1 Relativization Strategies in Indo-Aryan

1.1 English-type Relative Clauses (ERC)

(1) NP with Relative Clause

\[ [\text{DP vo } [\text{NP kita:b [\text{[C6] ja sale-par hai]}]}] \text{ achchhi: hai} \]
\[ \text{Dem book Rel sale-on be.Prs good.F be.Prs} \]

‘That book which is on sale is good.’

The relative clause can also appear in clause-final position.

(2) Right adjoined Relative Clause

\[ [\text{DP vo } [\text{NP kita:b]}] \text{ achchhi: hai [\text{C7 ja sale-par hai}]} \]
\[ \text{Dem book.F good.F be.Prs Rel sale-on be.Prs} \]

‘That book is good which is on sale.’

1.2 Non-finite Relative Clauses

(3) Basic Properties:

a. Always prenominal
b. No relative pronouns

Only subjects can be relativized in Hindi non-finite relative clauses:

(4) Prenominal non-finite Relative Clause

a. Perfective participial

\[ [[\text{Avi-dwaaraa} kaat.-e}] \text{ neem-ke the Avi-by yesterday cut-Pfv.PI tree Neem-Gen.PI be.Pst.PI} \]

‘The trees cut (by Avi) yesterday were Neem trees.’

b. Imperfective participial

\[ [[\text{chal-ti}] \text{ ga:ri:se mat utro move-Imprv.F vehicle.F-from Neg descend-Imp} \]

‘Do not descend from the moving vehicle.’ (from Hook (1979))

c. Adjectival

\[ m\text{E kal} [[\text{Ram-ko darshan parha:-ne va:le]} \text{ addhya:pak]-se I yesterday Ram-Acc philosophy teach-Ger.Obl Adj.Obl teacher-with mil-a: meet-Pfv} \]

‘I met the teacher who teaches Ram philosophy yesterday.’

Past participial relatives in Marathi allow for a wider variety of positions to be relativized.

(5) Marathi examples from Pandharipande (1997)

a. Relativization of direct Object

\[ [[\text{Ram-ko darshan parha:-ne va:le]} \text{ addhya:pak]-se I yesterday Ram-Acc philosophy teach-Ger.Obl Adj.Obl teacher-with mil-a: meet-Pfv} \]

‘I met the teacher who teaches Ram philosophy yesterday.’

b. Relativization of a place adverbial

\[ [\text{I live-pres be-PastPart-N.Sg house-N.Sg very old is} \]

‘The house in which I am living is very old.’

c. Relativization of subject of a finite sentential complement

\[ [[\text{Ram-Erg ripe are tell-PastPart-Pl.M mangoes-3Pl.M be buy} \text{ ghetle take-Pst-3Pl.M} \]

‘We bought the mangoes which Ram told us were ripe.’
1.3 Correlatives

(6) Basic Components:
   a. a Correlative Clause that contains (a) Relative Phrase(s)
   b. a main clause that contains a Demonstrative Phrase associated with the Correlative Clause

(7) Simple Correlative:

\[ \text{[jo sale-par hai] [Maya us CD-ko kharic-egi:] Rel sale-on be.Prs Maya.F Dem CD-Acc buy-Fut.F} \]

'Maya will buy buy the CD that is on sale.'
(Lit. 'What is on sale, Maya will buy that CD.')

(8) Multi-Head Correlatives:

\[ \text{[jya mula-ne, jya muli-la, pahila, jyo, yaa, mula-ne, tya muli-la, pasant kela]} \]

Rel boy-Erg Rel girl-Acc saw Dem boy-Erg Dem girl-Acc like did

'For boy, girl s.t. x saw y, x liked y.'
(Lit. 'Which boy saw which girl, that boy liked that girl')

b. Hindi

\[ \text{[jis-ne, jy kar-na: cha:h-a, jyo, yaa, nus-ne, roj, ki-yaa:]} \]

Rel-Erg Rel do-Ger want-PlfV Dem-Erg Dem do-PlfV

'For x, y s.t. x wanted to do y, x did y.'
(Lit. 'Who wanted to do what, he/she did that.')

2 Externally Headed, Internally Headed, and Correlative Clauses

2.1 Externally Headed Relative Clauses

(9) Basic Components
   a. \( S_{rel} \) (the relative clause) (which contains a relativized position \( NP_{rel} \))
   b. A domain noun \textit{external} to \( S_{rel} \) (= the head NP)

(10) Things that can vary (cf. Keenan (1985))
   a. \( S_{rel} \) can be pronominal or postnominal
   b. The location of the determiner:
      i. Det + Head + \( S_{rel} \) (English)
      ii. Head + Det + \( S_{rel} \) (Urhobo (Kwa, Nigeria))
      iii. Head + S_{rel} + Det (Yoruba (Kwa, Nigeria))
      iv. Det + S_{rel} + Head (German participial relatives)
      v. S_{rel} + Det + Head (Korean)
      vi. S_{rel} + Head + Det (Basque)
   c. The internal composition of S_{rel} - finite, infinitival, or participial
   d. How the relativization is marked:
      i. NP_{rel} is a personal pronoun (Modern Hebrew, Persian)
      ii. NP_{rel} is a relative pronoun (English, Hindi)
      iii. NP_{rel} is not present at all (Persian, English, Swedish)

* NP_{rel} cannot be a repetition of the external head in restrictive postnominal embedded externally headed relative clauses.

* Postnominal extrapoosed externally headed relative clauses and non-restrictive relative clauses allow for repetition of the external head in some languages (Latin, Serbo-Croatian, see Keenan (1985)).

2.2 Internally Headed Relative Clauses

(11) Basic Components:
   a. \( S_{rel} \) (the relative clause)
   b. a domain NP \textit{internal} to \( S_{rel} \) (no external head)

Generally \( S_{rel} \) is sufficiently nominalized to combine with determiners, case-marking, and adpositions.

(12) (Tibetan, from Keenan (1985))


'The book Peem carried is mine.'
2.3 Correlative Clauses

(16) Basic Components (from Keenan (1985))
\[ S_\text{rel} \rightarrow [\ldots NP_{rel} \ldots] \mid [\ldots NP_{ann} \ldots] \]
\[ S_\text{main} \rightarrow [\ldots \text{NP}_{ann} \mid \text{NP}_{rel} \ldots] \]

a. $S_{rel}$ (which contains $NP_{rel}$)

b. $S_{main}$ (which contains an $NP_{ann}$ associated with $S_{rel}$)

The term correlative is often reserved for instances where $S_{rel}$ precedes $S_{main}$.

(17) Marking of $NP_{rel}$ and $NP_{ann}$

a. $NP_{rel}$ is marked in whatever way the language marks $NP_{rel}$ in headed relative clauses.

b. $NP_{ann}$ is marked using one of the means used for marking anaphoricity: personal pronouns, demonstratives, or a special correlative pronoun

c. In certain languages, both $NP_{rel}$ and $NP_{ann}$ may undergo movement to the left edge of their respective clauses (cf. Izvorski (1996) for Bulgarian).

Unlike headed relatives, the 'head' can appear in either $S_{rel}$ or $S_{main}$, or both.

(18) (from Srivastav (1991))

a. 'head' in $S_{rel}$

\[ \left[ \begin{array}{c} \text{[kan kwitsa-man kwintu-ta willa-shka]-ka llapu sumaj-mi]} \\ \text{the girl to whom you told the story is very pretty.} \\ \text{The story that you told to the girl is very pretty.} \end{array} \right] \]

b. 'head' in $S_{main}$

\[ \left[ \begin{array}{c} \text{[lambii tckii standing.f hai]} \\ \text{which girl is standing, she is tall.} \\ \text{The girl who is standing is tall.' (Lit. which girl is standing, she is tall.)} \end{array} \right] \]

c. 'head' in both $S_{rel}$ and $S_{main}$

\[ \left[ \begin{array}{c} \text{[lambii tckii standing.f hai]} \\ \text{which girl is standing, she is tall.} \\ \text{The girl who is standing is tall.' (Lit. which girl is standing, that girl is tall.)} \end{array} \right] \]

The following is a non-exhaustive list of languages where correlative clauses are found: Hittite (Berman (1972), Raman (1973)), Warlpiri (Hale (1976), Keenan (1985)), Medieval Russian (Keenan (1985)), Old English (Curme (1912)), South Slavic: Bulgarian, Macedonian, and Serbo-Croatian (Izvorski (1996)), Sanskrit (Andrews (1985)), Dravidian: Kannada (Sridhar (1990)), Malayalam (Asher and Kumari (1997)), and Tamil (Asher (1982)), and the Modern Indo-Aryan languages with the exception of Southern Konkani, Saurashtra, and...

In practice the distinction between correlatives and (dislocated) internal RCs is not always easy to make. (Keenan (1985):165)

Perhaps it would be more accurate to say that this correlative construction combines features of both prenominal and internal-head types, i.e. these two types are not mutually exclusive. (Comrie (1981):139)

3 Differences between Headed Relative Clauses and Correlatives

3.1 Possibilities of an Internal Head

Correlatives allow for the head to appear in both $S_{nr}$ and $S_{main}$ (cf. 18).

3.1.1 Embedded Externally Headed Relative Clauses

Internal Heads are not possible with embedded externally headed relative clauses.

(19) a. no internal head:

mujhe [vo aadmii [jo Sita-ko pasand hai]] accha: nahi: lag-ta:
I.Dat that man Rel Sita-Dat like be.Prs.Sg like Neg seem-Hab.MSg
'I don't like the man who Sita likes.'

b. with internal head:

*mujhe [vo aadmii [jo aadmii Sita-ko pasand hai]] accha: nahi: lag-ta:
I.Dat that man Rel Sita-Dat like be.Prs.Sg like Neg seem-Hab.MSg
'I don't like the man who Sita likes.'

Dialectal variation:

(20) internal head, no external head (from Mahajan (2000), see Junghare (1994) for parallel Marathi data)

%mujhe [vo [[jo aadmii Sita-ko pasand hai]] accha: nahi: lag-ta:
I.Dat that man Rel Sita-Dat like be.Prs.Sg like Neg seem-Hab.MSg
'I don't like the man who Sita likes.'

3.1.2 Extrapoosed Externally Headed Relative Clauses

Extraposed Externally Headed RCs are taken to not allow internal heads (cf. Dayal (1996)).

(21) a. external head, no internal head:

I.Dat that man like Neg seem-Hab.MSg Rel Sita-Dat like hai
be.Prs.Sg
'I don't like the man who Sita likes.'

b. internal head with external head:

*mujhe [vo aadmii] accha: nahi: lag-ta: [jo aadmii Sita-ko pasand]
I.Dat that man like Neg seem-Hab.MSg Rel man Sita-Dat like hai
be.Prs.Sg
'I don't like the man who Sita likes.'

c. internal head with no external head:

*mujhe [vo accha: nahi: lag-ta: [jo aadmii Sita-ko pasand]
I.Dat that man like Neg seem-Hab.MSg Rel man Sita-Dat like hai
be.Prs.Sg
'I don't like the man who Sita likes.'

Dialectal variation:

(22) internal head with external head (from Mahajan (2000), see also Marlow (1994) and for parallel Marathi data see Junghare (1994))

%mujhe [vo aadmii] accha: nahi: lag-ta: [jo aadmii Sita-ko pasand]
I.Dat that man like Neg seem-Hab.MSg Rel man Sita-Dat like hai
be.Prs.Sg
'I don't like the man who Sita likes.'
3.2 The Demonstrative Requirement

3.2.1 Demonstrative Requirement on Correlatives

There must be a demonstrative phrase in the main clause associated with the correlative clause.

(23) a. Dem + NP$_{ex}$
   \[(\text{jo CD \ sale-par\ hai}) \ [Aamir \ [vo \ CD] \ khari:d-ega:]
   \text{Rel CD sale-on be.Prs} \ \text{Aamir Dem CD buy-Fut.MSg}
   \text{‘Aamir will buy the CD that is on sale.’}

   (Lit. ‘Which CD is on sale, Aamir will buy that CD.’)

b. Bare NP$_{ex}$
   \*[\[(\text{jo CD \ sale-par\ hai}) \ [Aamir \ [CD] \ khari:d-ega:]
   \text{Rel CD sale-on be.Prs} \ \text{Aamir CD buy-Fut.MSg}
   \text{‘Every girl who is standing is tall.’}

   (Lit. ‘Which CD is on sale, Aamir will buy CD.’)

c. Some/Every + NP$_{ex}$
   \*[\[(\text{jo CD \ sale-par\ hai}) \ [Aamir \ [koi/har \ CD] \ khari:d-ega:]
   \text{Rel CD sale-on be.Prs} \ \text{Aamir some/every CD buy-Fut.MSg}
   \text{‘Every girl who is standing is tall.’}

   (Lit. ‘Which CD is on sale, Aamir will buy some/every CD.’)

Some systematic exceptions to the Dem-XP requirement on Correlatives.

If the DP associated with the Correlative Clause is modified by, or is, sab/dono/ti:n˜o/‘all/both/all-three/’ (but not do/kuchh/adhiktam ‘two/some/most’), then it need not contain a demonstrative.

(24) [\text{laRkiy˜a: \ khaRii \ hE} \ [\text{[sab/dono/*do/*kuchh \ lambii \ hE]}
   \text{Rel girls standing.F be.Prs.PI all/both/two/some tall.F be.Prs.PI}
   \text{‘The girls who are standing are all/both/two/some tall.’}

There are also cases where the Dem-XP that would be associated with the Correlative Clause is not overtly represented in the matrix clause.

(25) [\text{jo CD sale-par\ hai}] \ \text{achchha: \ hai}
   \text{Rel CD sale-on be.Prs good.MPl be.Prs}
   \text{[Which CD is on sale] is good.’}

3.2.2 No Demonstrative Requirement on Headed Relatives

(26) Embedded Headed Relative Clause (from Dayal (1996))

a. Bare NP head:
   \[\text{[\text{lar.kii \ girl.f} \ (jo \ khar.ii \ standing.f \ hai)]}
   \text{be.Prs.Sg lambii \ tall.f be.Prs.Sg}
   \text{‘The girl who is standing is tall.’}

b. every + NP head:
   \[\text{[\text{har \ laRkii [jo kharii \ hai]]} \ \text{lambii \ tall.f be.Prs.Sg Rel standing.f be.Prs.Sg}
   \text{‘Every girl who is standing is tall.’}

(27) Extraposed Headed Relative Clause (from Dayal (1996))

a. Bare NP head:
   \[\text{[\text{lar.kii \ girl.f} \ lambii \ tall.f \ (jo \ khar.ii \ standing.f \ hai)]}
   \text{be.Prs.Sg}
   \text{‘The girl who is standing is tall.’}

b. every + NP head:
   \[\text{[\text{har \ laRkii \ lambii \ (jo kharii \ hai)]} \ \text{every girl.f Rel standing.f be.Prs.Sg Rel standing.f be.Prs.Sg}
   \text{‘Every girl who is standing is tall.’}

3.3 Multi-Head Relative Clauses

Multi-Head Relative Clauses are only possible with correlatives.

(28) [\text{jis-ne \ jo \ kar-na: \ cha:h-a:} \ \text{[us-ne \ vo \ ki-ya:]} \ Rel-Erg \ Rel do-Ger \ \text{want-Pfv} \ \text{Dem-Erg \ Dem do-Pfv}
   \text{‘For $x$, $y$ s.t. $x$ wanted to do $y$, $x$ did $y$.’}

   (Lit. ‘Who wanted to do what, he/she did that.’)

(29) a. Extraposed English-type Multi-Head Relative Clause
   * [\text{[us \ \text{larkii-ne, us \ larke-ko, pasand ki-ya:}$]} \ \text{[jis-ne, jis-ko, dekh-aa]}
   \text{Dem girl-Erg Dem boy-Acc like do-Pfv Rel-Erg Rel-Acc see-Pfv}
   \text{‘That girl liked that boy, who saw whom.’}

b. Non-extraposed English-type Relative Clause
   impossible to construct
3.4 Stacking
McCawley (2003) notes that while externally headed relative clauses allow for stacking, correlative do not.

(30) a. Stacked Headed Relative Clause
   har aadmii [jo mujhe pasand hai] [jise mE-ne bulaa-yaa hai] every man Rel.I.Dat like be.Prs.Sg Rel.Acc I-Erg call-Pfv be.Prs.Sg aa-egaa
   come-Fut.MSg
   ‘Every man [who I like] [who I have called] will come.’
   b. Stacked Correlative
   * [jo mujhe pasand hai] [jise mE-ne bulaa-yaa hai] [vo aadmii Rel I.Dat like be.Prs.Sg Rel.Acc I-Erg call-Pfv be.Prs.Sg Rel man aa-egaa]
   come-Fut.MSg
   (Lit. Who I like, Who I have called, that man will come.’

A related observation is that there is no such thing as a non-restrictive correlative.

3.5 Some Commonalities
If we restrict our attention to within the Correlative Clause CP/Headed Relative Clause CP, embedded or extraposed, we find that their syntax is substantially identical:

(31) a. They involve a Relative Phrase that must contain a relative pronoun or determiner.
   b. Relative Pronouns are distinct from Interrogative Pronouns in Indo-Aryan.
   c. There are no null relative operators in finite relative clauses in most Indo-Aryan languages.

(32) Movement of the Relative Phrase:
   a. If no finite CP boundaries intervene between the Relative Phrase and the target [Spec,CP], the fronting of the Relative Phrase is optional but favored.
   b. If a finite CP boundary intervenes between the Relative Phrase and the target [Spec,CP], the fronting of the Relative Phrase is obligatory.

This is (almost) the pattern found with wh-phrases.

4 Structures for Correlatives
4.1 Structures Proposed for Simple Correlatives
4.1.1 Option 1: Base-generation in an IP-adjoined Position


(33) IP adjunction:
   ‘[ IP [which CD is on sale], IP [Ram bought that CD] ]’

(34) Dem-XP adjunction
   ‘Ram bought [ [which CD is on sale] that CD]’
4.1.2 Option 2: Base-generation in an Dem-XP-adjoined Position


(35) Dem-XP adjunction

[Ram bought [[which CD is on sale] that CD]]

4.2 Structures Proposed for Multi-Head Correlatives

(37) IP adjunction:

‘which girl heard which CD, that girl bought that CD’

4.3 The Options

(38) a. Simple Correlative 1: [[.. Rel-XP ..] [.. Dem-XP, ..]]

Option 1: IP adjunction

Option 2: the CP is generated adjoined to [Dem-XP] and moves to the clause-initial position

b. Simple Correlative 2: [[.. Rel-XP ..] Dem-XP] ..

Option 1: the CP is generated adjoined to Dem-XP

Option 2: the CP is generated adjoined to Dem-XP

c. Multi-Head Correlative: [[.. Rel-XP, Rel-XP,...] [.. Dem-XP, Dem-XP,...]]

Option 1: the CP is generated adjoined to IP

Option 2: the CP is generated adjoined to IP
5 Arguments for movement of the Correlative Clause

5.1 Island Effects

The relationship between the Correlative Clause and the Demonstrative Phrase is subject to islands (cf. Srivastav (1991), Bain (1994), Dayal (1996)).

(39) \[Correlative-CP\] \([Correlative-CP]\]

\[\text{The relationship between the Correlative Clause and the Demonstrative Phrase is subject to islands (cf. Srivastav (1991), Bain (1994), Dayal (1996)).}\]

5.1.2 No Covert Movement out of Finite Clauses

(40) \[Correlative-CP\]

\[\text{Putatively movement of Dem Phrase in Hindi would be covert.}\]

5.1.3 Overt Movement out of Finite Clauses

(41) \[XP\]

\[\text{Local Conclusion: it is the correlative clause that is (overtly) moving.}\]

Hence something must be moving. What is this something?

5.1.1 Izvorski (1996): the Dem Phrase moves

(42) Movement of Dem is obligatory (Bulgarian: from Izvorski (1996))

a. \[Correlative-Clause\] \([Correlative-Clause]\]

\[\text{a'. Movement of Dem is obligatory (Bulgarian: from Izvorski (1996))}\]

b. \[Correlative-Clause\] \([Correlative-Clause]\]

\[\text{b'. Movement of Dem is obligatory (Bulgarian: from Izvorski (1996))}\]

Local Conclusion: it is the correlative clause that is (overtly) moving.
5.2 Constituency and constraints on fronting of the Correlative Clause

5.2.1 Evidence for the [CorrelativeCP Dem-XP] structure from co-ordination

(47) Rahul nowadays \([r_v [r_o [r_p [r_o [r_o Dem-XP, ] ] ] ] ]\) and \([r_o [r_o [r_o CorCP, Dem-XP, ] ] ]\) reading is


Shyam-Erg make-Pfv Dem read Prog be.Prs

‘Nowadays, Rahul is reading the book that Saira wrote and the cartoon that Shyam made.’ (Lit. ‘Nowadays, Rahul is reading [[which book that Saira wrote] that (book)] and [[which cartoon that Shyam made] that (cartoon)].’

(48) Rahul \([r_o [r_o [r_o [r_o [r_o Dem-XP, ] ] ] ] ]\) and \([r_o [r_o [r_o CorCP, Dem-XP, ] ] ]\) nowadays t reading is


Shyam-Erg make-Pfv Dem read Prog be.Prs

‘Nowadays, Rahul is reading the book that Saira wrote and the cartoon that Shyam made.’ (Lit. ‘Nowadays, Rahul is reading [[which book that Saira wrote] that (book)] and [[which cartoon that Shyam made] that (cartoon)].’

(49) Extraction out of co-ordinate island

a’. ??CorCP, Rahul is reading


Shyam-Erg make-Pfv Dem read Prog be.Prs

‘Nowadays, Rahul is reading [[which book that Saira wrote] that (book)] and [[which cartoon that Shyam made] that (cartoon)].’

b’. *CorCP, Rahul is reading


‘Nowadays, Rahul is reading [[which book that Saira wrote] that (book)] and [[which cartoon that Shyam made] that (cartoon)].’

5.2.2 Constraints on fronting of the Correlative Clause

(50) \([r_p [r_o [r_o [r_o CorCP, Dem-XP, ] ] ] ]\) and \([r_o [r_o [r_o CorCP, Dem-XP, ] ] ]\)

Ram-ne \([j_o [kita:b Sairaa-ne likh-i], [us [lar.ke-ko], ] [j_o [kita:b Sairaa-Erg Rel boy your behind is Dem boy-Dat Rel book Shantiniketan-ne chhaa-pan thii], [vo kitaa:b], ] dii Shantiniketan-Erg print-Pfv.F Was.F Dem book give-Pfv.F

‘Ram gave the book that Shantiniketan had published to the boy who is standing behind you.’ (lit. ‘Ram gave [[which book that Shantiniketan had published] that book] to [[which boy is behind you] that boy].’)

(51) a’. CorCP, \([r_o [r_o [r_o [r_o [r_o Dem-XP, ] ] ] ] ]\) and \([r_o [r_o [r_o CorCP, Dem-XP, ] ] ]\)

a. [jo larke: tumhaare pichhe hai], Ram-ne \([us [lar.ke-ko], ] [j_o [kita:b Rel boy-Dat your behind be.Prs Rel book Shantiniketan-ne chhaa-pan thii], [vo kitaa:b], ] dii Shantiniketan-Erg publish-Pfv.F be.Pst.F Dem book give-Pfv.F

‘Ram gave the book that Shantiniketan had published to the boy who is standing behind you.’ (lit. ‘Ram gave [that boy, [[which book that Shantiniketan had published] that book] that (boy)]]’)

b’. CorCP, \([r_o [r_o [r_o [r_o [r_o Dem-XP, ] ] ] ] ]\) and \([r_o [r_o [r_o CorCP, Dem-XP, ] ] ]\)

b. [jo kitab Shantiniketan-ne chhaa-pan thii, Ram-ne \([j_o [kita:b Sairaa-Erg Rel boy-Dat your behind be.Prs Rel book Shantiniketan-Erg publish-Pfv.F be.Pst.F Dem book give-Pfv.F

‘Ram gave the book that Shantiniketan had published to the boy who is standing behind you.’ (lit. ‘Ram gave [that boy, [[which book Shantiniketan had published] that book] that (boy)]]’)


intended interpretation is same as (50)


intended interpretation is same as (50)

(53) ok: extraction of two arguments out of a clause
5.3 Reconstruction Effects

5.3.1 Condition C effects

(57) a’. \[CP \ldots \text{Name} \ldots \] [[t, Dem-XP] \text{Pron} \ldots ]
   a. [jo larkii Sita-ko, pyaar kar-tii hai], [us-ne, us-ko, thukraa di-ya]
      Rel girl Sita-Acc love do-Hab.F is Dem-Erg Dem-Acc reject GIVE-Pfv
      ‘She rejected the girl who loves Sita.’
   b’. * [\ldots Name, \ldots ] [[t, Dem-XP] \text{Pron} \ldots ]
   a. [jo larkii Sita-ko, pyaar kar-tii hai], [us-ne-\text{/j}, us-ko, thukraa]
      Rel girl Sita-Acc love do-Hab.F is Dem-Erg Dem-Acc reject GIVE-Pfv
      ‘She rejected the girl who loves Sita.’
   c’ [[\ldots Name, \ldots ] [[t, Dem-XP] \text{Pron} \ldots ]
   a. [jo larkii Sita-ko, pyaar kar-tii hai], [us-ko, us-ne, thukraa di-ya]
      Rel girl Sita-Acc love do-Hab.F is Dem-Acc Dem-Erg reject GIVE-Pfv
      ‘She rejected the girl who loves Sita.’

5.3.2 Variable Binding

(58) a. ‘His, mother loves every boy.’
   b. Every boy, loves his mother.

(59) a. [His, band\ldots] seems to every Austinite, [t, to be the best].
   b. [Someone from his, class\ldots] seems to every professor, [t, to be a genius].
   c. [His, father\ldots] seems to every boy; [t, to be a genius].
   ((59b, c) are from Fox (2000), pg. 147.)

(60) a. LF: seems to every Austinite, [his, band to be the best]
   b. LF: seems to every professor, [someone from his, class to be a genius].
   c. LF: seems to every boy, [his, father to be a genius].
5.3.3 Prediction: Non-reconstruction effects with Multi-Head Correlatives

(62) a'. *[[[head correspondence]]] [[Pron, Rel, ...] [QP, Dem-XP, Dem-XP, ...]]
   a. *[[Pron, Rel, Rel, ...] [QP, Rel, Rel, ...] [Pron, Rel, Rel, ...] [QP, Dem-XP, Dem-XP, ...]]
6 Rel-XP Deletion and Asymmetries between Simple and Multi-Head Correlatives

(71) *[jo] sale par hai [Lila vo CD khariid-egii]
Rel sale on be.Prs Lila.F Dem CD buy-Fut.F
‘Lila will buy the CD which is on sale.’

(72) Rel-XP deletion/omission in simple Gujarati Correlatives (Babu Suthar p.c.)

a. *[wɔːɾʃiɾ... Rel-XP, ...] [YP Dem-XP, ...]
   a. [je chokro sita sathe vat kari rahyo che], [ritane te chokro game che]
      Rel boy Sita with talk do Prog is Rita-Dat Dem boy like is
      ‘Rita likes the boy who is talking to Sita.’ (Lit. ‘Which boy is talking to Sita, Rita
      likes that boy.’)

b. *[wɔːɾʃiɾ thɔːɾtʃiɾ ...] [YP Dem-XP, ...]
   b. [sita sathe vat kari rahyo che], [ritane te chokro game che]
      Sita with talk do Prog is Rita-Dat Dem boy like is
      ‘Rita likes the boy who is talking to Sita.’ (Lit. ‘Who is talking to Sita, Rita
      likes that boy.’)

(73) No Rel-XP deletion in Multi-Head Gujarati Correlatives (Babu Suthar p.c.)

 *[wɔːɾʃiɾ * (Rel-XP) * (Rel-YP) ...] [Dem-XP, Dem-YP, ...]
 [je chokrae, je chokrine, jei, te chokrae, te chokrine, pasand kari]
 Rel boy-Erg Rel girl-Acc saw Dem boy-Erg Dem girl-Acc like did
 ‘For x, y s.t. x saw y, x liked y.’

(74) a. the book [which/ɔɨ C*[rel] [John read t]]
b. a topic [[on which]/*[on ɔɨ] [John writes t]]

(from Jacobson (1983))

a. everyman who I like who I know
b. *everyman who I like I know

7 Locality of Merge

(76) a. base-generation in IP adjoined position:
   ‘[tʃiɾ ʃiɾɛɾ\-CD, which CD is on sale], [tʃiɾ Ram bought that-CD,]’

b. base-generation in Dem-XP adjunction, plus movement of Correlative Clause:
   ‘[which CD is on sale], [tʃiɾ Ram bought [tʃiɾ that-CD,]]’

(77) a. base-generation as adjoined to matrix IP
   ‘[ʃiɾɛɾ ʃiɾɛɾ\-CD, Rel, ʃiɾ ...] [Bill thinks that [tʃiɾ ... Dem-XP, Dem-XP, ...]]

b. base-generated adjoined to embedded IP, followed by movement
   ‘[ʃiɾɛɾ ʃiɾɛɾ\-CD, Rel, ʃiɾ ...] [Bill thinks that [tʃiɾ [tʃiɾ ... Dem-XP, Dem-XP, ...]]]

Condition on Local Merge: The structure-building operation of Merge must apply in as local manner as possible.

(78) *(wɔːɾʃiɾ... Name_{\_\_\_\_}) [Pron_{\_\_\_\_} Dem-XP_{\_\_\_\_}]

(79) a. Base-generation in an IP-adjoined position:
   *(wɔːɾʃiɾ... Name_{\_\_\_\_}) [Pron_{\_\_\_\_} Dem-XP_{\_\_\_\_}]

b. Base-generation in a Dem-XP adjoined position followed by fronting:
   *(wɔːɾʃiɾ... Name_{\_\_\_\_}) [Pron_{\_\_\_\_} [tʃiɾ Dem-XP_{\_\_\_\_}]]

7.1 Crosslinguistic Comparisons 1: Correlatives in South Slavic

(80) Movement of Dem is obligatory (Bulgarian: from Izvorski (1996))

a'. [Correlative-Clause], [tʃiɾ Dem-XP, ...]
   a. [Kolkoto pari iska], tolkova, misli če šte i dam t
      how-much money wants Dem-much thinks that will her give-1Sg
      ‘She thinks that I’ll give her as much money as she wants.’

b'. *[Correlative-Clause], [tʃiɾ Dem-XP, ...]
   b. *[Kolkoto pari iska], misli če šte i dam tolkova,
      how-much money wants thinks that will her give-1Sg Dem-much

(81) Dem-XP adjunction is not possible (Bulgarian) [tʃiɾ XP ... [nom-xP [Correlative-Clause], Dem-XP, ...]]

* misli če šte i dam [Kolkoto pari iska], tolkova
  thinks that will her give-1Sg how-much money wants Dem-much
  ‘She thinks that I’ll give her as much money as she wants.’
7.2 Crosslinguistic Comparisons 2: Clitic Left Dislocation

(82) Modern Greek (from Iatridou (1994))

\[ \text{ton Kosta, i Maria ton idhe} \]
\[ \text{DET Kosta/ACC DET Mary/NOM him saw} \]
\[ \text{‘Kosta, Mary saw him.’} \]

(83) Islands: * DP . . . [relcl . . . Clitics . . . ]

\[ \text{ton Kosta, sinandisa tin kopela pu ton idhe} \]
\[ \text{DET Kosta/ACC (i)-met DET girl who him saw} \]
\[ \text{Lit. Kosta, I met the girl who saw him.’} \]

(84) a. DP . . . [relcl [v . . . Clitics . . . ]]

Non-local Merge, No movement, No island violation

b. *DP . . . [relcl [v, [v . . . Clitics . . . ]]]

Local Merge followed by movement, Island violation

8 The Condition on Merge at work: evidence from absent demonstratives

(85) Omission of Dem-XP leads to ungrammaticality

\[ \text{[jo larki khaRii hai] [Ram *(us-ko) pasand kar-aa hai]} \]
\[ \text{Rel girl standing.F is Ram Dem-Dat like do-Hab is} \]
\[ \text{‘Ram likes the girl who is standing.’} \]

(86) Missing Dem-XP

\[ \text{[jo larki: khar: hai] lambii hai} \]
\[ \text{Rel girl standing.F be.Prs tall.F be.Prs} \]
\[ \text{[Which girl is standing] is tall.’} \]

Conditions under which overt Dem is not required:

(87) \text{form(Case(Rel-XP)) = form(Case(Dem-XP)) = \phi (from Bhatt (1997))}

(88) \text{[jis larki-ne sports medal jiita,aa] *[us-ne academic medal-bhii jiita,aa]} \]
\[ \text{Rel boy-Erg sports medal win-Pfv Dem-Erg academic medal-also win-Pfv} \]
\[ \text{‘The boy who won the sports medal also won the academic medal.’} \]

(89) Srivastav (1991)’s analysis: \[ [k_{rel}, \ldots] [v, p_{0}, \ldots] \]

\[ \text{[jo larki: khar: hai] [p_{0}, lambii hai]} \]
\[ \text{Rel girl standing.F be.Prs tall.F be.Prs} \]
\[ \text{[Which girl is standing] is tall.’} \]

(90) Free Relative structure for Dem-XP-less Correlatives

\[ [v, k_{rel}, \ldots] [p_{0}] \text{ is good} \]
\[ [v, k_{rel}, [jo kita:b sale-par hai] [p_{0}] achchhi: hai] \]
\[ \text{Rel book.F sale-on be.Prs good.F be.Prs} \]
\[ \text{‘Lit. [Which book is on sale] is good.’} \]

8.1 Free Relative Fronting vs. Correlative Fronting

(91) a. *CorCP, CorCP, [v . . . Dem-XP, . . . Dem-XP, . . . ]

b. *CorCP, CorCP, [v . . . Dem-XP, . . . Dem-XP, . . . ]

(92) a'. CorCP, CorCP, [v . . . Dem-XP, . . . . . . ]

b'. CorCP, CorCP, [v . . . Dem-XP, . . . . . . ]


8.2 Matching Effects in Multi-Head Correlatives

\[(93) \text{form(Case(Rel-XP)) = form(Case(Dem-XP)),} \]
\[(94) \text{form(Case(Rel-XP)) = form(Case(Dem-XP))),} \]

What differentiates (93) from the matching requirement on Simple Correlatives in (87) is the absence of the \( = \) \( \phi \) clause. This can be seen in (94), where it is possible for the Dem-XPs to be absent even though not all of the case markers on the Dem-XPs involved are \( \phi \).

(94) \[\{pro_j \ldots pro_j \ldots\} (Dayal, p.c.)\]

\[\text{People did what they wanted. Lit. Whoever whatever wanted, they did that}\]

(95) Structures for Correlatives without Dem-XPs

a. DP Adjunction Structures:
   [\( \cup_{\text{cor}} \) Rel-XP \ldots \] [\( y \) YP [\( l \_y \) pro] \ldots]
   [\( \cup_{\text{cor}} \) Rel-XP \ldots] pro] [\( l \_y \) YP [\( l \_y \) \ldots]

b. [\( \cup_{\text{cor}} \) Rel-XP \ldots] [\( l \_y \) YP pro \ldots] (Unavailable)

9 Conclusions and Questions Raised

(96) a’. [\( \cup_{\text{cor}} \) which woman is in the kitchen...]
   [\( l \_y \) Ram thinks [[\( l \_y \) that-woman,] is not in the kitchen]]
   a. [[\( j\_i \) bai ki\( \_i \)\_c\_an madhe ahe], Ram-la \( \text{wat.} \) ki\( \_i \)\_c\_an]
      Rel woman kitchen in is Ram-Dat thinks that Dem woman
      ki\( \_i \)\_c\_an madhe nahii]
      kitchen in Neg.is
      sensible reading: ‘Woman X is in the kitchen, Ram thinks that Woman X is not
      in the kitchen.’
      contradictory reading: ‘Ram thinks that the woman who is in the kitchen is
      not in the kitchen.’

b’. Ram thinks [[\( \cup_{\text{cor}} \) which woman is in the kitchen...]]
   [\( l \_y \) that-woman,] is not in the kitchen]]
   b. Ram-la \( \text{wat.} \) ki [[\( j\_i \) bai ki\( \_i \)\_c\_an madhe ahe], [[\( l\_i \) ti bai],]
      Ram-Dat thinks that Rel woman kitchen in is Dem woman
      ki\( \_i \)\_c\_an madhe nahii]
      kitchen in Neg.is
      contradictory reading: ‘Ram thinks that the woman who is in the kitchen is
      not in the kitchen.’

(97) Bill thinks that the earth is larger than it is.

(98) (from Heim (1985))
   a. We believed that every problem, was harder than it, was.
   b. We expect that every boy, thinks he, is brighter than he, is.

(99) Ram thinks [[\( \cup_{\text{cor}} \)which woman is (really) in the kitchen...]]
   [\( l\_y \) that-woman,] is not in the kitchen]]
   Ram soch-taa hai ki [[\( j\_i \) aurat (sachmuch) rasoi-me hai], [[\( l\_i \) \[vo\]]]
   Ram think-Hab.MSg be.Prs that Rel woman really kitchen-in is Dem
   rasoi-me nahii hai]]
   kitchen-in Neg be.Prs
   without \( \text{sachmuch} \) ‘really’: contradictory reading: ‘Ram thinks that the woman
   who is in the kitchen is not in the kitchen.’
   with \( \text{sachmuch} \) ‘really’: sensible reading: ‘The woman who is really in the kitchen,
   Ram thinks that she is not in the kitchen.’
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