Diachronic object scrambling in German ditransitives

Introduction   In Standard German, the canonical order of adjacent full-DP objects of ditransitive transaction verbs like *geben* 'to give' is indirect (IO) > direct object (DO) (1a). However, the distribution of various linguistic factors such as animacy, definiteness, consituent complexity, contrastive focus, or givenness can trigger deviation from this canonical order (1b) (see Lenerz 1977; Zifonun et al. 1997).

(1)   a.   What happened?
           Ich gab [$_{IO}$ *einem Kind*] [$_{DO}$ *ein Buch*]. 'I gave a child a book.'
         b.   Who did you give the book to?
           Ich gab [$_{DO}$ *das Buch*] [$_{IO}$ *einem Kind*]. 'I gave the book to a child.'

In order to get a reliable empirical basis for a structural analysis, I present a comprehensive corpus study on the factors for object scrambling of the dialectal and historical varieties of German. Cartographic approaches such as Grewendorf (2005) assuming topic or focus projections on the syntactic level fail to account for the fact that German object scrambling is purely optional. Given referents such as *das Buch* in (1b) are not forced to be scrambled, which would be expected by movement to a functional projection for the sake of checking an uninterpretable feature. I therefore propose a structural analysis of prosody-driven (discontinuous) PF-deletion which copes with the optional nature of German object scrambling.

Corpus study   My approach is based on a corpus of prose texts from three time periods of German which contain about 2,000 instances of ditransitives denoting a physical (e.g. *give, bring*) oder mental (e.g. *show, tell*) transaction. Table 1 shows that, across periods, there is a clear tendency to put given referents before new ones (red boxes). Among all factors increasing the likelihood of deviating from the canonical order, givenness is the most significant one in all periods of German (cf. Speyer 2016 for a different view). Apart from this diachronically stable factor, there are (at least) two unstable factors influencing object alignment: (i) Table 1 reveals that there has been a change with respect to the variability of two newly introduced objects: DO$_{new}$ > IO$_{new}$ is very common in 1050–1350 and 1350–1650, but almost excluded in 1650–1950 (yellow boxes). (ii) The complete loss of case distinction in Low German in 1650–1950 correlates with a significant decrease of DO > IO orders (χ^2=10,9***, Table 2).
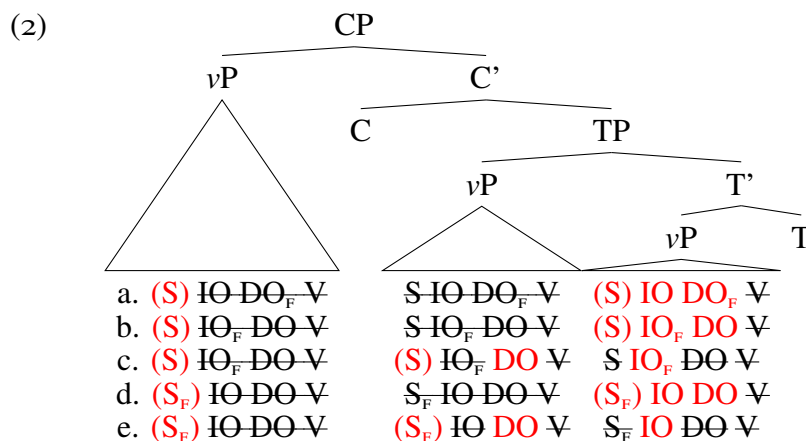
Table 1

	1650–1950		1350–1650		1050–1350	
	% DO>IO	TOTAL	% DO>IO	TOTAL	% DO>IO	TOTAL
IO$_{giv}$, DO$_{new}$	0.9	336	6.3	382	4.9	122
IO$_{giv}$, DO$_{giv}$	13.1	289	20.7	294	29.8	171
IO$_{new}$, DO$_{giv}$	48.6	35	58.1	31	73.9	23
IO$_{new}$, DO$_{new}$	0.7	152	17.2	128	20.6	63
TOTAL	7.3	812	15.0	835	23.0	379

Table 2

	1650–1950	
	% DO>IO	TOTAL
High German	9.0	598
Low German	2.3	214
TOTAL	7.3	812

Analysis   An appropriate structural analysis needs to account for the optionality of scrambling in German as well as for the historically stable and unstable factors. My proposal adopts Struckmeier's (2014) assumption that object scrambling is a prosody-driven spell-out of syntactic structure (see also Büring 2001; Hinterhölzl 2004). The *v*P as a whole is obligatorily copied to SpecTP without any interpretative effect (see Biberauer & Richards 2006). The resulting object duplicates can be deleted discontinuously on the PF level, which can read the prosodic effects of information structure ("Distributed Deletion", see Fanselow & Ćavar 2002). Since Struckmeier (2014) does not account for cases where the lexical verb is located in C, I extend his approach by arguing that *v*P is further copied to SpecCP. The resulting three *v*P-copies provide enough object duplicates to cover all possible alignments of subject, IO and DO in German.

The default clausal stress pattern of German assigns primary stress (ꜰ: focus exponent) to the rightmost argument of V (Cinque 1993), i.e. primary stress always has to be spelled out in the lower *v*P-copy. Consequently, in ditransitive constructions DO is primary stressed by default and has always to be spelled out in the lowest *v*P-copy. Depending on the clause type, the subject can be spelled out in the lowest *v*P, or, in case the lexical verb is in C, in the highest *v*P (2a). Since there is no direct correlation between clause type and prosody in German, I assume that PF is spelling out incrementally by starting at the lowest *v*P-copy: As long as the preferences for the position of the primary stress are respected, the remaining constituents can be distributed quite freely over the other *v*P-copies. In case of a new IO, there are two possible ways for primary stress to be realized in the lowest *v*P: Either the upper *v*Ps are completely deleted again (2b), or the upper IO and the lower DO are deleted, which results in DO > IO (2c). The spell-out of the subject, again, depends on the clause type. These possibilities respect the fact that deviating from the canonical object order is purely optional in German. Whereas primary stressed IOs or DOs must be located as close as possible to the base position of V in the lowest *v*P (2a–c), my corpus data show that the primary stressed subject keeps as much distance as possible to the base position of V (2d–e).

(2)

	*v*P		*v*P	TP
a.	(S) I̶O̶ DO_ꜰ V̶		S̶ I̶O̶ DO_ꜰ V̶	(S) IO DO_ꜰ V̶
b.	(S) I̶O̶_ꜰ D̶O̶ V̶		S̶ IO_ꜰ D̶O̶ V̶	(S) IO_ꜰ DO V̶
c.	(S) I̶O̶_ꜰ D̶O̶ V̶		(S) I̶O̶_ꜰ DO V̶	S IO_ꜰ D̶O̶ V̶
d.	(S_ꜰ) I̶O̶ D̶O̶ V̶		S_ꜰ I̶O̶ DO V̶	(S_ꜰ) IO DO V̶
e.	(S_ꜰ) I̶O̶ D̶O̶ V̶		(S_ꜰ) I̶O̶ DO V̶	S_ꜰ IO D̶O̶ V̶

The aforementioned unstable factors do not challenge my proposal because they can be explained by developments that are independent from the prosody-driven PF-deletion: (i) Early New High German headlines prove that the default primary stress pattern for maximal focus could be either IO > DO_ꜰ or DO > IO_ꜰ, whereas today it sticks to the canonical order IO > DO_ꜰ as in (1a). Therefore, two newly introduced objects show a quite variable relative order in 1050–1350 and 1350–1650. (ii) The very low amount of DO > IO orders in modern Low German is found in instances where both objects are given, which entails that neither object bears primary stress. The lack of case distinction in Low German seems to restrict discontinuous deletions affecting the middle *v*P-copy to the improvement of the position of primary stress like in (2c). The middle *v*P-copy is thus inaccessible to deletions that do not improve the position of primary stress such as (2e). Here, PF sticks to less complex deletions that preserve the canonical order (2d).

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