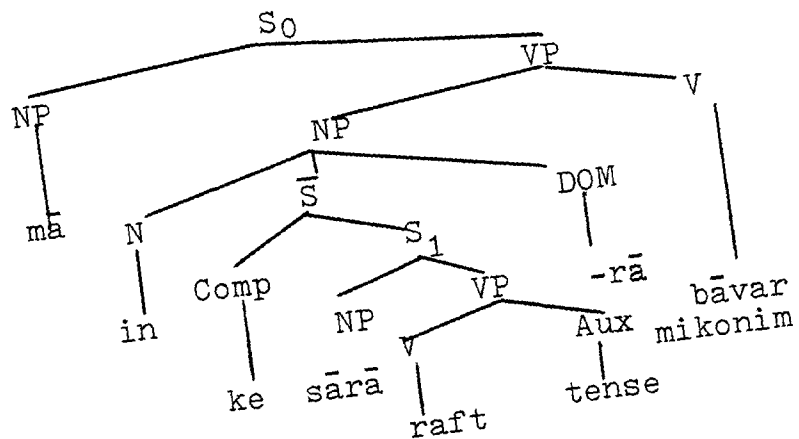with transformations on the cycle that effect the embedding.)
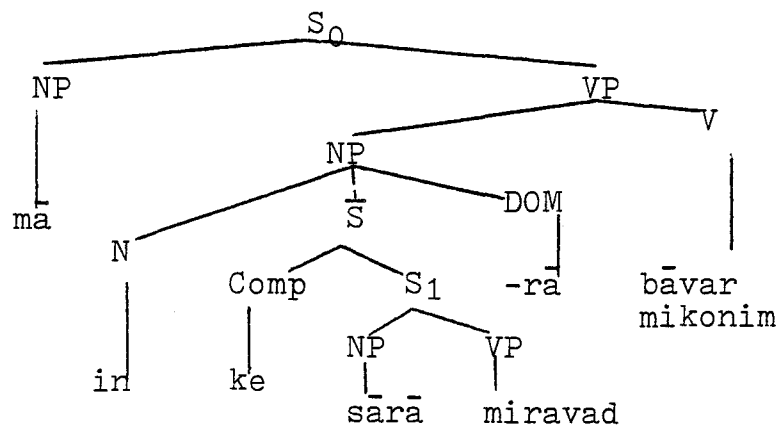
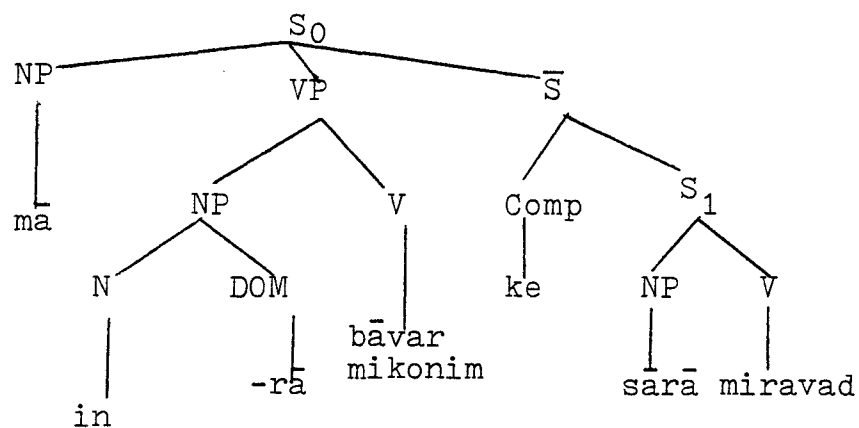(97) a) Deep Structure
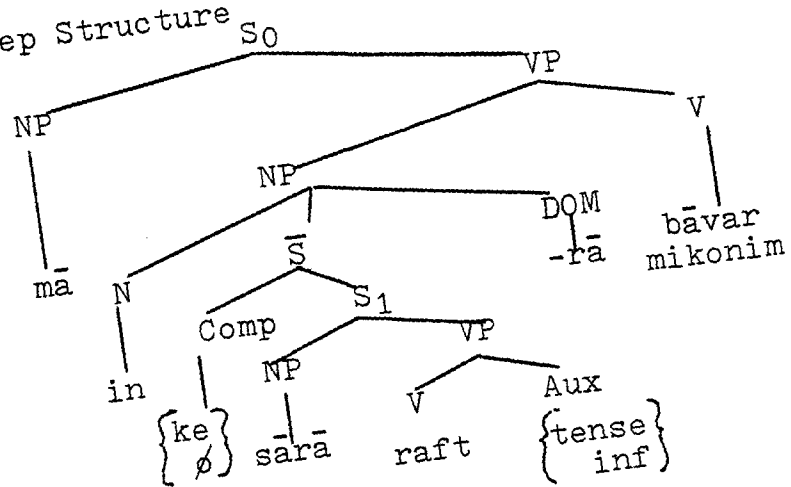
b) Chose Complementizer

c) Chose Auxilary

d) Person and Number Agreement - Affix Hopping

S_0

NP

ma

VP

V

NP

N

in

$\bar{S}$

Comp

ke

S_1

NP

sarā

VP

miravad

DOM

-rā

bāvar
mikonim

e) Extrapositioning

S_0

NP

ma

VP

NP

N

in

DOM

-rā

V

bāvar
mikonim

$\bar{S}$

Comp

ke

S_1

NP

sarā

V

miravad

f) In-Ra Deletion

S_0

NP

ma

VP

NP

V

bāvar
mikonim

$\bar{S}$

Comp

ke

S_1

NP

sarā

V
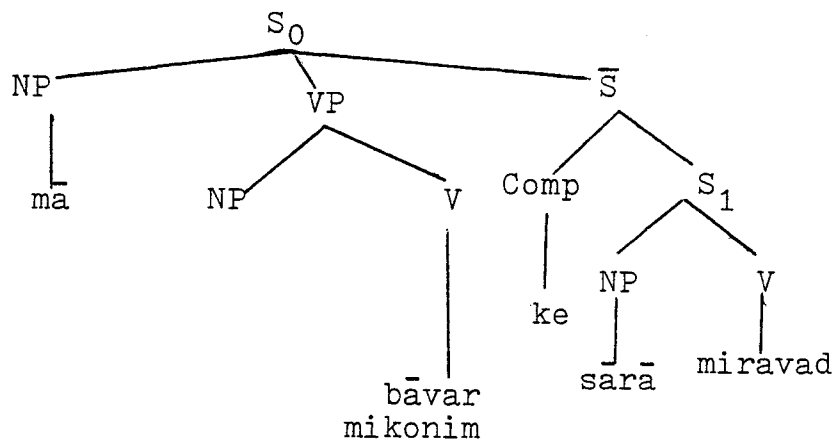
miravad

g) S-Node Pruning
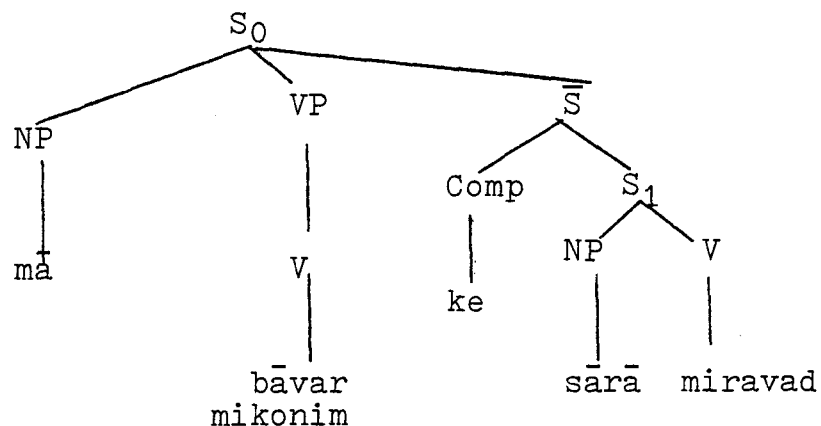
h) Surface Structure =

```
mā    bāvar mikonim    ke  sārā   miravad
we    belief do-1Pp     that Sarah go-3Ps
```

= We believe that Sarah is leaving

If the complement is not extraposed, then (97)d would represent the final step in the derivation with the surface structure:

(98) mā in ke sārā miravad rā bāvar mikonim
      we this that Sarah go-3Ps DOM belief do-1Pp

= We believe that Sarah is leaving.

5.3.2 Infinitival Complement

If the ∅ complement is chosen, it triggers the choice of the infinitive auxilary, rather than tense, and the subsequent restructuring outlined below.

(99) a) Deep Structure

b) Chose Complementizer

c) Chose Auxilary
    (In-Deletion)
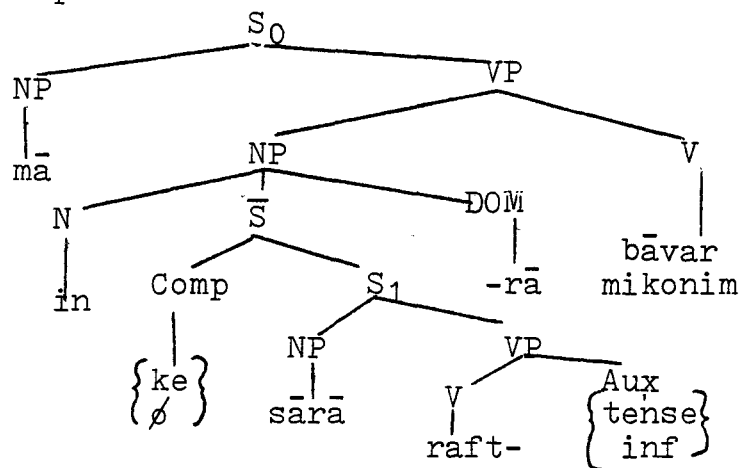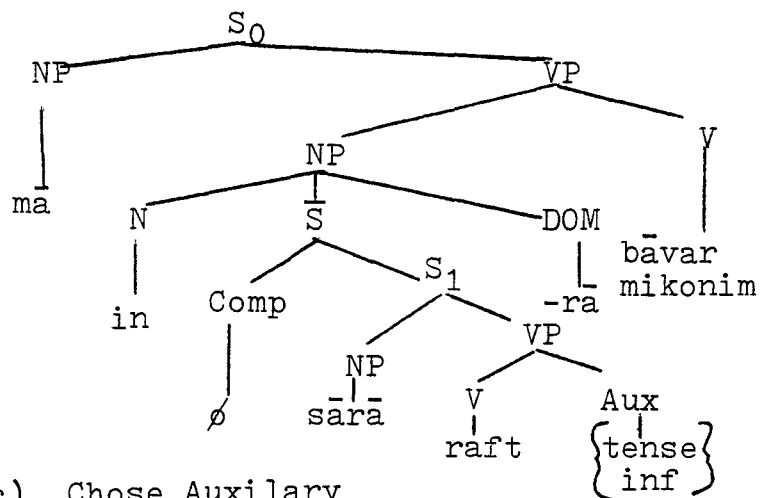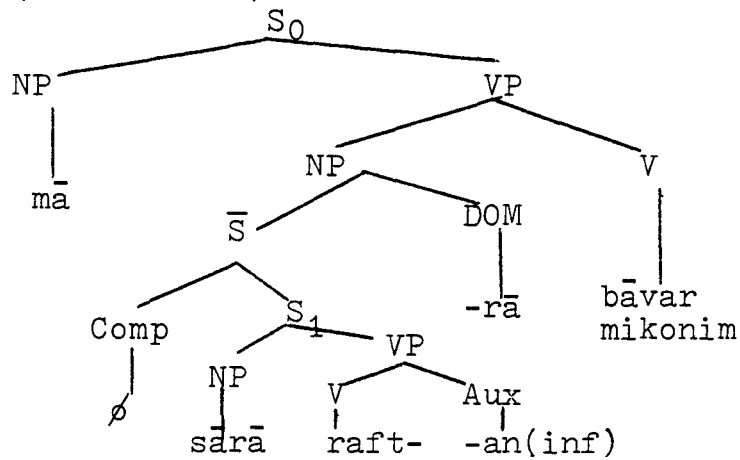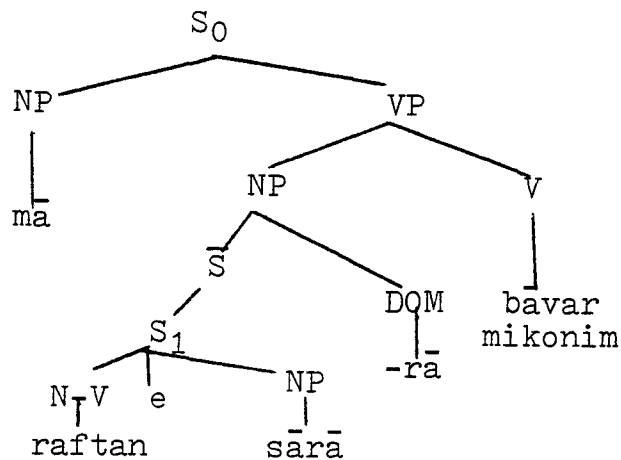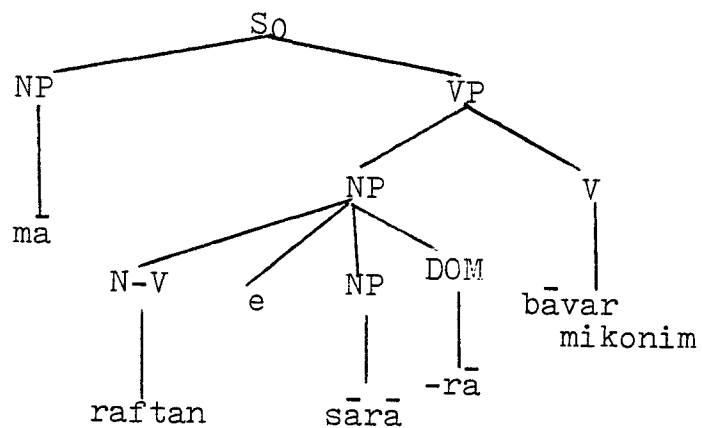
d) Scrambling Rule - Affix Hopping

```
                        S₀
                _____|_____
              NP                       VP
              |                 _____|_____
             ma              NP                  V
                        _____|_____              |
                      S̄           DOM          bavar
                   ___|___         |          mikonim
                 S₁       NP      -ra
              ___|___      |
            N V  e       sara
            | |
           raftan
```

e) S-Node Pruning

```
                        S₀
               _____|_____
             NP                   VP
             |              _____|_____
            ma            NP             V
                    _____|_____         |
                  N-V   e  NP  DOM      bavar
                   |       |    |      mikonim
                raftan   sara  -ra
```

f) Surface Structure =

ma̅ raftan-e-sa̅ra̅ ra̅ ba̅var mikonim
we to go   Sarah DOM belief do-1Pp

= We believe Sarah to be leaving.

5.4 Proving the Analysis

        In order to prove my analysis, I: i) review the
points that negate a Raising solution; and ii) demonstrate
that the S-node has been pruned.

5.4.1 Disproving Raising

         In the previous section I show that Raising, as
described by Postal and others, does not fit Moyne and Carden's
analysis in Persian and that Kuno's description of Verb
Raising in Japenese offers no parallel to Persian either. To
review, the main reasons for denying the Raising (NP or
Infinitive) analysis are:

i) The application of the Passivization Transformation
causes the deletion of the direct object marker (DOM),
indicating that nothing is left behind, at least as direct
object.

ii) The ezāfe remains to unite the members of the infinitive
construction, during Passivization, which shows that no one
part is acting independently of the other (i.e. N-VP and NP).

iii) Also during Passivization, the infinitival complement
behaves in a parallel manner to the ke-clause embedding. This
further suggests that the embedded NP has not been broken up
and the members are still joined together (i.e. dominated by
the same node).

iv) If the subject of the matrix sentence is plural, after
Nominalization of the verb and Passivization one would
expect the matrix verb to be in the plural if the NP has
been raised. This, however, is not the case.

v) The Infinitive Raising of Moyne and Carden is unlike
the proven Verb Raising of other languages such as Japanese.

vi) If the process in Persian were a simple case of Raising

there would not be the restrictions on the structure
description outlined in section 5.1. That is, in English,
an embedding that is to undergo Raising may have both a
specified object and a specified subject.

5.4.2 S-Node Pruning

In order to prove that the S-node is pruned, once
the lack of Raising is established, it is only necessary to
demonstrate that either i) the NP's of the matrix sentence
and complement behave as clause mates, or, ii) the complement
does not act like a sentence. Here, both types of proof are
put forward:

i) Extrapositioning is a transformation that takes an
embedded sentence and moves it to the right or the left of
the matrix sentence. In English and Persian the movement
is rightward. See (100) and (101).

(100) a) That you are careless worries me.

extrapose
$\Longrightarrow$ b) It worries me that you are careless.

(101) a) in   ke   sārā gom šode be nazar
           this that Sarah lost became to appear

miāyad
come-3Ps

= (literal:*That Sarah has gotten lost appears).

= (gloss) It appears that Sarah has gotten lost.

extrapose
$\Longrightarrow$ b) be nazar miayad ke   sara gum šode
           to appear come-3Ps that Sarah lost became

= It appears that Sarah has gotten lost.

Although Extrapositioning is used quite extensively in Persian and English, it is interesting to note that the Persian infinitive complement and the English gerundive, which seem similar, cannot be extraposed. This suggests that the two constructions are not governed by S-nodes. Notice the difference between the grammaticality of the following.

(102) a) That you are careless worries me.

extrapose
⟹
         b) It worries me that you are careless.

         c) Your being careless worries me.

extrapose
⟹
         d)*It worries me your being careless.

(103) a) in   ke   raftand vaze   ast
            this that went-3Pp clear is

         = That they left is clear.

extrapose
⟹
         b) vaze ast ke   raftand
            clear is that went-3Pp

         = It is clear that they left.

         c) raftan-e-ānhā vaze ast
            to go   they   clear is

         = Their leaving is clear.

extrapose
⟹
         d)*vaze ast raftan-e-ānhā
            clear is to go   they

         = *It is clear their leaving.

The embedded sentence, definitely governed by an S-node, is easily extraposed producing what is often the preferred form. The same sentence, with the infinitive or gerundive, however, may not be extraposed. I suggest that

this is because a nominalized verb is dominated by an N-node
and the requirements for a sentence are no longer met,
causing S-Node Pruning and leaving a noun phrase that may
not be extraposed.

Heavy Noun Phrase Shift which is sometimes used in
Persian (Colarusso 1975) to remove a lengthy phrase from
between the subject and the verb does not apply in this
case. This is because the infinitive constructions do not
exhibit a head-noun necessary for HNP Shift.

> (104) a) raftan-e-ali be tehrān
>   to go   Ali to   Tehran
>
>   = Ali's going to Tehran
>
>   b) xub budan-e-kāve
>   good to be Kaveh
>
>   = Kaveh's being good
>
>   c) didan-e-tup
>   to see ball
>
>   = the seeing of the ball

Longer embeddings would generally be extraposed rather than
reduced to a noun phrase and then shifted. Indeed, the latter
process would seem to be dysfunctional even if it were possible
to apply HNP Shift to NP's without head nouns.
ii) If the traditional argument that Reflexivization can only
occur between clause mates (Postal 1974: 69) is accepted, then
the NP's of the infinitive complement and the matrix sentence
are members of the same clause. This has already been shown

in section 4.3.2 so further illustration is not necessary.

iii) Just one NP is allowed in an infinitival complement.
This restriction does not meet with the normal description
of a sentence. Sentences are permitted to have both subject
and object NP's depending on the verb type (i.e. transitive
or intransitive or copula). The presence of this constraint
supports the analysis that the infinitive construction is not
dominated by an S-node but by an NP-node which acts as the
direct object of the matrix verb.

6.0 Conclusions

In this thesis, I have shown that Postal's description of Raising and the accompanying constraints do not apply to certain dialects of Persian, and, that Moyne and Carden's analysis of "Infinitive Raising" is incorrect. These points lead one to conclude that Raising is not a universal and that the existence of "universally characterizable constraints" is doubtful. In turn, these conclusions lead to implications of far greater significance to the study of transformational-generative grammar and syntax in general.

The method normally used to derive abstract universals -- the in-depth analysis of only one language, usually English (e.g. Chomsky 1965) -- is inadequate: even though the universals may be cross-checked with another, unrelated language (e.g. Postal 1974: 374, Raising in Japanese), the case examined herein shows that exceptions may still be extant. Correspondingly, if other syntactic universals were studied in relation to more languages, their universality might also be disproven. As stated in the introduction, if Persian deviates from the supposed universal pattern, then more distantly related and/or typologically distinct languages may exhibit further and extensive exceptions or 'oddities'. English has generally been the source language

for the transformational grammarians, so one can only wonder
about the universals that would have been posited if Malagasy
(both unrelated to English,and, as a VOS language,typologi-
cally distinct from it), for example, had provided the
theoretical base.

The belief that one can derive abstract universals
from a single language underlies the whole theory of
transformational syntax. It is reasoned (Chomsky 1968: 27)
that there is an innate language-learning mechanism,
programmed with specific universals, that enables children to
learn this complex system, i.e. language, with relative speed.
Yet, if the kinds of universals propsed by Chomsky and his
followers (e.g. Burt 1971; Bresnan 1979; Rosenbaum 1967;
Postal 1974) do not carry weight when tested empirically,
what can they tell us about language learning and the human
mind? They give us, at best, a statistical likelihood. By
disproving the validity of an accepted universal, other
universals must be considered questionable until further
evidence has been supplied. If universals are being reviewed,
so must the idea of universal grammar, as it is known, with
its theories of an innate language-learning mechanism.

I do not wish to claim that the concept of language
universals per se has no validity, for afterall, humans are
one species and language is a species-specific form of
communication. Rather, I find that the specificity of the
universals makes the system too rigid to incorporate the

the great variety of forms found in diverse languages. In
fact, this specificity reduces the mind to an inelastic
mechanism, pre-programmed to internalize data in a precise
way -- an idea that would fit in well with the theories of
sociobiologists and other extremsits on the side of genetics
in the nature vs nurture debate.

Syntactic universals of a more abstract sort (e.g.
there is always a point of reference, verbs are the most
inflected form of speech, centre-embedding is avoided by
various techniques) most probably exist but material must
be collected and analyzed before theoretical claims can be
substantiated. Furthermore, the presence of universals
does not necessarily imply innateness of syntactic rules
or patterns: a developmental approach may prove to be more
fruitful, or a theory that is based on semantics might be
more suitable. I am not suggesting that the study of syntax
be turned into a discipline of "shreds and patches", but that
the comparative analyses of 'exotic' languages could dramati-
cally change the present idio-centrism of the discipline. (It
should be noted here that I am concerned with only the deriva-.
tion of abstract universals and not the concrete universals
or tendencies derived by Greenberg (e.g. 1963) and others
who do indeed examine a wide range of languages).

Taking the points raised here into account, I suggest
that further work in language universals should involve:

i)   a realistic set of universals based on empirical data
from a wide range of languages;

ii)   a realistic level of abstraction (specificity);

iii)   a realization of the tentative status of a great many
of the present universal claims.

I believe that if such realism and prudence are
employed, a set of universals could be derived that would
tell us a good deal about the nature of language and the
mind.

REFERENCES CITED

Akmajian, A. and F. Heny
 1975 <u>An Introduction to the Principles of</u>
    <u>Transformational Syntax</u>. Cambridge: The MIT
    Press.

Bresnan, J. W.
 1979 <u>Theory of Complementation in English Syntax</u>.
    New York: Garland Publishing.

Burt, M. K.
 1971 <u>From Deep to Surface Structure</u>. New York:
    Harper and Row.

Chomsky, N.
 1965 <u>Aspects of the Theory of Syntax</u>. Cambridge:
    The MIT Press.

 1968 <u>Language and Mind</u>. New York: Harcourt Brace
    Jovanovich.

 1971 To appear. Cited in Postal 1974:43.

Colarusso, J.
 1975 Syntactic Rule Ordering in Modern Persian.
    <u>Wiener Linguistische Gazette</u>, 9:3-10.

Comrie, B.
 1981 <u>Language Universals and Linguistic Typology</u>.
    Oxford: Basil Blackwell.

Greenberg, J. H.
 1963 Some Universals of Grammar with Particular
    Reference to the Order of Meaningful Elements.
    In <u>Universals of Language</u>. J. H. Greenberg, ed.
    Cambridge: The MIT Press.

Kuno, S.
 n.d. Natural Explanations for Some Syntactic
    Universals. Harvard University: manuscript.

 1973 <u>The Structure of the Japanese Language</u>.
    Cambridge: The MIT Press.

Moyne, J. and G. Carden
    1974   Subject Reduplication in Persian. <u>Linguistic Inquiry</u>, 5:205-249

Palmer, A. S.
    1971   <u>The Ezāfe Construction in Modern Standard Persian</u>. University of Michigan: Dissertation.

Postal, P. M.
    1974   <u>On Raising: One Rule of English Grammar and Its Theoretical Implications</u>. Cambridge: The MIT Press.

Rosenbaum, P. S.
    1967   <u>The Grammar of English Predicate Complement Constructions</u>. Cambridge: The MIT Press.

Windfuhr, G. L.
    1979   Syntax. In <u>Persian Grammar: History and State of Its Study</u>. W. Winter, ed. New York: Mouton.