A proposal concerning relative clause formation in Halbi

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A PROPOSAL CONCERNING RELATIVE CLAUSE FORMATION IN HALBI

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0. Introduction.

Halbi is the lingua-franca of Bastar District in the interior of the state of Madhya Pradesh, India, with a recorded 300,000 native speakers, according to the 1961 Census of India. It belongs to the Indo-Aryan family of languages and is closely related to both Hindi and Marathi. Its speakers, most of whom are basically rice farmers, are composed of several cultural groups which consider themselves separate castes, though some are officially recognized by the government as tribal groups and some are not.

The data on which this paper is based were gathered from Raj Muria people in the village of Bhatpal during the period March, 1967 - March, 1969. The chief informant was Durga Ram, a teen-age boy, though many others contributed less formally. The investigators were Miss Fran Woods (Australia) and the present author (USA), members of the Summer Institute of Linguistics, working under an agreement signed with Deccan College, University of Poona, India.

This is a working paper and, as such, represents an initial attempt to describe Halbi relative clause formation. It should be recognized that further study and subsequent modifications will continue.

The transformational generative model is used here to deal with relative clause formation. The tagmemic model had been used in our analysis of Halbi prior to this summer, 1969, though none of the grammar had been formally described. Unfortunately, no native speaker of Halbi is available in the U.S., so the basis for this paper was necessarily a corpus of text materials recorded and transcribed in the village (thus the qualification "a proposal" was stated). One further qualification might be stated: the author has only begun to study and use the transformational generative model this summer, so that there are still many things to be understood and the majority of Halbi grammar to be described. As an aside, the word "understood" might be emphasized here, since as a direct correlation with seeking to apply this linguistic model to Halbi has come a greater understanding of the deeper structure of this dialect.

1. Halbi phrase structure.

The following skeletal set of phrase structure rules will generate the sentences which we are concentrating on here.

$$
\begin{aligned}
&\text{Given: } \#S\# \\
&\#S\# \rightarrow NP+PP \\
&PP \rightarrow (Location)(Time)VP+Auxiliary \\
&VP \rightarrow (Direction)(Instrumental)(Manner)(NP(NP))V \\
&\left.\begin{array}{l} Loc \\ Dir \\ Time \end{array}\right\} \rightarrow \left\{\begin{array}{l} NP \\ Adverb \end{array}\right\} \\
&Inst \rightarrow NP \\
&Man \rightarrow Adverb \\
&NP \rightarrow NP(\#S\#) \\
&NP \rightarrow \left\{\begin{array}{l} Pronoun \\ (Determiner)N \end{array}\right\} \\
&Det \rightarrow Article^{1} \\
&Aux \rightarrow (Negative)(Aspect)\left\{\begin{array}{l} Tense \\ Imperative \end{array}\right\} \\
&Asp \rightarrow \left\{\begin{array}{l} Completed \\ Progressive \\ Durative \end{array}\right\} \\
&Tns \rightarrow \left\{\begin{array}{l} Present \\ Past \\ Future \\ Indefinite \end{array}\right\}
\end{aligned}
$$

Attention is focused only on those items pertinent to the formation of relative clauses, and other items will not be developed. Features, both syntactic and inherent, are not specified.[2]

2. Deep structure of Halbi relative clauses.

Relative clauses are here considered to be embedded sentences, one of the constituents of the category NP (NP → NP($\#S\#$)) in a matrix sentence. The surface structure is derived by means of transformational rules.

The subject of the embedded sentence (ES) may be the same NP as the subject of the matrix sentence (MS), the direct object of the matrix sentence, or the indirect object of the matrix sentence. The following examples show these different relations.

----

[1] The category 'determiner' is expanded in this manner here to allow for simple statement of relative clause formation phenomena. The focus is not on the determiner itself, so its expansion will not be specified further.

[2] Postpositions were not included in the PS rules but will be inserted later in the grammar. This hypothesis has been formulated since Halbi postpositions are predictable in terms of content.

2.1 ES subject and MS subject

<u>i   lAge   kaw kArto kawra   ni ay[3]</u>
this place-in caw doing crow   Neg it is
There is no cawing crow here.


```
                              #S#
                 NP_____/   \
               /      \   #S#
            NP         NP        PP              PP
           /  \       /  \      /  \            /    \
          D    N     D    N   VP    Aux        /      \
          |    |     |    |   /|     |         /        \
         Art   N    Art   N  / |    Tns       /          \
          |    |     |    | /  |     |       /            \
          #   hun  kawra # hun kawra kaw kAr Indef#i lAg as Neg Pres#
             that  crow    that crow caw do      this place be
```
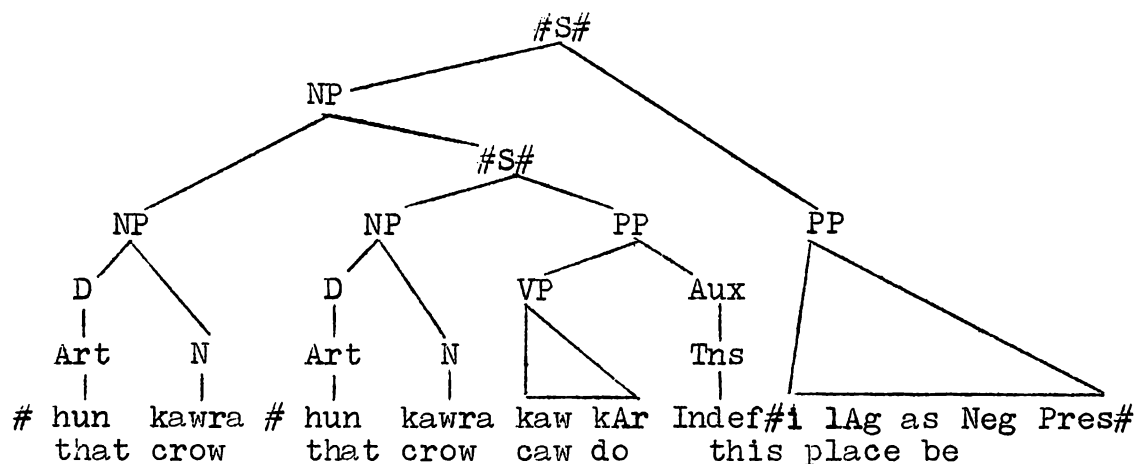
2.2 ES subject and MS indirect object

<u>gelo log mAn kꞋ tel deuat</u>
went people (OM) oil they(will)give[5]
They will give oil to the people who went.


```
                          #S#
               NP_____/  \
              /                 PP
             /                   VP
            /       NP_____/  /|\
           /       /    #S#      / | \
          /      NP    NP    PP  NP  Aux
         /      /  \  /  \  /  \  |   |
        /      D    N D   N VP Aux N  Tns
        |      |    | |   | |   |  |   |
      #Pro    Art   N Art N V  Tns V  Indef#
      3pl      |    | |   | |   |  |
             hun  log hun log ja Past# tel de
             that  mAn that mAn go        oil give
                  people   people
```
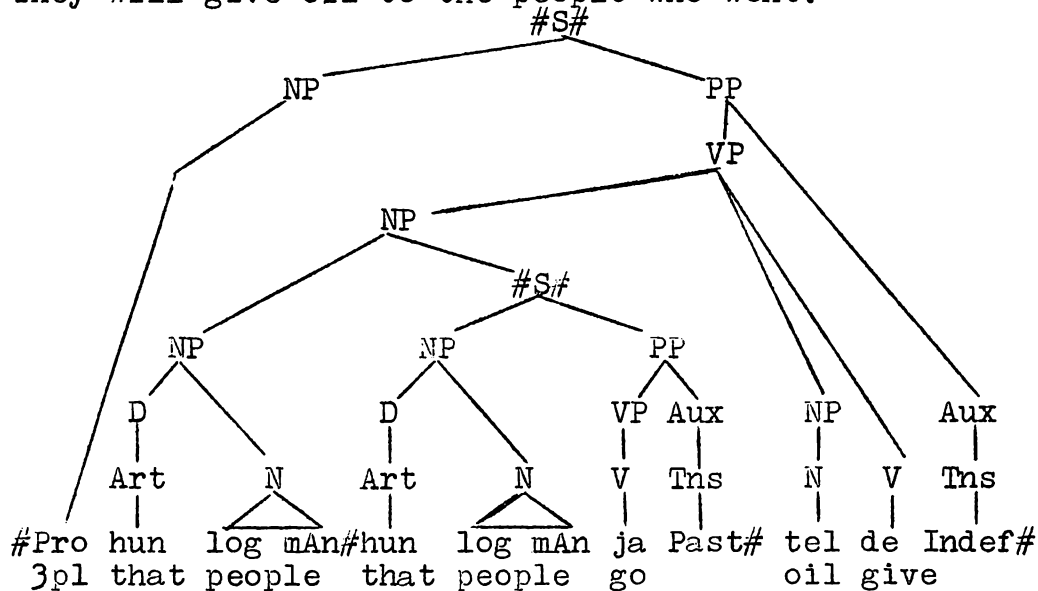
2.3 ES subject and MS direct object

<u>phuTli   gar anlo[4]</u>
cracked egg he brought - He brought the cracked egg.

---

[3]All surface structures are underlined. The symbol 'A'
represents /ə/.

[4]The symbol 'T' represents /ṭ/.

[5](OM) represents 'object marker' postposition.

(syntax tree diagram)

```
                          #S#
                   NP            PP
                          VP
                    NP
                           #S#
              NP        NP      PP
              D         D       VP   Aux          Aux
              Art  N    Art  N  V    Tns      V   Tns
          #  Pro hun gar #hun gar phuT Past # an Past #
             3sg that egg  that egg crack      bring
```

In addition, there are other combinations of
NP-NP relationships. A few are listed here as examples.

2.4 ES object and MS object

khato pani anlo
eating water he brought - He brought some drinking water.
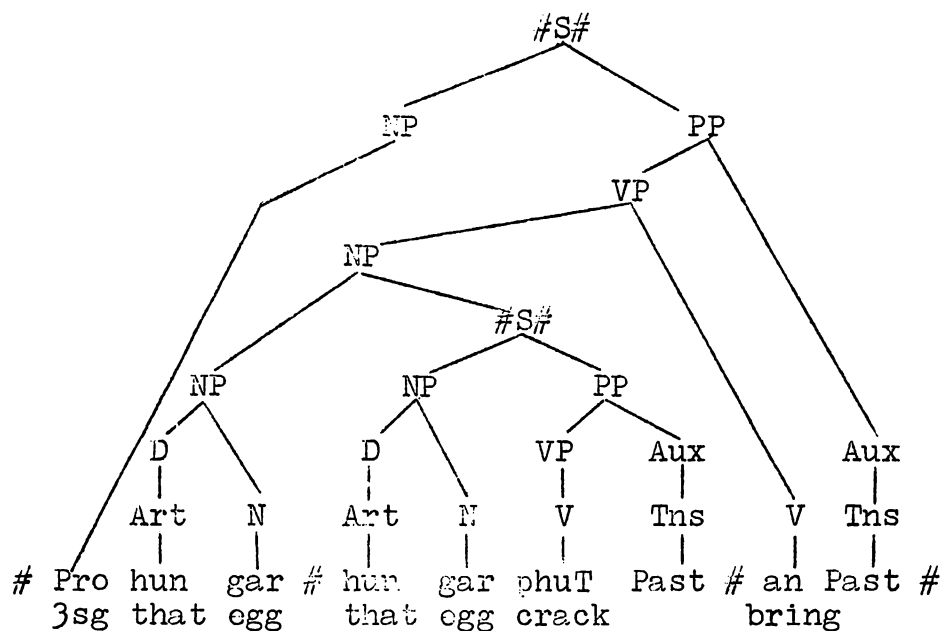
(syntax tree diagram)

```
                          #S#
                   NT            PP
                    NP              VP
                           #S#
                                PP
                             VP
                    NP        NP
              D          NP   D       V   Aux      V    Aux
              Art  N     N    Art  N                    Tns
                                     Tns
          #Pro hun pani #log mAn hun pani kha Indef #an Past#
            3sg that water people that water eat       bring
```
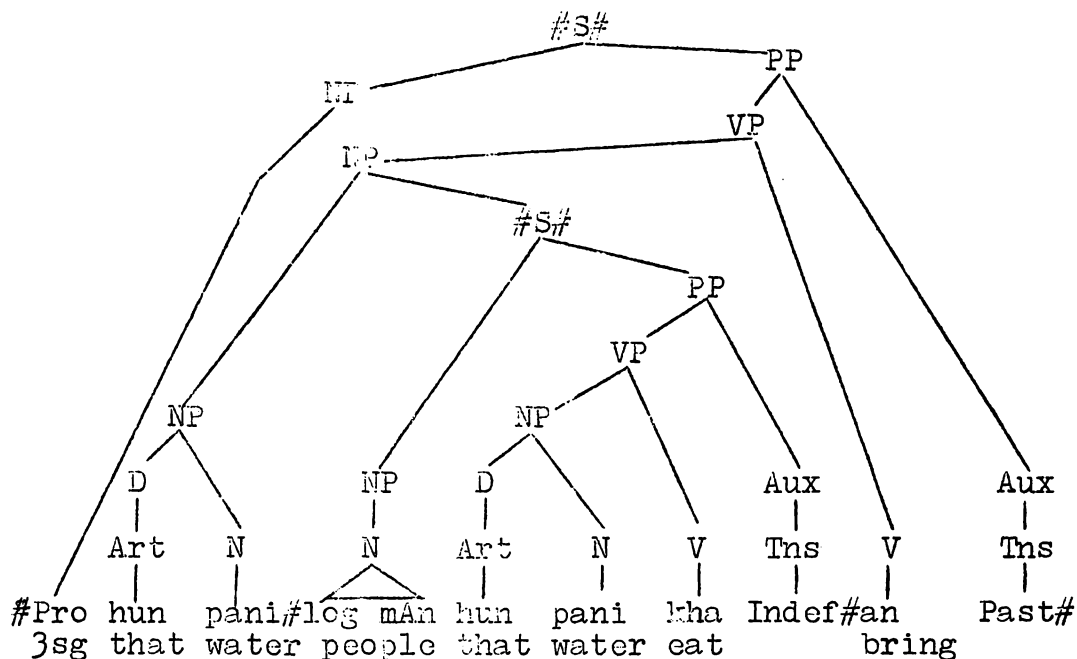
2.5 ES Instrumental and MS subject

mAco piuto kAsla huta geli
my drinking pot where it went
My drinking vessel went (in) there.
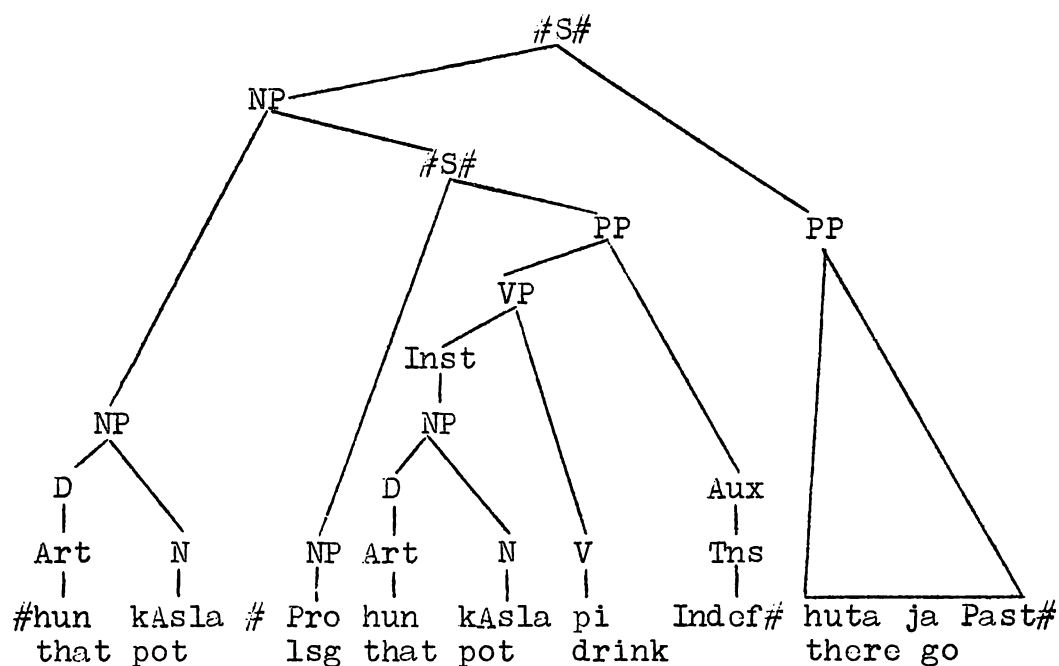
2.6 ES instrumental and MS object

cegto   biti anlo
climbing thing he brought - He brought the ladder.

2.7 ES locational and MS object

mAke souto   biti dia
me   sleeping thing give - Give me something to sleep on.

```
                                    #S#
                    NP                        PP
                              VP
                    NP      NP
                                  #S#
                                        PP
                                    Loc
                                        NP
               NP              NP   D      N    VP   Aux        V   Aux
               D              N    N       Art  so   Tns            Imp#
               Art       N                                    de
```

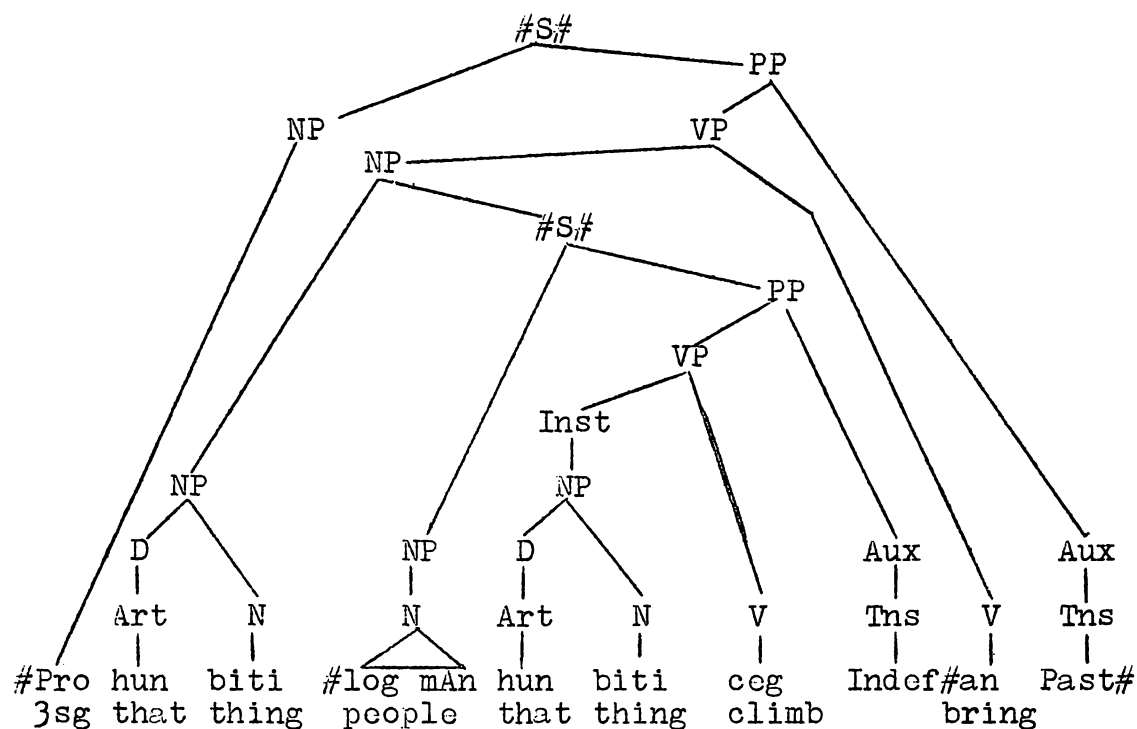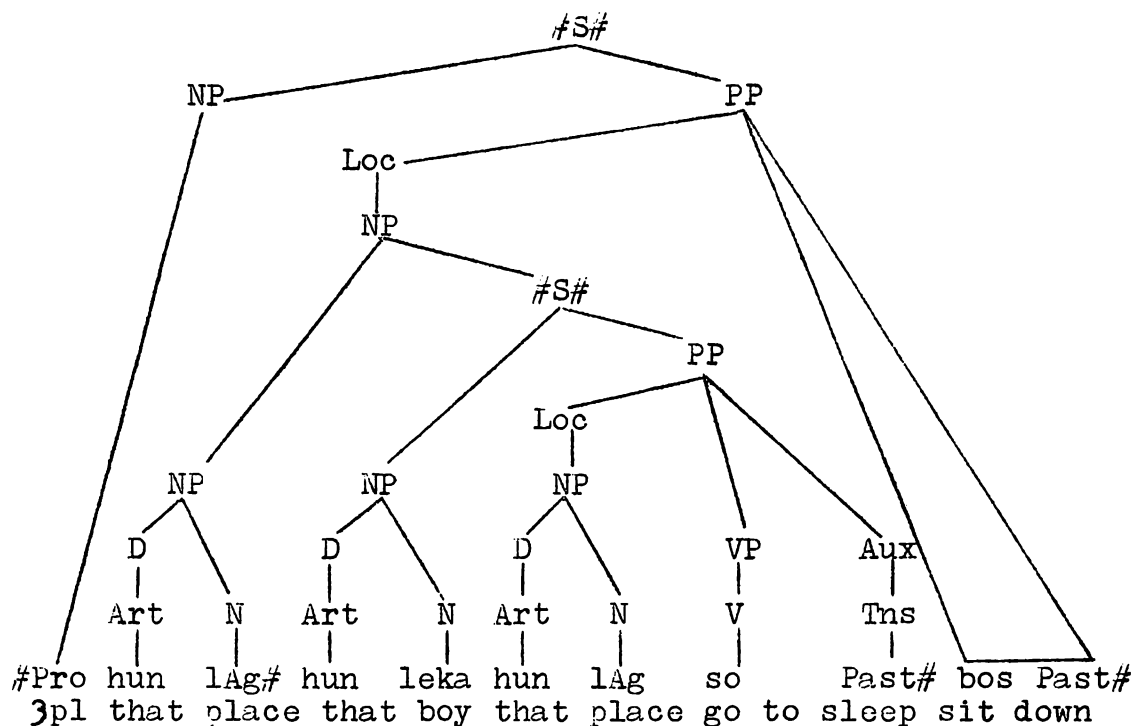| #Pro	Pro	hun	biti	#	log mAn	hun	biti	so	Indef#	de	Imp#
2pl	1sg	that	thing		people	that	thing	sleep		give	

Similar relationships hold between NP's dominated by
Time or Location in both embedded and matrix sentences.

2.8 ES time and MS time

tuco bia   kArto bera AsAn   kAru ra
your wedding doing time like this have done
Do this at your wedding.

```
                                  #S#
               NP                         PP
                    Time
                    NP
                         #S#
                              PP
                         Time
                         NP
                    NP          NP
                    D    N  NP  D    N   VP    Aux
                    Art       Art       bia kAr Tns
```

#Pro	hun	bera	#Pro	hun	bera	bia	kAr	Indef	#AsAn	kAr	Imp	Dur#
2sg	that	time	2sg	that	time	wed- ding	do		like this	do		

2.9 ES location and MS location

<u>hun   leka co solo lAge   bosla</u>
that boy   's went place-in they sat down
                to sleep
They sat down near where the boy went to sleep.

#S#
NP — PP
Loc
NP
#S#
PP
Loc
NP   NP   NP   VP   Aux
D   D   D   V   Tns
Art N Art N Art N
#Pro hun lAg# hun leka hun lAg so   Past# bos Past#
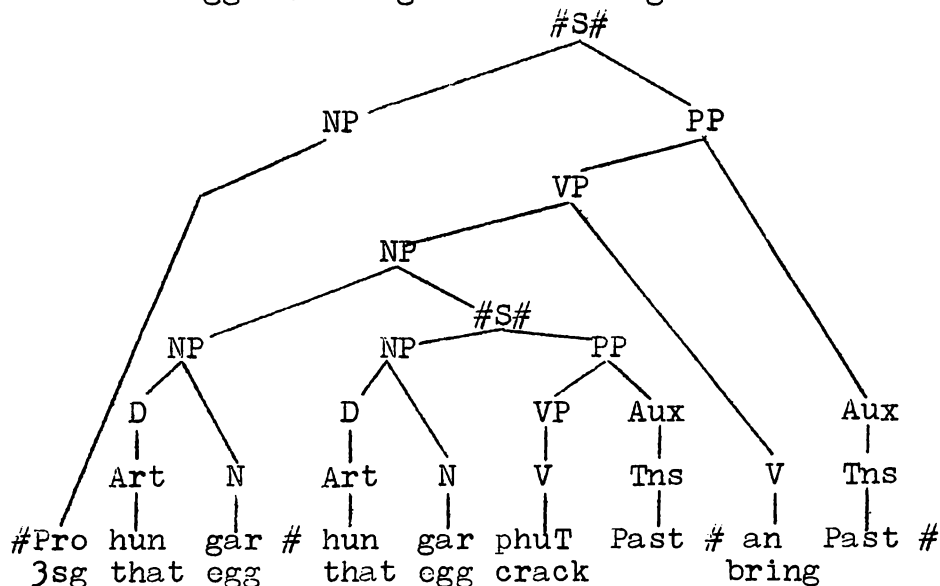3pl that place that boy that place go to sleep sit down

3. Transformational rules for deriving Halbi relative clauses.

In deriving surface structures from the preceding deep structures, certain transformational rules will be applied. They will be listed in order of application and illustrated, using the examples found in 2.3, 2.9, and 2.4 above.

3.1 <u>phuTli gar anlo</u>

cracked egg he brought - He brought the cracked egg.

#S#
NP   PP
VP
NP
NP   #S#
NP   PP
D   D   VP   Aux   Aux
Art N Art N V Tns   V Tns
#Pro hun gar # hun gar phuT Past # an Past #
3sg that egg that egg crack   bring

3.1.1 Relative clause formation rule

SD: #X [, NP, #W, Art, N, U#] NP Y#
    1   2   3   4   5 6
SC: 1   2   3 J+4 5 6
CA: Obl
   Where 2=4+5

RCF⇒
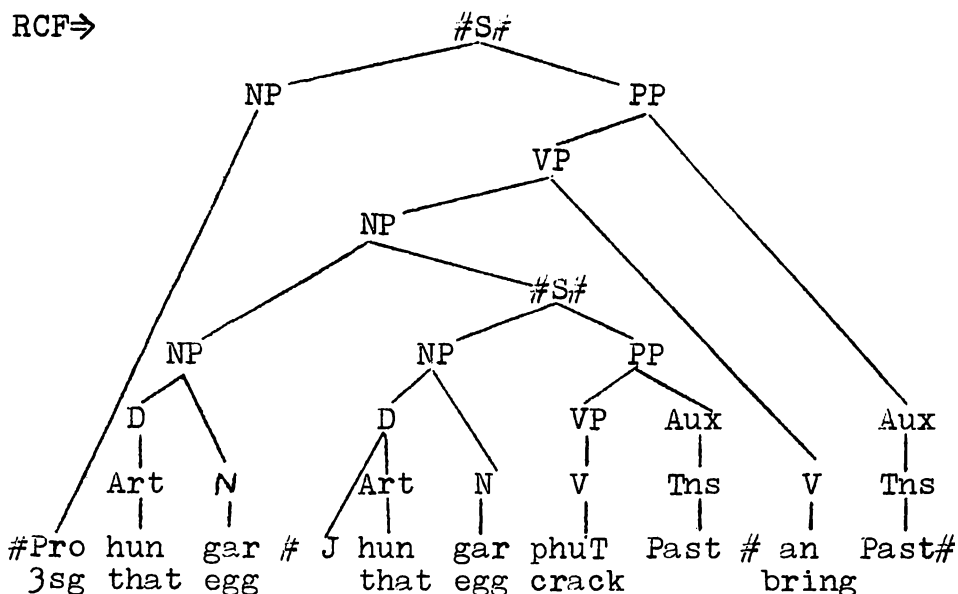
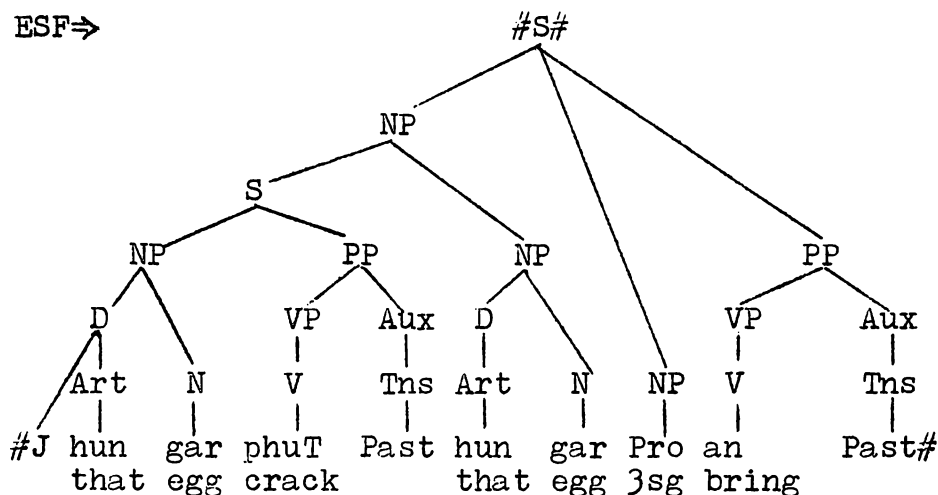### 3.1.2 J-fronting rule

SD: #X #, Y, J+Art+N, Z# W#
    1 2   3   4
SC: 1 3 2   ∅   4
CA: Obl

For this example, the J-fronting rule does not apply,
since 'J+hun gar' is already at the beginning of the
embedded sentence. See example 3.2, where it does
apply (3.2.2).

3.1.3 Embedded sentence fronting rule[6]

SD: #, X, NP, #, Y, #, Z#
    1 2 3 4 5 6 7
SC: 1 5 ∅ ∅ ∅ ∅ ∅ 3 2 7
CA: Obl
   Where 5 contains 3

---

[6]In all cases noted thus far, embedded sentences are
fronted in this manner. Further investigation may reveal
the need to modify the rule, if this is not generally true.

```
ESF⇒                              #S#
                          NP
                 S                          PP
          NP           PP        NP                    PP
        D           VP    Aux   D                  VP     Aux
      Art   N       V     Tns  Art    N    NP      V      Tns
      #J   hun    gar  phuT  Past  hun  gar  Pro   an          Past#
         that    egg  crack       that egg  3sg  bring
```
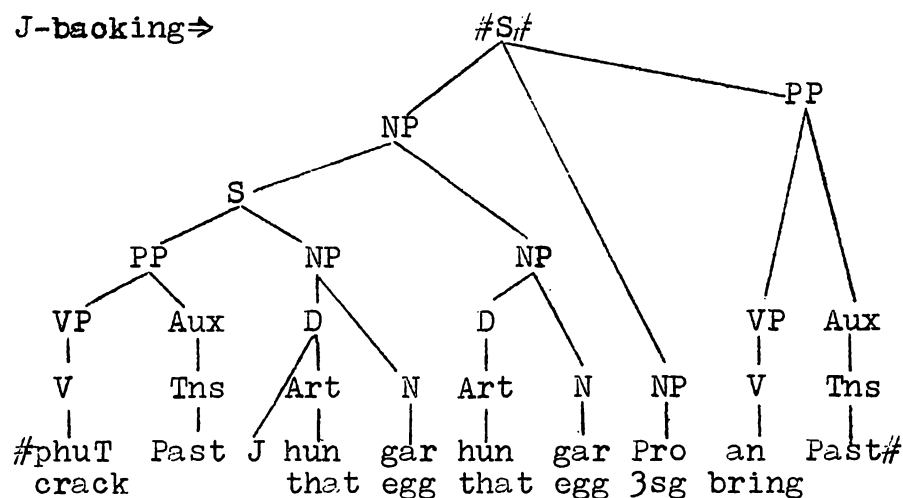
The result of this transformation is an intermediate string which is also a final derived string, another kind of relative clause which is very common. After certain other T rules and spelling rules (i.e. copying the features of the subjects onto the verbs, optionally deleting the subject pronoun, spelling 'J+hun' as 'je', and spelling Aux as suffix to V), this sentence will have the following form:

<u>je   gar phuTli   hun   gar anlo</u>
which egg it cracked that egg he brought
He brought the egg which cracked.

3.1.4 J-backing rule

```
SD:  #,  J+Art+N,  X+Aux,  Y#
     1      2        3      4
SC:  1      ∅        3   2  4
CA:  Opt
```

```
J-backing⇒                       #S#
                          NP                  PP
                 S                       
          PP           NP        NP          VP   Aux
        VP    Aux    D         D             V    Tns
        V    Tns   Art   N    Art  N   NP    
      #phuT Past  J hun  gar  hun  gar  Pro  an   Past#
       crack      that  egg  that egg 3sg  bring
```
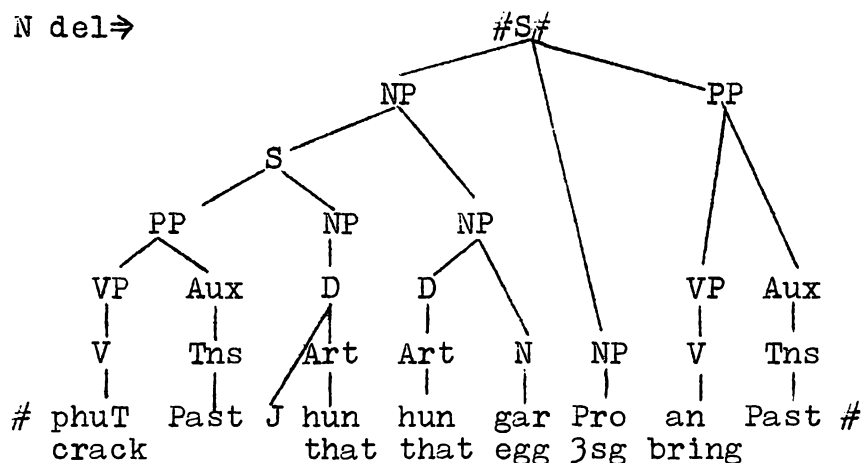
Since the result of the first three transformations is a final derived string, this rule is optional; but once it has applied, the following rule is obligatory.

3.1.5 Noun deletion rule

```
SD: # X+J+Art,  N,  Art,  N,  Y#
              1     2    3    4   5
SC:           1     Ø    3    4   5
CA: Obl
    Where 2=4
```

N del⇒

```
                              #S#
                 NP                        PP
             S
         PP        NP        NP
      VP   Aux    D     D              VP   Aux
      V     Tns   Art  Art   N    NP   V    Tns
  #  phuT  Past  J hun hun  gar  Pro  an  Past #
     crack        that that egg  3sg bring
```
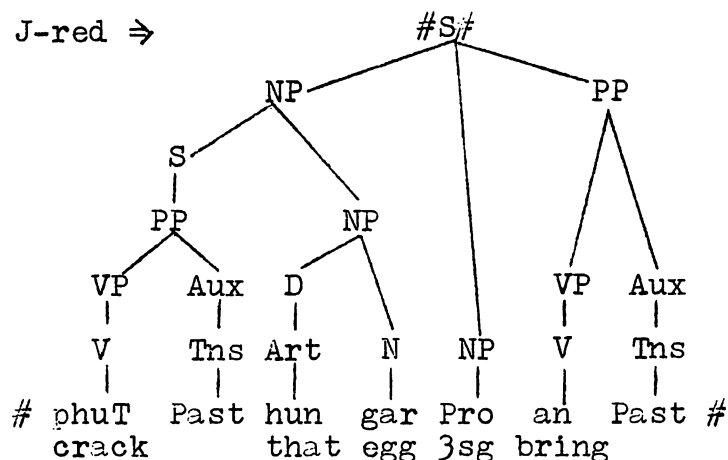
This string is also a final derived string, a third
form which relative clauses may have. After the same
general T rules and spelling rules cited in 3.1.3, it
has the following form:

phuTli   je   hun gar anlo
it cracked which that egg he brought
He brought the egg which cracked.

3.1.6 J-reduction rule

```
SD: # W,  Z+V+Aux,   J+Art,  NP+Y #
       1     2          3       4
SC:    Ø     2          Ø       4
CA: Opt
    Where W is indefinite NP ('log mAn') or null
```

J-red ⇒

```
                          #S#
               NP                    PP
          S
          PP          NP
      VP   Aux    D                VP   Aux
      V    Tns   Art   N    NP     V    Tns
  #  phuT  Past  hun  gar  Pro    an  Past #
     crack       that egg  3sg  bring
```

3.1.7 Article deletion, 'co' and 'to' insertion rule

SD: #U, Z, X+V, Tns, Art, N+Y#
    1 2   3   4   5   6

SC:1 2+co   3 4+to $\emptyset$ 6

CA: Obl
    Where Z is N or U and Z are null

Art,co,to$\Rightarrow$
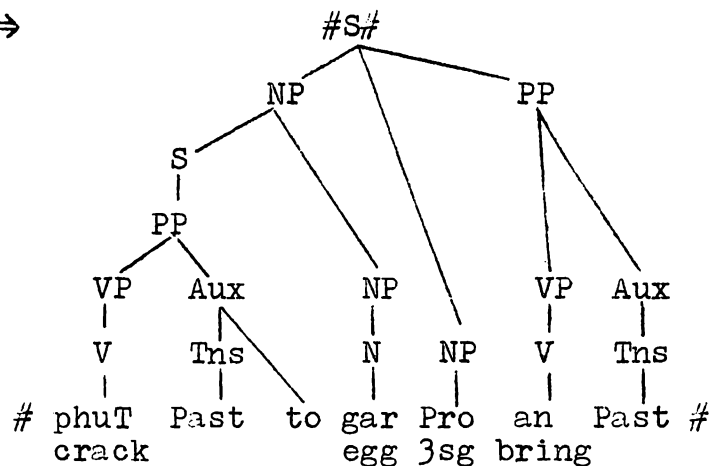
This is the final derived string cited in 2.2, after application of the general T rules and spelling rules and the following additional spelling rule:

to/Past __ $\rightarrow$ lo.

phuTli gar anlo
cracked egg he brought - He brought the cracked egg.

3.2 For the following example, neither trees produced by PS rules nor T rules will be written out, but the intermediate and final derived strings will be specified. (For reference, note the tree produced by PS rules drawn for this sentence in 2.9.)

hun leka co solo   1Age   bosla
that boy 's went to sleep place-in they sat down
They sat down near where the boy went to sleep.

#Pro hun 1Ag #hun leka hun 1Ag   so   Past# bos Past#
 3pl that place that boy that place go to   sit
                          sleep   down

3.2.1 Relative clause formation $\Rightarrow$
Pro hun 1Ag # hun leka J hun 1Ag so Past # bos Past

3.2.2 J-fronting $\Rightarrow$
Pro hun 1Ag # J hun 1Ag hun leka so Past # bos Past

3.2.3 Embedded sentence fronting $\Rightarrow$
J hun 1Ag hun leka so Past hun 1Ag Pro bos Past

This is a final derived string after the general T rules and spelling rules apply (as enumerated in 3.1.3,

plus postposition insertion), with the following form:

<u>je</u>   <u>lAge</u>   hun leka solo   hun <u>lAge</u>   <u>bosla</u>
which place-in that boy he went that place-in they sat
                              to sleep   down
They sat down near where the boy went to sleep.

3.2.4 J-backing ⇒
hun leka so Past J hun lAg hun lAg Pro bos Past

3.2.5 Noun deletion ⇒
hun leka so Past J hun hun lAg Pro bos Past

This is a final derived string after the general
T rules, spelling rules, and postposition insertion:

<u>hun</u>   <u>leka</u> <u>solo</u>   <u>je</u>   <u>hun</u>   <u>lAge</u>   <u>bosla</u>
that boy he went which that place-in they sat down
            to sleep
They sat down near where the boy went to sleep.

3.2.6 J-reduction ⇒
hun leka so Past hun lAg Pro bos Past

3.2.7 Article deletion, 'co' and 'to' insertion ⇒
hun leka co so Past to lAg Pro bos Past

This then becomes:
<u>hun</u>   <u>leka</u> <u>co</u> <u>solo</u>   <u>lAge</u>   <u>bosla</u>
that boy 's went to place-in they sat down
They sat down near where the boy went to sleep.

3.3 In the following example, an indefinite subject and tense
are found in the embedded sentence; these are later dele-
ted. 'log mAn' meaning 'people' is used as the indefinite
subject for the time being, subject to further investiga-
tion. (For reference, note the tree produced by PS rules,
drawn for this sentence in 2.4.)

<u>khato</u>   <u>pani</u>   <u>anlo</u>
eating water he brought - He brought some drinking water.

#Pro hun   pani # log mAn hun   pani   kha Indef # an   Past #
 3sg that water   people that water eat   bring

3.3.1 Relative clause formation ⇒
Pro hun pani # log mAn J hun pani kha Indef # an Past

3.3.2 J-fronting ⇒
Pro hun pani # J hun pani log mAn kha Indef # an Past

3.3.3 Embedded sentence fronting ⇒
J hun pani log mAn kha Indef hun pani Pro an Past

And the following is derived:

<u>je   pani   log mAn khauat   hun pani anlo</u>
which water people   they(will)eat that water he brought
He brought the water which people drink.

3.3.4 J-backing ⇒
log mAn kha Indef J hun pani hun pani Pro an Past

3.3.5 Noun deletion ⇒
log mAn kha Indef J hun hun pani Pro an Past

And the following is derived:

<u>log mAn khauat   je   hun pani anlo</u>
people   they(will)eat which that water he brought
He brought the water which people drink.

3.3.6 J-reduction ⇒
kha Indef hun pani Pro an Past

3.3.7 Article deletion, 'co' and 'to' insertion ⇒
kha Indef to pani an Pro Past

And the derived form:

<u>khato   pani   anlo</u>
eating water he brought - He brought some drinking water.

(Note a further spelling rule: Indef/ __to → ∅.)

4. Observations.

In developing the derivation of one form of relative clauses, the other two forms were also derived as intermediate strings, thus providing one kind of independent motivation for the particular transformational rules proposed. Independent motivation is also seen in the fact that complex sentence comparatives, both quantitative and manner, function in a similar way. The rules will have to be generalized if they are to be included.

4.1 Quantitative comparatives

4.1.1 Amount

From the following deep structure, three forms of amount quantitative comparatives may be derived:

```
                              #S#
                                \
                                 PP
                                   \
                                   VP
                                     \
                     NP───────────────
                       \
                       #S#
                          \
                           PP
                             \
                             VP
                               \
              NP                 NP
                \                  \
                 D                  D              Aux      Aux
                  |                  |               |        |
      NP        Art        N    NP  Art      N     V Tns   V  Tns
       |         |         |     |   |       |     |  |    |   |
     #Pro      hutlo     poysa #Pro hutlo  poysa saNg Past#de Past#
     1sg       that      much  3sg  that   much  tell       give
                               money              money
```

Note the application of the following T rules:

4.1.1.1 Relative clause formation ⇒
   # Pro hutlo poysa # Pro J hutlo poysa saNg Past #de Past#

4.1.1.2 J-fronting ⇒
   #Pro hutlo poysa# J hutlo poysa Pro saNg Past# de Past#

4.1.1.3 Embedded sentence fronting ⇒
   #J hutlo poysa Pro saNg Past hutlo poysa Pro de Past#

   This is a final derived string, after the previously
   mentioned general T rules and spelling rules (3.1.3),
   plus the following additional rule: J+hutlo → jitlo.

   jitlo   poysa saNglo   hutlo   poysa dile[7]
   as much money he told that much money I gave
   I gave as much money as he said.

4.1.1.4 J-backing ⇒
   #Pro saNg Past J hutlo poysa hutlo poysa Pro de Past#

4.1.1.5 Noun deletion ⇒
   #Pro saNg Past J hutlo hutlo poysa Pro de Past#

   Then the second final derived string is:
   saNglo   je   hutlo   poysa dile
   he told (rel) that much money I gave
   I gave as much money as he said.
        (Note the spelling rule: J+hutlo/__hutlo → je.)

---

[7]Note the use of the symbol 'N' to indicate the vowel which
precedes it is nasalized.

4.1.1.6 J-reduction ⇒
#Pro saNg Past hutlo poysa Pro de Past#

4.1.1.7 Article deletion, 'co' and 'to' insertion
This rule needs to be modified, since article deletion does not apply in this case. Thus, the two following rules are suggested, to replace the one Article deletion and 'co' and 'to' insertion. With this modification, they apply to all such formations, the preceding relative clauses as well as these comparatives.

'Co' and 'to' insertion
SD: #U, Z, X+V, Tns, NP+Y #
      1   2   3   4   5
SC: 1 2+co 3 4+to   5
CA: Obl
      Where Z is N or U and Z are null

Article deletion
SD: # X+Tns+to, Art, N+Y #
           1   2   3
SC: 1   ∅   3
CA: Obl
      Where Art is 'hun'

Thus, with 'co' and 'to' insertion ⇒
#Pro co saNg Past to hutlo poysa Pro de Past#

And the final derived string is:
<u>hun co saNglo itlo_____poysa dile</u>
he 's he told this much money I gave
I gave as much money as he said.
      (Note spelling rule: hutlo/V+Tns+to__ → itlo.)

4.1.2 Time
From the following deep structure, two forms of time quantitative comparatives are derived. We would expect to find a third after further investigation, analogous to the third form derived in 4.1.1.7.

```
                              #S#
                   NP                    PP
                         Time
                          NP
                                  #S#
                                              PP
                                         Time
                                          NP
                  NP                  NP    D
                D       N              N  Art   N
              Art   N
        #Pro  hudAl daNy #  kukRa  hudAl daNy  bas Fut#  uT  Fut#8
        1sg   that  time     rooster that time  crow      get up
              much                   much
```

#Pro hudAl daNy # kukRa hudAl daNy bas Fut# uT Fut#8

1sg that much / time / rooster / that much / time / crow / get up

4.1.2.1 Relative clause formation ⇒
#Pro hudAl daNy #kukRa J hudAl daNy bas Fut# uT Fut #

4.1.2.2 J-fronting ⇒
#Pro hudAl daNy #J hudAl daNy kukRa bas Fut# uT Fut#

4.1.2.3 Embedded sentence fronting ⇒
#J hudAl daNy kukRa bas Fut hudAl daNy Pro uT Fut#

This yields the following final derived string:

jidAldaNy   kukRa   basde   hudAldaNy uTeNde
as much time rooster   they will crow   that much I will
                                           time   get up
I'll get up when the roosters crow.
   (Note: J+hudAl → jidAl.)

4.1.2.4 J-backing ⇒
#kukRa bas Fut J hudAl daNy hudAl daNy Pro uT Fut#

4.1.2.5 Noun deletion ⇒
#kukRa bas Fut J hudAl hudAl daNy Pro uT Fut#

Then the following final derived string is:

kukRa   basde   je hudAldaNy   uTeNde
rooster they will crow (rel) that much time I will get up
I'll get up when the roosters crow.
   (Note: J+hudAl/__hudAl → je.)

_____

[8]Note the use of the following symbol: R = /r̥/.

4.1.3 Size

Only one type of example is here available for size comparative, but in the future we would expect to find others. The one type is that of the most derived.

mAco idlo   leka ay   hun
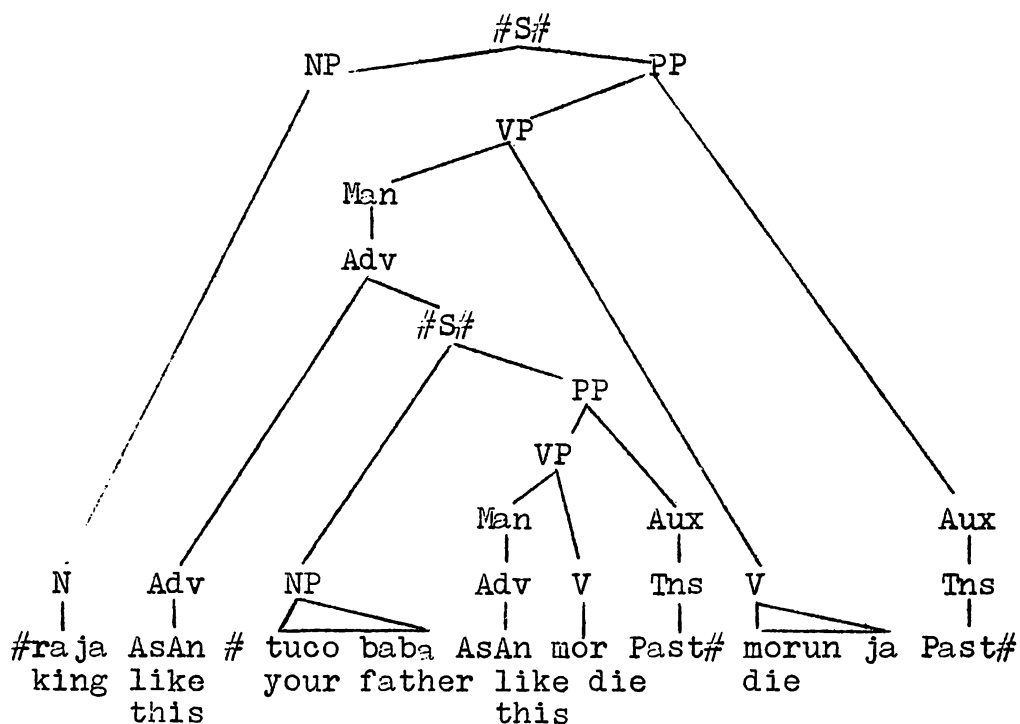my   this much boy he is he
He is the same size as I am.

A possible deep structure for this sentence might be the following:
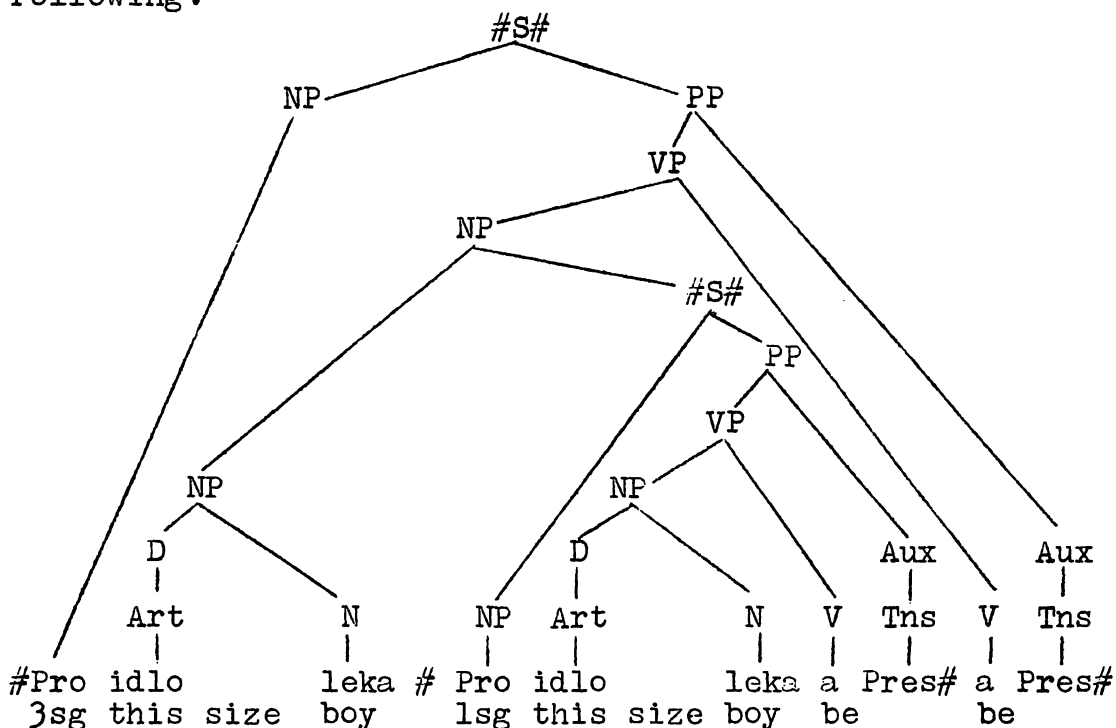
4.2 Manner comparatives

From the following deep structure, three forms of manner comparatives are derived. (Note that with this tree the following PS rule has been added: Adv → Adv (#S#).)

With modifications to generalize the T rules proposed above for the formation of relative clauses, these generalized T rules will also derive manner comparatives. Note the suggested modifications and the manner comparative derivations which follow the tree.

```
                          #S#
            NP _____/    _____ PP
           /                VP
          /             Man/ \
         /              |    \
        /              Adv    \
       /              /  \     \
      /              /   #S#    \
     /              /   /   \    \
    /              /   /     \ PP \
   /              /   /    VP/ \   \
  /              /   /  Man/ \  \   \
 /              /   /   |   \  Aux  Aux
 N            Adv  NP  Adv   V  |    |
 |            |    /\   |    |  Tns  V    Tns
 |            |   /  \  |    |  |    |    |
#raja       AsAn # tuco baba AsAn mor Past# morun ja Past#
 king       like   your father like die   die
            this              this
```

4.2.1 Relative clause formation
SD: # X [,Y, # W, Z, Q, U#]R T #
        1   2   3 4 5 6
SC: 1   2   3 J+4 5 6
CA: Obl
        Where 2=4+5
                Y is NP or Adv, Z is Art or AsAn, Q is N or null,
                and R is NP or Adv, respectively

Relative clause formation ⇒
raja AsAn # tuco baba J AsAn mor Past # morun ja Past#

4.2.2 J-fronting
SD: # X #, W, J+Z+Q, U # T #
        1   2   3   4
SC: 1 3 2   ∅   4
CA: Obl
        Where Z is Art or AsAn, Q is N or null, respectively

J-fronting ⇒
raja AsAn # J AsAn tuco baba mor Past # morun ja Past#

4.2.3 Embedded sentence fronting
SD: #, X, Y, #, U, #, T #
     1 2 3 4 5 6 7
SC:1 5 ∅ ∅ ∅ ∅ ∅ 3 2 7
CA: Obl
        Where Y is NP or Adv
               5 contains 3
Embedded sentence fronting ⇒
#J AsAn tuco baba mor Past AsAn raja morun ja Past#

After the application of the general T rules and spelling rules cited above (3.1.3), an additional spelling rule (J+AsAn → jAsAn), and optional subject backing, the following final derived string is generated:

jAsAn tuco baba   morlo   AsAn morun gela   raja
as   your father he died like (they)he died king
                              this
As your father died, so the king died.

4.2.4 J-backing
SD: #, J+Z+Q, X+Aux, T #
     1   2   3   4
SC: 1   Ø   3 2   4
CA: Opt
    Where Z is Art or AsAn, Q is N or null, respectively

J-backing ⇒
tuco baba mor Past J AsAn AsAn raja morun ja Past#

The following final derived string is generated:

tuco baba   morlo   je   AsAn   morun gela   raja
your father he died (rel) like this (they)he died king
As your father died, so the king died.
    (Note the following spelling rule: J+AsAn/__AsAn → je.)

4.2.5 Noun deletion
        This rule needs no modification since it only applies to relative clauses in which a NP has been relativized. Thus, it is simply not applicable in the formation of manner comparatives since the conditions for application would not be met.

4.2.6 J-reduction
SD: # X, W+V+Aux, J+Z, NP+T #
     1   2   3   4
SC: Ø   2   Ø   4
CA: Opt
     Where Z is Art or AsAn
           X is indefinite NP ('log mAn') or null

J-reduction ⇒
#tuco baba mor Past AsAn raja morun ja Past#

4.2.7 'Co' and 'to' insertion
SD: #T, X, W+V, Tns, Z+Q+U #
     1 2 3   4   5
SC: 1 2+co 3   4+to   5
CA: Obl
     Where Z is Art or AsAn,   Q is N or null, respectively
           X is N or T and X are null

'Co' and 'to' insertion ⇒
tuco baba co mor Past to AsAn raja morun ja Past#

4.2.8 Article deletion

No modification in this rule is necessary since it does not apply in the formation of manner comparatives.

4.2.9 Verb deletion

This new rule is necessary for the formation of manner comparatives. After further study perhaps a more general rule may be formulated.

```
SD: # T+X+co,  V,Tns+to,  AsAn+U,  V,  Y#
         1      2    3        4     5   6
SC:      1      Ø    Ø        4     5   6
CA: Obl
    Where X is N and 2=5
```

Verb deletion ⇒
tuco baba co AsAn raja morun ja Past#

And the following final derived string:

tuco baba	co AsAn	morun gela	raja
your father	's like this	(they)he died	king

As your father died, so the king died.

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It should be noted that there have been some other descriptive linguistic studies of Halbi using particularly the traditional structural model, which should be recognized. However, no transformational treatment of Halbi has come to our attention. Since that is the approach taken here, the following bibliography lists only studies which have followed this model. First are listed those dealing with Hindi and next those dealing with other related Indo-Aryan languages. Subsequent transformational studies of Indo-Aryan languages are undoubtedly available and will also need to be included in such a bibliographical listing.

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