Harmony, the Head-Proximate Filter, and the Near Parallels between Nominal and Clausal Linkers

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(1)  

\[ \begin{array}{cccc}
& a) & \text{Initial-over-initial} & b) \text{Final-over-final} & c) \text{Initial-over-final} & d) \text{Final-over-initial} \\
\begin{array}{cccc}
\beta & \alpha & \gamma \\
\alpha & \beta & \gamma \\
\alpha & \beta & \gamma \\
\alpha & \beta & \gamma \\
\end{array}
\end{array} \]

• The aim of this presentation is to motivate following generalisations:

(2)  
a) Where \( \alpha \) belongs to a certain class of functional heads (which we will term ‘linkers’), the disharmonic orders in (1)c) and d) are ungrammatical.

b) Where \( \alpha \) is any other head, the disharmonic orders in (1)c) and d) are simply dispreferred (as long as any requirement over linkers can otherwise be satisfied).

In doing so, we will also find an explanation both for certain parallels and certain differences between word order in clauses and nominals, particularly as regards the distribution of complement clauses to verbs and of relative clauses.

1 Typological Overview

1.1 Linkers and Harmony

(2)  
a) Where \( \alpha \) belongs to a certain class of functional heads (which we will term ‘linkers’), the disharmonic orders in (1)c) and d) are ungrammatical.

• Distribution of subordinating complementisers \( (C) \), heading complement to verb:

(3)  
\( \alpha = C \)

a) Initial-over-initial: \([V [C TP]]\) = 157 languages \( (93\%) \)
b) Final-over-final: \([[[TP C] V]]\) = 12 languages \( (7\%) \)
c) *Initial-over-final: \([V [TP C]]\) = 0 languages \( (0\%) \)
d) *Final-over-initial: \([[[C TP] V]]\) = 0 languages \( (0\%) \)


• Distribution of syntactically independent relative clause markers \( (REL) \), including:

- ordinary complementisers:

(4)  
the letter \[\text{that you sent}\]  

\( \text{English} \)

\(^1\) I have removed from Dryer’s data the languages Supyire, Harar Oromo and Khoekhoe, since these are not true instances of C-headed complements to verbs. In Supyire, the CP is in fact an adjunct associated with a pronoun in (preverbal) object position (see Dryer 2009:200, ex 25b). In Harar Oromo and Khoekhoe, the complement clause is embedded under a nominal (see discussion in Philip 2010:§4).
- general markers of subordination in NP:

(5)  [ ni jilai de] xin
      you send LNK letter
   ‘the letter that you sent’
     (Paul 2007:1, ex 1f)

- specialised relative clause markers / relativisers:

(6) dopisu [co Vám poslali]
     letter REL you.PL.DAT sent
   ‘the letter that they sent you’
     (Fried in press: 5, ex 5a)

(7) \( \alpha = \text{REL} \)
   a) Initial-over-initial: \([N[\text{REL TP}]] = 21 \text{ languages (88\%)} \)
   b) Final-over-final: \([\text{TP REL} N] = 3 \text{ languages (14\%)} \)
   c) *Initial-over-final: \([N[\text{TP REL}]] = 0 \text{ languages (0\%)} \)
   d) *Final-over-initial: \([\text{REL TP} N]] = 0 \text{ languages (0\%)} \)


• Distribution of linkers in the complex NP (LNK):

- These are semantically vacuous, syntactically independent markers of a relationship between a noun and any kind of phrasal dependent (Rubin 2002; Den Dikken and Singhapreecha 2004; Philip 2009), including

  - complements:

(8) samy-a [cə Habi]
      listen.to-N.F LNK.F Habi
   ‘listening to Habi’
     (Oprina 2002:124, ex 64d)

  - possessors:

(9) [ wo de] shu
     I LNK book
   ‘my book’
     (Den Dikken & Singhapreecha 2004:34, ex 46b)

  - predicative modifiers:

(10) [ hao de] shu
      good LNK book
   ‘good books’
     (Den Dikken & Singhapreecha 2004:34, ex 46a)

(11) [ zai Beijing de] ren
      in Beijing LNK people
   ‘people in Beijing’
     (ex 46c)

---

2 Abbreviations in glosses are as follows: ACC accusative; CL classifier; DAT dative; FUT future; IMP imperative; IMPF imperfective; LOC locative; LNK linker; N nominaliser; NOM nominative; PERF perfective; PL plural; REL relative clause; SG singular.
J Philip. ‘Harmony, the Head-Proximate Filter, and the Near Parallels between Nominal and Clausal Linkers.’
LAGB meeting, Leeds, 2nd September 2010.

(12) "wo mai de] shu
I buy LNK book
‘the book that I bought’
(ex 46d)
- non-predicative modifiers:

(13) "weilai de] laoshi
future LNK teacher
‘future teacher’
(Ortmann 2003:24, ex 61b)

(14) "chi ve] qhaʔ-še nǐ gā
this LNK headman two CL
‘these two headmen’
(Den Dikken & Singhapreecha 2004:36, fn 23, ex iii)

(15) ghayak-i [ta darra]
knife.PL-PL LNK.PL many
‘these two headmen’
(Demeke 2002:96, ex 74c)

(16) α = LNK
- Initial-over-initial: [N [LNK XP]] = 51 languages (61-62%)
- Final-over-final: [[XP LNK] N] = 31 languages (37-38%)
- *Initial-over-final: [N [XP LNK]] = potentially 1 language (0-1%)
- *Final-over-initial: [[[LNK XP] N]] = 0 languages (0%)
(see Appendix for languages and classification)

- Subordinating complementisers, relative clause markers and linkers in the NP form a natural class – ‘linkers’:
  - syntactically independent
  - semantically vacuous
  - serve only to mark the presence of an independently existing relationship – modification or θ-role assignment – between a head (here noun or verb) in one extended projection and a distinct dependent extended projection
  - Where there is no head-dependent relationship, there is no linker: complementisers and relative clause markers do not appear in matrix clauses; the linkers in (10) and (11) do not occur where the adjective or preposition is the sentence predicate.
  - in many languages, the relationships marked by linkers in (3)-(16) occur with no marking at all.

1.2 Disharmony Elsewhere

(2) Where α is any other head, the disharmonic orders in (1)c) and d) are simply dispreferred.

- Where a head does not belong to the class of linkers, disharmony is possible, both
  - between extended projections:

(17) α = P
- Initial-over-initial: [V [P NP]] = 419 languages (47%)
- Final-over-final: [[NP P] V] = 427 languages (48%)

3 Kanuri (Western Saharan); see Philip (2010:§5.2) for discussion.
c) Initial-over-final: \([V \[NP P\]] = 38\) languages \((4\%)\) \((8\%\) of postpositional lgs)  
d) Final-over-initial: \([P \[NP V\]] = 10\) languages \((1\%)\) \((2\%\) of prepositional lgs)  

(Data taken from Dryer 2008c; Sheehan 2008:§4)

\(\alpha = D\)

a) Initial-over-initial: \([V \[D NP\]] = 37\) genera \((44\%)\)  
b) Final-over-final: \([NP D] V] = 19\) genera \((23\%)\)  
c) Initial-over-final: \([V \[NP D\]] = 15\) genera \((18\%)\) \((29\%\) of VO genera)  
d) Final-over-initial: \([D NP] V] = 13\) genera \((15\%)\) \((41\%\) of OV genera)  

(Data taken from Dryer 1992:104, table 34)

\(\alpha = N\)

a) Initial-over-initial: \([V \[N PossP\]] = 63\) genera \((29\%)\)  
b) Final-over-final: \([PossP N] V] = 112\) genera \((52\%)\)  
c) Initial-over-final: \([V \[PossP N\]] = 30\) genera \((14\%)\) \((21\%\) of N-final genera)  
d) Final-over-initial: \([N PossP] V] = 12\) genera \((6\%)\) \((16\%\) of N-initial genera)  

(Data taken from Dryer 1992:91, table 5)

- within a single extended projection:

\(\alpha = V\)

a) Initial-over-initial: \([Aux \[V O\]] = 79\) languages \((55\%)\)  
b) Final-over-final: \([O V] Aux] = 30\) languages \((21\%)\)  
c) Initial-over-final: \([Aux \[O V\]] = 19\) languages \((13\%)\) \((39\%\) of OV languages)  
d) Final-over-initial: \([V O] Aux] = 16\) languages \((11\%)\) \((17\%\) of VO languages)  

(Data taken from Julien 2002:330-356)

\(\alpha = V\)

a) Initial-over-initial: \([Q \[V O\]] = 75\) languages \((20\%)\)  
b) Final-over-final: \([O V] Q] = 127\) languages \((34\%)\)  
c) Initial-over-final: \([Q \[O V\]] = 34\) languages \((9\%)\) \((21\%\) of OV languages)  
d) Final-over-initial: \([V O] Q] = 135\) languages \((36\%)\) \((64\%\) of VO languages)  

(Data taken from Bailey 2010:29, table 1, using data from Dryer 2008a,b)

\(\alpha = N\)

a) Initial-over-initial: \([P \[N PossP\]] = 134\) languages \((40\%)\)  
b) Final-over-final: \([PossP N] P] = 177\) languages \((53\%)\)  
c) Initial-over-final: \([P \[PossP N\]] = 14\) languages \((4\%)\) \((7\%\) of N-final languages)  
d) Final-over-initial: \([N PossP] P] = 11\) languages \((3\%)\) \((8\%\) of N-initial languages)  

(Hawkins 2010:1, using data from Hawkins 1983)

2 Subordinating Complementiser Distribution and a Theory of Harmony

(23) \(VO\) languages:  \(OV\) languages:

\(\text{V[CVO]}\)  \(\text{V[COV]}\)  
\(*\text{[VOC]} V\) \(\text{[OVC]} V\)  
\(*\text{[VOC]}\) \(*\text{[VOC]} V\)  


The data in (23) can be summed up by two left-right asymmetries:
OV languages allow both initial and final Cs; VO languages allow only final Cs.
- OV languages allow both preverbal and postverbal CPs; VO languages allow only postverbal CPs.
and an intervention requirement:
- C must intervene linearly between its selecting V and the complement clause.

I propose that these three observations can be captured by the interaction of three independently motivated harmonic word order constraints:

(24) HEAD UNIFORMITY
A functional head must match the lexical head of its extended projection in the direction of headedness.

As regards Cs, there should therefore be a preference for initial Cs in VO languages and for final Cs in OV languages.

(25) CP-FINAL REQUIREMENT
A clausal dependent must follow the head of its superordinate domain.

Dryer (1980) showed that there is a cross-linguistic preference for clausal arguments to appear in sentence-final position (cf. (3) above).

(26) HEAD-PROXIMATE FILTER
The highest head in the extended projection of a subordinate domain must be contiguous with the head of its superordinate domain.

For example, cross-linguistically there is an overwhelming tendency to avoid placing the complement of an adposition between this adposition and its selecting verb (see (17) above).

In (23), C, as head of the dependent clause, must be base-generated such that it is adjacent to its selecting head, the matrix verb.

Where the three constraints compete, the Head-Proximate Filter universally takes precedence:

(27) Harmonic Word Order Ranking
HEAD-PROXIMATE FILTER >> CP-FINAL, HEAD UNIFORMITY

- In VO languages, the constraints do not compete, resulting in a single optimal order:
In order to obey the Head-Proximate Filter, and the Near Parallels between Nominal and Clausal Linkers.

In order to obey the dominant constraint – the Head Proximate Filter – either Head Uniformity or the CP-Final requirement must be violated, resulting in two possible orders:

<table>
<thead>
<tr>
<th>OV language</th>
<th>HEAD-PROXIMATE</th>
<th>CP-FINAL</th>
<th>HEAD UNIFORMITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [OV]V</td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>b. [OVC]V</td>
<td>#!</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>c. V[OVC]</td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>d. [COV]V</td>
<td>#!</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

It is important to note that the Harmonic Word Order Ranking is concerned only with base-generated structures:

- In OV languages displaying the order [V[COV]], such as Bengali, Dutch, German, Hindi-Urdu, Persian and Turkish, the C-initial complement is base-generated in postverbal position; it is not an island for extraction:


- The effects of the Harmonic Word Order Ranking can be undone on the surface by movement: certain OV languages (such as Japanese and Malayalam) allow as a result of movement the otherwise unattested order V[OVC], as marked variant of the harmonic [[OVC][V]]:

(30) [Un ketab-a=ro], mæn mi-dun-æm [ke Kimea t₁ xær-id-e].

Persian

that book-PL=LNK,ACC I IMPF-know-1SG LNK Kimea buy-PERF-3SG

‘As for those books, I know that Kimea has bought (them).’

(Karimi 2001, ex 69)

- The island test shows that only the harmonic order is base-generated:

(31) a) ayaaL [waliya miinu-kaL aa kuLatt-il uNTə enna] paraññu.

Malayalam

he big fish-PL that pond-LOC is LNK said

b) ayaaL paraññu [waliya miinu-kaL aa kuLatt-il uNTə enna].

he said big fish-PL that pond-LOC is LNK

‘He said that there are big fish in that pond.’

The island test shows that only the harmonic order is base-generated:

(32) a) [aa kuLatt-il] ayaaL [waliya miinu-kaL t₁ uNTə enna] paraññu.

that pond-LOC he big fish-PL is LNK said

‘In that pond, he said that there are big fish.’

(Bayer 1999:256, ex 35, citing p.c. from Hany Babu)

b) * [aa kuLatt-il] ayaaL paraññu [waliya miinu-kaL t₁ uNTə enna]

that pond-LOC he said big fish-PL is LNK

3 A Theory of Disharmony

In the previous section, I proposed that the distribution of subordinating complementisers be derived by a universal Harmonic Word Order Ranking.

However, it is clear that not all categories obey this ranking; evidence in 1.2 suggests that for any head that is not a linker, disharmony is possible.

So, why do non-linkers not always obey this Harmonic Word Order Ranking? That is, why does disharmony arise?

4 Many thanks to Dennis Philip for Malayalam judgments
I propose the following explanation:

- **Ordering rules** pertaining to the **semantics** of a head can require it to appear in a **prominent position**, either initial or final.
- Where such rules **conflict** with, and **override**, the Harmonic Word Order Ranking in (27), **disharmony** arises.

For example, disharmony is relatively common for negative markers. As operators, negative markers certainly have semantics. Cross-linguistically, there is a tendency to place negative markers in one of two prominent positions: initially, with the result that negation will be expressed as soon as possible (Jespersen 1917, 1933:297; Dryer 1988:102); or finally, the position reserved for new or significant information (Mazzon 2004:5). Where the choice of prominent position differs from the headedness of the verb, disharmony arises.

- **Linkers**, on the other hand, are **impervious** to such **ordering rules**:
- They are distinguished from other heads by their **semantic vacuity**.

Disharmonic orders arise only when ordering rules require a head with specified semantics to appear in a certain (prominent) position; however, since linkers are semantically vacuous, they can never be the target of such ordering rules.

Therefore the position of **linkers always conforms** to the dominant constraint in the Harmonic Word Order Ranking: the **Head-Proximate Filter**.

**Synchronic and diachronic supporting evidence:**

- In Bengali, the subordinating complementiser *bole* must obey the Harmonic Word Order Ranking:

  (33) a) chele-ta [or baba aS-be *bole] Sune-che.  
  boy-CL his father come-FUT.3 LNK hear-PST.3
  
  b) *?chele-ta Sune-che [or baba aS-be *bole].  
  boy-CL hear-PST.3 his father come-FUT.3 LNK
  ‘The boy has heard that his father will come.’

  Where the same morpheme is used to head a reason adverbial – and hence has semantics – it can violate the Head Proximate Filter, and hence the Harmonic Word Order Ranking:

  (34) ami ekhane eSe-chi [tomar SONge kOtha bol-bo *bole].  
  I here come-PST.1 you with speech say-FUT.1 because
  ‘I have come here in order to talk with you.’

- In the now extinct language Akkadian, the initial adverbial conjunction *kīma* was used to head comparative/purpose clauses:

  (35) [kīma udammiqak-kunūşi] dummikā-nim.
  as 1SG.do.favours.PST-to.you.PL do.favours.IMP.PL-to.me
  ‘As I have done you favours, do me favours.’

  Over time, a gradual semantic bleaching took place, such that *kīma* became a subordinating complementiser *kī*. In conjunction with the semantic change, the clause headed by initial *kī* shifted from preverbal to postverbal position (Deutscher 2007:§4), from a disharmonic position to a harmonic one:

  (36) bēl-ī ñde [kī ultu ēlā dilipt-u mahratan-ni].  
  lord-my 3SG.know LNK since1SG.arrive.PST trouble-NOM 3FSG.confront.STATIVE-me
  ‘My lord knows that since I arrived, trouble has befallen me.’

  (Deutscher 2007:40, ex 27)
4 Harmony Meets Disharmony: Linkers in the Noun Phrase

Distribution of relative clauses:

(37) a) Postnominal and VO: \[N \{RC VO\} \] = 370 languages (64%)
b) Prenominal and OV: \[[RC O V]\ N = 111 languages (19%)
c) Postnominal and OV: \[N \{RC O V\}\ N = 95 languages (16%) (46% of OV languages)
d) Prenominal and VO: \[[RC V O]\ N = 5 languages (1%) (1% of VO languages)


(38) VO languages: OV languages:

\[N\{REL VO\] \[OV REL]N
\[VO REL]N (very rare) N\{REL OV\]
*N[VO REL] \[*N[OV REL]
*\[REL VO]N \[*\[REL OV]N

The distribution of relative clause markers (REL) exhibits certain parallels with the distribution of subordinating complementisers (cf. (23)):

- There is an intervention requirement: REL must intervene between the N it modifies and the relative clause.
- OV languages allow both prenominal and postnominal CPs, VO languages show a marked preference for postnominal CPs.

However, there is an important difference:

- Preverbal complement clauses in VO languages are ungrammatical; Prenominal relative clauses in VO languages are simply dispreferred.

• Both the parallels, and the difference, in the data can be captured by the Harmonic Word Order Ranking, working in conjunction with the theory of disharmony:

- In OV languages, there are two possible orders:

<table>
<thead>
<tr>
<th>OV language</th>
<th>HEAD-PROXIMATE</th>
<th>CP-FINAL</th>
<th>HEAD UNIFORMITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [VREL OV]</td>
<td>N {REL OV] [OV REL]N</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>b. [VREL]N</td>
<td>[VO REL]N</td>
<td>*</td>
<td></td>
</tr>
</tbody>
</table>
| c. N \{OV REL\] | *! | | *
| d. \[REL OV]N | *! | | *

- In VO languages, it initially appears as if only one order is permitted, obeying all constraints (which of course is the wrong result):

<table>
<thead>
<tr>
<th>VO language</th>
<th>HEAD-PROXIMATE</th>
<th>CP-FINAL</th>
<th>HEAD UNIFORMITY</th>
</tr>
</thead>
</table>
| a. \[VREL VO\] | N \{REL VO\] \[VO REL]N | *! | *!
| b. \[VREL]N | \[VO REL]N | *! | |
| c. N \{VO REL\] | *! | | *
| d. \[REL VO]N | *! | | *

However, recall that while relative clause markers, as linkers, must obey the Harmonic Word Order Ranking, the noun, as a head with semantics, may have an ordering rule of its own.

- Suppose firstly the noun has an initial ordering rule, N-initial:
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(41) | **VO language** | **HEAD-PROXIMATE** | **N-INITIAL** | **CP-FINAL** | **HEAD UNIFORMITY** |
<table>
<thead>
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<tbody>
<tr>
<td>a. N[REL VO]</td>
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<tr>
<td>b. [VO REL]N</td>
<td></td>
<td>*!</td>
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<tr>
<td>c. N[VO REL]</td>
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<tr>
<td>d. [REL VO]N</td>
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</table>

- If however the noun has a final ordering rule (dominating at least CP-Final and Head Uniformity), the results are different; the optimal candidate violates both CP-Final and Head Uniformity in order to obey N-Final:

(42) | **VO language** | **HEAD-PROXIMATE** | **N-FINAL** | **CP-FINAL** | **HEAD UNIFORMITY** |
<table>
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<tbody>
<tr>
<td>a. N[REL VO]</td>
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<td>*!</td>
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<tr>
<td>b. [VO REL]N</td>
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<tr>
<td>c. N[VO REL]</td>
<td>*!</td>
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</tr>
<tr>
<td>d. [REL VO]N</td>
<td>*!</td>
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</table>

Hence there are two possible orders for relative clause markers in VO languages: [[VO REL]N] where the noun phrase is N-final, and [N[REL VO]] elsewhere.

The presence of N-Initial and N-Final rules in OV languages does not increase the number of orders allowed, since of the two permitted orders ([N[REL OV]] and [[OV REL]N]) one is N-initial and one N-final anyway.

- **Why** do we not find a parallel situation with regard to subordinating complementisers and complement clauses? – Why are there no preverbal complement clauses in VO languages?

A clausal dependent in a VO language will only precede its superordinate head if this superordinate head has a final ordering rule. In the case of clausal complements to verbs, the superordinate head is V. In a VO language, it is simply impossible to have a V-final ordering rule; if there is an active V-final rule, the language as a whole is necessarily OV!

- This explanation for prenominal relative clauses in VO languages makes a very precise prediction: In languages displaying the order [[VO REL]N] (which must have an active N-Final rule), the noun should appear finally to its projection.

Dryer (2008d) and Comrie (2008) list the following languages displaying this order:

- **Chinese languages**

These are well known to be consistently N-final:

(9) | [ wo de] shu  | Mandarin  | Chinese  |
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>I LNK book</td>
<td></td>
<td>‘my book’</td>
</tr>
</tbody>
</table>

(Den Dikken & Singhapreecha 2004:34, ex 46b)

(10) | [ hao de] shu | Mandarin  | Chinese  |
<table>
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</thead>
<tbody>
<tr>
<td>good LNK book</td>
<td></td>
<td>‘good books’</td>
</tr>
</tbody>
</table>

(ex 46a)
Possessors precede the noun, but demonstratives and numerals follow the noun, while adjectives may appear on either side (Dryer 2008e:§4).

However, recall that the Harmonic Word Order Ranking is concerned not with the surface order, but with the base-generated order. It turns out that, prior to movement, Bai is N-final:

The two possible surface orders are: A-N-Dem-Num and N-Dem-Num-A

Extensive work on word order in the NP by Cinque (2005a) and Abels & Neeleman (2009, to appear) shows that the surface orders attested in Bai are not possible as base-generated orders; they can be derived only by leftwards movement of (a projection of) the noun from final position:

\[
\begin{align*}
\text{(43) a) } & [A \text{ N}, [\text{Dem Num } t_i]] \\
\text{b) } & N_i [\text{Dem Num A } t_i]
\end{align*}
\]

Amis

Demonstratives, numerals and adjectives precede the noun, while possessors may appear on either side, the postnominal position being preferred (Joy Wu, p.c.). Again this is not necessarily problematic.

It is generally assumed that UG has two available positions for possessors: one low, within NP, and one high, in [Spec, DP].

If the possessor in Amis is associated with D, rather than N, and hence outside the immediate projection of N, its appearance in final position poses no problem.

Pazih

Adjectives, numerals and possessors precede the noun, while demonstratives may appear on either side (see Li 2000; Li & Tsuchida 2001).

Like the high possessor, demonstratives are associated with D, rather than N, appearing in [Spec, DP]. Therefore demonstratives lie outside our prediction, and Pazih conforms perfectly to the prediction that it should be N-final.

5 Concluding Remarks

- I have presented evidence supporting the generalisations in (2):

\[
\begin{align*}
\text{(2) a) } & \text{Where } \alpha \text{ belongs to a certain class of functional heads (which we will term ‘linkers’), the disharmonic orders in (1)c) and d) are ungrammatical.} \\
\text{b) } & \text{Where } \alpha \text{ is any other head, the disharmonic orders in (1)c) and d) are simply dispreferred (as long as any requirement over linkers can otherwise be satisfied).}
\end{align*}
\]

Harmony is defined here by the optimal order determined by the ranking of the Head-Proximate Filter, CP-Final and Head Uniformity, with the Head-Proximate Filter taking precedence.

Disharmony occurs where ordering rules pertaining to the semantics of a head override the Harmonic Word Order Ranking.
Since **linkers** do not have **semantics**, they must **always obey** at least the **Head-Proximate Filter**, the dominant constraint in the Harmonic Word Order Ranking (hence generalisation (2)a)). We have seen evidence for this from **subordinating complementisers**, **relative clause markers**, and **linkers** in the **noun phrase**.

- **An alternative generalisation** over absent disharmonic word orders is provided by the **Final-Over-Final Constraint** (FOFC; Holmberg 2000; Biberauer, Holmberg & Roberts 2007 et seq):

  (44) **The Final-over-Final Constraint**

  If α is a head-initial phrase and β is a phrase immediately dominating α, then β must be head-initial. If α is a head-final phrase, and β is a phrase immediately dominating α, then β can be head-initial or head-final, where:
  
  (i) α and β are in the same Extended Projection [categorially non-distinct, and αP is a complement to β]5
  
  (ii) αP has not been A’-moved to SpecβP. 

  Biberauer, Holmberg & Roberts 2010:53, ex 1’’’’

  This states that a **head-initial phrase cannot be dominated** by a categorically non-distinct **head-final phrase** (that is, where α and β are categorically non-distinct, (1)d) is ungrammatical).

- I suggest that the **proposals** presented here capture a **wider range of data** than FOFC:

  - Arguably, the most convincing evidence for FOFC is the distribution of **subordinating complementisers** (in (23)).6 I have shown that this same data can be captured by the **Harmonic Word Order Ranking** in (27).

  - The **relative clause marker** and other **linker** data, on the other hand, falls **outside** the scope of FOFC: both disharmonic orders are absent, and not just the final-over-initial order (in (1)d)). Moreover, even the ungrammaticality of this order is not predicted by FOFC, since the relevant heads are categorially distinct.

  - Moreover, **clause-final particles** in **VO** languages (see (20)d), (21)d), also (22)d)), that pose a problem for FOFC, are unproblematic here: being **semantically contentful, disharmony** is possible.

  - Finally, we have also seen that, in certain cases, **FOFC** may be **violated** specifically to **obey** the **Head-Proximate Filter**. This occurs where a noun in an N-final language takes a head-initial dependent, marked by a linker:

  (11) [zai Beijing de] ren in Beijing LNK people ‘people in Beijing’

  (45) [zuotian chi yurou de] ren yesterday eat fish LNK person ‘the people who ate fish yesterday’

  (46) [vɛ 42 tsg 21 tsg 42 no 33] s 55 write tidy LNK word ‘words that are written tidily’

  Den Dikken & Singhapreecha 2004:34, ex 46c

  (Paul to appear: 4, ex 8a)

  Dryer 2008e, ex 39, citing Xu & Zhao 1984:73

---


6 See however Philip (2010:§3.1) for complementiser data from the Ge-Kaingang language Canela-Krahô that seems to fall outside the scope of FOFC.
### Appendix: Languages with Linkers in the Noun Phrase

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<th>Classification</th>
<th>No. of lgs. in sample</th>
<th>Language</th>
<th>Position of linker</th>
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J Philip. ‘Harmony, the Head-Proximate Filter, and the Near Parallels between Nominal and Clausal Linkers.’
LAGB meeting, Leeds, 2nd September 2010.

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References


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