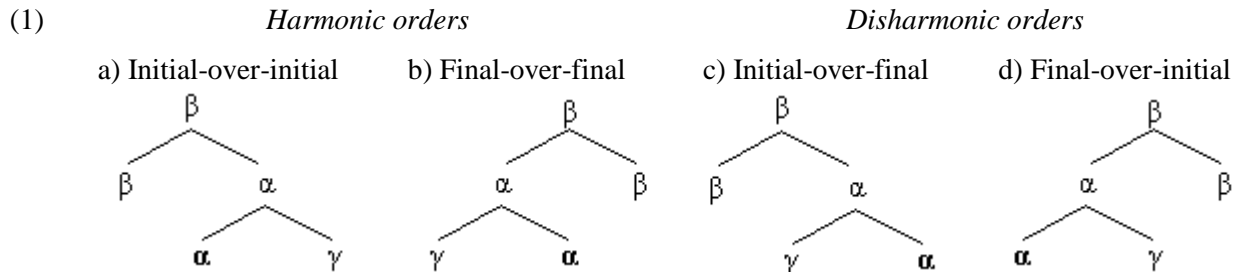


Harmony, the Head-Proximate Filter, and the Near Parallels between Nominal and Clausal Linkers

Joy Philip
j.philip@ucl.ac.uk

UCL



- The aim of this presentation is to motivate following **generalisations**:
- (2) a) Where α 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 α 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 α 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%) |

(Data taken from Dryer 2009:199-200¹; cf. Grosu and Thompson 1977; Hawkins 1988:346, 1994:§5.6.1; Bayer 1996 *et seq*; Kayne 2000:320, ex 36, p324, fn 12; Cinque 2005b:53-54)

- Distribution of syntactically independent **relative clause markers** (REL), including:

- ordinary complementisers:

- (4) the letter [**that** you sent]

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 *Mandarin Chinese*
you send LNK letter²
'the letter that you sent' (Paul 2007:1, ex 1f)

- specialised relative clause markers / relativisers:

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

(7) α = REL

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

(Data taken from C. Lehmann 1984; cf. Andrews 1975/1985:26; Downing 1978; Keenan 1985:160; Hawkins 1988 *et seq*; De Vries 2002:37, 2005:148; Cinque 2005b:53-54)

• 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) səmy-a [**cə** Habi] *Zina*
listen.to-N.F LNK.F Habi
'listening to Habi' (Oprina 2002:124, ex 64d)

- possessors:

- (9) [wo **de**] shu *Mandarin Chinese*
I LNK book
'my book' (Den Dikken & Singhapreecha 2004:34, ex 46b)

- predicative modifiers:

- (10) [hao **de**] shu *Mandarin Chinese*
goodLNK book
'good books' (Den Dikken & Singhapreecha 2004:34, ex 46a)

- (11) [zai Beijing **de**] ren *Mandarin Chinese*
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.

(12) [wo mai **de**] shu
I buy LNK book
'the book that I bought' (ex 46d)

- non-predicative modifiers:

(13) [weilai **de**] laoshi *Mandarin Chinese*
future LNK teacher
'future teacher' (Ortmann 2003:24, ex 61b)

(14) [chi **ve**] qhaʔ-ʃε nî gâ *Lahu*
this LNK headman two CL
'these two headmen' (Den Dikken & Singhapreecha 2004:36, fn 23, ex iii)

(15) ghayak-i [tə darra] *Zina*
knife.PL-PL LNK.PL many
'many knives' (Demeke 2002:96, ex 74c)

(16) α = LNK

- a) Initial-over-initial: [N [LNK XP]] = 51 languages (61-62%)
- b) Final-over-final: [[XP LNK] N] = 31 languages (37-38%)
- c) *Initial-over-final: [N [XP LNK]] = **potentially 1 language³ (0-1%)**
- d) *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) b) 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

- a) Initial-over-initial: [V [P NP]] = 419 languages (47%)
- b) 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)

(18) $\alpha = D$

- | | | | | |
|--------------------------|------------|-------------|-------|--------------------|
| 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)

(19) $\alpha = N$

- | | | | | |
|--------------------------|---------------|--------------|-------|---------------------------|
| 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:

(20) $\alpha = V$

- | | | | | |
|--------------------------|-------------|----------------|-------|-----------------------|
| 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)

(21) $\alpha = V$

- | | | | | |
|--------------------------|-----------|-----------------|-------|-----------------------|
| 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)

(22) $\alpha = N$

- | | | | | |
|--------------------------|---------------|-----------------|-------|-----------------------------|
| 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:*

- | | |
|---------|---------|
| V[CVO] | V[COV] |
| *[VOC]V | [OVC]V |
| *V[VOC] | *V[OVC] |
| *[CVO]V | *[COV]V |

(see Grosu and Thompson 1977; Dryer 1980, 1991:500, 1992:102, 2009:199-200; Hawkins 1988 *et seq*;
Bayer 1996 *et seq*; Kayne 2000:320, ex 36, p324, fn 12; Cinque 2005b:53-54)

The data in (23) can be summed up by two left-right asymmetries:

J Philip. 'Harmony, the Head-Proximate Filter, and the Near Parallels between Nominal and Clausal Linkers.'
LAGB meeting, Leeds, 2nd September 2010.

- **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.

(cf. Natural Serialisation Principle, Bartsch and Vennemann 1972:136;
Cross-Categorical Harmony, Hawkins 1980, 1983; Head Parameter, *inter alia* Chomsky 1981;
Branching Direction Theory, Dryer 1992, 2009; Principle of Cross-Domain Harmony, Dik 1997:403)

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.

(cf. Sentential NP Position Hierarchy, Dryer 1980;
Language Independent Preferred Order of Constituents, Dik 1997)

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.

(cf. W. Lehmann 1973; Surface Recursion Restriction, Emonds 1976, 1985; Head-Final Filter, Williams 1982; Head Proximity, Rijkhoff 1984 *et seq*; Early Immediate Constituents, Hawkins 1990, 1994)

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**:

(28)	<i>VO language</i>	HEAD-PROXIMATE	CP-FINAL	HEAD UNIFORMITY
a.	☞ V[CVO]			
b.	[VOC]V		*!	*!
c.	V[VOC]	*!		*
d.	[CVO]V	*!	*	

- In **OV** languages, no single order obeys all three constraints.

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**:

(29)	<i>OV language</i>	HEAD-PROXIMATE	CP-FINAL	HEAD UNIFORMITY
a.	V[COV]			*
b.	[OVC]V		*	
c.	V[OVC]	*!		
d.	[COV]V	*!	*	*

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:

(Bennis 1987; Simpson & Bhattacharya 2000:587, 2003:130; Karimi 2001; Aghaei 2006; Biberauer, Newton & Sheehan 2009; Biberauer & Sheehan 2010:§4.2 & references cited there)

- (30) [Un ketab-a=ro]_i mæn mi-dun-æm [ke Kimea t_i 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 effects of the Harmonic Word Order Ranking can be **undone** on the surface by **movement**: certain OV languages (such as Japanese and Malayalam⁴) allow as a result of movement the otherwise unattested order V[OVC], as marked variant of the harmonic [[OVC]V]:

- (31) a) ayaaL [waliya miinu-kaL aa kuLatt-il uNTə ennə] paraññu. *Malayalam*
he big fish-PL that pond-LOC is LNK said
b) ayaaL paraññu [waliya miinu-kaL aa kuLatt-il uNTə ennə].
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]_i ayaaL [waliya miinu-kaL t_i uNTə ennə] 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]_i ayaaL paraññu [waliya miinu-kaL t_i uNTə ennə]
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. *Bengali*
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.' (Bayer 1996:255, ex 9)

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]. *Bengali*
I here come-PST.1 you with speech say-FUT.1 because
'I have come here in order to talk with you.' (Bayer 1996:255, ex 10)

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

(35) [kīma udammiqak-kunūši] dummikā-nim. *Akkadian*
as 1SG.do.favours.PST-to.you.PL do.favours.IMP.PL-to.me
'As I have done you favours, do me favours.' (Deutscher 2007:40, ex 27)

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 īde [kī ultu ēlâ dilipt-u mahratan-ni]. *Akkadian*
lord-my 3SG.know LNK since 1SG.arrive.PST trouble-NOM 3FSG.confront.STATIVE-me
'My lord knows that since I arrived, trouble has befallen me.' (Deutscher 2007:51, ex 57)

4 Harmony Meets Disharmony: Linkers in the Noun Phrase

Distribution of **relative clauses**:

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

(Data taken from Dryer 2008d; cf. Greenberg 1963:90, table 10; Downing 1977:164, 1978; Mallinson and Blake 1981:§5.2.1; Hawkins 1983 *et seq*; C. Lehmann 1984; Keenan 1985:§2.1; Foster and Höfling 1987:486, 494; Dryer 1991:456, 1992:86, 2007:§6.1, 2008e; De Vries 2001:235-236, 2005:136-137; Rijkhoff 2002:307; Andrews 2007)

- (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:

(39)

<i>OV language</i>	HEAD-PROXIMATE	CP-FINAL	HEAD UNIFORMITY
a. ☞ N[REL OV]			*
b. ☞ [OV REL]N		*	
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):

(40)

<i>VO language</i>	HEAD-PROXIMATE	CP-FINAL	HEAD UNIFORMITY
a. ☞ N[REL VO]			
b. [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**:

(41)

<i>VO language</i>	HEAD-PROXIMATE	N-INITIAL	CP-FINAL	HEAD UNIFORMITY
a. N[REL VO]				
b. $[\text{VO REL}]\text{N}$		*!	*	*
c. N[VO REL]	*!			*
d. $[\text{REL VO}]\text{N}$	*!	*!	*	

- 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)

<i>VO language</i>	HEAD-PROXIMATE	N-FINAL	CP-FINAL	HEAD UNIFORMITY
a. N[REL VO]		*!		
b. [VO REL]N			*	*
c. N[VO REL]	*!	*!		*
d. $[\text{REL VO}]\text{N}$	*!		*	

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:

Cantonese }
Hakka } Chinese
Mandarin }
Bai — Tibeto-Burman
Amis }
Pazih } Formosan

- *Chinese languages*

These are well known to be **consistently N-final**:

(9) [wo **de**] shu *Mandarin Chinese*
I LNK book
'my book' (Den Dikken & Singhapreecha 2004:34, ex 46b)

(10) [hao **de**] shu
goodLNK book
'good books' (ex 46a)

- (11) [zai Beijing **de**] ren
in Beijing LNK people
'people in Beijing' (ex 46c)

- *Bai*

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:

- (43) a) [A N]_i [Dem Num *t*_i]
b) N_i [Dem Num A *t*_i]

- *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):
 - (2) a) Where α belongs to a certain class of functional heads (which we will term '**linkers**'), the **disharmonic** orders in (1c) and d) are **ungrammatical**.
 - b) Where α is **any other head**, the **disharmonic** orders in (1c) and d) are simply **dispreferred** (as long as any requirement over linkers can otherwise be satisfied).
- **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 Spec βP . (Biberauer, Holmberg & Roberts 2010:53, ex 1''')

This states that a **head-initial phrase cannot be dominated** by a categorially non-distinct **head-final phrase** (that is, where α and β are categorially 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 *Mandarin Chinese*
 in Beijing LNK people
 'people in Beijing' (Den Dikken & Singhapreecha 2004:34, ex 46c)

(45) [zuotian chi yurou **de**] ren (Paul to appear: 4, ex 8a)
 yesterday eat fish LNK person
 'the people who ate fish yesterday'

(46) [vẽ⁴² tsẽ²¹ tsã⁴² **no**³³] sɿ⁵⁵ *Bai*
 write tidy LNK word
 'words that are written tidily' (Dryer 2008e, ex 39, citing Xu & Zhao 1984:73)

⁵ Note that Biberauer *et al*'s definition of Extended Projection differs from Grimshaw's (1991/2005, 2000).

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

Classification	No. of lgs. in sample	Language	Position of linker
<i>Afro-Asiatic</i>	10		
- Chadic	(9)		
Biu-Mandara	(8)		
A		Gude	Postnominal
B	(7)		
Kotoko-Yedina			
Kotoko		Afade	Postnominal
		Goulfey	Postnominal
		Lagwan	Postnominal
		Mpade	Postnominal
		Mser	Postnominal
Zina		Mazera	Postnominal
		Zina	Postnominal
West Chadic		Nyam	Postnominal
- East Cushitic		Dasenech	Prenominal
<i>Austronesian</i>	13		
- Formosan	(4)		
Atayalic		Mayrinax Atayal	Prenominal/Both
Bunanan		Isbukun Bunan	Prenominal
Central East Formosan		Amis	Prenominal
Northern Formosan		Pazih	Prenominal/Both
- Malayo-Polynesian	(9)		
Nuclear Malayo-Polynesian		Palauan	Both
Oceanic	(5)		
Central-Eastern Oceanic	(2)		
Central Pacific		Rotuman	Postnominal
Micronesian		Kiribati	Postnominal
Meso-Melanesian		Bali-Vitu	Postnominal
Polynesian		Samoa	Postnominal
Southern Oceanic		Malo	Postnominal
Philippine	(3)		
Central Philippine		Tagalog	Both
Northern Luzon	(2)		
Central Cordilleran		Batad Ifugao	Both
Ilocano		Ilocano	Both
<i>Creole languages</i>	2		
- Dutch Creole		Berbice Dutch Creole	Postnominal
- English Creole		Tok Pisin	Postnominal
<i>Indo-European</i>	18		
- Albanian		Albanian	Postnominal
- Indo-Iranian	(11)		
Indo-Aryan		Hindi	Prenominal
		Urdu	Both
Western Iranian	(9)		
Northwestern Iranian	(7)		
Caspian		Gilaki	Both
		Mazandarani	Both
Kurdish		Balochi	Postnominal
		Hawrami	Postnominal
		Kurmanji	Postnominal
		Sorani	Postnominal
		Zazaki	Postnominal
Southwestern Iranian		Persian	Postnominal
		Tajik	Postnominal
- Italic	(3)		
Romance			
East Romance		Romanian	Postnominal

Italo-Western	(2)		
Italo-Dalmation		Italian	Postnominal
Western		French	Postnominal
- West Germanic	(3)		
Anglo-Frisian		English	Postnominal
High German		German	Postnominal
Low Franconian		Dutch	Postnominal
<i>Japonic</i>	1	Japanese	Prenominal
<i>Korean</i>	1	Korean	Prenominal
<i>Kwadi-Khoe</i>	1		
- Khoe		Khoekhoe	Postnominal
<i>Mayan</i>	1		
- Cholan-Tzeltalan		Tzeltal	Prenominal
<i>Niger-Congo</i>	9		
- Atlantic-Congo	(8)		
Benue-Congo	(7)		
Bantoid			
Central Bantu			
Zone D		Kilega	Postnominal
Zone E	(2)		
Kikuyu-Kamba		Gikuyu	Postnominal
		Kiitharaka	Postnominal
		Swahili	Postnominal
Zone G			
Zone J	(2)		
Haya-Jita		Haya	Postnominal
Konzo		Kinande	Postnominal
Zone N		Chichewa	Postnominal
Senegal-Guinea		Wolof	Postnominal
- Central-Southwestern Mande		Bambara	Prenominal
<i>Nilo-Saharan</i>	4		
- Central Sudanic		Lendu	Prenominal
- East Sudanic	(2)		
Western Nilotic			
Southern Luo			
Luo-Acholi		Dholuo	Postnominal
		Lango	Postnominal
- Songhay		Koyra Chiini	Prenominal
<i>Penutian</i>	1	Tsimshian	Postnominal
<i>Sino-Tibetan</i>	8		
- Sinitic	(3)		
Chinese		Cantonese	Prenominal
		Mandarin	Prenominal
		Taiwanese	Prenominal
- Tibeto-Burman	(5)		
Himalayish	(2)		
Mahakiranti		Newari	Prenominal
Tibeto-Kanauri		Byansi	Prenominal
Lolo-Burmese	(2)		
Burmish		Burmese	Prenominal
Loloish		Lahu	Prenominal
Northeast Tibeto-Burman		Bai	Prenominal
<i>Tai-Kadai</i>	1		
- Tai		Thai	Postnominal
<i>Trans-New Guinea</i>	1		
- Madang		Amele	Prenominal

Data from Ross (1998); Zeitoun *et al* (1999); Li (2000); Matamirofa (2000); Li & Tsuchida (2001); Kinyalolo (2002); Rijkhoff (2002); Den Dikken & Singhapreecha (2004); Holmberg & Odden (2004); Kutsch Lojenga (2005); Shklovsky (2005); Svenonius (2006); Witzlack-Makarevich (2006); Dryer (2007, 2008e); Bögel *et al* (2008); Jahani (2008); Spencer (2008); Andreas *et al* (2009); Philip (2009); Tourneux & Mahamat (2009); Larson (in press)

References

- Abels, Klaus & Ad Neeleman. 2009. 'Universal 20 without the LCA.' Jose M. Brucart, Anna Gavarró & Jaume Solà (eds.), *Merging Features: Computation, Interpretation and Acquisition*. New York: Oxford University Press, 60-79.
- Abels, Klaus & Ad Neeleman (to appear) 'Linear Asymmetries and the LCA.' *Syntax*.
- Aghaei, Behrad. 2006. 'The Syntax of *ke*-clause and Clausal Extraposition in Modern Persian.' Ph.D. dissertation, University of Texas. (Available from *University of Texas Libraries*, [<http://repositories.lib.utexas.edu/bitstream/handle/2152/2655/aghaeid29544.pdf?sequence=2>], accessed 25/11/09)
- Andreas, Heike, Rudolf Leger & Ulrike Zoch. 2009. 'The Nyam Language: First Steps towards a Grammatical Description.' Rothmaler (ed.), 23-36.
- Andrews, Avery D. 1985. *Studies in the Syntax of Relative and Comparative Clauses*. New York: Garland Publishing. (Published version of 1975 Ph.D. dissertation, MIT)
- Andrews, Avery. D. 2007. 'Relative Clauses.' Shopen (ed.), vol. 2: *Complex Constructions*, 206-236.
- Bailey, Laura. 2010. 'Sentential Word Order and the Syntax of Question Particles.' *Newcastle Working Papers in Linguistics* 16, 23-43. [<http://www.ncl.ac.uk/linguistics/assets/documents/BAILEY.pdf>] (accessed 03/08/10)
- Bartsch, Renate & Theo Vennemann. 1972. *Semantic Structures: A Study in the Relation Between Semantics and Syntax*. Frankfurt am Main: Athenäum.
- Bayer, Josef. 1996. *Directionality and Logical Form: On the Scope of Focussing Particles and Wh-in-situ*. Dordrecht: Kluwer.
- Bayer, Josef. 1997. 'CP-Extraposition as Argument Shift.' Dorothee Beerman, David LeBlanc & Henk van Riemsdijk (eds.), *Rightward Movement*. Amsterdam/Philadelphia: John Benjamins, 37-58.
- Bayer, Josef. 1999. 'Final Complementizers in Hybrid Languages.' *Journal of Linguistics* 35, 233-271.
- Bennis, Hans. 1987. *Gaps and Dummies*. Dordrecht: Foris.
- Biberauer, Theresa, Anders Holmberg & Ian Roberts. 2007. 'Disharmonic Word-Order systems and the Final-Over-Final-Constraint (FOFC).' Antonietta Bisetto & Francesco E. Barbieri (eds.), *Proceedings of XXXIII Incontro di Grammatica Generativa*, 86-105. (Available from *AMS Acta*, [http://amsacta.cib.unibo.it/2397/1/PROCEEDINGS_IGG33.pdf], accessed 13/08/10)
- Biberauer, Theresa, Anders Holmberg & Ian Roberts. 2008a. 'Linearising Disharmonic Word Orders: The Final-Over-Final Constraint.' K.-A. Kim (ed.), *Perspectives on Linguistics in the 21st Century*. Proceedings of the ICLK conference, Seoul, January 2007, 301-318.
- Biberauer, Theresa, Anders Holmberg & Ian Roberts. 2008b. 'Structure and Linearization in Disharmonic Word Orders.' Charles B. Chang & Hannah J. Haynie (eds.), *The Proceedings of 26th Western Coast Conference on Formal Linguistics*. Somerville, MA: Cascadilla Proceedings Project, 96-104.
- Biberauer, Theresa, Anders Holmberg & Ian Roberts. 2009. 'Linearization and the Architecture of Grammar: A View from the Final-Over-Final Constraint.' Vincenzo Moscati & Emilio Servidio (eds.), *StiL – Studies in Linguistics* 3. Proceedings of the Incontro di Grammatica Generativa XXXV, 77-89. (Available from *CISCL - Interdepartmental Center for Cognitive Studies of Language*, [http://www.ciscl.unisi.it/doc/doc_pub/igg-proceedings2009.pdf], accessed 13/08/10)
- Biberauer, Theresa, Anders Holmberg & Ian Roberts. 2010. 'A Syntactic Universal and its Consequences.' Ms, University of Cambridge, Stellenbosch University & Newcastle University.
- Biberauer, Theresa, Glenda Newton & Michelle Sheehan. 2009. 'Limiting Synchronic and Diachronic Variation and Change: The Final-Over-Final Constraint.' *Language and Linguistics* 10, 701-743.
- Biberauer, Theresa & Michelle Sheehan. 2010. 'Disharmony, Antisymmetry, and the Final-over-Final Constraint.' Myriam Uribe-Etxebarria & Vidal Valmala (eds.), *Ways of Structure Building*. Cambridge: Cambridge University Press.
- Bögel, Tina, Miriam Butt & Sebastian Sulger. 2008. 'Urdu Ezafe and the Syntax-Morphology Interface.' Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG08 Conference*. Berkeley: CSLI Publications, 129-149. [<http://csli-publications.stanford.edu/LFG/13/papers/lfg08boegeletal.pdf>] (accessed 05/01/09)
- Chomsky, Noam. 1981. *Lectures on Government and Binding*. Dordrecht: Foris.
- Cinque, Guglielmo. 2005a. 'Deriving Greenberg's Universal 20 and Its Exceptions.' *Linguistic Inquiry* 36, 315-332.
- Cinque, Guglielmo. 2005b. 'A Note on Verb/Object Order and Head/Relative Clause Order.' *University of Venice Working Papers in Linguistics* 15, 49-104. (Available from *Lear*, [<http://lear.unive.it/bitstream/10278/1971/1/2005-2s-Cinque.pdf>], accessed 03/11/09. Published minus appendices in Mila Dimitrova-Vulchanova and Tor A. Åfarli (eds.) *Grammar and Beyond: Essays in Honour of Lars Hellan*. Oslo: Novus Press, 69-89)

- Comrie, Bernard. 2008. 'Prenominal Relative Clauses in Verb-Object Languages.' *Language and Linguistics* 9, 723-733.
- Demeke, Girma A. 2002. 'The Syntax of DPs.' Schmidt *et al* (eds.), 72-105.
- Deutscher, Guy. 2007. *Syntactic Change in Akkadian: The Evolution of Sentential Complementation*. Oxford: Oxford University Press.
- Dik, Simon C. 1997. *The Theory of Functional Grammar Part 1: The Structure of the Clause*. 2nd edition. Berlin: Mouton de Gruyter.
- Dikken, Marcel den & Pornsiri Singhapreecha. 2004. 'Complex Noun Phrases and Linkers.' *Syntax* 7, 1-24.
- Downing, Bruce T. 1977. 'Typological Regularities in Postnominal Relative Clauses.' Fred R. Eckman (ed.), *Current Themes in Linguistics. Bilingualism, Experimental Linguistics, and Language Typologies*. New York: John Wiley & Sons, 163-194.
- Downing, Bruce T. 1978. 'Some Universals of Relative Clause Structure.' Joseph H. Greenberg (ed.), *Universals of Human Language* vol. 4: *Syntax*. Stanford, California: Stanford University Press, 375-418.
- Dryer, Matthew S. 1988. 'Universals of Negative Position.' Hammond *et al* (eds.), 93-124.
- Dryer, Matthew S. 1991. 'SVO Languages and the OV:VO Typology.' *Journal of Linguistics* 27, 443-482.
- Dryer, Matthew S. 1992. 'The Greenbergian Word Order Correlations.' *Language* 68, 81-138.
- Dryer, Matthew S. 2007. 'Word Order.' Shopen (ed.), vol. 1: *Clause Structure*, 61-131.
- Dryer, Matthew S. 2008a. 'Order of Object and Verb.' Haspelmath *et al* (eds.), chapter 83. [<http://wals.info/feature/description/83>] (accessed 09/08/10)
- Dryer, Matthew S. 2008b. 'Position of Polar Question Particles.' Haspelmath *et al* (eds.), chapter 92. [<http://wals.info/feature/description/92>] (accessed 09/08/10)
- Dryer, Matthew S. 2008c. 'Relationship between the Order of Object and Verb and the Order of Adposition and Noun Phrase.' Haspelmath *et al* (eds.), chapter 95. [<http://wals.info/feature/95>] (accessed 01/03/10)
- Dryer, Matthew S. 2008d. 'Relationship between the Order of Object and Verb and the Order of Relative Clause and Noun.' Haspelmath *et al* (eds.), chapter 96. [<http://wals.info/feature/96>] (accessed 09/05/10)
- Dryer, Matthew S. 2008e. 'Word Order in Tibeto-Burman Languages.' *Linguistics of the Tibeto-Burman Area* 31, 1-84.
- Dryer, Matthew S. 2009. 'The Branching Direction Theory Revisited.' Sergio Scalise, Elisabetta Magni & Antonietta Bisetto (eds.), *Universals of Language Today*. Berlin: Springer, 185-207.
- Dryer, Matthew Syngé. 1980. 'The Positional Tendencies of Sentential Noun Phrases in Universal Grammar.' *Canadian Journal of Linguistics* 25, 123-195.
- Emonds, Joseph. 1976. *A Transformational Approach to English Syntax*. New York: Academic Press.
- Emonds, Joseph. 1985. *A Unified Theory of Syntactic Categories*. Dordrecht: Foris.
- Foster, Joseph F. & Charles A. Höfling. 1987. 'Word Order, Case and Agreement.' *Linguistics* 25, 475-499.
- Fried, Mirjam (in press) 'Accusative Relative Pronoun in the Czech Relative Clauses with Absolutive Relativizer *co*.' *Korpus, gramatika, axiologie*. (Available from *Univerzita Hradec Králové*, [www.uhk.cz/doc/pdf/soutez/Studie_c_1.doc], accessed 23/08/10)
- Greenberg, Joseph H. 1963. 'Some Universals of Grammar with Particular Reference to the Order of Meaningful Elements.' Joseph H. Greenberg (ed.), *Universals of Language*. London: MIT Press, 73-113.
- Grimshaw, Jane. 2000. 'Locality and Extended Projection.' Peter Coopmans, Martin Everaert & Jane Grimshaw (eds.), *Lexical Specification and Insertion*. Amsterdam/Philadelphia: John Benjamins, 115-133.
- Grimshaw, Jane. 2005. 'Extended Projection.' Jane Grimshaw (ed.), *Words and Structure*. Stanford: CLSI. (Published version of ms. widely circulated in 1991)
- Grosu, Alexander & Sandra Thompson. 1977. 'Constraints on the Distribution of NP Clauses.' *Language* 53, 104-151.
- Hammond, Michael, Edith A. Moravcsik & Jessica R. Wirth (eds.) 1988. *Studies in Syntactic Typology*. Amsterdam: John Benjamins.
- Haspelmath, Martin, Matthew S. Dryer, David Gil & Bernard Comrie (eds.) 2008. *World Atlas of Language Structures Online*. Munich: Max Planck Digital Library. [<http://wals.info/>] (accessed 01/03/10)
- Hawkins, John A. 1980. 'On Implicational and Distributional Universals of Word Order.' *Journal of Linguistics* 16, 193-235.
- Hawkins, John A. 1983. *Word Order Universals*. Quantitative Analyses of Linguistic Structure Series. New York: Academic Press.
- Hawkins, John A. 1988. 'On Explaining some Left-Right Asymmetries in Syntactic and Morphological Universals.' Hammond *et al* (eds.), 321-57.
- Hawkins, John A. 1990. 'A Parsing Theory of Word Order Universals.' *Linguistic Inquiry* 21, 223-261.
- Hawkins, John A. 1994. *A Performance Theory of Order and Constituency*. Cambridge: Cambridge University Press.
- Hawkins, John A. 2010. 'FOFC from a Processing Typology Perspective.' Handout from workshop on The Final-Over-Final Constraint: Processing, Typology and Acquisition, Cambridge, 29th January 2010. (Available from

J Philip. 'Harmony, the Head-Proximate Filter, and the Near Parallels between Nominal and Clausal Linkers.'
LAGB meeting, Leeds, 2nd September 2010.

- Research – Newcastle University*, [http://research.ncl.ac.uk/linearization/Hawkins_FOFC_handout.pdf], accessed 16/02/10)
- Holmberg, Anders. 2000. 'Deriving OV Order in Finnish.' Peter Svenonius (ed.), *The Derivation of VO and OV*. New York: Oxford University Press, 123–152.
- Holmberg, Anders & David Odden. 2004. 'The Izafe and NP Structure in Hawrami.' *Durham Working Papers in Linguistics* 10, School of Linguistics and Language, University of Durham, 77-93.
- Jahani, Carina. 2008. 'Restrictive Relative Clauses in Balochi and the Marking of the Antecedent – Linguistic Influence from Persian?' Carina Jahani, Agnes Korn & Paul Titus (eds.), *The Baloch and Others: Linguistic, Historical and Socio-Political Perspectives on Pluralism in Balochistan*. Wiesbaden: Reichert, 141-166.
- Jespersen, Otto. 1917. *Negation in English and Other Languages*. Copenhagen: A.F. Høst.
- Jespersen, Otto. 1933. *Essentials of English Grammar*. London: George Allen & Unwin.
- Joseph, Brian D. & Jane C. Smirniotopoulos. 1993. 'The Morphosyntax of the Modern Greek Verb as Morphology and Not Syntax.' *Linguistic Inquiry* 24, 388-398.
- Julien, Marit. 2002. *Syntactic Heads and Word Formation: A Study of Verbal Inflection*. Oxford/New York: Oxford University Press.
- Karimi, Simin. 2001. 'Persian Complex DPs: How Mysterious are they?' *Canadian Journal of Linguistics* 46, 63-96.
- Kayne, Richard S. 2000. *Parameters and Universals*. New York: Oxford University Press.
- Keenan, Edward L. 1985. 'Relative Clauses.' Shopen (ed.), vol. 2: *Complex Constructions*, 141-170.
- Kinyalolo, K. 2002. 'What's with the Associative Marker -a in Bantu?' *NYU Department of Linguistics*, [<http://linguistics.as.nyu.edu/page/events/minico02/abstract/kinyalolo.pdf>] (accessed 14/12/06)
- Kutsch Lojenga, Constance. 2005. 'Prenominal Relative Clauses and Word Order in Lendu.' Ms, Leiden.
- Larson, Richard K. (in press) 'Chinese as a Reverse Ezafe Language.' *Yuyanxue Luncong* (Journal of Linguistics). Peking University. (Available from Richard K. Larson, [<http://semlab5.sbs.sunysb.edu/~rlarson/LarsonCAREL09.pdf>], accessed 26/05/09)
- Lehmann, Christian. 1984. *Der Relativsatz*. Tübingen: Gunter Narr.
- Lehmann, W. P. 1973. 'A Structural Principle of Language and its Implications.' *Language* 49, 47-66.
- Li, Paul Jen-kuei. 2000. 'Some Aspects of Pazeh Syntax.' Videia P. De Guzman & Byron W. Bender (eds.), *Grammatical Analysis: Morphology, Syntax, and Semantics: Studies in Honor of Stanley Starosta*. Oceanic Linguistics Special Publication No. 29. Honolulu: University of Hawaii Press, 89-108.
- Li, Paul Jen-kuei & Shigeru Tsuchida. 2001. *Pazih Dictionary*. Taipei: Institute of Linguistics (Preparatory Office).
- Mallinson, Graham & Barry J. Blake. 1981. *Language Typology: Cross-Linguistic Studies in Syntax*. Amsterdam: North-Holland.
- Matambirofa, Francis. 2000. 'Some Aspects of the Architecture of the Possessive Noun Phrase in Bantu.' *Zambezia* 27, 71-91.
- Mazzon, Gabriella. 2004. *A History of English Negation*. Harlow: Pearson Longman.
- Oprina, Florin. 2002. 'Notes on VP Syntax.' Schmidt *et al* (eds.), 106-128.
- Ortmann, Albert. 2003. 'Licensing Attributes Morphologically: Cross-Linguistic Evidence for Type-Shifts.' Ms, Universität Tübingen.
- Paul, Waltraud. 2007. 'The Insubordinate Subordinator *de* in Mandarin Chinese.' Ms, CRLAO, Paris. (Available from *LingBuzz* 001010, [<http://ling.auf.net/lingBuzz/001010>], accessed 22/02/10)
- Paul, Waltraud (to appear) 'Why Particles are Not Particular: Sentence-Final Particles in Chinese as Heads of a Split CP.' *Studia Linguistica*. Special issue on particles. (Available from *LingBuzz* 001076, [<http://ling.auf.net/lingBuzz/001076>], accessed 27/07/10)
- Philip, Joy. 2009. 'Restrictions on the Morphosyntactic Marking of Dependencies: What Linkers Tell us.' Ms, UCL. (Available from *LingBuzz* 000878, [<http://ling.auf.net/lingBuzz/000878>], accessed 04/06/09)
- Philip, Joy. 2010. '(Dis)harmony, the Head-Proximate Filter, and Linkers.' Ms, UCL. (Shortly to be posted on *LingBuzz*)
- Rijkhoff, Jan. 1984. 'The Principle of Head Proximity.' MA dissertation, University of Amsterdam.
- Rijkhoff, Jan. 1986. 'Word Order Universals Revisited: The Principle of Head Proximity.' *Belgian Journal of Linguistics* 1, 95-125.
- Rijkhoff, Jan. 1990. 'Explaining Word Order in the Noun Phrase.' *Linguistics* 28:5-42.
- Rijkhoff, Jan. 2002. *The Noun Phrase*. Oxford: Oxford University Press.
- Ross, Malcolm. 1998. 'Proto-Oceanic Adjectival Categories and their Morphosyntax.' *Oceanic Linguistics* 37, 85-119.
- Rothmaler, Eva (ed). 2009. *Topics in Chadic Linguistics V: Comparative and Descriptive Studies*. Papers from the 4th Biennial International Colloquium on the Chadic Languages. Cologne: Rüdiger Köppe.
- Rubin, Edward J. 2002. 'The Structure of Modifiers.' Ms, University of Utah. (Available from *College of Humanities at the University of Utah*, [<http://www.hum.utah.edu/linguistics/Faculty/rubin.htm>], accessed 11/01/08)

J Philip. 'Harmony, the Head-Proximate Filter, and the Near Parallels between Nominal and Clausal Linkers.'
LAGB meeting, Leeds, 2nd September 2010.

- Schmidt, Bodil Kappel, David Odden & Anders Holmberg (eds.) 2002. *Some Aspects of the Grammar of Zina Kotoko*. Munich: Lincom Europa.
- Sheehan, Michelle. 2008. 'FOFC and Phasal Complements of V.' Handout from FOFC seminar series, Cambridge, 15th February 2008. Available from *Research – Newcastle University*, [http://research.ncl.ac.uk/linearization/MS_FOFC_and_phases_Cambridge.pdf], (accessed 17/09/09).
- Shklovsky, Kirill. 2005. 'Person Marking in Petalcingo Tzeltal.' Undergraduate dissertation, Reed College. (Available from MIT, [<http://web.mit.edu/kirills/www/PersonMarkingInPetalcingoTzeltal.pdf>], accessed 20/05/08)
- Shopen, Timothy (ed.) 1985. *Language Typology and Syntactic Description*. Cambridge: Cambridge University Press. (2nd edition 2007)
- Simpson, Andrew & Tanmoy Bhattacharya. 2000. 'Wh-CP Pied Piping in Bangla.' Masako Hirotani, Andries Coetzee, Nancy Hall & Ji-yung Kim (eds.), *NELS 30*, Amherst: University of Massachusetts, GLSA, 583–596.
- Simpson, Andrew & Tanmoy Bhattacharya. 2003. 'Obligatory Overt Wh-Movement in a Wh-in-Situ Language.' *Linguistic Inquiry* 34, 127-142.
- Spencer, Andrew. 2008. 'The Possessum-Agreement Construction or "Does Albanian have a Genitive Case?"' *University of Essex*, [http://privatewww.essex.ac.uk/~spena/PossMod/poss_agr_constr1.pdf], accessed 21/03/09)
- Svenonius, Peter. 2006. 'The Emergence of Axial Parts.' Peter Svenonius & Marina Pantcheva (eds.), *Nordlyd: Tromsø Working Papers in Linguistics* 33. CASTL, Tromsø, 49-77.
- Tourneux, Henry & Adam Mahamat. 2009. 'Les marqueurs relatifs dans les langues dites "kotoko".' Rothmaler (ed.), 151-159.
- Vries, Mark de. 2001. 'Patterns of Relative Clauses.' *Linguistics in the Netherlands* 18, 231-243.
- Vries, Mark de. 2002. *The Syntax of Relativization*. PhD dissertation, University of Amsterdam. Utrecht: LOT.
- Vries, Mark de. 2005. 'The Fall and Rise of Universals on Relativization.' *Journal of Universal Language* 6, 125-157. [http://www.unish.org/unish/DOWN/PDF/Mark_De_Vries.pdf] (accessed 18/08/10)
- Williams, Edwin. 1982. 'Another Argument that Passive is Transformational.' *Linguistic Inquiry* 13, 160-163.
- Witzlack-Makarevich, Alena. 2006. 'Aspects of Information Structure in Richtersveld Nama.' Master's dissertation, University of Leipzig. (Available from *Universität Leipzig*, [http://www.uni-leipzig.de/~witzlack/MA_final.pdf], accessed 07/10/09)
- Xu Lin & Zhao Yansun. 1984. *Baiyu Jianzhi* (A Brief Description of the Bai Language). Beijing: Minzu Chubanshe.
- Zeitoun, Elizabeth, Lillian M. Huang, Marie M. Yeh & Anna H. Chang. 1999. 'Existential, Possessive and Locative Constructions in Formosan Languages.' *Oceanic Linguistics* 38, 1-42.