

## Correlative Clauses

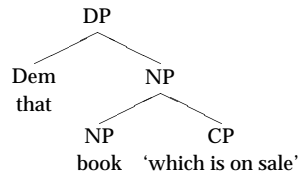
### 1 Three Relativization Strategies

#### 1.1 Externally Headed Relative Clauses

- (1) Basic Components
  - a.  $S_{rel}$  (the relative clause) (which contains a relativized position  $NP_{rel}$ )
  - b. A domain noun **external** to  $S_{rel}$  (= the head NP)
- (2) NP with Relative Clause

[<sub>DP</sub> vo [<sub>NP</sub> **kita:b** [<sub>CP</sub> jo sale-par hai]]] achchhi: hai  
 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.

- (3) Right adjoined Relative Clause

[<sub>DP</sub> vo [<sub>NP</sub> **kita:b**] achchhi: hai [<sub>CP</sub> jo sale-par hai]]  
 Dem book.F good.F be.Prs Rel sale-on be.Prs

'That book is good which is on sale.'

- (4) Things that can vary (cf. Keenan (1985))
  - a.  $S_{rel}$  can be prenominal 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 extraposed 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)).

#### 1.2 Internally Headed Relative Clauses

- (5) Basic Components:
  - a.  $S_{rel}$  (the relative clause)
  - b. a domain NP **internal** to  $S_{rel}$  (no external head)

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

- (6) (Tibetan, from Keenan (1985))

[[PeemE thep khii-pa] **the**] nee yin  
 Peem.Erg book.Abs carry-Part the.Abs I.Gen be

'The book Peem carried is mine.'

- (7) (Diegueño (Hokan, Amerindian), from Keenan (1985))
- ?Ewa:-**pu-L**<sup>y</sup> ?ciyawx  
house-DEF-in I-will-sing  
'I will sing in the house.'
  - TEnay ?Ewa:φ ?Ewu:w  
yesterday house-DO I-saw  
'I saw the house yesterday.'
  - [TEnay ?Ewa:φ ?Ewu:w]-**pu-L**<sup>y</sup> ?ciyawx  
yesterday house-DO I-saw-DEF-in I-will-sing  
'I will sing in the house that I saw yesterday.'

In many languages, the internal head is not explicitly marked. Sometimes this can lead to ambiguity.

- (8) a. (Diegueño, from Keenan (1985))  
[XatEkkok-φ wi:-m ?tuc]-pu-c n<sup>y</sup>iL<sup>y</sup>  
dog-DO rock-COMITATIVE I-hit-DEF-SUBJ was-black  
'The rock I hit the dog with was black'  
'The dog I hit with the rock was black.'
- b. (Quechua, from Comrie (1981):139)  
[Kan kwitsa-man kwintu-ta willa-shka]-ka llapa  
you girl-to story-Acc tell-NMLZ-TOP very  
sumaj-mi  
pretty-VALIDATOR  
'The girl to whom you told the story is very pretty.'  
'The story that you told to the girl is very pretty.'

In others, the internal head may be marked by a relative marker.

- (9) (Bambara (West Africa), from Keenan (1985))
- ne ye so ye  
I Pst horse see  
'I saw a horse.'
  - tye ye [ne ye **[so min]** ye] san  
man Pst I Pst horse REL see buy  
'The man bought the horse which I saw.'

• Other languages with Internally Headed Relative Clauses: Wappo (Amerindian), Lakhota (cf. Williamson (1987)), Navajo.

• What about Free Relatives in English? Issues of quantificational force.

### 1.3 Correlative Clauses

- (10) Basic Components (from Keenan (1985))  
[[S<sub>rel</sub>.....NP<sub>rel</sub>.....] [S<sub>main</sub>.....NP<sub>ana</sub>.....]]
- S<sub>rel</sub> (which contains NP<sub>rel</sub>)
  - S<sub>main</sub> (which contains an NP<sub>ana</sub> associated with S<sub>rel</sub>)

The term **correlative** is often reserved for instances where S<sub>rel</sub> precedes S<sub>main</sub>.

- (11) Simple Correlative:  
[CorCP...Rel-XP<sub>i</sub>...] [IP...Dem-XP<sub>i</sub>...]
- Hindi:  
[jo sale-par hai] [Maya us CD-ko khari:d-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.')
  - Hungarian (from Lipták (2005))  
[Aki korán jött], [azt ingyen beengedték].  
Rel-who early came that-Acc freely PV-admitted-3Pl  
'Those who come early were admitted for free.'
- (12) Multi-Head Correlatives:  
[CorCP...Rel-XP<sub>i</sub>...Rel-YP<sub>j</sub>...] [IP...Dem-XP<sub>i</sub>...Dem-YP<sub>j</sub>...]
- Hungarian (from Lipták (2005))  
[Aki amit kér], az azt elveheti.  
Rel-who Rel-what-Acc wants that that-Acc take-Pot-3Sg  
'Everyone can take what he/she wants.'
  - Marathi  
[jya mula-ne<sub>i</sub> jya muli-la<sub>j</sub> pahila]<sub>i,j</sub> [tya mula-ne<sub>i</sub> tya muli-la<sub>j</sub>  
Rel boy-Erg Rel girl-Acc saw Dem boy-Erg Dem girl-Acc  
pasant kela]  
like did  
'For boy *x*, girl *y* s.t. *x* saw *y*, *x* liked *y*.  
(Lit. [Which boy saw which girl], [that boy liked that girl])

- (13) Marking of NP<sub>rel</sub> and NP<sub>ana</sub>
- NP<sub>rel</sub> is marked in whatever way the language marks NP<sub>rel</sub> in headed relative clauses.

- b. NP<sub>ana</sub> 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<sub>rel</sub> and NP<sub>ana</sub> 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<sub>rel</sub> or S<sub>main</sub>, or both.

(14) (from Srivastav (1991))

- a. 'head' in S<sub>rel</sub>

[S<sub>rel</sub> [jo larkii] kharii hai] [S<sub>main</sub> [vo] lambii hai]  
 Rel girl.f standing.f be.Prs.Sg Dem tall.f be.Prs.Sg

'The girl who is standing is tall.' (Lit. which girl is standing, she is tall.)

- b. 'head' in S<sub>main</sub>

[S<sub>rel</sub> [jo] kharii hai] [S<sub>main</sub> [vo larkii] lambii hai]  
 Rel standing.f be.Prs.Sg Dem girl.f tall.f be.Prs.Sg

'The girl who is standing is tall.' (Lit. who is standing, that girl is tall.)

- c. 'head' in both S<sub>rel</sub> and S<sub>main</sub>

[S<sub>rel</sub> [jo larkii] kharii hai] [S<sub>main</sub> [vo larkii] lambii  
 Rel girl.f standing.f be.Prs.Sg Dem girl.f tall.f

hai]  
 be.Prs.Sg

'The girl who is standing is tall.' (Lit. which girl is standing, that girl is tall.)

The following is a non-exhaustive list of languages where correlative clauses are found: Hittite (Berman (1972), Raman (1973)), Hungarian (Lipták (2005)), 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 Sinhalese: Assamese (Masica (1991)), Bengali (Dasgupta (1980), Bagchi (1994)), Bhojpuri (Grierson (1883), Shukla (1981)), Dakkhini Urdu (Schmidt (1981)), Gujarati (Cardona (1965), Lambert (1971)), Hindi-Urdu (Kachru (1973), Srivastav (1991), Dayal (1996)), Kashmiri (Wali and Koul (1997)), Maithili (Grierson (1883), Yadav (1996)), Marathi (Junghare (1973), Kelkar (1973), Berntsen and Nimbkar (1975),

Junghare (1994), Pandharipande (1997)), Nepali (Masica (1991)), Oriya (Sahoo and Hellan (1998)), Punjabi (Bhatia (1993)), Sindhi (Trumpp (1872)).

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

## 2 Differences between Headed Relative Clauses and Correlatives

### 2.1 Possibilities of an Internal Head

Correlatives allow for the head to appear in both S<sub>rel</sub> and S<sub>main</sub> (cf. 14).

#### 2.1.1 Embedded Externally Headed Relative Clauses

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

- (15) a. no internal head:

mujhe [vo aadmii [jo Sita-ko pasand hai]] accha: nahī:  
 I.Dat that man Rel Sita-Dat like be.Prs.Sg like Neg  
 lag-ta:  
 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:  
 I.Dat that man Rel man Sita-Dat like be.Prs.Sg like  
 nahī: lag-ta:  
 Neg seem-Hab.MSg

'I don't like the man who Sita likes.'

Dialectal variation/'Light headed' relative clauses:

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

%mujhe [vo [[jo aadmii] Sita-ko pasand hai]] accha: nahī:  
 I.Dat that man Rel Sita-Dat like be.Prs.Sg like Neg  
 lag-ta:  
 seem-Hab.MSg

'I don't like the man who Sita likes.'

### 2.1.2 Extraposed Externally Headed Relative Clauses

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

- (17) a. external head, no internal head:  
 mujhe [vo **admii**] accha: nahī: lag-ta: [jo Sita-ko pasand  
 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 **admii**] accha: nahī: lag-ta: [jo **admii**  
 I.Dat that man like Neg seem-Hab.MSg Rel man  
 Sita-ko pasand hai]  
 Sita-Dat like be.Prs.Sg  
 ‘I don’t like the man who Sita likes.’
- c. internal head with no external head:  
 \*mujhe vo accha: nahī: lag-ta: [jo **admii** Sita-ko pasand  
 I.Dat that 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:

- (18) internal head with external head (from Mahajan (2000), see also Marlow (1994)  
 and for parallel Marathi data see Junghare (1994))  
 %mujhe [vo **admii**] accha: nahī: lag-ta: [jo **admii** Sita-ko  
 I.Dat that man like Neg seem-Hab.MSg Rel man Sita-Dat  
 pasand hai]  
 like be.Prs.Sg  
 ‘I don’t like the man who Sita likes.’

Appositive relative clauses also seem to allow for internal heads:

- (19) I read the New Yorker, [which magazine is one of the finest in the country].  
 (Chris Potts, p.c.)

## 2.2 The Demonstrative Requirement

### 2.2.1 Demonstrative Requirement on Correlatives

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

- (20) a. Dem + NP<sub>ana</sub>  
 [[jo CD] sale-par hai] [Aamir [vo CD] khari:d-ega:]  
 Rel CD sale-on be.Prs Aamir Dem CD buy-Fut.MSg  
 ‘Aamir will buy the CD that is on sale.’  
 (Lit. ‘Which CD is on sale, Aamir will buy that CD.’)
- b. Bare NP<sub>ana</sub>  
 \*[jo CD] sale-par hai] [Aamir [CD] khari:d-ega:]  
 Rel CD sale-on be.Prs Aamir CD buy-Fut.MSg  
 (Lit. ‘\*Which CD is on sale, Aamir will buy CD.’)
- c. Some/Every + NP<sub>ana</sub>  
 \*[jo CD] sale-par hai] [Aamir [koi/har CD] khari:d-ega:]  
 Rel CD sale-on be.Prs Aamir some/every CD buy-Fut.MSg  
 (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:nō/...* ‘all/both/all-three/...’ (but not *do/kuchh/adhiktam* ‘two/some/most’), then it need not contain a demonstrative.

- (21) [jo laRkiyā: khaRii hĒ] [sab/dono/\*do/\*kuchh lambii hĒ]  
 Rel girls standing.F be.Prs.Pl all/both/two/some tall.F be.Prs.Pl  
 ‘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.

- (22) [jo CD sale-par hai] achchha: hai  
 Rel CD sale-on be.Prs good.MPl be.Prs  
 ‘[Which CD is on sale] is good.’

• See Grosu (2002) on a proposal that attempts to derive these restrictions and connect them to facts concerning amount relatives.

### 2.2.2 No Demonstrative Requirement on Headed Relatives

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

a. Bare NP head:

[larkii [jo kharīi hai]] lambii hai  
girl.f Rel standing.f be.Prs.Sg tall.f be.Prs.Sg

'The girl who is standing is tall.'

b. every + NP head:

[har [larkii [jo kharīi hai]]] lambii hai  
every girl.f Rel standing.f be.Prs.Sg tall.f be.Prs.Sg

'Every girl who is standing is tall.'

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

a. Bare NP head:

[larkii lambii hai] [jo kharīi hai]  
girl.f tall.f be.Prs.Sg Rel standing.f be.Prs.Sg

'The girl who is standing is tall.'

b. every + NP head:

[har larkii] lambii hai [jo kharīi hai]  
every girl.f Rel standing.f be.Prs.Sg Rel standing.f be.Prs.Sg

'Every girl who is standing is tall.'

### 2.3 Multi-Head Relative Clauses

Multi-Head Relative Clauses are only possible with correlatives.

(25) [jis-ne<sub>i</sub> jo<sub>j</sub> kar-na: cha:h-a:]<sub>i,j</sub> [us-ne<sub>i</sub> vo<sub>j</sub> ki-ya:]  
Rel-Erg Rel do-Ger want-Pfv Dem-Erg Dem do-Pfv

'For *x*, *y* s.t. *x* wanted to do *y*, *x* did *y*.'

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

(26) a. Extraposed English-type Multi-Head Relative Clause

\*[us larkii:-ne<sub>i</sub> us larkii-ko<sub>j</sub> pasand ki-yaa] [jis-ne<sub>i</sub> jis-ko<sub>j</sub>  
Dem girl-Erg Dem boy-Acc like do-Pfv Rel-Erg Rel-Acc  
dekh-aa]  
see-Pfv

'\*That girl liked that boy, who saw whom.'

b. Non-extraposed English-type Relative Clause  
impossible to construct

### 2.4 Stacking

McCawley (2004) notes that while externally headed relative clauses allow for stacking, correlatives do not.

(27) a. Stacked Headed Relative Clause

har aadmii [jo mujhe pasand hai] [jise mĒ-ne bulaa-yaa  
every man Rel I.Dat like be.Prs.Sg Rel.Acc I-Erg call-Pfv  
hai] aa-egaa  
be.Prs.Sg come-Fut.MSg

'Every man [who I like] [who I have called] will come.'

b. Stacked Correlative

\*[jo mujhe pasand hai] [jise mĒ-ne bulaa-yaa hai] [vo  
Rel I.Dat like be.Prs.Sg Rel.Acc I-Erg call-Pfv be.Prs.Sg Rel  
aadmii aa-egaa]  
man 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.

### 2.5 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:

- (28) 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.

(29) 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.

But even so, there are places where the two diverge:  
 Headed relatives do not permit *-ever* while free relatives/correlatives do.

- (30) a. I'll read [whichever book you ask me to].  
 b. \*I'll read the book [whichever you ask me to]

Lipták (2005) notes that the relative pronoun *amely* 'Rel-which' can only occur in headed relatives, not in free relatives/correlatives:

- (31) a. headed relative/\*free relative:  
 Olvasom \*(azt a könyvet) [amelyet most vettem]  
 read-1Sg that-Acc the book-Acc Rel-which-Acc now bought-1Sg  
 'I am reading the book that I have just bought.'  
 b. correlative:  
 [Amelyet most vettem], azt a könyvet olvasom.  
 Rel-which-Acc now bought-1Sg that-Acc the book-Acc read-1Sg

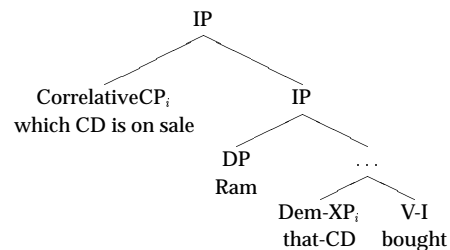
### 3 Structures for Correlatives

#### 3.1 Structures Proposed for Simple Correlatives

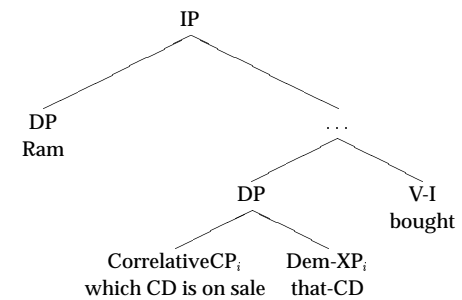
##### 3.1.1 Option 1: Base-generation in an IP-adjoined Position

Argued for by Srivastav (1991), Dayal (1996)

- (32) IP adjunction:  
 '[\_IP[which CD is on sale], [\_IP Ram bought that CD]]'



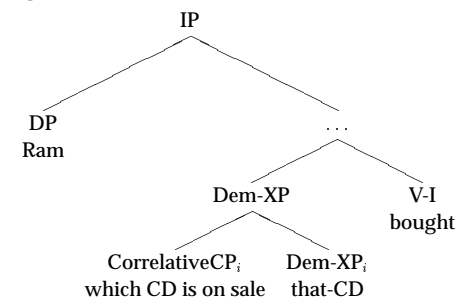
- (33) Dem-XP adjunction  
 'Ram bought [[which CD is on sale] that CD]'



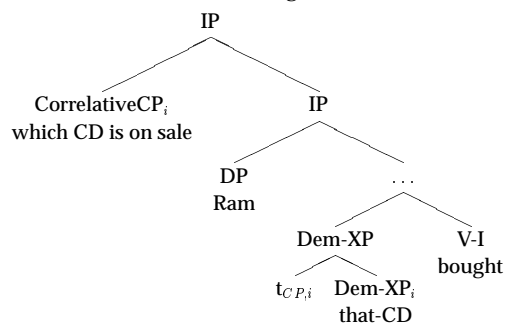
##### 3.1.2 Option 2: Base-generation in an Dem-XP-adjoined Position

Argued for by Bhatt (2003) (see Wali (1982), Bains (1994), Mahajan (2000) for related ideas).

- (34) Dem-XP adjunction  
 'Ram bought [[which CD is on sale] that CD]'



- (35) IP adjunction, via movement:  
 '[which CD is on sale]<sub>i</sub>, [<sub>IP</sub> Ram bought [<sub>t<sub>i</sub></sub> that-CD<sub>i</sub>]]'



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

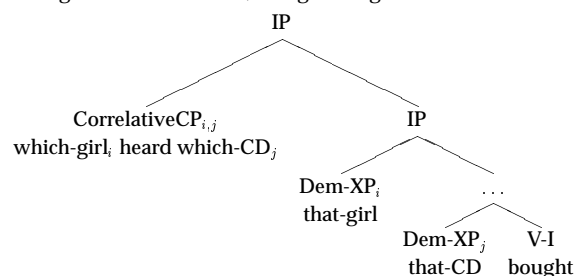
- c. Multi-Head Correlative: [<sub>CP</sub> ... Rel-XP<sub>i</sub> Rel-XP<sub>j</sub>...] <sub>i,j</sub> [... Dem-XP<sub>i</sub> Dem-XP<sub>j</sub>...]

Option 1: the CP is generated adjoined to IP

Option 2: the CP is generated adjoined to IP

### 3.2 Structures Proposed for Multi-Head Correlatives

- (36) IP adjunction:  
 'which girl heard which CD, that girl bought that CD'



### 3.3 The Options

- (37) a. Simple Correlative 1: [<sub>CP</sub> ... Rel-XP ...] <sub>i</sub> [... Dem-XP<sub>i</sub> ...]

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: ... [[<sub>CP</sub> ... Rel-XP ...] Dem-XP] ...

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

## 4 Arguments for movement of the Correlative Clause

### 4.1 Island Effects

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

- (38) [Correlative-CP]<sub>i</sub> [<sub>CP<sub>finite</sub></sub> Sita thinks that [<sub>CP<sub>finite</sub></sub> ... Dem-XP<sub>i</sub> ... ]]

[jo lar̥ki: TV-par ga: rah-i: hai]<sub>i</sub> [Sita soch-ti: hai [<sub>CP<sub>finite</sub></sub> ki  
 Rel girl TV-on sing Prog be.Prs Sita.F think-Hab.F be.Prs that  
 vo<sub>i</sub> sundar hai]]  
 Dem beautiful be.Prs

'Sita thinks that the girl who is singing on TV is beautiful.'

- (39) \* [Correlative-CP]<sub>i</sub> [<sub>IP</sub> ... [<sub>NP</sub> NP [<sub>RC</sub> ... Dem-XP<sub>i</sub> ... ]]] ... ]

\* [jo vahā: rah-ta: hai]<sub>i</sub> mujh-ko [vo kaha:ni: [<sub>RC</sub> jo Arundhati-ne  
 Rel there stay-Hab be.Prs I-Dat that story.F Rel Arundhati-Erg  
 us-ke-baare-mē likh-ii]] pasand hai  
 Dem-about write-Pfv.F like be.Prs

'\*Who lives there, I like the story that Arundhati wrote about that boy.'

- (40) Variable binding into a Relative Clause: no island effects

- a. Every boy<sub>i</sub> likes [the story [<sub>RC</sub> that Arundhati wrote about him<sub>i</sub>]].  
 b. har lar̥ke-ko<sub>i</sub> [vo kaha:ni: [<sub>RC</sub> jo Arundhati-ne us-ke-baare-mē,  
 every boy-Dat that story.F Rel Arundhati-Erg Pron-about  
 likh-ii]] pasand hai  
 write-Pfv.F like be.Prs  
 'Every boy<sub>i</sub> likes [the story [<sub>RC</sub> that Arundhati wrote about him<sub>i</sub>]].'

Hence something must be moving. What is this something?

#### 4.1.1 Izvorski (1996): the Dem Phrase moves

- (41) Movement of Dem is obligatory (Bulgarian: from Izvorski (1996))
- a'. [Correlative-Clause]<sub>i</sub> [<sub>IP</sub> Dem-XP<sub>i</sub> ... t<sub>i</sub> ...]
- a. [Kolkoto pari iska]<sub>i</sub> *tolkova*<sub>i</sub> misli će šte i dam  
 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]<sub>i</sub> [<sub>IP</sub> ... Dem-XP<sub>i</sub>]
- b. \* [Kolkoto pari iska]<sub>i</sub> misli će šte i dam *tolkova*<sub>i</sub>  
 how-much money wants thinks that will her give-1Sg Dem-much
- (42) \* [Correlative-Clause]<sub>i</sub> [<sub>IP</sub> Dem-XP<sub>i</sub> ... [<sub>Island</sub> ... t<sub>i</sub> ...]] (Bulgarian)
- \* [Kakto im kazah]<sub>i</sub> *taka*<sub>i</sub> čuh [<sub>NP</sub> sluha [<sub>CP</sub> će t<sub>i</sub> sa  
 how them told-1Sg Dem-way heard-1Sg the-rumor that are  
 postâpili]]  
 done  
 'I heard the rumor that they had acted the way I had told them to.'

Putatively movement of Dem Phrase in Hindi would be covert.

#### 4.1.2 No Covert Movement out of Finite Clauses

- (43) *wh*-word in embedded clause
- a'. non-finite clause, wide scope question reading available  
 [<sub>IP</sub> ... [<sub>NonFiniteClause</sub> ... Wh-XP ...]]
- a. Ram [kis-se mil-na:] cha:h-ta: hai  
 Ram who-with meet-Ger want-Hab be.Prs  
 'Who does John want to meet?'
- b'. finite clause, wide scope question reading not available  
 [<sub>IP</sub> ... [<sub>FiniteClause</sub> ... Wh-XP ...]]
- b. Sita jaan-tii hai ki Radha kis-se mil rahi: hai  
 Sita know-Hab.F be.Prs that Radha.F who-with meet Prog.F be.Prs  
 'Sita knows who Radha is meeting with.'  
 Not available: 'Who does Sita know that Radha is meeting with?'
- (44) \* XP<sub>i</sub> ... [<sub>CP</sub> <sub>finite</sub> ... t<sub>i,LF</sub>]

#### 4.1.3 Overt Movement out of Finite Clauses

- (45) a'. overt movement out of a finite clause is ok  
 XP<sub>i</sub> ... [<sub>CP</sub> <sub>finite</sub> ... t<sub>XP,overt</sub>]
- a. Lata, Sita ja:n-ti: hai [ki Poonam-ko t<sub>i</sub> pasand hai]  
 Lata Sita know-Hab.F be.Prs that Poonam-Dat like be.Prs  
 'Lata, Sita knows that Poonam likes.'
- b'. overt movement out of a Relative Clause Island is not ok  
 XP<sub>i</sub> ... [<sub>NP</sub> N [<sub>RelCl</sub> ... t<sub>i</sub> ...]]
- b. \*Arundhati-ne<sub>i</sub>, mujh-ko [vo kaha:ni: [<sub>RelCl</sub> jo t<sub>i</sub> likh-ii]] pasand  
 Arundhati-Erg I-Dat that story.F Rel write-Pfv.F like  
 hai  
 be.Prs  
 '\*Arundhati<sub>i</sub>, I like the story that t<sub>i</sub> wrote.'

Local Conclusion: it is the correlative clause that is (overtly) moving.

#### 4.2 Constituency and constraints on fronting of the Correlative Clause

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

- (46) Rahul nowadays [<sub>DP</sub> [<sub>DP</sub> CorCP<sub>1</sub> Dem-XP<sub>1</sub>] and [<sub>DP</sub> CorCP<sub>2</sub> Dem-XP<sub>2</sub>]] read-  
 ing is
- Rahul a:jkal [<sub>DP</sub> [<sub>DP</sub> [jo kita:b Saira-ne likh-i:]<sub>1</sub> vo<sub>1</sub>] aur [<sub>DP</sub>  
 Rahul nowadays Rel book.F Saira-Erg write-Pfv.F Dem and  
 [jo cartoon Shyam-ne bana:-ya:]<sub>2</sub> vo<sub>2</sub>]] paṛh raha: hai  
 Rel cartoon 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)].')

(47) Rahul [<sub>DP</sub> [<sub>DP</sub> CorCP<sub>1</sub> Dem-XP<sub>1</sub>] and [<sub>DP</sub> CorCP<sub>2</sub> Dem-XP<sub>2</sub>]]<sub>j</sub> nowadays <sub>t<sub>i</sub></sub>  
reading is

Rahul [<sub>DP</sub> [<sub>DP</sub> jho kita:b Saira-ne likh-i-<sub>i</sub>] <sub>vo</sub><sub>1</sub>] aur [<sub>DP</sub> jho cartoon  
Rahul Rel book.F Saira-Erg write-Pfv.F Dem and Rel cartoon  
Shyam-ne bana:-ya:<sub>i</sub>] <sub>vo</sub><sub>2</sub>]]<sub>j</sub> a:jkal <sub>t<sub>j</sub></sub> pa:rh raha: hai  
Shyam-Erg make-Pfv Dem nowadays 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) Extraction out of a co-ordinate island

a'. ???CorCP<sub>1</sub> [Rahul is reading

[<sub>DP</sub> [<sub>DP</sub> <sub>t<sub>CP1</sub></sub> Dem-XP<sub>1</sub>] and [<sub>DP</sub> CorCP<sub>2</sub> Dem-XP<sub>2</sub>]]]

a. ??? jho kita:b Saira-ne likh-i-<sub>i</sub>] [Rahul a:jkal [<sub>DP</sub> [<sub>DP</sub> <sub>t<sub>CP1</sub></sub>  
Rel book.F Saira-Erg write-Pfv.F Rahul nowadays

<sub>vo</sub><sub>1</sub>] aur [<sub>DP</sub> jho cartoon Shyam-ne bana:-ya:<sub>i</sub>] <sub>vo</sub><sub>2</sub>]] pa:rh raha:

Dem and Rel cartoon Shyam-Erg make-Pfv Dem read Prog

hai]

be.Prs

??? 'which book that Saira wrote]<sub>i</sub>, nowadays, Rahul is reading [that (book)]<sub>1</sub> and [which cartoon that Shyam made] that (cartoon)].'

b'. \*CorCP<sub>2</sub> [Rahul is reading

[<sub>DP</sub> [<sub>DP</sub> CorCP<sub>1</sub> Dem-XP<sub>1</sub>] and [<sub>DP</sub> <sub>t<sub>CP2</sub></sub> Dem-XP<sub>2</sub>]]]

b. \* jho cartoon Shyam-ne bana:-ya:<sub>i</sub>] <sub>vo</sub><sub>1</sub>] [Rahul a:jkal [<sub>DP</sub> [<sub>DP</sub> jho  
Rel cartoon Shyam-Erg make-Pfv Rahul nowadays Rel

kita:b Saira-ne likh-i-<sub>i</sub>] <sub>vo</sub><sub>1</sub>] aur [<sub>DP</sub> <sub>t<sub>CP2</sub></sub>] pa:rh raha:

book.F Saira-Erg write-Pfv.F Dem and

hai]

be.Prs

\*[which cartoon that Shyam made]<sub>2</sub>, nowadays, Rahul is reading [which book that Saira wrote] that (book)] and [<sub>t<sub>CP2</sub></sub> that (cartoon)].'

#### 4.2.2 Constraints on fronting of the Correlative Clause

(49) [<sub>LP</sub> ... [CorCP<sub>1</sub> Dem-XP<sub>1</sub>] ... [CorCP<sub>2</sub> Dem-XP<sub>2</sub>] ...]

Ram-ne [[jho la:kaa tumhaare pi:chhe hai]<sub>1</sub> [us la:ke-ko]<sub>1</sub>] [[jho kita:b  
Ram-Erg Rel boy your behind is Dem boy-Dat Rel book  
Shantiniketan-ne chha:api thi]<sub>2</sub> [vo kitaab]<sub>2</sub>] dhi  
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 Shantiniketan had published] that book] to [which boy is behind you] that boy].')

(50) a'. CorCP<sub>1</sub> [<sub>LP</sub> ... Dem-XP<sub>1</sub>] ... [CorCP<sub>2</sub> Dem-XP<sub>2</sub>] ...]

a. jho la:ka: tumhaare pi:chhe hai]<sub>1</sub> Ram-ne [us la:ke-ko]<sub>1</sub> [[jho  
Rel boy-Dat your behind be.Prs Ram-Erg Dem boy-Dat Rel  
kita:b Shantiniketan-ne chha:pi: thi]<sub>2</sub> [vo kitaab]<sub>2</sub>]  
book Shantiniketan-Erg publish-Pfv.F be.Pst.F Dem book  
dhi  
give-Pfv.F

'Ram gave the book that Shantiniketan had published to the boy who is standing behind you.' (lit. [which boy is behind you]<sub>1</sub>, Ram gave [that boy]<sub>1</sub>, [which book Shantiniketan had published] that book)]

b'. CorCP<sub>2</sub> [<sub>LP</sub> ... [CorCP<sub>1</sub> Dem-XP<sub>1</sub>] ... [Dem-XP<sub>2</sub>] ...]

b. jho kita:b Shantiniketan-ne chha:pi: thi]<sub>2</sub> Ram-ne [[jho  
Rel book Shantiniketan-Erg publish-Pfv.F be.Pst.F Ram-Erg Rel  
la:kaa tumhaare pi:chhe hai]<sub>1</sub> [us la:ke-ko]<sub>1</sub>] [vo kitaab]<sub>2</sub>  
boy your behind is Dem boy-Dat Dem book  
dhi  
give-Pfv.F

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

(51) a'. \*CorCP<sub>1</sub> CorCP<sub>2</sub> [<sub>LP</sub> ... Dem-XP<sub>1</sub>] ... Dem-XP<sub>2</sub> ...]

a. \* jho la:ka: tumhaare pi:chhe hai]<sub>1</sub> [jho kita:b Shantiniketan-ne  
Rel boy-Dat your behind be.Prs Rel book Shantiniketan-Erg  
chha:pi: thi]<sub>2</sub> Ram-ne [us la:ke-ko]<sub>1</sub> [vo kitaab]<sub>2</sub>  
publish-Pfv.F be.Pst.F Ram-Erg Dem boy-Dat Dem book  
dhi  
give-Pfv.F

intended interpretation is same as (49)

- b'. \*CorCP<sub>2</sub> CorCP<sub>1</sub> [<sub>IP</sub> ... Dem-XP<sub>1</sub> ... Dem-XP<sub>2</sub> ...]
- b. \* [jo kita:b Shantiniketan-ne chha:pi: thi:]<sub>2</sub> [jo lar̥ka:  
Rel book Shantiniketan-Erg publish-Pfv.F be.Pst.F Rel boy-Dat  
tumha:re pi:chhe hai]<sub>1</sub> Ram-ne [us lar̥ke-ko]<sub>1</sub> [vo kitaab]<sub>2</sub>  
your behind be.Prs Ram-Erg Dem boy-Dat Dem book  
dii  
give-Pfv.F  
intended interpretation is same as (49)
- (52) ok: extraction of two arguments out of a clause
- a'. 'topicalization': XP<sub>i,arg</sub> YP<sub>j,arg</sub> [<sub>CP</sub> ... [<sub>CP</sub> ... t<sub>i</sub> ... t<sub>j</sub> ...]]
- a. Ram-ne<sub>i</sub> Sita-ko<sub>j</sub>, Radha soch-ti: hai, ki kai tohfe  
Ram-Erg Sita-Dat Radha think-Hab.F be.Prs that many presents  
di-ye the  
give-Pfv.Pl be.Pst.MPI  
'Radha thinks that Ram gave Sita many presents.'
- b'. 'wh-movement': Wh-XP<sub>i,arg</sub> Wh-YP<sub>j,arg</sub> [<sub>CP</sub> ... [<sub>CP</sub> ... t<sub>i</sub> ... t<sub>j</sub> ...]]
- b. kis-ne<sub>i</sub> kis-ko<sub>j</sub>, Radha soch-ti: hai, ki t<sub>i</sub> t<sub>j</sub> kai tohfe  
who-Erg who-Dat Radha think-Hab.F be.Prs that many presents  
di-ye the  
give-Pfv.Pl be.Pst.MPI  
'For which *x*, *y*, Radha thinks that *x* gave *y* many presents.'
- (53) ok: extraction of one adjunct out of a clause
- a'. kahā:/ 'where': XP<sub>i,adj</sub> [<sub>CP</sub> ... [<sub>CP</sub> ... t<sub>i</sub> ...]]
- a. kahā:<sub>i</sub>, Radha soch-ti: hai, ki Ram-ne Sita-ko tohfe t<sub>i</sub>  
where Radha think-Hab.F be.Prs that Ram-Erg Sita-Dat presents  
di-ye the?  
give-Pfv.Pl be.Pst.MPI  
'Where<sub>i</sub> does Radha think [that Ram gave presents to Sita t<sub>i</sub>]?'
- b'. kab'/ 'when': XP<sub>i,adj</sub> [<sub>CP</sub> ... [<sub>CP</sub> ... t<sub>i</sub> ...]]
- b. kab:<sub>i</sub>, Radha soch-ti: hai, ki Ram-ne Sita-ko tohfe t<sub>i</sub>  
when Radha think-Hab.F be.Prs that Ram-Erg Sita-Dat presents  
di-ye the?  
give-Pfv.Pl be.Pst.MPI  
'When<sub>i</sub> does Radha think [that Ram gave presents to Sita t<sub>i</sub>]?'
- (54) a'. 'where when': XP<sub>i,adj</sub> YP<sub>j,adj</sub> [<sub>CP</sub> ... [<sub>CP</sub> ... t<sub>i</sub> ... t<sub>j</sub> ...]]
- a. \* kahā:<sub>i</sub> kab<sub>j</sub>, Radha soch-ti: hai, ki Ram-ne Sita-ko  
where when Radha think-Hab.F be.Prs that Ram-Erg Sita-Dat  
tohfe t<sub>i</sub> t<sub>j</sub> di-ye the?  
presents give-Pfv.Pl be.Pst.MPI

- \*'For which *x*, *y*, Radha thinks [that Ram gave presents to Sita at place *x*, time *y*]?'
- b'. 'when where': YP<sub>j,adj</sub> XP<sub>i,adj</sub> [<sub>CP</sub> ... [<sub>CP</sub> ... t<sub>i</sub> ... t<sub>j</sub> ...]]
- \* kab<sub>j</sub> kahā:<sub>i</sub>, Radha soch-ti: hai, ki Ram-ne Sita-ko  
when where Radha think-Hab.F be.Prs that Ram-Erg Sita-Dat  
tohfe t<sub>i</sub> t<sub>j</sub> di-ye the?  
presents give-Pfv.Pl be.Pst.MPI  
'\*For which *x*, *y*, Radha thinks [that Ram gave presents to Sita at place *x*, time *y*]?'

(55) \*Cor-CP<sub>1</sub> Cor-CP<sub>2</sub> [ ... [t<sub>1,adjunct</sub> Dem-XP<sub>1</sub>] ... [t<sub>2,adjunct</sub> Dem-XP<sub>2</sub>] ... ]

### 4.3 Reconstruction Effects

#### 4.3.1 Condition C effects

- (56) a'. [<sub>CorCP</sub> ... Name<sub>j</sub> ... ]<sub>i</sub> [[t<sub>i</sub> Dem-XP<sub>i</sub>] Pron<sub>j</sub> ... ]
- a. [jo lar̥kii Sita-ko<sub>j</sub> pyaar kar-tii hai]<sub>i</sub> [us-ne<sub>i</sub> us-ko<sub>j</sub> thukraa  
Rel girl Sita-Acc love do-Hab.F is Dem-Erg Dem-Acc reject  
di-yaa]  
GIVE-Pfv  
'The girl who loves Sita rejected her.'
- b'. \* [<sub>CorCP</sub> ... Name<sub>j</sub> ... ]<sub>i</sub> [Pron<sub>j</sub> [t<sub>i</sub> Dem-XP<sub>i</sub>] ... ]
- b. [jo lar̥kii Sita-ko<sub>j</sub> pyaar kar-tii hai]<sub>i</sub> [us-ne<sub>k/∗j</sub> us-ko<sub>i</sub> thukraa  
Rel girl Sita-Acc love do-Hab.F is Dem-Erg Dem-Acc reject  
di-yaa]  
GIVE-Pfv  
'She rejected the girl who loves Sita.'
- c'. [<sub>CorCP</sub> ... Name<sub>j</sub> ... ]<sub>i</sub> [[t<sub>i</sub> Dem-XP<sub>i</sub>] Pron<sub>j</sub> ... ]
- c. [jo lar̥kii Sita-ko<sub>j</sub> pyaar kar-tii hai]<sub>i</sub> [us-ko<sub>i</sub> us-ne<sub>j/k</sub> thukraa  
Rel girl Sita-Acc love do-Hab.F is Dem-Acc Dem-Erg reject  
di-yaa]  
GIVE-Pfv  
'She rejected the girl who loves Sita.'
- d'. \* [<sub>CorCP</sub> ... Name<sub>j</sub> ... ]<sub>i</sub> [Pron<sub>j</sub> [t<sub>i</sub> Dem-XP<sub>i</sub>] ... ]
- d. [jo lar̥kii Sita-ko<sub>j</sub> pyaar kar-tii hai]<sub>i</sub> [us-ko<sub>k/∗j</sub> us-ne<sub>i</sub> thukraa  
Rel girl Sita-Acc love do-Hab.F is Dem-Acc Dem-Erg reject  
di-yaa]  
GIVE-Pfv  
'The girl who loves Sita rejected her.'

### 4.3.2 Variable Binding

- (57) a. \*His<sub>i</sub> mother loves every boy<sub>i</sub>.  
 b. Every boy<sub>i</sub> loves his<sub>i</sub> mother.
- (58) a. [His<sub>i</sub> band]<sub>j</sub> seems to every Austinite<sub>i</sub> [t<sub>j</sub> to be the best].  
 b. [Someone from his<sub>i</sub> class]<sub>j</sub> seems to every professor<sub>i</sub> [t<sub>j</sub> to be a genius].  
 c. [His<sub>i</sub> father]<sub>j</sub> seems to every boy<sub>i</sub> [t<sub>j</sub> to be a genius].  
 ((58b, c) are from Fox (2000), pg. 147.)
- (59) a. LF: seems to every Austinite<sub>i</sub> [his<sub>i</sub> band to be the best]  
 b. LF: seems to every professor<sub>i</sub> [someone from his<sub>i</sub> class] to be a genius].  
 c. LF: seems to every boy<sub>i</sub> [his<sub>i</sub> father] to be a genius].
- (60) a'. [<sub>CP</sub> ... Pron<sub>i</sub> ... ]<sub>j</sub> [QP<sub>i</sub> [t<sub>j</sub> Dem-XP<sub>j</sub>] ... ]  
 a. [jis larke-ko vo; pasand kar-ti: hai]<sub>j</sub> [har larki-ti; [t<sub>j</sub> [us Rel boy-Dat Dem like do-Hab.F be.Prs every girl Dem larke-ko]<sub>j</sub>] buddhima:n samajh-ti: hai]<sub>j</sub> boy-Dat intelligent consider-Hab.F be.Prs  
 'Every girl considers the boy who she likes to be intelligent.'
- (61) a'. [<sub>MathCP</sub> Rel<sub>k</sub> Name<sub>j</sub> Rel<sub>k</sub> ... ] [Pron<sub>j</sub> Dem-XP<sub>k</sub> Dem-XP<sub>i</sub> ... ]  
 a. [jis-ne; Ram-ko<sub>j</sub> jise<sub>k</sub> di-yaa] [us-ne<sub>j</sub> us-se<sub>k</sub> us<sub>k</sub>-kii Rel-Erg Ram-Acc Rel.Dat give-Pfv Dem-Erg Dem-Inst Dem-Gen.F taariif kil] praise did  
 'For *x*, *y* s.t. *x* gave Ram to *y*, Ram praised *x* to *y*.'
- b'. [<sub>MathCP</sub> Rel<sub>k</sub> Name<sub>j</sub> Rel<sub>k</sub> ... ] [Pron<sub>j</sub> Dem-XP<sub>i</sub> Dem-XP<sub>k</sub> ... ]  
 b. [jis-ne; Ram-ko<sub>j</sub> jise<sub>k</sub> di-yaa] [us-ne<sub>j</sub> us-se<sub>i</sub> us<sub>k</sub>-kii Rel-Erg Ram-Acc Rel.Dat give-Pfv Dem-Erg Dem-Inst Dem-Gen.F taariif kil] praise did  
 'For *x*, *y* s.t. *x* gave Ram to *y*, Ram praised *y* to *x*.'
- c'. [<sub>MathCP</sub> Rel<sub>k</sub> Name<sub>j</sub> Rel<sub>k</sub> ... ] [Dem-XP<sub>k</sub> Pron<sub>j</sub> Dem-XP<sub>i</sub> ... ]  
 c. [jis-ne; Ram-ko<sub>j</sub> jise<sub>k</sub> di-yaa] [us-ne<sub>k</sub> us-se<sub>j</sub> us<sub>i</sub>-kii Rel-Erg Ram-Acc Rel.Dat give-Pfv Dem-Erg Dem-Inst Dem-Gen.F taariif kil] praise did  
 'For *x*, *y* s.t. *x* gave Ram to *y*, *y* praised Ram to *x*.'
- d'. [<sub>MathCP</sub> Rel<sub>k</sub> Name<sub>j</sub> Rel<sub>k</sub> ... ] [Dem-XP<sub>i</sub> Pron<sub>j</sub> Dem-XP<sub>k</sub> ... ]  
 d. [jis-ne; Ram-ko<sub>j</sub> jise<sub>k</sub> di-yaa] [us-ne<sub>i</sub> us-se<sub>j</sub> us<sub>k</sub>-kii Rel-Erg Ram-Acc Rel.Dat give-Pfv Dem-Erg Dem-Inst Dem-Gen.F taariif kil] praise did  
 'For *x*, *y* s.t. *x* gave Ram to *y*, *x* praised *y* to Ram.'
- e'. [<sub>MathCP</sub> Rel<sub>k</sub> Name<sub>j</sub> Rel<sub>k</sub> ... ] [Dem-XP<sub>k</sub> Dem-XP<sub>i</sub> Pron<sub>j</sub> ... ]  
 e. [jis-ne; Ram-ko<sub>j</sub> jise<sub>k</sub> di-yaa] [us-ne<sub>k</sub> us-se<sub>i</sub> us<sub>j</sub>-kii Rel-Erg Ram-Acc Rel.Dat give-Pfv Dem-Erg Dem-Inst Dem-Gen.F taariif kil] praise did  
 'For *x*, *y* s.t. *x* gave Ram to *y*, *y* praised Ram to *x*.'
- f'. [<sub>MathCP</sub> Rel<sub>k</sub> Name<sub>j</sub> Rel<sub>k</sub> ... ] [Dem-XP<sub>i</sub> Dem-XP<sub>k</sub> Pron<sub>j</sub> ... ]  
 f. [jis-ne; Ram-ko<sub>j</sub> jise<sub>k</sub> di-yaa] [us-ne<sub>i</sub> us-se<sub>k</sub> us<sub>j</sub>-kii Rel-Erg Ram-Acc Rel.Dat give-Pfv Dem-Erg Dem-Inst Dem-Gen.F taariif kil] praise did  
 'For *x*, *y* s.t. *x* gave Ram to *y*, *x* praised Ram to *y*.'
- (62) \* [<sub>MathCP</sub> Pron<sub>i</sub> Rel<sub>j</sub> Rel<sub>k</sub> ... ] [QP<sub>i</sub> Dem-XP<sub>j</sub> Dem-XP<sub>k</sub> ... ]  
 \* [us-ne<sub>i</sub> jis larke-ko<sub>j</sub> jo kita:b<sub>k</sub> di-i] [har larki-ne<sub>i</sub> us Dem-Erg Rel boy-Dat Rel book.F give-Pfv.F every girl-Erg Dem larke-se<sub>j</sub> us kita:b<sub>k</sub> ke-ba:re-me bat: ki-i] boy-with Dem book about talk do-Pfv.F  
 \*\*For book *x*, boy *y* s.t she<sub>i</sub> gave *x* to *y*, every girl<sub>i</sub> talked to *y* about *x*.'

### 4.3.3 Prediction: Non-reconstruction effects with Multi-Head Correlatives

- (61) a'. [<sub>MathCP</sub> Rel<sub>k</sub> Name<sub>j</sub> Rel<sub>k</sub> ... ] [Pron<sub>j</sub> Dem-XP<sub>k</sub> Dem-XP<sub>i</sub> ... ]  
 a. [jis-ne; Ram-ko<sub>j</sub> jise<sub>k</sub> di-yaa] [us-ne<sub>j</sub> us-se<sub>k</sub> us<sub>k</sub>-kii Rel-Erg Ram-Acc Rel.Dat give-Pfv Dem-Erg Dem-Inst Dem-Gen.F taariif kil] praise did  
 'For *x*, *y* s.t. *x* gave Ram to *y*, Ram praised *x* to *y*.'
- b'. [<sub>MathCP</sub> Rel<sub>k</sub> Name<sub>j</sub> Rel<sub>k</sub> ... ] [Pron<sub>j</sub> Dem-XP<sub>i</sub> Dem-XP<sub>k</sub> ... ]  
 b. [jis-ne; Ram-ko<sub>j</sub> jise<sub>k</sub> di-yaa] [us-ne<sub>j</sub> us-se<sub>i</sub> us<sub>k</sub>-kii Rel-Erg Ram-Acc Rel.Dat give-Pfv Dem-Erg Dem-Inst Dem-Gen.F taariif kil] praise did  
 'For *x*, *y* s.t. *x* gave Ram to *y*, Ram praised *y* to *x*.'

#### 4.3.4 Reconstruction effects with Multi-Head Correlatives

- (63) [ $_{MultCorCP}$  Rel<sub>i</sub> Rel<sub>j</sub> ...][Bill thinks that [ $_{IP}$  ... Dem-XP<sub>i</sub> Dem-XP<sub>j</sub> ...]]  
 a. Option 1: base-generation  
 [ $_{MultCorCP}$  Rel<sub>i</sub> Rel<sub>j</sub> ...][Bill thinks that [ $_{IP}$  ... Dem-XP<sub>i</sub> Dem-XP<sub>j</sub> ...]]  
 b. Option 2: Multi-Head Correlative Clause moves up  
 [ $_{MultCorCP}$  Rel<sub>i</sub> Rel<sub>j</sub> ...]<sub>k</sub> [Bill thinks that [ $_{IP}$  ... Dem-XP<sub>i</sub> Dem-XP<sub>j</sub> ... ]]]
- (64) \* [ $_{MultCorCP}$  Rel<sub>i</sub> Name<sub>j</sub> Rel<sub>k</sub> ...]<sub>i</sub> [Pron<sub>j</sub> thinks that [ $_{IP}$  ... Dem-XP<sub>i</sub> Dem-XP<sub>k</sub> ... ]]]  
 [jis larke-ne Sita-se, jis topic ke-baare-me baat ki-i]<sub>i</sub> [vo<sub>j/wi</sub>  
 Rel boy-Erg Sita-with Rel topic about talk did Dem  
 soch-tii hai ki [ $_{IP}$  [vo larkaa us topic par paper likh-egaa ]]  
 think-Hab.F is that Dem boy Dem.Obl topic on paper write-Fut  
 ‘For  $x$ ,  $y$  s.t.  $x$  talked to Sita<sub>i</sub> about topic  $y$ , she<sub>j/wi</sub> thinks that  $x$  will write a paper on topic  $y$ .’
- (65) [ $_{MultCorCP}$  Pron<sub>i</sub> Rel<sub>j</sub> Rel<sub>k</sub> ...]<sub>i</sub> [QP<sub>i</sub> ... V [ $_{CP}$  Dem-XP<sub>j</sub> Dem-XP<sub>k</sub> ... ]]]  
 [us-ne, jis larke-ko<sub>j</sub> jo kita:b<sub>k</sub> di-i]<sub>i</sub> [har larke soch-ti:  
 Dem-Erg Rel boy-Dat Rel book.F give-Pfv.F every girl think-Hab.F  
 hai [ki  $t_i$  [us larke-ko vo kita:b pasand a:-yegi:]]]  
 be.Prs that Dem boy-Dat Dem book.F like ‘come’-Fut.F  
 ‘Every girl<sub>i</sub> thinks that for book  $x$ , boy  $y$  s.t. she<sub>i</sub> gave  $x$  to  $y$ ,  $y$  will like  $x$ .’
- (66) \* [ $_{MultCorCP}$  Rel<sub>i</sub> Rel<sub>j</sub> ...] [... Dem-XP<sub>i</sub> ... V [ $_{CP}$  ... Dem-XP<sub>j</sub> ... ]]  
 \* [jis-ne, jis-ko<sub>j</sub> dekh-aa] [us-ne, kah-aa [ $_{CP}$  ki vo<sub>j</sub> aa-yega:]]  
 Rel-Erg Rel-Acc see-Pfv Dem-Erg say-Pfv that Dem come-Fut  
 ‘For which  $x$ ,  $y$  s.t.  $x$  saw  $y$ ,  $x$  said that  $y$  will come.’ (from Wali (1982) via Dayal (1996))
- (67) [ $_{CorCP}$  ... Rel-XP<sub>i</sub> ... Rel-YP<sub>j</sub> ...]<sub>i,j</sub> [ $_{IP}$  ... Dem-XP<sub>i</sub> ... Dem-YP<sub>j</sub> ... ]  
 [jis-ne, jo<sub>j</sub> kar-na: cha:h-a:]<sub>i,j</sub> [us-ne, vo<sub>j</sub> ki-ya:]  
 Rel-Erg Rel do-Ger want-Pfv Dem-Erg Dem do-Pfv  
 ‘For  $x$ ,  $y$  s.t.  $x$  wanted to do  $y$ ,  $x$  did  $y$ .’  
 (Lit. ‘Who wanted to do what, he/she did that.’)
- (68) [ $_{CorCP}$  ... Rel-XP<sub>i</sub> ... Rel-YP<sub>j</sub> ...]<sub>i,j</sub> Dem-XP<sub>i</sub> Dem-XP<sub>j</sub> [ $_{IP}$  ...  $t_i$  ...  $t_j$  ... ]
- (69) \*Dem-XP<sub>i</sub> Dem-XP<sub>j</sub> [ $_{IP}$  ...  $t_i$  ... V that [ $_{IP}$  ...  $t_j$  ... ]]

## 5 Rel-XP Deletion and Asymmetries between Simple and Multi-Head Correlatives

- (70) [\* $(jo)$  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.’
- (71) Rel-XP deletion/omission in simple Gujarati Correlatives (Babu Suthar p.c.)  
 a’. [ $_{CorCP}$  Rel-XP<sub>i</sub> ...]<sub>i</sub> [YP Dem-XP<sub>i</sub> ... ]  
 a. [je chokro sita sathe vat kari rahyo che], [ritane te chokro game  
 Rel boy Sita with talk do Prog is Rita-Dat Dem boy like  
 che]  
 is  
 ‘Rita likes the boy who is talking to Sita.’ (Lit. ‘Which boy is talking to Sita, Rita likes that boy.’)  
 b’. [ $_{CorCP}$   $\phi_{RelXP}$  ...]<sub>i</sub> [YP Dem-XP<sub>i</sub> ... ]  
 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.’)
- (72) No Rel-XP deletion in Multi-Head Gujarati Correlatives (Babu Suthar p.c.)  
 [ $_{CorCP}$  \*(Rel-XP<sub>i</sub>)\*(Rel-YP<sub>j</sub>) ...]<sub>i,j</sub> [Dem-XP<sub>i</sub> Dem-YP<sub>j</sub> ... ]  
 [je chokrae, je chokrine<sub>j</sub> joi]<sub>i,j</sub> [te chokrae, te chokrine<sub>j</sub> pasand  
 Rel boy-Erg Rel girl-Acc saw Dem boy-Erg Dem girl-Acc like  
 kari]  
 did  
 ‘For  $x$ ,  $y$  s.t.  $x$  saw  $y$ ,  $x$  liked  $y$ .’
- (73) a. the book [which/ $\phi_i$  C<sup>0</sup>[+rel] [John read  $t_i$ ]]  
 b. a topic [[on which]/\* $[on \phi_i]$  [John writes  $t_i$ ]]
- (74) (from Jacobson (1983))  
 a. everyman who I like who I know  
 b. \*everyman who I like  $\phi$  I know

## 6 Locality of Merge

- (75) a. base-generation in IP adjoined position:  
 '[<sub>IP</sub>[<sub>CorCP</sub>which CD is on sale]<sub>i</sub> [<sub>IP</sub> Ram bought that-CD]<sub>i</sub>]]'  
 b. base-generation in Dem-XP adjunction, plus movement of Correlative Clause:  
 '[which CD is on sale]<sub>i</sub>, [<sub>IP</sub> Ram bought [<sub>t<sub>i</sub></sub> that-CD]<sub>i</sub>]]'
- (76) a. base-generation as adjoined to matrix IP  
 [<sub>MultCorCP</sub> Rel<sub>i</sub> Rel<sub>j</sub> ...]<sub>i</sub>[Bill thinks that [<sub>IP</sub>... Dem-XP<sub>i</sub> Dem-XP<sub>j</sub> ...]]  
 b. base-generated adjoined to embedded IP, followed by movement  
 [<sub>MultCorCP</sub> Rel<sub>i</sub> Rel<sub>j</sub> ...]<sub>k</sub> [Bill thinks that [<sub>t<sub>k</sub></sub> [<sub>IP</sub>... Dem-XP<sub>i</sub> Dem-XP<sub>j</sub> ... ]]]

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

- (77) \* [<sub>CorCP</sub>...Name<sub>j</sub>...]<sub>i</sub> [Pron<sub>j</sub> Dem-XP<sub>i</sub> ...]
- (78) a. Base-generation in an IP-adjoined position:  
 [<sub>CorCP</sub>...Name<sub>j</sub>...]<sub>i</sub> [Pron<sub>j</sub> Dem-XP<sub>i</sub> ...]  
 b. Base-generation in a Dem-XP adjoined position followed by fronting:  
 [<sub>CorCP</sub>...Name<sub>j</sub>...]<sub>i</sub> [Pron<sub>j</sub> [<sub>t<sub>i</sub></sub> Dem-XP<sub>i</sub>] ...]

### 6.1 Crosslinguistic Comparisons 1: Correlatives in South Slavic

- (79) Movement of Dem is obligatory (Bulgarian: from Izvorski (1996))  
 a'. [Correlative-Clause]<sub>i</sub> [<sub>IP</sub> Dem-XP<sub>i</sub> ... t<sub>i</sub> ...]  
 a. [Kolkoto pari iska]<sub>i</sub> *tolkova<sub>i</sub>* misli će šte i dam t<sub>i</sub>  
 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]<sub>i</sub> [<sub>IP</sub>... Dem-XP<sub>i</sub>]  
 b. \* [Kolkoto pari iska]<sub>i</sub> misli će šte i dam *tolkova<sub>i</sub>*  
 how-much money wants thinks that will her give-1Sg Dem-much
- (80) Dem-XP adjunction is not possible (Bulgarian) [<sub>IP</sub> XP ... [<sub>Dem-XP</sub> [Correlative-Clause]<sub>i</sub> Dem-XP<sub>i</sub>] ...]
- \* misli će šte i dam [[Kolkoto pari iska]<sub>i</sub> *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.'

### 6.2 Crosslinguistic Comparisons 2: Clitic Left Dislocation

- (81) Modern Greek (from Iatridou (1994))  
 ton Kosta, i Maria ton idhe  
 DET Kosta/ACC DET Mary/NOM him saw  
 'Kosta, Mary saw him.'
- (82) Islands: \* DP<sub>i</sub> ... [<sub>Island</sub> ... Clitic<sub>i</sub> ...]  
 \*ton Kosta, sinandisa tin kopela pu ton idhe  
 DET Kosta/ACC (I-)met DET girl who him saw  
 Lit. Kosta, I met the girl who saw him.'
- (83) a. DP<sub>i</sub> [ ... [<sub>Island</sub> [<sub>IP</sub> ... Clitic<sub>i</sub> ... ]]]  
 Non-local Merge, No movement, No island violation  
 b. \*DP<sub>i</sub> [ ... [<sub>Island</sub> [<sub>t<sub>i</sub></sub> [<sub>IP</sub> ... Clitic<sub>i</sub> ... ]]]]  
 Local Merge followed by movement, Island violation

## 7 The Condition on Merge at work: evidence from absent demonstratives

- (84) Omission of Dem-XP leads to ungrammaticality  
 [jo laRkii khaRii hai] [Ram \*(us-ko) pasand kar-taa hai]  
 Rel girl standing.F is Ram Dem-Dat like do-Hab is  
 'Ram likes the girl who is standing.'
- (85) Missing Dem-XP  
 [jo laŕki: khaŕi: hai] lambii hai  
 Rel girl standing.F be.Prs tall.F be.Prs  
 '[Which girl is standing] is tall.'

Conditions under which overt Dem is not required:

- (86) form(Case(Rel-XP)) = form(Case(Dem-XP)) =  $\phi$  (from Bhatt (1997))

- (87) [jis larke-ne sports medal jiiit-aa] [\* (us-ne) academic medal-bhii  
Rel boy-Erg sports medal win-Pfv Dem-Erg academic medal-also  
jiiit-aa]  
win-Pfv  
'The boy who won the sports medal also won the academic medal.'

- (88) Srivastav (1991)'s analysis: [[*CorCP* ... ]<sub>i</sub> [*IP pro* ... ]]  
[jo lar̥ki: khari: hai]<sub>i</sub> [pro, lambii hai]  
Rel girl standing.F be.Prs tall.F be.Prs  
'[Which girl is standing] is tall.'

- (89) Free Relative structure for Dem-XP-less Correlatives  
[*IP* [*FR*[*CP* ... ] *pro*] is good]  
[*IP* [*FR*[*CP* jo kita:b sale-par hai] *pro*] achchhi: hai]  
Rel book.F sale-on be.Prs good.F be.Prs  
'Lit. [Which book is on sale] is good.'

## 7.1 Free Relative Fronting vs. Correlative Fronting

- (90) a. \**CorCP*<sub>1</sub> *CorCP*<sub>2</sub> [*IP* ... Dem-XP<sub>1</sub> ... Dem-XP<sub>2</sub> ... ]  
b. \**CorCP*<sub>2</sub> *CorCP*<sub>1</sub> [*IP* ... Dem-XP<sub>1</sub> ... Dem-XP<sub>2</sub> ... ]  
(91) a'. *CorCP*<sub>2</sub> *CorCP*<sub>1</sub> [*IP* ... Dem-XP<sub>1</sub> ... ]  
a. [jo kita:b Shantiniketan-ne chha:pi: thi:]<sub>2</sub> [jo lar̥ka:  
Rel book Shantiniketan-Erg publish-Pfv.F be.Pst.F Rel boy-Dat  
tumha:re pi:chhe hai]<sub>1</sub> Ram-ne [us lar̥ke-ko]<sub>1</sub> dii  
your behind be.Prs Ram-Erg Dem boy-Dat give-Pfv.F  
'Ram gave the book that Shantiniketan had published to the boy who  
is behind you.'  
(Lit. [Which book Shantiniketan had published]<sub>i</sub> [Which boy is stand-  
ing behind you]<sub>j</sub>, Ram gave t<sub>i</sub> to [t<sub>j</sub> that-boy]<sub>j</sub>)  
b'. *CorCP*<sub>1</sub> *CorCP*<sub>2</sub> [*IP* ... Dem-XP<sub>1</sub> ... ]  
b. [jo lar̥ka: tumha:re pi:chhe hai]<sub>1</sub> [jo kita:b Shantiniketan-ne  
Rel boy-Dat your behind be.Prs Rel book Shantiniketan-Erg  
chha:pi: thi:]<sub>2</sub> Ram-ne [us lar̥ke-ko]<sub>1</sub> dii  
publish-Pfv.F be.Pst.F Ram-Erg Dem boy-Dat give-Pfv.F

'Ram gave the book that Shantiniketan had published to the boy who  
is behind you.'  
(Lit. [Which boy is standing behind you]<sub>j</sub> [Which book Shantiniketan  
had published]<sub>i</sub> Ram gave t<sub>i</sub> to [t<sub>j</sub> that-boy]<sub>j</sub>)

## 7.2 Matching Effects in Multi-Head Correlatives

- (92) form(Case(Rel-XP<sub>1</sub>)) = form(Case(Dem-XP<sub>1</sub>)),  
form(Case(Rel-XP<sub>2</sub>)) = form(Case(Dem-XP<sub>2</sub>)), ...

What differentiates (92) from the matching requirement on Simple Correlatives  
in (86) is the absence of the =  $\phi$  clause. This can be seen in (93), 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  $\phi$ .

- (93) [*MultCorCP* Rel<sub>i</sub> ... Rel<sub>j</sub> ... ] [pro<sub>i</sub> ... pro<sub>j</sub> ... ] (Dayal, p.c.)  
[jis-ne<sub>i</sub> jo<sub>j</sub> chahaa] [(us-ne<sub>i</sub> vo<sub>j</sub>) kiyaa].  
Rel-Erg Rel want-Pfv Dem-Erg Dem do-Pfv

'People did what they wanted. Lit. Whoever whatever wanted, they did  
that'

- (94) Structures for Correlatives without Dem-XPs  
a. DP Adjunction Structures:  
[*CorCP* Rel-XP ... ]<sub>i</sub> [*IP* YP [t<sub>i,CP</sub> pro<sub>i</sub>] ... ]  
[[*CorCP* Rel-XP ... ] *pro*]<sub>i</sub> [*IP* YP t<sub>i</sub> ... ]  
b. [*CorCP* Rel-XP ... ]<sub>i</sub> [*IP* YP pro<sub>i</sub> ... ] (**Unavailable**)

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