# Five notes on Correlatives[1]

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**Introduction.**

In Cinque (in preparation) (see Cinque 2008 for a preliminary presentation) it is proposed that the different types of relative constructions found across languages (externally headed post-nominal, externally headed pre-nominal, internally headed, 'headless' (or 'free'), correlative, and 'adjoined' or extraposed) derive from one and the same structure, whether they involve a raising or a matching derivation.
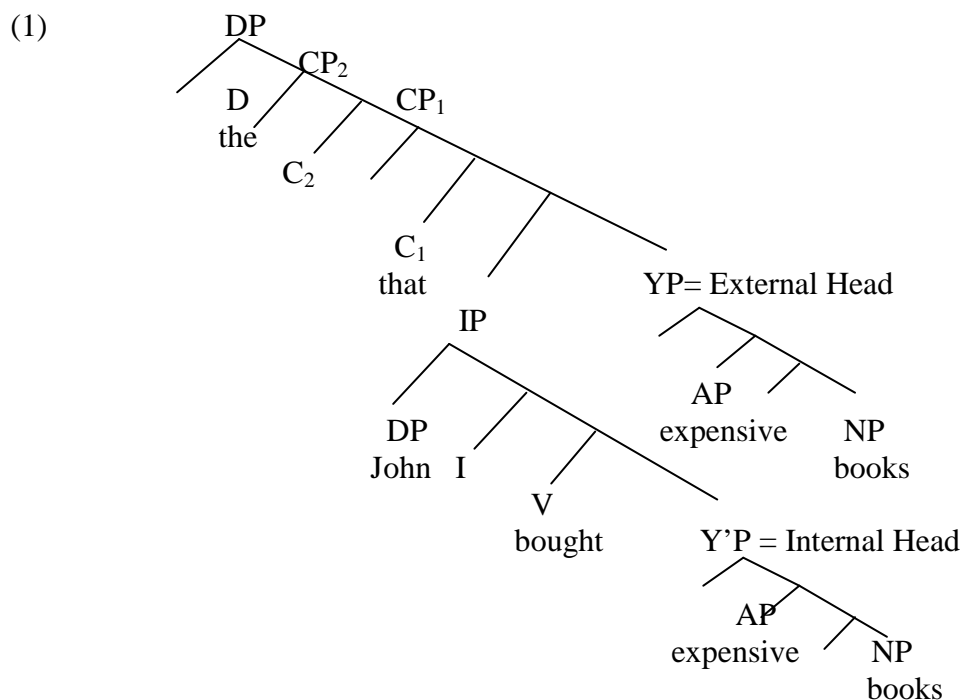
This unique structure, in compliance with Antisymmetry (Kayne 1994), has the relative clause merged pre-nominally, in a specifier of the extended projection of the NP; more precisely between the position of numerals (and other weak determiners, in the sense of Milsark 1974), and that of demonstratives (and other strong determiners, like the definite article and universal quantifiers).[2]

See (1), which represents the (simplified) structure underlying the relative clause *the expensive books that John bought*.

[2] An independent conceptual argument for the prenominal origin of relative clauses appears to come from the pervasive left-right asymmetry of natural languages discussed in Cinque (2009). I take this asymmetry to suggest that the complements, modifiers, and functional heads associated with a lexical head (N, V, etc.) should be merged exclusively to the left of the lexical head, their possible surface location to its right being a function of the raising of a projection of the lexical head to their left. See Cinque (2009) for an elaboration of this point.

(1)

DP
the D
CP₂
C₂
CP₁
C₁ that
IP
DP John — I — V bought — Y'P = Internal Head
AP expensive — NP books
YP = External Head
AP expensive — NP books

$\text{DP} \rightarrow \text{D (the)}, \text{CP}_2$
$\text{CP}_2 \rightarrow \text{C}_2, \text{CP}_1$
$\text{CP}_1 \rightarrow \text{C}_1 (\text{that}), \text{IP}, \text{YP}$

The phrase directly modified by the relative clause (YP in (1)) is the *external Head* of the relative clause, which is matched inside the relative clause by an identical phrase (Y'P, the *internal Head*).

Whenever interpretive factors require reconstruction of the *overt* Head inside the relative clause (idiom chunks, pronominals within the Head bound inside the relative clause, etc.), it is the internal Head which raises to a position c-commanding the external Head (Spec,$C_1$), causing the latter to delete. Instead, when nothing forces reconstruction of the Head inside the relative clause, the *overt* Head is the external Head, which raises to a position c-commanding the internal Head (Spec,$C_2$), whether the latter moves or not, and deletes (or 'reduces') it. See Krapova (2009) for evidence to this effect from Bulgarian relatives.

For present purposes it suffices to note that under this analysis all relative constructions, 'headless'/ 'free' relatives included, are double headed (they have both an external and an internal Head). For example, English 'headless'/'free' relative clauses would receive the following analysis, arguably with recoverable deletion (from the particular wh-phrase involved) of such functional nouns as THING, AMOUNT, PLACE, TIME, PERSON,...[3]

(2)a  (I don't like) [DP[CP what THING$_i$ you said  t$_i$ ] (SUCH) THING ]
   b (He weighs)  [DP[CPwhat AMOUNT$_i$ I weigh t$_i$ ] (SUCH) AMOUNT]

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[3] For discussion of some of the other contexts in which the presence of such silent functional nouns can be postulated, see Kayne (2004, 2005a, 2007).

c (Here is)    [$_{DP}$[$_{CP}$where PLACE$_i$ they slept t$_i$ ] THERE PLACE]

d (Come)    [$_{DP}$[$_{CP}$when TIME$_i$ you can  t$_i$ ]    THEN TIME]

e (He helps)    [$_{DP}$[$_{CP}$whoever PERSON$_i$ t$_i$ needs it ] (SUCH) PERSON]

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See Cinque (2008, and in preparation) for discussion of such an analysis.

If correct, this proposal prompts a reconsideration of certain aspects of the analysis of correlatives.

**NOTE 1: *Simple* correlatives as 'left dislocated' *DPs* resumed IP-internally.**[4]

Following a certain tradition, by 'simple correlatives' I mean those correlatives that contain a single *wh*-phrase, like that in (3):

(3) **jo laRkii**  khaRii  hai,  vo (laRkii) lambii  hai   (Cf. Dayal 1996,160)

which girl  standing be-PR,  she/that (girl)  tall be-PR

'which girl is standing, she is tall'

An influential analysis of this construction takes the left peripheral relative to be a bare CP, adjoined to the matrix IP, which contains a pronominal (or demonstrative) bound by that CP: See Srivastav (1991), and Dayal (1996).[5]

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[4] See Rebuschi (1999,68) for the similar idea that the correlative clause may just be "la partie visible d'une véritable relative libre topicalisée.", and especially Gupta (1986, chapter 5), who concludes: "Thus, internal [correlative] and postnominal relative constructions display characteristics of "left dislocated" NPs. These same traits are not evident in extranominal [extraposed] relative sentences" (p.91). Also see Lipták (2004), Dasgupta (2006), Butt, King and Roth (2007, §4.3), and Rebuschi (2009, §3.3). As we see below, the term 'left dislocated DP' corresponds in different languages to different types of 'left dislocation' constructions, while the element resuming the relative in the matrix IP may be represented either by a full DP (see for example (i) below, from Marathi- Renuka Ozarkar, p.c. – which incidentally redresses McCawley's 2004,300 generalization), or by a demonstrative (possibly followed by a head noun), as shown in (3), or by an anaphoric pronoun, which can also be silent, depending on the Case it bears, and the particular language involved.

(i) [jyaa    aattaa-c    aalyaa         aahet]  **Tyaa laal Dres  ghaat-le-lyaa    don Chotyaa    mulii**…
    which now-emph come-PAST.FEM   be-PRES.PL those red  dress wear-PAST.PART-FEM  two small/young  girls…
    'Those two small girls wearing a red dress who have just arrived…'

In languages that have both demonstratives and special anaphoric correlative pronouns, the two may have different semantic consequences. See Bagchi's (1994) discussion on Bangla.

Sometime the phrase in the matrix IP which resumes the left peripheral relative is considered as the (external) Head of the relative clause. But this is misleading if the correlative pronoun (phrase) is nothing other than a phrase resuming a 'left dislocated' DP (for multiple correlatives, see NOTE 3 below).

[5] Also see Andrews (1975) and Hale (1976). Among the works that essentially adopt this analysis are Bagchi (1994), Bianchi (1999, chapter 3, section 4.1), de Vries (2002, chapter 5, section 6), Cecchetto, Geraci and Zucchi (2006), Leung (2007c), and various contributions in Lipták (2009). Differently from Srivastav (1991) and Dayal (1996), Bhatt (2003, 2005) argues that the CP is not base-generated as an adjunct to the matrix IP, but is moved there from a position inside the matrix IP adjoined to the correlative pronoun or demonstrative (Mahajan 2000,fn.10 also proposes a

This analysis is the only conceivable one if both simple correlatives and multiple correlatives (those containing more than one wh-phrase, like (4)) are taken to represent one and the same construction.

(4) jis laRkii-ne$_i$  jis laRke$_j$-ke saath khelaa, us-ne$_i$ us-ko$_j$ haraayaa (Dayal 1996,197)

   which girl-ERG  which boy with play.PAST, she-ERG he-ACC defeated

   'which girl played with which boy, she defeated him'

Clearly a DP analysis for such cases is out of the question since the correlative CP cannot have two external Heads (cf. Downing 1973,13; Dasgupta 1980,291; Srivastav 1988,148; de Vries 2002,147; Bhatt 2005,9; Anderson 2005,5fn3).[6] Correlatives would thus seem to pose a problem for any unified analysis of relative clauses that takes them to be embedded in a DP.

There is however evidence (discussed in Bhatt 2003, 2005) that multiple and simple correlatives do not constitute a homogeneous construction and thus should not be forced under one and the same analysis that "generalizes to the worst case" (that of multiple correlatives).

Some of this evidence will be recalled in NOTE 3 below, where multiple correlatives will actually be taken to be free adjunct clauses (in Izvorski's 2000 sense), along the lines of Dayal's original analysis.[7]

Here suffice it to observe that simple correlatives like those in (3) contain a 'free' relative which may alternate with an externally headed postnominal relative. Compare (3) with (5):

(5) vo laRkii  jo khaRii  hai,  vo lambii  hai          (cf. Dayal 1996,152)

   that girl which standing be-PR,  she/that tall be-PR

   'which girl is standing, she is tall'

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movement derivation of the left peripheral relative). In this way, the fact that the relation between the CP and the correlative pronoun or demonstrative in the matrix IP is sensitive to islands can be made to follow. A similar analysis is actually adumbrated in de Vries (2002, 149, fn.49), and Dayal herself (1996, chapter 6, section 2.4) admits that the CP can in certain cases be adjoined to the DP containing the correlative pronoun or demonstrative, and also mentions elsewhere (p.183) that the relation between the two, when they are separated, is subject to island constraints.

[6] In addition to (simple and multiple) correlatives, Hindi has externally headed embedded ((i)a) and extraposed ((i)b) postnominal relative clauses, which share properties setting them apart from (simple and multiple) correlatives (see, among others, Srivastav 1991, Mahajan 2000, McCawley 2004, Leung 2007a,b, Butt, King and Roth 2007, §3). Here I will not be concerned with these other types of relative clauses.

(i)a vo laRkii **jo khaRii hai** lambii hai          (Srivastav 1991,642)

   that girl which standing is tall is

  b vo laRkii lambii hai **jo khaRii hai**          (Srivastav 1991,642)

   that girl tall is which standing is

   'The girl who is standing is tall'

[7] Butt, King and Roth (2007, section 5) also give a non relative clause analysis for multiple correlatives (adjunction to IP) distinct from that for simple correlatives (generation in a specifier of the correlative DP).

Taking (3) and (5) together into consideration, and the double headed analysis of 'headless'/'free' relatives given in (2), it becomes possible to interpret (3) as having a silent external Head, as in (7):[8]

(7) [$_{DP}$VO LARKII [$_{CP}$ jo laRkii khaRii hai]] vo laRkii lambii hai

THAT GIRL which girl standing be-PR, that GIRL tall be-PR

'the girl who is standing, that girl is tall'

Veneeta Dayal (p.c.) tells me that she in fact marginally accepts (8), which shows the underlying structure of (3) and (5) on its sleeve, so to speak:[9]

(8) vo laRkii  jo laRkii khaRii hai, vo laRkii lambii hai

that girl which girl standing be-PR,  that girl tall be-PR

'the girl who is standing, that girl is tall'

The same full structure is apparently acceptable (under the appropriate conditions of emphasis) in two other Indo-Aryan languages: Bundeli ((9)a – Ruchi Jain, p.c.) and Maithili ((9)b, from Singh (1980), according to whom it is "cumbersome, though acceptable"(p.34)):[10]

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[8] Gupta (1986,36fn2) explicitly proposes that a Hindi correlative like (i) derives from an externally headed RC like (ii), with deletion of the external Head (also see Mahajan 2000,215):
(i)      jo laRka: la:l kami:j pahne hai    wo    mera: bha:i: hai
        which boy   red    shirt wearing is that/he I.gen brother is
         'The boy who is wearing a red shirt is my brother'
(ii)      [[wo laRka:] [jo laRka: la:l kami:j pahne hai]] wo    mera: bha:i: hai
          That boy   which boy red shirt  wearing is  that/he I.gen brother is
Junghare (1973) also proposes to derive the Marathi correlative forms in (iii) from a structure essentially like (iv), which however is not acceptable for her. Also see Wali (1982):
 (iii)a **to manus**[**jo  Ø**      ith∂ kam k∂rto]        **to manus** ajari ahe
    b **to     Ø** [**jo  Ø**      ith∂ kam k∂rto]        **to  Ø**    ajari ahe
    c **to     Ø** [**jo  Ø**      ith∂ kam k∂rto]        **to manus** ajari ahe
    d **Ø     Ø** [**jo manus** ith∂ kam k∂rto]        **to  Ø**    ajari ahe
    e **Ø     Ø** [**jo   Ø**     ith∂ kam k∂rto]        **to manus** ajari ahe
    f **Ø     Ø** [ **Ø    Ø**     ith∂ kam k∂rto]        **to manus** ajari ahe
    (that)(man)(which)(man) here work does        that (man) sick is
     'the man who works here is sick'
[9] Alice Davison tells me that (8) was accepted by many speakers she consulted. Wali (2006,289) claims that in Marathi too the left dislocated DP may sometimes surface unreduced. See (v) (Renuka Ozarkar tells me that this is indeed possible if one wants to emphasize 'that particular girl', stressing 'ti' at the beginning of the main clause. Otherwise, it is slightly odd ('?')):
(v) **Ti mulgi** [**ji   mulgi** ghari geli] ti  ithe rāhte
    That girl which girl  home went that here lives
     'The girl who went home lives here'
[10] The same full structure is instead not readily acceptable in Nepali (Samar Sinha, p.c.).

Between (iii)f and [9]:
(iv) **to manus** [**jo manus**  ith∂ kam k∂rto] **to manus** ajari ahe  (*)

(9)a [**ba moRii** [ **jo moRii** ThaRii hɛ]], **ba moRii** lambii hɛ

    that girl which girl standing  is,    that girl tall is

    'The girl who is standing is tall'

  b[(**o**) **panc-sab** [jaah$^i$ **panc-sab-kE$^n$** ham niik jakaan$^n$ janait   chalianh$^i$ ]$_S$]$_{NP}$ **o panc-sab**..

    (the) Panch which Panch-PL-OBJ I good way know.PART BE.PAST.AGR, the (same) Panch..

     'The Panch whom I knew very well, the same Panch…'

The 'left dislocated' DP, containing the RC, is matched by a resumptive DP (often pronominal/demonstrative) in the clause. Depending on the language, the 'left dislocated' DP containing the correlative clause may apparently be either an English-type Left dislocation/Hanging Topic (Kashmiri), or a German-type Contrastive Left Dislocation (German, Bulgarian), or a Romance-type Clitic Left Dislocation (for the "correlatives" of Italian).

    As opposed to the other Indo-Aryan languages, Kashmiri is an (SOV) V-2 language. Its finite verb, in main (and complement) clauses, necessarily occupies the second position, following either the subject or a scene-setting adverb, or a focussed phrase or wh-phrase (Hook and Koul 1996, and especially Bhatt 1999, chapter 4).[11] However, if a left dislocated/hanging topic is present, resumed by a demonstrative or pronominal inside the clause, the finite verb is found in *third* position, with a subject or a focussed/wh-phrase occupying the second position. In other words, the left dislocated/hanging topic phrase does not count as a filler for the "first position".[12]

    Now, as Hook and Koul (1996,98) show, a correlative clause too "does not count in the V-2 calculation, with the result that the finite verbal element comes in *third* position". See (10)a, which contrasts minimally with (10)b, characterized by a topicalized Headed postnominal relative (not resumed by a correlative element):

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[11] As Richard Kayne reminds me, Kashmiri, as opposed to Germanic V-2 languages, allows multiple wh-fronting, with the consequence that the verb may end up not being in strict second position. It also ends up in third position after a Hanging Topic (see the next footnote), or in the presence of a sentence initial yes/no question marker (Koul 2003, §6.2.1.4). Also see Bhatt (1999, §4.1.2.2).

[12] See for example (i)a-b, from Bhatt (1999,103):

(i)a Tem dop ki, coon kalam, shiilaayi tshooND su

   he  said that, your  pen, Sheila   found   that

   'He said that as for your pen, it is Sheila who found it'

  b Coon kalam, su goyi me garyi mashith

    your   pen,  that gone I home-at forget

    'As for your pen, that (is what) I forgot at home'

Bhatt (1999,103f) gives two arguments for the extra-clausal nature of left dislocated/hanging topics in Kashmiri. The first is that it is possible to insert a parenthetical after them, and the second is that they are "always in the nominative case", whereas the co-referential pronoun in the following clause is in the appropriate Case.

(10)a [yus naphar raath aay] bi chus yatshaan temyis samikh-un

    [which person yesterday came] I am wanting him.DAT meet-INF

    'I want to meet the man who came here yesterday'

  b [temyis naphras yus raath aav] chus bi yatshaan samikh-un

    [the person who yesterday came] am I wanting meet-INF

    'I want to meet the man who came here yesterday'


Thus Kashmiri provides direct evidence that one type of correlative clause can occupy the position of left dislocated/hanging topics, preceding the CP space which contains a fronted phrase (in first position) and the finite verb (in second position).[13]

Hindi, possibly in addition to an English/Kashmiri-type left dislocation construction (Dwivedi 1994a, section 2.2.2), appears to have a topicalization construction involving movement, possibly similar to Romance Clitic Left Dislocation, modulo the presence of non clitic resumptive DP (either a full DP, or a demonstrative pronoun) (Mahajan 1990; Srivastav 1991; Dwivedi 1994a,b). See, in particular Mahajan (2000,fn.10) and Bhatt (2003) for arguments that the correlative relative acquires its left adjoined position by movement, and Bhatt (2003) for the idea that it starts out together with the correlative pronoun (as seen from the possibility of their making up a constituent), and optionally moves out to a left peripheral position stranding the correlative DP.

We follow this analysis here except for the idea that the RC is internal to a DP which together with the correlative DP forms a "big DP" ([ [ Head RC] [correlative]), much like the "big DP" taken to underlie French Complex Inversion (Kayne 1972) and Romance Clitic Left Dislocation ( [$_{DP}$ DP [$_D$Clitic]] – Uriagereka 1995,81).

In Bulgarian, differently from Hindi (and other Indo-Aryan languages), the left dislocated DP of the correlative construction is never found adjoined to the resumptive element (Bhatt 2003,529). Rather, it appears to be base generated in situ and matched by a correlative element which obligatorily moves to the front of the main clause (presumably to Spec,FocusP) (cf. Izvorski 1996,12):

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[13] If the left dislocated phrase containing the relative clause in Kashmiri is base generated in the left peripheral position rather than moved there, no reconstruction of the left dislocated DP should be possible, nor should its relation with the correlative element be subject to island constraints. This remains to be checked.

Hungarian correlatives, which, as Lipták (2004) shows, do not reconstruct inside the main clause to a position adjoined to the correlative element, nor display sensitivity to islands, also appear (pace her own conclusion) to be Hanging Topics. The two putative differences which according to Lipták (2004, 302) distinguish Hanging Topics from Hungarian correlatives may turn out not to be real. Both correlatives and Hanging Topics seem to be root phenomena and indeed, just as with correlatives, there is in general no more than one Hanging Topic per clause (cf. Postal 1971, 136, fn.17; Cinque 1990,58; although some speakers marginally accept more than one).

(11) [Kolkoto pari Maria$_k$ iska], tolkova$_i$ tja$_k$ misli če šte j dam t$_i$

  How much money M. wants, that much she thinks that will her I.give

  'She thinks that I will give her as much money as Maria wants'


This is indicated by the fact that, differently from Hindi (Bhatt 2003, section 3.3.1), the left dislocated DP (in (11)) does not reconstruct, as no Principle C violation is to be observed there.

This appears parallel to the non-connectivity variant of German contrastive Left Dislocation:[14]


(12) [Wer das sagen wird] dem will ich vertrauen

  who.NOM that say will that.DAT will I trust

  'I will trust who(ever) says that'


In Italian, the element resuming the "correlative" relative is normally a run-of-the-mill clitic, actually the usual resumptive clitic associated with the Clitic Left Dislocated DP that contains the relative clause (though a demonstrative, itself clitic left dislocated, can resume the correlative relative when this is a hanging topic, as in (13)c):


(13)a **Qualunque promessa** lui potrà farti, non prender**la** sul serio

  whatever promise he will.be.able.to make to you, not take it seriously

  'Whatever promise he may make to you, do not take it seriously'

 b **Chi fa cose del genere**, credo Ø non debba essere seguito

  who does such things, I.think not has to be followed

  'I do not think that one should follow someone who does such things'

 c **Chi ti ha appena telefonato**, **quello lì,** proprio non **lo** sopporto

  Who to you has just telephoned , that there really not him I.can.stand

  'The one who just called you, that one really I cannot stand'


From this perspective, the impossibility of stacking correlatives (Srivastav 1996,175-77; McCawley 2004, section 5; Butt, King and Roth 2007, section 2) should be limited to those containing a left dislocated free relative (as free relatives are also known not to be able to stack –

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[14]Namely to (i)a, where no Case connectivity is present, vs. (i)b:

(i)a Der Karl, dem will ich vertrauen

  The(Nom) Karl, him(Dat) will I trust

 b Dem Karl, dem will ich vertrauen

  The(Dat) Karl, him(Dat) will I trust

Carlson 1977).[15] It should not extend to those correlatives that contain a left dislocated externally headed (pre- or post-nominal) relative clause, or an internally headed one whose Head has not moved, all of which are known to be able to stack. In the next Note I am actually suggesting that all main types of relative clauses can be left dislocated, and thus enter the correlative construction. To reserve the term 'correlative' just to left dislocated free relatives seems, from this point of view, arbitrarily limiting.

## NOTE 2: (Simple) Correlatives as a non independent relative clause type.

It is often assumed, in both the typological and generative literature, that correlatives are an entirely separate type of relative clause, but if they are DPs (containing a relative clause) in TopP, resumed by a coindexed resumptive phrase in the matrix IP, then one should expect them to be just a particular manifestation of externally headed postnominal, externally headed prenominal, internally headed, and "headless" (or "free") relative clauses, not an independent, fifth, type.

This indeed seems to be the case as the 'left dislocated' DP can contain, depending on the language, any of the other types of relatives. We have already seen that it can contain an externally headed postnominal relative clause (see (5)), or a "headless"/"free" relative clause (see (3) and the Bulgarian, German, and Italian examples in (11) through (13)). It can also contain an externally headed prenominal relative clause resumed by a coindexed phrase in the matrix IP, as shown by the Sinhala (Indo-Aryan) example in (14):[16]

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[15] Stacking of correlatives is claimed to be possible in other Indo-Aryan languages: Konkani (Almeida 1989,304 - see (i)), and Bhojpuri (Shukla 1981, chapter 19, section 4, p.206 – see (ii)):
(i)      jo   a:j   aila,   ja-ka   gʰor na, jace   poise sãdlyat, tya mons-ak pedru adar dita
   who today come, who-dat house not, whose money lost,    that man-dat Peter help gives
   'Peter helps the man who has come today, who has no home and whose money is lost'
(ii)     ham jaon pʰal     pa:k-i:,   jaon tu:   bec-ba:   taon   kʰa:-b
   I which fruit ripe-3sg.m.fut, which you sell-2sg.m.fut   that eat-1sg.fut
   'I will eat that fruit, which will ripen, which you will sell'
Also see Davison (2009, section 2.2.5) for the apparent possibility of stacking in Sanskrit correlatives. However, given that the impossibility of stacking seems to be a general property of relatives involving raising of the internal Head (free relatives, correlatives with a left peripheral free relative, etc. - Carlson 1977; Grosu 2002), one should determine whether such cases truly involve stacking rather than simple asyndetic coordination (cf. McCawley 2004,306).
[16] I owe this example to Lalith Ananda (p.c.). The phonetic transcription follows the one utilized in Ananda (2008). Sinhala is generally reported (Bhatt 2003,491; Leung 2007c; Lipták 2009a,10) as not having correlatives (as it does not have embedded postnominal relative clauses with relative pronouns, nor their free relative variant). But, if correlatives are not limited to left dislocated free relatives, this is strictly speaking not true.
Languages with both correlatives and prenominal relative clauses have been claimed (Downing 1978,400) not to exist. But, in addition to the case of Sinhala, Dravidian languages and the language isolate Burushaski also have both correlatives and prenominal relative clauses, even though, differently from Sinhala, for correlatives they utilize a free relative (containing an interrogative adjective/pronoun) resumed by a correlative proform (cf. Lakshmi Bai 1985 for Dravidian, and Tiffou and Patry 1995 for Burushaski).

(14)　[ara [hitagena inna] gaenu lamaya], ee lamaya usa i

　　　that [standing being] woman child, that child  tall is

　　　'That girl who is standing, that girl is tall.'


Finally, the 'left dislocated' DP can also contain an Internally Headed relative clause resumed by a coindexed phrase in the matrix IP, as in the Wappo example (15), or in the Bambara example (16):[17]


(15) [ i　čhuya t'um-ta ]　　cephi　　šoy'i-khi?　(Thompson, Park, and Li 2006,117)[18]

　　　1SG　house  buy-PST:DEP 3SG:NOM  burn-STAT

　　　I house bought, that one burned down = 'the house I bought burned down'


(16) deni　mi djolen file,　　　o (deni)  ka djan　(Dayal 1996,215fn.15)[19]

　　　girl which  is　standing, that (girl)  is  tall

　　　'Which girl is standing, that (girl) is tall'


**NOTE 3: Multiple correlatives as non-relative, free adjunct, CPs.**


In addition to the possibility for simple, but not for multiple, correlatives to alternate with externally headed postnominal relatives, there is further evidence that one should distinguish between two separate constructions: one, a DP (containing a relative CP), adjoined to the resumptive correlative DP, which it can strand in its movement to the left-periphery of the matrix IP (as shown in (17)a); the other, a base-generated CP, containing one or more wh-phrases, paired in the matrix IP with

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[17] Cf. Keenan (1985,165). Other languages optionally displaying a left dislocated DP with an Internally Headed relative clause resumed by a phrase in the matrix IP are Arizona Tewa (Gorbett 1977,272), and, possibly, Italian Sign Language (Branchini and Donati 2009), which also appears to have externally Headed postnominal relative clauses (also entering a correlative construction). See Bertone (2006), and Brunelli (2006).

[18] Wappo (a Californian language whose genetic affiliation is unclear - Thompson, Park and Li 2006, xi) also has free relatives resumed by a demonstrative correlative pronoun:

(i) [ te  **ita**  čo?-me ]　　**cew**　ah　　　te-k'a　čo:-si?　　　(Thompson, Park and Li 2006,123)

　　　3SG where go-DUR:DEP  there 1SG:NOM  3SG–COM  go-FUT

　　　'I'll go wherever s/he goes'

Thompson, Park and Li (2006) say that "[t]he demonstrative pronoun seems to be required when it is *cephi*, the nominative form, but optional when it is *ce*, the accusative form" (p.116).

[19] Bambara (of the Mande branch of Niger-Congo) has both left peripheral Internally Headed relative clauses resumed by an anaphoric phrase/pronoun ((16)), or Internally Headed relative clauses in argument position, as in (i), below (in both cases the internal Head is marked by a following modifier, *mi(n)*). In some varieties it also has externally headed postnominal and extraposed relative clauses (Bird 1968, Zribi-Hertz and Hanne 1995, and references cited there).
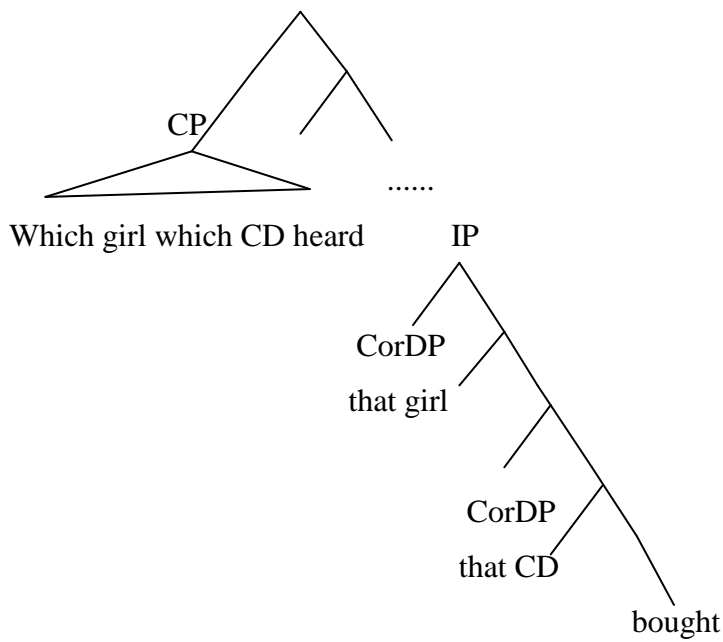
(i)　　　Tyɛ̀ ` be  n ye so  min ye dyo　　　　(Bird 1968,46)

　　　　man the  PRES [I  PAST house wh- see] erect

　　　　'The man is building the house that I saw'

corresponding correlative phrases, as in (17)b (cf. Izvorski 2000. I exemplify with English glosses only):

(17)a. 'Ram, which CD is on sale, that CD bought'
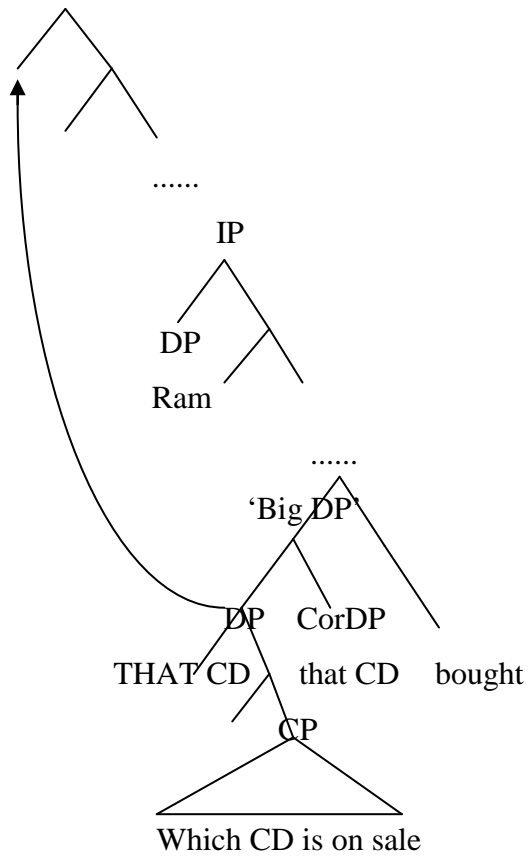


b. 'Which girl which CD heard, that girl that CD bought'

As shown most extensively in Bhatt (2003, 2005), this dual analysis receives support from the fact that in simple, but not in multiple, correlatives the relation between the relative clause and the correlative pronoun is sensitive to islands (Dayal 1996,183; Mahajan 2000, fn.10, and Bhatt 2005); and from the fact that in simple, but not in multiple, correlatives there is obligatory reconstruction of the fronted relative clause, as evidenced by pronominal binding facts and Principle C violations. For exemplification, see Bhatt (2003,section 3.3.3; 2005).[20]

A further difference between multiple and simple correlatives is represented by the possibility of 'deleting' correlative pronouns when the relative phrases have overt Case. As noted in Bhatt (1997), who attributes the observation to Veneeta Dayal, this is possible in multiple correlatives ((18)) but not in simple correlatives ((19)) (also see Bhatt 2003, section 4):

(18) [ $jis_i$ ne $jo_j$ chahaa] ( $us_i$ ne $vo_j$) kiyaa (= (24) of Bhatt 1997,64)

REL.obl ERG REL want.Pfv DEM.obl ERG DEM do.Pfv

'Whoever whatever wanted, they did that'

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[20] Anderson (2005) makes the interesting observation that Nepali shows a semantic distinction between the two structures (17)a and b. The former is associated with a restrictive (specific) interpretation, the latter with an indefinite (free choice) interpretation. The evidence for this comes from the fact when the correlative is in absolute initial position both interpretations are available while only one, the restrictive (specific) interpretation, is possible when the correlative is adjacent to the correlative pronoun. See (i)a and b:

(i)a jun manche-lai bhok lag-eko cha, ma us-lai khana din-chu (= Anderson's 2005, ex. (15))

REL man-DAT hunger attach-PFPT 3SG.PR, 1SG.NOM 3SG.DAT food give-1SG.PR

either: 'I will give food to the man who is hungry' (specific man – restrictive relative)

or: 'I will give food to any man who is hungry' (any hungry man – free relative)

b ma jun manche-lai bhok lag-eko cha, tyo manche-lai khana din-chu (= Anderson's 2005, ex. (16))

1SG.NOM REL man-DAT hunger attach-PFPT 3SG.PR, DEM man-DAT food give-1SG.PR

'I will give food to the man who is hungry' (specific man)

This makes sense, according to Anderson (2005), if the initial position can either be filled by movement of the correlative relative from the internal position adjacent to the correlative DP (which gives the restrictive, specific, interpretation) or by base generating the simple correlative CP (like multiple correlatives) in initial position (which gives the free choice interpretation). It remains to be seen whether this holds of other Indo-Aryan languages as well. Dayal (1996, chapter 6, section 2) suggests that multiple correlatives in Hindi have a functional reading, which apparently "can also be used to refer to a unique pair of individuals in the contextual domain." (p.204). Additionally, it should be observed that if simple correlatives can also access the base generated structure of multiple correlatives, they would be expected to show no necessary island sensitivity nor obligatory reconstruction. The facts here are contradictory. While Mahajan (2000,227fn10) and Bhatt (2003, 2005) claim that the correlative pronoun cannot be found within an island (see (ii)), McCawley (2004) gives one case of a correlative pronoun within a relative clause complex NP island judged possible by his informants (his orthography has been uniformized to the one used here). See (iii):

(ii) *[jo si:ta:-ko acha: lagta: hɛ] mɛ [DP yah ba:t [CPki vo a:dmi: pa:gal hɛ]] (= (ii) of fn.10 of Mahajan 2000)

who Sita-DAT nice seem be-PRES I this fact that that man crazy be-PRES know be-PRES

'I know the fact that the man who Sita likes is crazy'

(iii) [jo laRkii vaha khaRii hai], ram ne vo paRha, jo us ne likha

Which girl there standing is, Ram read the letter that she wrote

Further investigation is needed here, also in relation to the apparent possibility of extracting from correlatives (and *if* clauses) vs. the impossibility of extracting from embedded postnominal and extraposed relatives reported in Dwivedi (1994a,b). Perhaps extraction is possible from the adjunct CP correlative but not from the DP correlative.

(19) [jis     laRkii=ko Srini pasand hai] *(vo)   khaRii    hai    (=(9)b of Bhatt 1997,57)

REL.obl girl=DAT    S.  like be.PRS DEM   standing be.PRS

'The girl who likes Srini is standing'

That simple and multiple correlatives should not be treated as a homogeneous construction is also shown by the fact that not all languages having correlatives allow for multiple correlatives. This is the case of Bambara, as reported in Pollard and Sag (1994,229,fn.10) and that of Basque, as reported in Rebuschi (1999,59).

**NOTE 4: Non-restrictive correlatives.**

Dayal (1996), on the basis of the ungrammaticality of examples like (20) below, concludes that Hindi correlatives cannot be non-restrictive "since non-restrictives typically occur with proper names" (p.182).[21]

(20) *jo laRkii khaRii hai anu lambii hai          (= ex. (43) of Dayal 1996,182)

which girl standing be-PR Anu tall is

'Anu, who is standing, is tall'

The question remains whether this is a property of Hindi or of correlatives more generally. To judge from the fact that the closely related Indo-Aryan language Marathi can apparently form non-restrictive correlatives, one has to conclude that the impossibility of (20) in Hindi is not due to some inherent feature of the correlative construction, but is a property of the grammar of Hindi (to be understood). The possibility of non-restrictive correlatives in "rethorical speech and writing" in Marathi is noted in Gupte (1975,77), where such examples as (21)a-b are reported (also see Pandharipande 1997,82f):[22]

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[21] Also see Gupta (1986,34). The same is claimed by Butt, King and Roth (2007, section 4.2) for the Urdu variant of Hindi/Urdu, and by Bhatia (1993,55) for Punjabi.

[22] The existence of non-restrictive correlatives in Marathi was independently pointed out to me by Avinash Pandey and Renuka Ozarkar. Renuka Ozarkar gave me the following additional example of a non-restrictive correlative in Marathi:

i) ji-ne        maajhyaa-saaThii kaSTa ghet-l-e,              tii maajhii aaii    aataa jiwanta naahii.

REL.fem-ERG me-for             efforts take-PERF-3P.PLURAL, that my-FEM mother now alive not-PRES

'My mother, who took efforts for me, is not alive anymore.'

Non-restrictive correlatives were apparently also possible in Sanskrit. See Davison (2009,227).

(21)a jā-nni    gāt$^h$ā racali        te tukārām mahārāj dehulā   janmale

    REL-INSTR Gatha composed that St.Tukaram        Dehu-at  was born

    'St.Tukaram, who composed the Gatha, was born in Dehu'

  b gānd$^h$i-nni      jā-nnā guru    mānale    te gok$^h$ale mawāl   hote

    Gandhi-INSTR REL-to  teacher regarded that Gokhale moderate was

    'Gokhale, whom Gandhi regarded as (his) teacher, was a moderate'


As a matter of fact, given the possibility of resuming a DP followed by a non-restrictive relative clause with a correlative phrase, as in (22) from Bangla, it should in principle be possible, if the language permits it, to 'delete' the external Head like is possible with the external Head of restrictives (cf. (3) and (5) above):


(22) bhoddrolok, Jini amar ãttio, tini bose achen      (Morshed 1986,38)

    Gentleman, who my relative, he sitting is

    'The gentleman, who is my relative, is sitting'


Thus the possibility of non-restrictive correlatives may simply reduce to whether the language allows deletion of the external Head of non-restrictives (Marathi) or not (Hindi).

Interestingly, non-restrictive correlatives are also attested in other language families. See (23) from Jalonke (of the Central Mande branch of Niger-Congo), and the relative discussion in Lüpke (2005,131f):


(23)  N naaxan a     fala-m'    i bɛ jɛɛ,   n saa-xi saar-ɛɛ ma

    1SG   REL    3SG  speak-IPFV 2SG for PART, 1SG lie-PF  bed-DEF at

    (lit.) which I is speaking to you now, I lie in bed

    I, who am talking to you now, I am lying on the bed.'


**NOTE 5: Correlatives as a non exclusive relativization strategy.**


To judge from the substantive lists of languages with correlatives given in de Vries (2002,388 and 412), Bhatt (2003,491), and Lipták (2009a,10f) it seems that there may be no single language for which correlatives are the only relativization strategy available. Correlatives invariably appear to co-occur either with embedded postnominal or extraposed relatives (most Indo-Aryan languages,

Slavic languages, Warlpiri, etc.), or with prenominal non finite relatives (Dravidian languages, Sinhala, etc.), or with internally Headed relatives (Bambara, Wappo, etc.). From what I have been able to see in the literature on relative clauses, no language is described as having correlatives as its only type of relative clause.[23]

This fact (assuming it to be a fact) should actually not be surprising if one thinks that simple correlatives (setting multiple correlatives aside, which are no relative clauses) are just left dislocated DPs containing a relative clause of one or another of the existing types (externally Headed postnominal, externally Headed prenominal, internally Headed, and Headless or free) resumed by a phrase in the main clause.

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[23] Actually, Creissels (2009,43) states that "[l]e malinké n'a pas de relatives adnominales: les seules relatives du malinké sont les relatives correlatives [..].", but, as he makes clear, the correlatives of Malinké are left dislocated Internally Headed relatives, which in contrast to the closely related languages Bambara (cf. fn.19 above) and Mandingo (Bokamba and Dramé 1978), appear not to be able to occur in argument position (Creissels 2009,51). This, if true, remains to be understood.

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