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.

Given: \#S#

\#S# → NP+PP
PP → (Location)(Time)VP+Auxiliary
VP → (Direction)(Instrumental)(Manner)(NP(NP))V
Loc → {NP}
Dir → {Adverb}
Time → NP
Inst → NP
Man → Adverb
NP → NP(#S#)
NP → {Pronoun
  {(Determiner)N}
Det → Article
Aux → (Negative)(Aspect)(Tense
  {Imperative
  {Completed
    {Progressive
      {Durative
Tns → {Present
    {Past
      {Future
        {Indefinite

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 (NS), the direct object of the matrix sentence, or the indirect object of the matrix sentence. The following examples show these different relations.

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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

\[ i \quad 1\text{Age} \quad \text{kaw} \quad \text{kArto} \quad \text{kawra} \quad \text{ni} \quad \text{ay}^3 \]

\[ \text{this place-in caw doing crow} \quad \text{Neg it is} \]

\[ \text{There is no cawing crow here.} \]

2.2 ES subject and MS indirect object

\[ \text{gelo log} \quad \text{mAn} \quad k\cdot \text{tel deuat} \]

\[ \text{went people (Oh) oil they will give}^5 \]

\[ \text{They will give oil to the people who went.} \]

2.3 ES subject and MS direct object

\[ \text{phuTli} \quad \text{gar} \quad \text{anlo}^4 \]

\[ \text{cracked egg he brought - He brought the cracked egg.} \]

\[ ^3 \text{All surface structures are underlined. The symbol 'A' represents /a/.} \]

\[ ^4 \text{The symbol 'T' represents /t/.} \]

\[ ^5 \text{(OM) represents 'object marker' postposition.} \]
In addition, there are other combinations of NP-NP relationships. A few are listed here as examples.

2.4 ES object and IN object

khato pani solo
eating water he brought - He brought some drinking water.

2.5 ES Instrumental and IN subject

mAcopiuto kAsla buta goli
my drinking pot there it went
My drinking vessel went (in) there.
2.6 ES instrumental and MS object

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

2.8 ES time and MS time

\[
tuco bia karto bera AsAn kAr u ra \\
your wedding doing time like this have done \\
Do this at your wedding.
\]
2.9 ES location and MS location

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hun leka co solo lag bosla
de that boy went place-in they sat down
to sleep

They sat down near where the boy went to sleep.
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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 phuTli gar anlo

cracked egg he brought - He brought the cracked egg.
3.1.1 Relative clause formation rule

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

RCF⇒

3.1.2 J-fronting rule

SD: \[#X #, Y, J+Art+N, Z# W#
SC: 1 2 3 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 rule6

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

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6In 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.
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:

\textit{je gar phuTli hun gar anlo}

which egg it cracked that egg he brought
He brought the egg which cracked.

3.1.4 J-backing rule

\begin{align*}
\text{SD:} & \ #:, J+\text{Art+N}, X+\text{Aux}, Y# \\
& 1 \ 2 \ 3 \ 4 \\
\text{SC:} & \ 1 \ \emptyset \ 3 \ 2 \ 4 \\
\text{CA:} & \ \text{Opt}
\end{align*}

J-backing⇒

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#

SC: 1 2 3 4 5

CA: Obl
Where 2=4

N del⇒

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 #

SC: Ø 2 Ø 4

CA: Opt
Where W is indefinite NP ('log mAn') or null

J-red ⇒
3.1.7 Article deletion, 'co' and 'to' insertion rule

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

\( \text{to/Past } \rightarrow \text{lo.} \)

\( \text{phuTli } \text{gar anlo} \)

\( \text{cracked egg he brought - He brought the cracked egg.} \)

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.)

\( \text{hun leka co solo } \text{lAg } \text{bosla} \)

that boy 's went to sleep place - in they sat down

They sat down near where the boy went to sleep.

\( \text{#Pro hun lAg } \text{#hun leka hun lAg so } \text{Past# bos Past#} \)

\( \text{3pl that place that boy that place go to sit sleep down} \)

3.2.1 Relative clause formation \( \Rightarrow \)

\( \# \text{ Pro hun lAg } \# \text{ hun leka J hun lAg so Past # bos Past #} \)

3.2.2 J-fronting \( \Rightarrow \)

\( \# \text{ Pro hun lAg } \# \text{ J hun lAg hun leka so Past # bos Past #} \)

3.2.3 Embedded sentence fronting \( \Rightarrow \)

\( \# \text{ J hun lAg hun leka so Past hun lAg Pro bos Past #} \)

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:

\[ \text{je } \text{lAge } \text{hun } \text{leka solo } \text{hun } \text{lAge } \text{ bosla} \]

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:

\[ \text{hun } \text{leka solo } \text{je } \text{hun } \text{lAge } \text{ bosla} \]

that boy he went which that place-in they sat down to sleep
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:

\[ \text{hun } \text{leka co solo } \text{lAge } \text{ bosla} \]

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 deleted. 'log mAn' meaning 'people' is used as the indefinite subject for the time being, subject to further investigation. (For reference, note the tree produced by PS rules, drawn for this sentence in 2.4.)

\[ \text{khato pani anlo} \]

eating water he brought - He brought some drinking water.

#Pro hun pani # log mAn hun pani kha Indef # an Past #

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:
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:

log mAn khauat je hun pani anlo
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:

khato pani anlo
eating water he brought - He brought some drinking water.
(Note: further spelling rule: Indef/ to \to\ → \Ø.)

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:
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
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.)

7Note 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 2 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:

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.
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 hudAl daNy 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 hudAl daNy 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.)

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\[ R = /r/ \]
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.
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 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 2 3 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 Ø Ø Ø Ø Ø 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 (4.1.3), an additional spelling rule (\(J+\text{AsAn} \rightarrow \text{je}\text{AsAn}\)), and optional subject backing, the following final derived string is generated:

\[
\begin{align*}
\text{AsAn tuco baba } & \text{ morlo AsAn morun gela } \text{ raja} \\
& \text{as your father he died like (they)he died king} \\
& \text{this}
\end{align*}
\]

As your father died, so the king died.

4.2.4 J-backing

SD: \('#, J+Z+Q, X+\text{Aux}, T \#' \\
1 2 \ 3 \ 4 \\
SC: \ Ø \ 2 \ Ø \ 4 \\
CA: Opt

Where Z is Art or AsAn, Q is N or null, respectively

The following final derived string is generated:

\[
\begin{align*}
tuco baba & \text{ mor Past J AsAn AsAn raja morun ja Past}\#
\end{align*}
\]

As your father died, so the king died.

(Note the following spelling rule: \(J+\text{AsAn/\_AsAn} \rightarrow \text{je}\).)

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+\text{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 \(\Rightarrow\)

\[
\begin{align*}
tuco baba & \text{ mor Past AsAn raja morun ja Past}\#
\end{align*}
\]

4.2.7 'Co' and 'to' insertion:

SD: '#T, X, W+V, \text{Tns}, Z+Q+U \#
1 2 3 \ 4 \\
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 \(\Rightarrow\)

\[
\begin{align*}
tuco baba & \co \text{ mor Past to AsAn raja morun ja Past}\#
\end{align*}
\]
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, X#

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.
BIBLIOGRAPHY

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.

Hindi

Bahl, Kalicharan, A STUDY ON THE TRANSFORMATIONAL ANALYSIS OF THE HINDI VERB, Department of South Asian Studies, University of Chicago (mimeographed).
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