

Challenges for Theories of Post-Syntactic Head Movement: Tense and Modality in Hungarian

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SinFonJA 13
13th conference on Syntax, Phonology, and Language Analysis

Research Institute for Linguistics Budapest, Hungary

September 24–26, 2020

1. Which morphological, syntactic, and semantic principles govern the order of Hungarian verbal suffixes?
2. Can current theories of affix order and head movement account for the observed patterns?
 - **Mirror Principle** (Baker 1985)
 - **Morpho-syntactic Merger and syntactic head movement** (Bartos 1999)
 - **Syntactic head movement** (Arregi & Pietraszko 2018, To appear) **and Quantifier Raising at LF**
 - **Post-syntactic head movement** (Harizanov & Gribanova 2019)

Hungarian verbal/clausal structure

- Topic–predicate sentence structure (É. Kiss 2002)
- No dominant word order: typically SVO with definite objects and SOV with indefinites (Kenesei, Vago & Fenyvesi 1998)
- Position of inflected verbs below negation and *v*P adverbs (ibid.)
- Fixed order of inflectional suffixes (É. Kiss 2002, based on Bartos 1999):
 - (1) a. V - modality - tense - mood - object agreement - subject agreement
 - b. [_{AgrSP} AgrS [_{AgrOP} AgrO [_{MoodP} Mood [_{TP} T [_{ModP} Mod [_{VP} V]]]]]]]]]

Mirror Principle (Baker 1985)

- Order of affixes mirrors order of syntactic derivations and vice versa
- Indirect evidence: semantic interpretation mirrors syntactic structure

Morphology	Syntax	Semantics
beat-CAUS-RECP	[[beat CAUS] RECP]	'They _i cause e.o. _i to beat him.'
beat-RECP-CAUS	[[beat RECP] CAUS]	'He causes them _i to beat e.o. _i .'

Violations of the Mirror Principle (Hyman 2003)

- Fixed affix order, but variable scope (e.g., derivational suffixes in Bantu)
- Evidence for syntax-morphology mismatch (visible through passivization)
- Distinction between syntactic factors (argument structure) and semantic factors (semantic scope) often difficult (Rice 2011)

Derivation: order of affixes corresponds to scope

- (2) a. Vers-ek-et ír-ogat-tat-∅-∅ vel-e.
poem-PL-ACC write-FREQ-CAUS-INDEF-3SG INS-3SG
'She makes her write (again and again) poems.' CAUS>FREQ
- b. Vers-ek-et ír-at-gat-∅-∅ vel-e.
poem-PL-ACC write-CAUS-FREQ-INDEF-3SG INS-3SG
'She makes her (again and again) write poems.' FREQ>CAUS
- (3) Ölel-kez-tet-n-ek mink-et.
hug-RECP-CAUS-INDEF-3PL 1PL-ACC
'They make us_i hug each other_i.' CAUS>RECP
- (4) Ölel-tet-ve vagy-unk (a rendező-∅ által).
hug-CAUS-PASS be-1PL DEF director-NOM by
'We are made (by the director) to get hugged.' PASS>CAUS

Inflection: fixed order, varying scope

(5) From Alberti, Dóla & Kleiber (2014, p. 172)

- a. Anna- \emptyset haza-me-het-ett- \emptyset .
Anna-NOM home-go-MOD-PST-3SG
'Anna was allowed to go home. (deontic/root)' PST>MOD
- b. Anna- \emptyset haza-me-het-ett- \emptyset .
Anna-NOM home-go-MOD-PST-3SG
'Anna may (perhaps) have gone home. (epistemic)' MOD>PST

How to account for the violation of the Mirror Principle?

Morphosyntactic Merger and syntactic head movement

- Derivation of suffix order: movement of V head to Mod head (checking [+finite] feature) + cliticization of remaining morphemes via merger
- Resolution of scope ambiguity: movement of [V + Mod] complex into empty MoodP in syntax

→ **Syntax-morphology mismatch!**

Syntactic head movement and Quantifier Raising at LF

- Derivation of suffix order: cyclic “roll up” head movement in syntax
- Resolution of scope ambiguity: head movement (adjunction) of Mod head to Mood head at LF
- Independently established and motivated mechanisms
 - Syntactic head movement for word formation (e.g., Julien 2002; Arregi & Pietraszko 2018, To appear)
 - Quantifier raising resolves scope ambiguities at sentence level (May 1977)
 - Affix movement at LF resolves bracketing paradoxes (Pesetsky 1985)
 - Syntax-morphology mismatch with deponencies re-analyzable as a matter of syntax and semantics (Stump 2007)

→ **Syntax-semantics mismatch!**

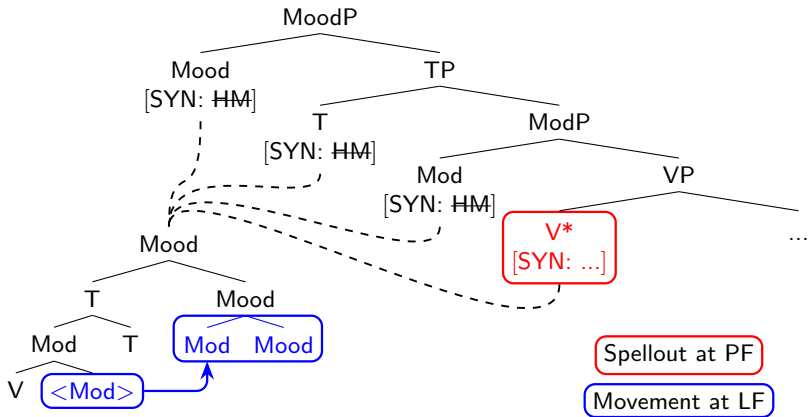
Syntactic head movement (Arregi & Pietraszko 2018, To appear)

- Successive Generalized Head Movement (triggered by [HM] feature) results in copies of the complex [V + Mod + T + Mood] head in all head positions
- Spell-out of the complex head in V (strong diacritic syntactic feature *)

Quantifier Raising at LF

- Head movement (adjunction) of Mod head to Mood head at LF

Current Proposal



What follows from our analysis?

- Affix order in Hungarian is consistent with the Mirror Principle
- strict distinction between syntax-morphology and syntax-semantics mirror
- Critique on Bartos (1999): combining Morpho-syntactic Merger and syntactic movement questionable and only stipulated
- Head movement as a word formation process should allow for the resolution of scope ambiguities among morphemes
- Post-syntactic head movement (e.g., Harizanov & Gribanova 2019) cannot account for scope ambiguities (no morphology-semantics interface)

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