

## A Form-Copy analysis of Belarusian, Macedonian and Slovak *how*-complements

Alberto Frasson – University of Wrocław

This paper examines Slavic *how*-complements through a comparative, corpus-based analysis of their distribution and syntactic properties. Using translations of two English texts (*Harry Potter and the Philosopher's Stone* and *The Hobbit*) into Slovak (West Slavic), Macedonian (South Slavic), and Belarusian (East Slavic), the comparative approach sheds light on structural properties of Slavic *how*-complements, additionally offering a new perspective on the typological conditions on subject drop in these constructions in Slavic languages.

Slavic *how*-complements often translate English *-ing* forms used as complements of perception verbs and refer to directly perceivable events. Slovak (a) and Macedonian (b) *how*-complements are formally similar to Romance pseudo-relatives [1, 2, 5]: they are introduced by the complementizer *how* and feature a null subject co-referent with the object of the perception verb. By contrast, Belarusian (c) only allows *how*-complements with an overt nominative subject.

- a. Harry zazre-l      Malfoy-a,    ako    búch-a      čaš-ou    do stola.      *Slovak*  
Harry see-PST.MSG Malfoy-ACC how bang-PRS.3SG cup-INS to table
- b. Harry go      vid-e      Malfoy kako udara-še      so    peharot vrz masata.      *Macedonian*  
Harry he.ACC see-AOR.3SG Malfoy how bang-IMP.3SG with cup      on table
- c. Harry ŭbačy-ŭ,    jak Malfoy      stuka-e      pa stale sva-im    kubk-am.      *Belarusian*  
Harry see-PST.MSG how Malfoy.NOM bang-PRS.3SG on table own-INS cup-INS  
'Harry saw Malfoy banging his cup on the table'.

I define the structures in (a) and (b) as pseudo-relatives (in view of their formal identity with their Romance counterparts) and the structure in (c) as a complement clause [9]. I will show that this distinction is motivated at both a typological and syntactic level.

Corpus data reveal that Slovak and Macedonian alternate between pseudo-relatives and complement clauses, while Belarusian exclusively uses complement clauses. English *-ing* complements of perception verbs (98 occurrences in the two analyzed books) are translated as follows:

	Pseudo-relative	Complement clause	Other translation
Slovak	47	21	30
Macedonian	71	10	17
Belarusian	0	63	36

English *-ing* forms were also translated using other types of constructions (relative and embedded clauses, coordinated conjuncts, among others), which are not considered here.

At a typological level, this distribution can be reconciled with the variation in subject drop conditions across Slavic languages. West and South Slavic languages (here represented by Slovak and Macedonian) are consistent null-subject languages and allow null subjects under co-reference with an accessible antecedent [7]. In contrast, East Slavic languages (here represented by Belarusian) are partial null-subject languages [4, 6] and generally disallow referential third-person null subjects, leading to the exclusive use of complement clauses.

At a syntactic level, I adopt a split CP approach [8] and propose that *how* is merged in FinP, in the lower part of the C-domain in both types of constructions, but only complement clauses (available across Slavic languages) further merge a full CP, represented by ForceP. Pseudo-relatives (available only in consistent null-subject languages) do not merge a full CP and therefore are not phasal domains. I argue that Form-Copy ('FC', [3]) captures the

distribution of null and overt subjects in the two types of complements. FC is an LF-mechanism that selects one element and scans the phasal domain, looking for an element carrying identical referential properties. If it finds it, it establishes a Copy relation between the two elements, deleting the lower one. [3] argues that theta-positions can be filled only via external merge; in (a) and (b), the NP *Malfoy* is externally merged into two thematic positions in the matrix clause and the pseudo-relative: the matrix verb assigns a theta-role to its object, while the embedded verb assigns a theta-role to its subject in Spec-vP. Embedded *Malfoy* moves to the embedded Spec-TP for agreement, yielding two identical embedded occurrences of the NP. FC assigns the Copy relation to the two embedded occurrences of *Malfoy*, deleting the lower one. At the matrix vP, FC assigns the Copy relation to the highest *Malfoy* in the matrix VP complement and the lower *Malfoy* in the embedded Spec-TP, deleting the latter and yielding the structure in (d). The null subject in the pseudo-relative is therefore licensed under FC because of the lack of a phase edge between the matrix clause and the pseudo-relative.

d. [CP [TP zazrel [vP [VP **Malfoya**] [FinP ako [TP **Malfoy** [T búcha] [vP **Malfoy** ...]]]]]]]

In (c), the Copy relation cannot be established across phases: it is impossible to delete the subject of the PR under identity because of the presence of a phase edge over ForceP (e).

e. [CP [TP ubačyŭ [vP [VP (\***Malfoya**)] [ForceP [FinP jak [TP **Malfoy** [T stukae] [vP **Malfoy** ...]]]]]]]]]

In (e), the additional copy of *Malfoy* in the matrix clause is uninterpretable under co-reference with embedded *Malfoy*, leading to ungrammaticality.

These findings demonstrate that comparative corpus-based methodology reveals typological and syntactic factors that shape the distribution of *how*-complements across different Slavic languages.

### Selected references

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