Structure and linearization in disharmonic word orders

A 'Mixed'/'disharmonic' word-order systems have created particular difficulties for parametrically based accounts of word-order variation. Here we formulate and motivate a generalisation about disharmonic systems which we conjecture has universal validity for word-order typology, and which we derive from current notions of cyclicity and linearization.

B Holmberg (2000) proposes the Final-over-Final Constraint (FOFC) in 1 and schematized in 2. Evidence for FOFC includes i.a. the following:

1 Old and modern Germanic varieties exhibit a mix of head-initial and head-final orders in VP and IP, with all permutations of Aux, V and Object attested except one (den Besten & Edmondson 1983, Hróarsdóttir 2002) – cf. 3. The unattested order (f) violates FOFC. Finnish, which also permits mixed orders, shows the same pattern.

2 Sentence-final complementisers are not found in VO languages (Hawkins 1990). This is since both $[_{CP} [_{TP} [_{vP} V O] T] C]$ and $[_{CP} [_{TP} T [_{vP} V O]] C]$ violate FOFC. Thus, there is no way for VO languages to have TP C order.

3 In the nominal domain, Finnish has mixed projections too: it has both pre- and postpositions and N-Complement (N-O) as well as Complement-N order. All permutations of P, N and O are found except N-O-P, the FOFC-violating order.

C However, a range of constructions apparently violate FOFC:

a Head-final VP may immediately dominate head-initial DP/PP in OV Germanic – cf. 4.

b Many VO & I VP languages have clause-final "force" particles (e.g. Mandarin). If these particles are C-elements, they violate FOFC.

c Many VO languages have clause-final negation. If the negation is a head taking a VP, TP or CP-complement, these are potential counterexamples to FOFC.

d Although SVOAux is extremely rare globally (Julien 2000), some Central Sudanic languages (Logbara, Mamvu [Tucker & Bryan 1966] and Mande [Kastenholz 2003]) allow it; and VO order with clause-final tense/aspect particles is also attested in some East Asian languages (Thai, Chinese).

D The central ideas in our account of FOFC are: (i) any head may have an EPP-feature, (ii) the LCA, and (iii) linearization is cyclically determined by phase-heads according to the (strict version of) the PIC so that material sent to Spellout upon completion of a phase can no longer be affected by any subsequent linearization process, including movement. Against this background, we propose the preliminary generalisation in 5, which, applied to the vP-phase, delivers 6. The FOFC violation in **1** (*VOAux) thus falls under 6d: for $[_{vP}VO]$ to precede Aux, it must move to or through the specifier of vP, i.e. v must have an EPP-feature, while V does not, in violation of 5. If auxiliaries are in v, VOAux violates 6d directly; if auxiliaries are in T, 6d is an intermediate stage of the derivation. VOAux is therefore underivable. The order in **2** cannot be derived via intermediate step 6d. The only option is thus pied-piping an entire head-initial vP (i.e. 6c) to SpecTP. However, in this case, the object must appear in clause-final position, having been "frozen in place" by the PIC as VP is spelled out upon completion of the vP phase. The nominal cases of FOFC are identical to 6d with the single difference that the categories are n/N.

E The central observation regarding the exceptions to FOFC is that there is a categorial distinction between the phase-head and the moved category. This is very clear for German **a**: PP/DP and v are distinct categories. 5 should thus be reformulated as 7, which is very much in the spirit of Chomsky's (2005) idea that phase-heads determine many of the properties of the heads in their phasal domain, including their ability to act as probes and/or movement triggers. 7 implies the configuration of FOFC-obeying and -violating cases in 8 (where n/N and v/V represent categorially like/unlike heads). Counterexamples **a-d** all fall under 8c,d. The German case is clearly 8d. Following Holmberg (1986), we assume that C may be nominal or verbal in nature, while T is always verbal. We thus predict FOFC violations where C is nominal. This appears to be true for the Mandarin final force particles in **b** (Li 2006) and the final negative elements (polarity markers) in **c**. Lastly, the final "auxiliaries" in the putative VOAux orders in various African languages have independently been argued to be nominal (Fabb 1992, Kastenholz 2003), making these orders cases of 8c. Our proposal that some Aux in these languages = n leads to the prediction that when the relevant n_{EPP} selects N, N will have an EPP-feature (cf. 6a). We thus expect rigid head-final order in "pure" nominal phases, which seems to be true.

F Studying FOFC, both its violations and non-violations, in addition to its obvious typological interest, may provide an empirical basis for distinguishing categories that are phase-heads from those that are not.

Data and references

Data

(1)   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. (cf. also Julien 2000)

(2)   * [$_{Head1'}$ [$_{Head2P}$ Head2   Compl]   Head1]

(3) a AUX V O   b AUX O V   c O V AUX   d O AUX V   e V AUX O   f ***V O AUX**

(4) a   *Johann hat [$_{VP}$ [$_{DP}$ den Mann] gesehen]*   [German]
     Johann has   the man   seen

   b   *Johann ist [$_{VP}$ [$_{PP}$ nach Berlin] gefahren]*
     Johann is   to   Berlin driven

(5)   If a phase-head PH has an EPP-feature, all the heads in its complement domain must have an EPP-feature.

(6) a v_{EPP} V_{EPP} →   [[$_{VP}$ O V] v]   (consistent head-final order)
    b   v V_{EPP} →   [v [$_{VP}$ O V]]   (disharmonic non-FOFC-violating order)
    c   v   V   →   [v [$_{VP}$ V O]]   (consistent head-initial order)
    d   *v_{EPP} V   →   [[$_{VP}$ V O] v]]   (FOFC-violating order)

(7)   If a phase-head PH has an EPP-feature, all the heads in its complement domain with which it Agrees in categorial features must have an EPP-feature.

(8)   a n_{EPP} N   FOFC violation   b v_{EPP} V   FOFC violation
       c n_{EPP} V   allowed   d v_{EPP} N   allowed

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