

Postverbal adverbs and PP-adverbials in flexibly verb-final languages: the challenges

Intro. In this paper, we investigate the principles governing the ordering restrictions on postverbal adverbs and PP-adverbials in verb-final languages, expanding on the Neeleman's (2017) study of postverbal PPs in Dutch. We provide novel data from three languages typologically similar to Dutch (flexibly verb-final, allowing for (i) verb-raising in certain constructions and (ii) postverbal PP-adverbials): Hungarian, Udmurt (both Uralic), and (dialectal Bizkaian) Basque, and show that several other neutral patterns of (non-right-dislocated) postverbal PP-adverbial placement emerge, which cannot be straightforwardly accounted for under Neeleman's (2017) approach. We suggest that additional, non-syntactic (e.g., prosodic) factors might be at play, and provide a tentative account of the post-syntactic derivation of these postverbal adverbs and adverbials.

Background. In embedded clauses in Dutch, if a string of preverbal PPs is placed postverbally, the linear order of PPs is reversed from 321 to 123, as in (1) (Neeleman 2017):

- (1) a. dat hij [[door een stuurfout]₃ [met een knal]₂ [op het hek]₁ stranddev]
that he by a steering.error with a bang on the fence got.stuck
'that he got stuck on the fence with a bang because of a steering error'
b. dat hij [stranddev [op het hek]₁ [met een knal]₂ [door een stuurfout]₃]
that he got.stuck on the fence with a bang by a steering.error

It has been argued that the PPs are generated in the same hierarchical order, but ascending either on the right or left of the verb, which leads to the mirror effect: 321V vs. V123 (V321 is also attested, due to verb raising in main clauses) (Neeleman & Weerman 1999; Neeleman 2017).

Clause structure & postverbal PP-adverbials. We use the term 'PP-adverbials' to refer to predominantly optional, adverb-like constituents like comitatives (*with a friend*), locatives (*in the park*) and temporal expressions (*on Monday; yesterday*), which may have an overt or covert P⁰. All three languages under consideration allow for postverbal PP-adverbials. In Hungarian, the VP is/used to be head-final (Marác 1989), but the verb raises to the head-initial PredP in neutral all-new clauses, which means that post-verbal constituents (PVCs), including PP-adverbials, that are generated inside PredP, result from stranding, (2a); direct objects are routinely postverbal. In Udmurt, the VP is also head-final, but the verb can optionally move to any one of a series of head-initial projections in broad-focus clauses; accordingly, any PVCs, including PP-adverbials, also result from stranding, (2b); the number and types of PVCs depend on the height of the verb in a given construction. Finally, in Basque, the clausal spine up to the level of FinP is head-final, switching to head-initial above FinP (Duguine 2022 & refs therein). In all-new clauses, the clause-final auxiliary is found in Fin⁰, which means that any PVCs are adjoined to FinP, (2c); arguments (e.g. direct objects), as a rule, cannot be postverbal in all-new clauses.

- (2) a. [CP[TP A húg-om [PredP meg-talál-ta_V [VP/VP a kiskutyá-d-at [PP a park-ban] t_V]]].
DEF sister-1SG PV-find-PST.3SG DEF puppy-2SG-ACC DEF park-LOC
'My sister found your puppy in the park.'
b. [CP [VP Kart-ed skal-me <bašt-i-z> [VP [PP bazar-yš] <bašt-i-z>]]].
husband-2SG cow-ACC.1SG buy-PST-3SG bazar-EL buy-PST-3SG
'My husband bought your cow at the market.'
c. [CP[FinP Nire arrebiek [VP zure txakurkumi-e topa] dau] [PP parkien]].
my sister.ERG your puppy-DEF find AUX park.LOC
'My sister found your puppy in the park.'

All three languages also allow for multiple postverbal PP-adverbials, but their relative orders differ. The Udmurt pattern is the easiest to account for: here, only one order of adverbials is possible, with the verb position flexible: <V>1<V>2<V>3<V>. This is consistent with unrestricted, semantically vacuous verb movement to the left, with adverbials limited to left-adjunction and staying in situ. The Hungarian and Basque patterns, however, are not easy to account for within the bounds of Neeleman's (2017) approach.

The Hungarian challenge. In Hungarian, the basic preverbal order of PP-adverbials is as in (1a) (though each type can be freely fronted leftward if it is a topic). Postverbal PP-adverbials, in contrast, can come in any order without any interpretational differences: e.g., all permutations of PP ordering in (3) are synonymous and equally felicitous in a neutral, broad-focus context, including 231, which is ruled out in Neeleman's (2017) account:

- (3) [CP [_{PredP} Fenn-akadt [_{PP} egy csattanás-sal]₂ [_{PP} egy hiba miatt]₃ [_{PP} egy kerítés-en]₁]].
 PV-got.stuck.3SG a bang-with an error due.to a fence-on
 '[S/he] got stuck on the fence with a bang because of a steering error.'

Furthermore, postverbal PP-adverbials in broad-focus clauses may freely intermingle with any number of high (e.g. evaluative or epistemic) adverbs, (4).

- (4) a. [CP [_{PredP} Fenn-akadt [_{PP} egy csattanás-sal]] [_{AdvP} valószínűleg/sajnos] [_{PP} egy kerítés-en]].
 PV-got.stuck.3SG a bang-with probably/unfortunately a fence-on
 '[S/he] got stuck on the fence with a bang because of a steering error.'

É. Kiss's (2008) approach, involving the 'flattening' of postverbal structures in Hungarian, can account for the free order in (3) but not (4), because of a higher, VP-external modifier *valószínűleg/sajnos*. Accordingly, we suggest that a non-syntactic explanation must be at play: postverbal constituents in Hungarian are subject to optional, post-syntactic reordering, which is supported by the lack of interpretative differences between different word orders.

The Basque challenge. In Basque, the order of postverbal adverbials is free, (5); neither can appear preverbally in all-new contexts (Elordieta 2001):

- (5) [CP [_{FinP} Xabier Miren-egaz [_{VP} jun] da <[_{PP} azoka-ra]> [_{PP} asteburuen] <[_{PP} azoka-ra]>]].
 Xabier Miren-with go AUX market-to weekend.on market-to
 'Xabier went to the market with Miren in the weekend.'

In contrast with the patterns reported in Elordieta (2001), young speakers of colloquial Bizkaian Basque routinely place low adverbs postverbally in neutral all-new clauses:

- (6) a. % [CP [_{FinP} Zure senarrak [_{VP} nire txakurra jo] du [_{AdvP} gogor]]].
 your husband.ERG my dog hit AUX hard
 'Your husband hit my dog hard.'
 b. % [CP [_{FinP} Katuek [_{VP} sarritzen miau egin] sauen] [_{AdvP} altu] [_{PP} atzo]].
 cat.ERG often miau do AUX loudly yesterday
 'A cat often meowed loudly yesterday.'

Given the head-final structure of the Basque clause (9), the post-AUX adverbs and adverbial in (6) are located higher than their merge positions. We suggest that this is due to a restriction on the number of preverbal elements in a Basque clause (likely prosodic in nature): preferentially, only one constituent can surface between the subject and the verb; if competition for the preverbal slot arises, young Bizkaian speakers prefer for the adverb to 'lose' and surface postverbally.

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