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Multiple fronting vs. VP fronting in German

Multiple fronting in German

German is classed as a V2 language, that is, normally exactly one constituent occupies the position before the finite verb (the *prefield*) in declarative main clauses. When a sentence contains a non-finite verb (e. g. a participle, an infinitive), the constituent in the prefield may be a verb phrase, consisting of the non-finite verb plus any number of its complements and adjuncts, as in (1).

(1) (DeReKo/Cosmas: NUN93/OKT.01456)
[Ganz auf den Straßenausbau verzichten] **will** die CSU keinesfalls
Completely on the road.development renounce wants the CSU not
'The CSU doesn't want to abandon the development of the road completely.'

In what have been claimed to constitute rare, exceptional cases, however, more than one constituent appears to precede the finite verb, as illustrated in (2):

(2) (DeReKo/Cosmas: R99/JAN.01605)
[Dem Saft] [eine kräftigere Farbe] **geben** Blutorangen.
to.the juice a more.vivid colour give blood.oranges
'What gives the juice a more vivid colour is blood oranges.'

There has been ongoing debate in the theoretical literature concerning the status of examples seemingly violating this V2 constraint, mostly based on constructed examples and considering the data without any context. On the other hand, Müller (2003) discusses a collection of naturally occurring examples, classified by syntactic category and grammatical function of the *prefield* elements. At this point, the question arises as to which constraints govern multiple fronting in German and in particular, which relation multiple fronting bears to the (putatively) more canonical vp-fronting construction exemplified in (1). Interestingly, we find alternation between these two constructions even when the non-finite verb and much of the remaining material in the *prefield* are kept constant (compare (1) to (3)).

(3) (DeReKo/Cosmas: BRZ06/DEZ.08579)
[Ganz] [auf das Skalpell] **können** die Ärzte allerdings nicht verzichten
Completely on the scalpel can the doctors however not renounce
'However, doctors aren't able yet to work completely without a scalpel.'

Since discourse related factors have been argued to play a role in constraining/licensing multiple fronting, the present study explores in detail the role of information structure in tipping the balance towards one or the other of the constructions exemplified in (1) and (3). To our knowledge, no such analysis has ever been undertaken, almost certainly because the data needed for such a comparison are relatively scarce.

Pilot study

Method

Using the w-archive at IDS/Mannheim (2.5 billion word tokens), we conducted a corpus study that compares multiple fronting (MF) and vp-fronting (VPF) with respect to selected features of information structure. Since these corpora are not parsed, there is no straightforward way of extracting the structures we are interested in. As a workaround, a specific instantiation of the multiple fronting / vp-fronting pattern was chosen that can be represented as: ADV PP (X) Vfin…(Y), with a finite verb occuring in either the X or Y position (=VPF vs. MF, respectively). For the pilot study, the pattern was limited to specific lexical material for the adverb, the non-finite verb, and the preposition heading the PP, resulting in two sets: *sich negativ/positiv auf ...auswirken* 'to have a negative/positive effect on sth.' and *ganz auf ...verzichten* 'to do completely without sth.', as shown schematically in Figure 1. All sentence token satisfying these criteria were extracted from the corpus. For each sentence token, the following factors were annotated a.) focus; b.) givenness of the PP; c.) givenness of the subject; d.) length of the PP; e.) length of the subject-NP.

FIGURE 1. PATTERNS EXAMINED IN PILOT STUDY.

	SET A	SET B
MF	[*Ganz*] [*auf* NP] V_{fin} …*verzichten*$_{nfin}$	[*Positiv/Negativ*] [*auf* NP] V_{fin} …*auswirken*$_{nfin}$
VPF	[*Ganz auf* NP *verzichten*$_{nfin}$] V_{fin} …	[*Positiv/Negativ auf* NP *auswirken*$_{nfin}$] V_{fin} …

Results

Remarkably, the "canonical" construction (VPF) turned out to be less frequent than the "non-canonical" one (MF) (Figure (2)).

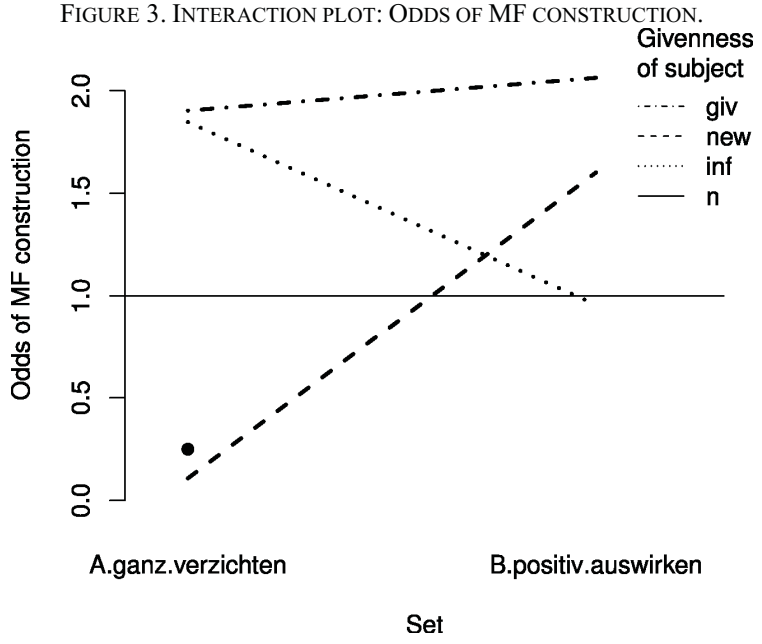
FIGURE 2. EXTRACTED SENTENCE TOKENS BY SET AND CONSTRUCTION.

	SET A	SET B	TOTAL
MF	81	74	155
VPF	50	26	76
TOTAL	131	100	231

A logistic regression was performed on the annotated data (with the construction type as the dependent variable), followed by a stepwise model selection process (optimizing AIC). Length (both of the PP and subject-NP) as well as givenness of the PP could be eliminated as factors from the optimal model. Figure 3 plots the odds of the

MF construction against the givenness of the subject-NP (*given*, *new*, *inferrable*, *none*) for the two sets.

FIGURE 3. INTERACTION PLOT: ODDS OF MF CONSTRUCTION.



Firstly, subject-NPs with givenness-status *none* (negative quantified NPs like *niemand* 'nobody') almost exclusively occur in the VPF construction; however, the effect is only marginally significant (p = .07) due to the low overall number of items in this category (n=5). Second, *new* subject-NPs strongly disfavour the MF construction (p = .04), but only in the A-set; the effect is not significant anymore in the B-set.

FIGURE 4. RESULTS OF LOGISTIC REGRESSION.

	COEFFICIENT	STD. ERROR	Z	P	
(Intercept)	0.64	0.22	3.02	0.003	**
set=B	0.08	0.91	0.09	0.93	
givenness-subj=inf	-0.03	0.55	-0.05	0.96	
givenness-subj=new	-2.87	1.41	-2.04	0.04	*
givenness-subj=none	-2.03	1.14	-1.78	0.07	.
focus=subj	0.84	0.86	0.98	0.33	
focus=other	-16.21	1029.12	-0.02	0.99	
set=B × givenness-subj=inf	-0.74	1.15	-0.64	0.52	
set=B × givenness-subjv=new	2.61	1.49	1.76	0.08	.
set=B × givenness-subj=none	NA	NA	NA	NA	

Discussion

The results of our pilot study suggest that, contrary to what was expected, none of the information structural factors that were considered explain the observed MF-VPF alternation across the two sets of data. Instead, we find item-specific effects (that is, specific to the lexical material that was held constant in each set). These findings, if they carry over to a larger, less constrained data set, are interesting from a theoretical point of view because they would seem to stress the role of item specific knowledge as opposed to higher-level generalizations in this particular domain of grammar.

An extended version of the study will include more data, both in absolute terms and in terms of variation. The general pattern will be the same as the one examined in the pilot study, i. e.:

(4) ADV XP (X) Vfin…(Y)

However, NPs as well as any PP are allowed in the slot labeled 'XP' in (4), and the non-finite verb may vary freely. Moreover, the initial adverb may vary across a set of semantically similar adverbs (thus we have synonym sets centered around *negativ*/*positiv* and *ganz*. In addition, one more such synonym set will be considered, centered around *weiterhin* 'still'). Figure 5 illustrates this for the synsets *ganz* and *weiterhin*. As can be seen, extending the study in this way yields another 840 sentences tokens that will allow us to compare the two constructions on a more solid empirical basis.

FIGURE 5. DATA TO BE INCLUDED IN EXTENDED STUDY.

SYNSET	GANZ		WEITERHIN	
ADVERBS	*ganz, komplett, gänzlich, vollständig, völlig*		*weiterhin, nach wie vor, weiters, fortwährend, immer noch*	
TOTAL	651		189	
CONSTRUCTION	MF	VPF	MF	VPF
TOKENS	276	375	94	95

References

Müller, Stefan. 2003. Mehrfache Vorfeldbesetzung. *Deutsche Sprache* 31(1), 29-62, available at: http://hpsg.fu-berlin.de/~stefan/Pub/mehr-vf-ds.html [28 February 2011].