Blocked Particle Verb Movement in German and Hungarian: A Unified Analysis¹

Chenchen (Julio) Song, cs791@cam.ac.uk

Department of Theoretical and Applied Linguistics Gonville & Caius College, University of Cambridge

LAGB Annual Meeting, York, 6-9 September 2016





¹I am grateful to Prof. Ian Roberts, Dr. Theresa Biberauer, Prof. Anders Holmberg and Dr. Ioanna Sitaridou for helpful discussion. Many thanks to Dr. András Bárány, András Rado, Ádám Varga, Christopher Laufs, Daniela Gerz, Kata Wohlmuth and Mengmi Lyu for judgments and discussion over the data.

Introduction

Two grammatical points:

- ✔ Particle verb
- ✓ Verb movement

Two languages:

- ✓ German (Germanic)
- ✓ Hungarian (Uralic)

My focus: Failed verb movement.

Introduction: Particle Verb

Separable preverbal particles:

- homophonous with prepositional, adverbial, etc. elements;
- denoting directional, aspectual, etc. modification.

```
German Hungarian

<u>ein-brechen</u> "in-break; break in" <u>be-megy</u> "go in"

<u>ab-waschen</u> "off-wash; wash up" <u>fel-készül</u> "up-prep; get ready"

<u>teil-nehmen</u> "part-take; take part" <u>agyon-dicsér</u> "on brain-praise; adulate"
```

German also has inseparable verbal prefixes (which Hungarian lacks), e.g. <u>ver</u>achten "despise", <u>er</u>fragen "inquire", <u>be</u>folgen "obey"

Introduction: Verb Movement

GER: V-to-C movement under V2 requirement.

HUN: V-to-F movement in non-neutral [+Foc]/[+Wh]/[+Neg] environments.

- F = Foc in Horvath (1981, 1986), Bródy (1990, 1995), É. Kiss (1987, 2002), etc.;
- F = NN (Non-Neutral) in Olsvay (2000ab), Surányi (2002), É. Kiss (2008), etc.

In both languages verb movement only targets the verb, leaving the particle behind.

- Peter steigt; in den Bus ein t;. (<ein-steigen "get on")
 Peter climbs in the bus in "Peter gets on the bus."
 (Zeller 2001: 55)
- (2) János **tegnap** olvasta; fel t; a verseit. (<fel-olvas "read out")
 John yesterday read up his poems
 "John read out his poems yesterday (not today)." (É. Kiss 2002: 56)

Phenomenon: Failed Verb Movement

Sometimes movement out of particle verb is blocked! —The verb stays after the separable particle in syntactic environments where verb movement should take place.

- German double-particle verbs (a subclass of "immobile verbs")
- Hungarian infinitival clauses
- (3) a. * Du meldest uns vor-an /*anmeldest uns vor /*voranmeldest uns. you register us pre-on Intended: "You preregister us."
 - b. ... wenn du uns vor-an-meldest.

 if you us pre-on-register

 "... if you preregister us."

(Haider 2010: 60)

(4) Nem tudtam **kit** meg-hív-ni /*hív-ni meg. not knew.1sg whom PFV-invite-INF "I didn't know whom to invite."

(É. Kiss 2002: 202)

Goal: A Unified Analysis

- Examine the phenomena in more details.
- ✓ Specify the common reason(s) for the German and Hungarian cases.
- ✓ Provide a formal analysis within the Minimalist framework.

German "Immobile Verbs"

- A group of complex verbs that only appear in verb-final clauses.
- =movement-resistant (Fortmann 2007)/C⁰-phobic (Ahlers 2010) verbs
- 2 subclasses: Complex-Backformation (CB) verbs & Double-Separable-Particle (DSP) verbs
- CB: derived from a complex structure of a different lexical category.
 - bausparen "building-save" < (das) Bausparen < bau + (das) Sparen < sparen;
 - gasbeheizen "heat with gas" < gasbeheizt < gas + beheizt < beheizen.

(cf. Wurzel 1998)

e.g. *Spart er bau?/*Bauspart er? vs. Er will bausparen./... weil er bauspart.

"Does he building-save?" "He wants to building-save/because he building-saves."

(cf. Vikner 2005)

- DSP: formed with two separable preverbs.
 - vor-an-melden "pre-on-register";
 - mit-aus-drucken "with-out-print; print out jointly".

(cf. Haider 2010)

More Immobile Verbs

Complex-Backformation (CB) verbs

bauchreden "ventriloquize" (< das Bauchreden), bauchtanzen "belly-dance" (< das Bauchtanzen), schutzimpfen "inoculate" (< die Schutzimpfung), wettrennen "race" (< das Wettrennen), uraufführen "premiere" (< die Uraufführung), rückfragen "query" (< die Rückfrage), bruchrechnen "do fractions" (< das Bruchrechnen), etc.

Double-Separable-Particle (DSP) verbs

vor-an-kündigen "pre-on-announce; preannounce", vor-ein-stellen "pre-in-set; preset", mit-ein-steigen "with-in-climb; get on together", durch-ab-fertigen "through-off-make ready; check through", etc.

(cf. Ahlers 2010, Haider 2010, McIntyre 2002)

There are more CB verbs than DSP verbs.

DSP Verbs as a Separate Subclass

Some DSP verbs have corresponding complex nouns, e.g.

```
    voranmelden — die Voranmeldung "pre-registration"
    vorankündigen — die Vorankündigung "pre-announcement"
    voreinstellen — die Voreinstellung "presetting, default"
```

Two reasons to keep DSP as a separate subclass:

- There are still DSP verbs without complex noun counterparts.

 "The crucial point is that this verb format is productive... there is no room for the kind of doubts raised...based on verbs that arise through backformation."

 (Haider 2010: 60)
- ② The role of backformation needs to be synchronically formulated.

```
"The synchronic relevance of backformation is sometimes questioned (see e.g. Aronoff 1976, Becker 1993)." (McIntyre 2002: 4)
```

Why Immobile?

Previous approaches:

- Demands of two preverbs cannot be simultaneously satisfied (Haider 1993, 2010).
- Conflicting separability requirements in backformation (Zeller 2001).
- Structural uncertainty between V⁰ and V' (McIntyre 2002) or V* (Vikner 2005).
- Unqualified target for V-to-C movement (V* for Fortmann 2007; complex V⁰ for Ahlers 2010).

I Backformation indeed has a role to play, but this role needs to be incorporated in the general structure of complex verbs.

German Immobile Verbs: More Empirical Facts

#1 There is much variation from speaker to speaker.

- Some verbs are immobile for some people and mobile for others.
- ✓ notlanden: mobile (Eisenberg 1998), immobile (Gallmann 1999) (cf. Vikner 2005)
- √ 40% among 50 people find voranmelden fully mobile (and separable), while
 another 50% strongly reject such usage. (cf. Freywald & Simon 2007)
- ✓ Acceptance score (0–6) of *bausparen*: V2~4.3, V-final~5.1. (ibid.)
- Some people reject movement more strongly than others.
- (5) a. Es ist die Oper, die man in Dresden im Jahr 1845 uraufführte. "It is the opera that was premiered in Dresden in 1845."
 - b. */??Man uraufführte den Tannhäuser in Dresden im Jahr 1845.

 "Tannhäuser was premiered in Dresden in 1845." (Ahlers 2010: 17)

"Which class a given complex verb belongs to depends on many factors which vary from speaker to speaker, including how frequently it is used."

—Vikner (2005: 18)

German Immobile Verbs: More Empirical Facts

#2 There are also mobile derived complex verbs.

- (6) a. Die Kinder buchstabierten das Wort "Diplomarbeit". (< der Buchstabe) "The children spelled the word DIPLOMARBEIT."
 - b. Erna ohrfeigte Emil. (< die Ohrfeige)
 "Erna slapped Emil." (Ahlers 2010: 49)

langweilen "bore", frühstücken "breakfast", handhaben "handle", fachsimpeln "jargonize"

Ahlers (2010): mobile vs. immobile derived/backformed complex verbs.

- Inflection: mobile (always regular), immobile (follow base verb);
 e.g. handhaben→handhabte/*handhatte, bergsteigen→*bergsteigte/bergstieg.
- Attachment of ge-: mobile (to entire verb), immobile (only to base verb);
 e.g. gehandhabt/*handgehabt vs. *gebergsteigt/*gebergstiegen/berggestiegen.
- Immobile verbs are internally headed.

German Immobile Verbs: More Empirical Facts ·

#3 Only the base verb is immobile.

- The preverb is occasionally mobile.
- (7) a. MIT ist er ein-gestiegen, nicht MEAT.
 with is he in-climbed not meat
 "He has got on TOGETHER, not TOOGETHER."
 - b. BAU hat er gespart, nicht PAUL.
 building has he saved not Paul
 "He has BUILDING-saved, not PUILDING."
- The non-finite verb forms are also mobile.
- (8) a. Verschmäht hat heute eine Maus den Käse. disdained has today a mouse the cheese "A mouse has disdained the cheese today."
 - b. Aufstehen würde er nicht.
 to stand up would he not
 "He would not stand up."

(Haider 2010: 1–2)

German Immobile Verbs: More Empirical Facts

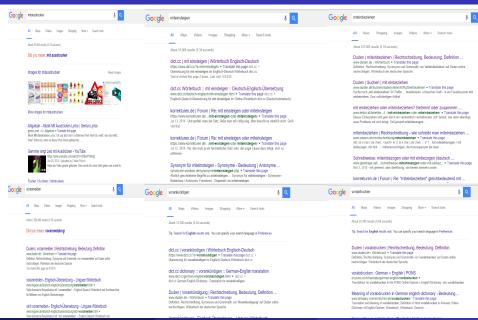




vor-	mit-
voranmelden/*vor anmelden	miteinsteigen/mit einsteigen
vorankündigen/*vor ankündigen	miteinbeziehen/mit einbeziehen
vorabdrucken/*vor abdrucken	mitausdrucken/mit ausdrucken

- (9) a. * Peter steigt in den Bus mit-ein. Peter climbs in the bus with-in
 - b. Peter steigt in den Bus mit ein. Peter climbs in the Bus with in "Peter gets on the bus together."
- (10)a. * Peter druckt die Namen mit-aus. Peter prints the names with-out
 - b. Peter druckt die Namen mit aus. Peter prints the names with out "Peter prints out the names jointly."

vor- and mit-: Google Search Results → back



German Immobile Verbs: Summary

- They resist V2 movement, but can appear in various forms in sentence-final position.
- Two subclasses: Complex-Backformation (CB) and Double-Separable-Particle (DSP).
- Word-building method is relevant but needs synchronic formalization.
- Inter-speaker variation suggests multiple underlying structures.
- Immobile verbs partially resemble separable particle verbs.
- Category and categorial change may turn out to be crucial.
- Spelling variation may reflect structural variation.

Hungarian Infinitive Particle Verbs

```
Non-neutral environments: [+Focus], [+Wh], [+Neg]. (cf. É. Kiss 1987, 2002)
```

- (11) a. János csak Máriá-val beszélte meg az ügyet.

 John only Mary-with spoke.3sg PFV the matter

 "John discussed the matter only with Mary."
 - b. János szeretné csak Máriá-val beszél-ni meg/meg-beszél-ni az ügyet.

 John would love only Mary-with speak-INF PFV the matter

 "John would like to discuss the matter only with Mary." [+Focus]
- (12) a. **Kit** hívtál meg? whom invited.2sg PFV "Who did you invite?"
 - b. Nem tudtam **kit** meg-hív-ni/?hív-ni meg. not knew.1sg whom PFV-invite-INF "I didn't know whom to invite."

[+Wh]

- (13) a. **Nem** buktam meg. not failed.1sg pfV "I didn't fail (the exam)."
 - b. Szeretnék **nem** meg-buk-ni/?buk-ni meg. I would love.1sg not PFV-fail-INF "I would like not to fail."

[+Neg]

Hungarian Infinitive Particle Verbs

Previous approaches:

- Optional verb movement based on feature strength (Bródy 1990, 1995).
- Dual categorial features [+V]/[+N] in infinitive marker -ni (É. Kiss 1987, 2002).
- PF phenomenon relevant to VM's phonological weight (Koopman & Szabolcsi 2000).
- IFI will further develop É. Kiss's approach.

Hungarian Particle Verbs: More Empirical Facts >

#1 Non-neutral strength might be relevant.

- (14) a. Szeretnék nem meg-buk-ni/?buk-ni meg.
 I would love.1sg not PFV-fail-INF
 "I would like not to fail."
 - b. Szeretnék most az egyszer nem meg-buk-ni/buk-ni meg. would love.1sg now the once not PFV-fail-INF "I would like not to fail for this once."
- (15) a. János szeretné csak Máriá-val meg-beszél-ni az ügyet.

 John would love only Mary-with PFV-speak-INF the matter

 "John would like to discuss the matter only with Mary."
 - b. János szeretné csak Máriá-val beszél-ni meg az ügyet.
 John would love only Mary-with speak-INF PFV the matter
 "John would like to discuss the matter only with Mary." [wider scope]
 - The generally preferred order is still no inversion.

Hungarian Particle Verbs: More Empirical Facts

#2 Other non-finite forms of particle verbs normally invert.

(16) Adjectival Participle

a. Nem tudtam, hogy ez a fiú feltétlenül meg-hív-andó.
not knew.1sg that this the boy definitely PFV-invite-PTCP
"I didn't know that this boy was definitely to be invited." (neutral)

b. Nem tudtam ki hív-andó meg/*meg-hívandó.
not knew.1sg who invite.PTCP PFV

"I didn't know who was to be invited."

[+Wh]

c. Nem tudtam ki nem hív-andó meg/*meg-hívandó. not knew.1sg who not invite.PTCP PFV "I didn't know who was not to be invited."

[+Neg]

d. Nem tudtam, hogy **ez** a **fiú** hívandó meg/*meg-hívandó. not knew.1sg that this the boy invite-INF PFV "I didn't know that it was **this boy** who was to be invited."

[+Foc]

Hungarian Particle Verbs: More Empirical Facts >

(17) Adverbial Participle

- a. Máriát meg-hí-va János sok pénzt költött.

 Mary.ACC PFV-invite-ing John much money.ACC spent

 "Inviting Mary, John spent a lot of money." (neutral)
- b. Kit hí-va meg/*meg-híva költött János sok pénzt?
 whom invite-ing PFV spent John much money.ACC
 "Inviting whom did John spend a lot of money?" [+Wh]
- C. Máriát nem hí-va meg/*/ meg-híva János kevesebb pénzt költött. Mary.ACC not invite-ing PFV John less money spent "Not inviting Mary, John spent less money." [+Neg]
- d. **Máriát** hí-va meg/*/? meg-híva János sok pénzt költött.

 Mary.ACC invite-ing PFV John much money spent

 "Inviting **Mary**, John spent a lot of money." [+Foc]

Hungarian Infinitive Particle Verbs: Summary

- They generally assume non-inverted order in non-neutral contexts.
- Their (alleged) dual-category property might be relevant.
- Strength of non-neutral reading might be revelant.
- Participles do not pattern with infinitives in this respect.

Data Summary

Two cases of blocked particle verb movement:

German	Hungarian	
DSP	infinitive	
a subclass of "immobile verbs"	a subtype of non-finite verb form	
resist V2 movement	resist Prv-V inversion	
inter-speaker variation → more than one possible structure		
categorial change is relevant	dual category is relevant	

Akt Hypothesis

A theory of complex verb formation (Song 2016)

Complex verbs of the form Preverb-Verb (Prv-V) have a basic underlying structure (R_F-)Akt-v_X-R. (Akt-v = complex verbalizer \subseteq big V) $F=[AKT^{VAL}], \ Akt=\{[AKT:_], \ [uV]\}, \ v=[iV]$

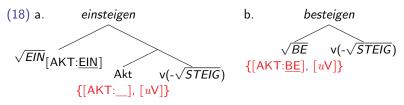
Some assumptions:

- Syntax: single generative engine (DM), multiple workspaces (Fowlie 2013).
- **Root:** born bare (Alexiadou 2014), invisible to syntax (Chomsky 2013), must be equipped with some F (e.g. a category).
- Presyntactic feature bundling: not a generative operation, only takes individual Fs/Roots as input.
- One categorizer can only take one Root-modifier (cf. Marantz 2013); Akt adds an extra one via the [AKT]-[uV]-[iV] mediator.
- Preverbs: special v-adjuncts on primary plane (cf. Oseki 2015).
- Complex verb formation: a categorization-level issue.

Separable vs. Inseparable Verbs

The minimal distinction: the locus of $\{[AKT], [uV]\}$.

— separable (in null Akt-head), inseparable (directly in the extra Root).



Notes:

- Which preverbs are prebundled with [uV] is a historical issue.
- Each [AKT] value is a fixed modification of v (there are not too many).
- The [V] category can be of different semantic flavors.
- German inseparable verbs only represent one type of inseparability (Song 2016).

Structuring German Immobile Verbs

(19)
$$\mathbf{v}[\dots[\mathbf{X}-\mathbf{v}[\dots[\mathbf{Y}-\mathbf{v}\dots]]]]$$

- Lexical categorizers are phase heads. (Marantz 2001 et seq.)
- Initial categorization = adjunction, Recategorization = complementation.
- The "re-verbalizer" blocks the initial verbalizer in situ.

(20) a.
$$_{V}[...[Akt-v[...[Akt-v...]]]]$$
 (DSP verb) b. $_{V}[\sqrt{MIT}[Akt-v[\sqrt{STEIG}]]]]$

(21) a.
$$_{N}[\sqrt{BAU} [F-n-\sqrt{SPAR}]]$$
 (Complex Noun) b. $_{V}[\sqrt{BAU}_{i} [Akt-v [t_{i} [F-v-\sqrt{SPAR}]]]]$ (CB verb)

Notes:

- F is to n what Akt is to v.
- $\sqrt{BAU} = \{[F], [uN]\}$. ([F] and [AKT] may be the same feature)
- The structure in (21b) is similar to that in Fortmann (2007).

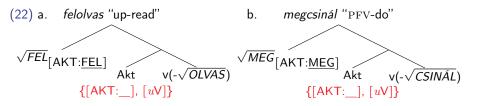
Explaining Empirical Facts

- Only the base verb is "truly" immobile.
- The preverb is either not in the phase domain or technically able to escape it.
- e.g. $[\sqrt{BAU_i} [Akt-v [t_i [F-v-\sqrt{SPAR}]]]]$
 - When the outer preverb of a DSP verb is spelled separately, the complex verb becomes mobile (and separable).
- The separately spelled preverb is a real adverb.
- e.g. $mit_{ADV} [\sqrt{EIN} [Akt-v-\sqrt{STEIG}]]$
 - There are also (inseparable) mobile derived verbs. •
- These involve initial verbalization, e.g. $[v-\sqrt{FR\ddot{U}HST\ddot{U}CK}]$, $[v-\sqrt{OHRFEIGE}]$.
- Mobile derived verbs are generally more idiomatic. (Fortmann 2007)

Hungarian Particle Verbs

I analyze Hungarian separable verbs also with the Akt-v structure.

- Akt adds an extra Root modifier to v.
- Hungarian preverbs all have Roots (though some are more bleached).



- 🎏 Infinitive morphology: V + -ni, e.g. felolvasni, megcsinálni. 🕒
- No clear recategorization structure (e.g. CB, DSP).
- Prv-V inversion is blocked, but the complex verb is mobile as a whole.

Deciphering Infinitive Particle Verbs

Assumptions:

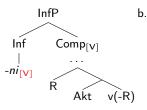
- -ni has V/N dual categories. (É. Kiss 1987, 2002)
- Feature bundles have internal structure. (cf. Biberauer to appear)
- External Merge involves featural interaction. (e.g. Matushansky 2006)

Hypothesis: The dual categorial features in -ni are structured.

(23) a. Infinitive marker

$$-ni = \left\{ \begin{array}{c} [+V] \\ [+N] \end{array} \right\}$$

$$-ni = \left\{ \begin{array}{c} [+N] \\ [+V] \end{array} \right\}$$



$$H_{[V]}$$
 $-ni_{[N]}(-[R-[Akt-v(-R)]])$

Explaining Empirical Facts

- There is inter-speaker/context-specific variation.
- Feature bundling is pre-syntactic.
- Strong NN context requires [+V]-salient -ni.
- Infinitives have argument structure and left periphery. (É. Kiss 2002)
- When adjoined to [+N]-salient -ni, the entire particle verb is out of primary plane.
- The verbal Extended Projection is -ni's.
- Featural make-up of -ni: [+N]-salient~{[iN], [iV]}, [+V]-salient~{[uV], [uN]}.
 - Inversion failure does not happen to participles.
- Possibility 1: Predicative participles are (almost) always [+V]-salient (over [+A]).
- Possibility 2: Participles do not involve lexical (re)categorizer at all (no [A]).
- ✓ Anyway Hungarian infinitives and participles are very different.

Conclusion: Blocked Particle Verb Movement

Solution: Lexical categorizers are phase heads.

Four subclasses of Prv-V complex verbs:

Subclass	Structure	Example
Separable	$[R_{[AKT:F]} [Akt_{[AKT:_]}-v(-R)]]$	GER/HUN separable verbs
Inseparable	[R _{[AKT:F,[uV]]} -v(-R)]	GER inseparable verbs
Immobile	[R [Akt-v [R [Akt-v(-R)]]]]	GER immobile verbs
Mobile-as-whole	[v(-[R [F-n(-R)]])]	GER mobile derived verbs
	[n(-[R [Akt-v(-R)]])]	HUN infinitive verbs

Two types of recategorization:

- as complementation [primary plane] immobile;
- as adjunction (separate plane) mobile as a whole.

Why can't the base verb escape the recategorizer's phase domain?...

References L

Ahlers, T. (2010). Komplexe C^0 -phobe Verben des Deutschen [Complex C^0 -phobic verbs of German]. MPhil thesis. University of Vienna.

Alexiadou, A. (2014). Roots don't take complements. In *Theoretical Linguistics* 40 (3/4), 287–297.

Biberauer, T. (to appear). Particles and the Final-over-Final Constraint. In Biberauer, T., A. Holmberg, I. Roberts & M. Sheehan (eds.), *The Final-over-Final Constraint*. Cambridge, MA: MIT Press.

Bródy, M. (1990). Some remarks on the focus field in Hungarian. In *UCL Working Papers in Linguistics 2*. UCL, 201–225.

Bródy, M. (1990). Focus and checking theory. In Kenesei, I. (ed.), *Approaches to Hungarian 5*. Szeged: JATE, 29–44.

Chomsky, N. (2004). Beyond explanatory adequacy. In Belletti, A. (ed.), *Structures and Beyond. The Cartography of Syntactic Structures*. OUP, 104–131.

Chomsky, N. (2013). Problems of projection. In Lingua, 130, 33-49.

Eisenberg, P. (1998). Grundrißder deutschen Grammatik I: Das Wort [Sketch of the German grammar I: The word]. J.B. Metzler, Stuttgart.

É. Kiss, K. (1987). Configurationality in Hungarian. Dordrecht: Reidel.

É. Kiss, K. (2002). The Syntax of Hungarian. CUP.

References II

É. Kiss, K. (2008). The function and the syntax of the verbal particle. In É. Kiss, K. (ed.), *Event Structure and the Left Periphery*. Springer, 17–56.

Fortmann, C. (2007). Bewegungsresistente Verben [movement-resistent verbs]. In Zeitschrift für Sprachwissenschaft 26, 1–40.

Fowlie, M. (2013). Multiple Multiple Spellout. In Biberauer, T. & I. Roberts (eds.), *Challenges to Linearization*. Mouton de Gruyter, 129–169.

Freywald, U. & H. Simon (2007). Wenn die Wortbilding die Syntax stört: Über Verben, die nicht in V2 stehen können [When wordbuilding disturbs syntax: On verbs that cannot stand in V2]. In Kauffer, M. & R. Métrich (eds.), Verbale Wortbildung im Spannungsfeld zwischen Wortsemantik, Syntax und Rechtschreibung [Verbal wordbuilding in the field of tension between word-semantics, syntax and orthography], Tübingen, Stauffenburg.

Gallmann, P. (1999). Wortbegriff und Nomen-Verb-Verbindungen [Word-concept and noun-verb-connections]. In *Zeitschrift für Sprachwissenschaft* 18/2, 269–304.

Horvath, J. (1981). Aspects of Hungarian Syntax and the Theory of Grammar. PhD dissertation. UCLA, Los Angeles.

Horvath, J. (1986). FOCUS in the Theory of Grammar and the Syntax of Hungarian. Dordrecht: Foris.

Koopman, H. & A. Szabolcsi (2000). Verbal Complexes. Cambridge, MA: MIT Press.

References III

Marantz, A. (2001). Words. West Coast Conference on Formal Linguistics, Santa Barbara.

Marantz, A. (2013). Verbal argument structure: Events and participants. In *Lingua*, 130, 152–168.

Matushansky, O. (2006). Head movement in linguistic theory. In *Linguistic Inquiry* 37, 69–110.

McIntyre, A. (2002). Verb-second and backformations and scalar prefix verbs in German: The interaction between morphology, syntax and phonology. Ms. University of Leipzig.

Olsvay, C. (2002a). A syntactic analysis of negative universal quantifiers in Hungarian. MA thesis. Eötvös Loránd University, Theoretical Linguistics Program, Budapest. Olsvay, C. (2002b). Formális jegyek egyeztetése a magyar nemsemleges mondatokban [The agreement of formal features in non-neutral Hungarian sentences]. In Büky, L. & M. Maleczki (eds.), *A mai magyar nyelv leírásának újabb módszerei 4* [Newer methods of today's Hungarian language description]. JATE, Szeged, 119–151.

Oseki, Y. (2015). Eliminating Pair-Merge. In *Proceedings of the 32nd West Coast Conference on Formal Linguistics*, 303–312.

Song, C. (2016). A Minimalist study of complex verb formation. First-year report. University of Cambridge.

References IV

Surányi, B. (2002). Multiple Operator Movements in Hungarian. LOT 72. Utrecht. Vikner, S. (2005). Immobile complex verbs in Germanic. In *Journal of Comparative Germanic Linguistics* 8, 83–115.

Wurzel, W. (1998). On the development of incorporating structures in German. In Hogg, R. & L. van Bergen (eds.), *Historical Linguistics 1995—selected papers from the 12th international conference on Historical Linguistics*, Manchester, August 1995, Amsterdam/Philadelphia, Benjamins.

Zeller, J. (2001). Particle Verbs and Local Domains. John Benjamins.