

# Wh-movement and sentence stress

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**Question** How do interface mapping principles interact with wh-movement in different types of wh-constructions (canonical wh-questions, wh-exclamatives, split questions)?

**Background** In German SOV clauses, sentence stress tends to fall on the object if it is a full XP, and on the verb if the object is a pronoun. This can be modeled by the constraints STRESS-XP and WRAP-XP (accounting for the preference to stress the object rather than the verb), and HI (accounting for rightward sentence stress on the object rather than the subject; Truckenbrodt 1995). For wh-constructions, it has been controversially discussed whether the mapping principles apply in an at least partly reconstructing manner, taking into account lower copies/traces of moved constituents (Bresnan 1971, Selkirk 1995, Korth 2014) or in a surface-oriented way (Kahnemuyipour 2009).

**Design and procedure** 42 native speakers rated the acceptability of the target utterance (presented auditorily). As shown in (1–4), four different structures were tested: subordinate clauses, wh-questions, exclamatives, split wh-questions. The position of sentence stress (on the subject vs. object) was manipulated in all of them. In (1–2), the influence of object type (full phrase vs. pronoun) on the stressability of the verb was tested in addition. All items were preceded by a context intended to trigger an all-new reading (e.g., ‘Was there anything interesting on the news?’) in order to hold information-structural factors as constant as possible.

**Results** The results in terms of z-scores are shown in Fig. 1. The preference for sentence stress on the object, which is observed in SOV clauses, is less pronounced in the marked structures; in wh-questions, the preference is even reversed. The acceptability difference between a stressed verb heading a pronominal object in comparison to an XP object, which is observed in SOV clauses, is also significantly reduced in wh-questions.

**Conclusions** The pattern found in subordinate clauses conforms to the expectations. As for wh-questions, no evidence for reconstruction for interface mapping is found: neither the preference for stress on the object rather than the subject nor the influence of object type on the stress-behavior of the verb carry over from the unmarked SOV structure to the marked ones with wh-movement. Rather, there seems to be a surface-oriented preference for sentence stress on the rightmost argument—the subject in canonical wh-questions, and the (in situ part of) the object in split wh-questions. In contrast, a preference for sentence stress on the fronted object is observed in exclamatives. Since wh-questions and wh-exclamatives involve the same formal trigger for the syntactic reordering (the need to front a wh-element), it would be implausible to assume reconstruction in one case and surface-oriented mapping in the other. More plausibly, the pattern results from a preference concerning prosody-meaning mapping: exclamatives are linked to an emphatic interpretation, and emphasis is linked to increased prosodic prominence.

**Short References** Bresnan, J. W. 1971. Sentence stress and syntactic transformations. *Language* 47. — Kahnemuyipour, A. 2009. *The Syntax of Sentential Stress*. Oxford Studies in Theoretical Linguistics. — Korth, M. 2014. *Von der Syntax zur Prosodie*. PhD thesis, Universität Stuttgart. — Selkirk, E. O. 1995. *Sentence prosody: Intonation, stress and phrasing*. In: *The handbook of phonological theory*. — Truckenbrodt, H. 1995. *Phonological phrases: their relation to syntax, focus, and prominence*. PhD thesis, MIT.

- (1) Subordinate clause: *subject* < *object* < *verb*
- Ich habe gelesen, dass Emma Anderson ein Buch geschrieben hat.  
I have read that Emma Anderson a book written has  
'I read that Emma Anderson has written a book.'
  - Ich habe gelesen, dass Emma Anderson ein Buch geschrieben hat.
  - Ich habe gelesen, dass Emma Anderson ein Buch geschrieben hat.
  - Ich habe gelesen, dass Emma Anderson was geschrieben hat.
- (2) Wh-question: *object* < *subject* < *verb*
- Was für ein Buch hat Emma Anderson geschrieben?  
what for a book has Emma Anderson written  
'What book has Emma Anderson written?'
  - Was für ein Buch hat Emma Anderson geschrieben?
  - Was für ein Buch hat Emma Anderson geschrieben?
  - Was hat Emma Anderson geschrieben?
- (3) Exclamative: *object* < *subject* < *verb*
- Mann, was für ein Buch Emma Anderson geschrieben hat!  
man what for a book Emma Anderson written has  
'Man, what a book Emma Anderson has written!'
  - Mann, was für ein Buch Emma Anderson geschrieben hat!
- (4) Split wh-question: *part of the object* < *subject* < *part of the object* < *verb*
- Was hat Emma Anderson für ein Buch geschrieben?  
what has Emma Anderson for a book written  
'What book has Emma Anderson written?'
  - Was hat Emma Anderson für ein Buch geschrieben?

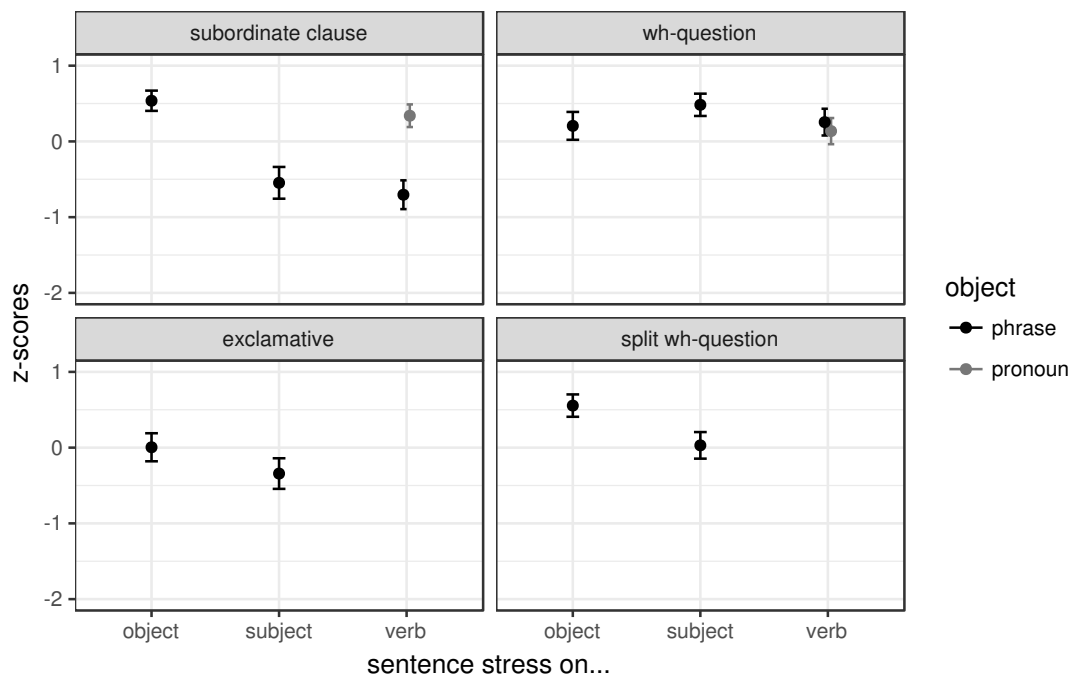


Figure 1: Mean z-scores with 95% confidence intervals