Topicalization in German particle verb constructions: The role of semantic transparency

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Abstract

In this paper, we investigate topicalization patterns of German particle verbs by comparing the syntactic behavior of semantically transparent and non-transparent particle verb constructions. We propose a classification that allows us to cover the whole transparency spectrum and to distinguish between fully transparent and fully non-transparent particle verbs. Given this classification, we report on a questionnaire study that provides empirical evidence for the claim that information structural constraints in combination with the degree of semantic transparency govern topicalization patterns in particle verb configurations. We conclude by pointing out potential additional constraints on topicalization in particle verb constructions that go beyond information structure.

1 Introduction

In this paper, we investigate topicalization patterns of German particle verbs by distinguishing different classes of particle verbs in terms of semantic transparency. While the occurrence of the whole particle verb in the prefield of the clause is a common option in German syntax, the topicalization of only the particle is classified differently in the literature. In particular, scholars claiming that particle verbs are complex words rather than proper syntactic constructions often doubt the acceptability of those configurations (Eisenberg 1999; Stiebels & Wunderlich 1994). Fuhrhop (2007: 50) even goes so far as to claim that prepositional particles such as *aus* ('out') or *ein* ('in') never occur in the prefield by themselves. In contrast, we follow work by Lüdeling (2001), Müller (2002a), and Zeller (2001), among others, who provide a range of examples, partly based on corpus evidence, demonstrating the option to prepose the particle to the left periphery. In section 2, we discuss the claim that topicalization of particles is governed by information structural constraints. In section 3, we propose a classi-

fication of particle verbs that allows us to cover the whole transparency spectrum and to distinguish between fully transparent and fully non-transparent particle verbs. Given this classification, in section 4, we report on a questionnaire study that investigates whether and to what extent the option of topicalizing the particle depends on the grade of semantic transparency of the particle verb construction. Section 5 summarizes and concludes the paper.

2 Topicalization in particle verb constructions and information structure

In particle verb constructions, the topicalization of only the particle is a phenomenon that has been extensively discussed in the literature on present-day Germanic, including English (cf. Dehé 2015). As is the case for other Germanic languages, both semantic and structural factors have been claimed to constrain particle topicalization in German (e.g. Lüdeling 2001; Müller 2002a; Stiebels & Wunderlich 1994; Zeller 2001). Most researchers agree that one major condition on particle topicalization consists in the possibility of attributing a contrastive interpretation to the particle (e.g. McIntyre 2001: 44–45; Müller 2002: 275; Zeller 2001: 93). This explains why the sentence in (1) is grammatical, whereas the one in (2) is not.

(1) Zu hat er die Tür gemacht (und nicht auf).
PART(close) has he the door made and not PART(open)
'He closed the door.' (Zeller 2001: 89)

(2) * Auf hat Peter mit dem Trinken gehört.
PART has Peter with the drinking heard
'Peter stopped drinking.' (Zeller 2001: 90)

While the particle topicalized in (1) may enter a relation of paradigmatic opposition with the particle *auf* in *auf-machen* (lit. 'open-make', to open), the particle *auf* in *auf-hören* does not (cf. #*zu-hören*, #*ab-hören* etc.). However, contrastiveness of the particle does not hold for cases like the following, a corpus example by Müller (2002a).[1]

(3) VOR hat er das jedenfalls.
PART has he that anyway
'He intends that in any case.' (Müller 2002a: 276)

[1] A preliminary corpus search via http://www.ids-mannheim.de/cosmas2 confirmed Müller's (2002a) finding that cases such as (3) exist. Interestingly, in the case of *vor-haben* we found that 80% of all occurrences of left peripheral *vor* contained modal licensers such as *allerdings* (lit. 'indeed'), *eigentlich* (lit. 'actually'), and *schon* (lit. 'already', here used as the homonymous discourse particle). We will come back to this issue in section 4.5.

A natural account in terms of information structure would be to analyze such configurations as 'pars-pro-toto-constructions'.[2] That is, elements that do not fulfill any discourse-semantic function in the left periphery alone can appear in the prefield 'pars-pro-toto', thereby highlighting the whole predicate. This is a very common strategy, given that the category that appears in the left periphery of the German clause may be smaller than the focus (4) or larger than the focus (5a), and sometimes it coincides with the focus (5b), cf. Jacobs (1991: 8).

(4) Was hat er gemacht?
'What has he done?'
Ein BUCH hat er gelesen.
a book has he read

(5) a. Was hat er gelesen?
'What did he read?'
Ein BUCH gelesen hat er.
a book read has he
b. Ein BUCH hat er gelesen.
a book has he read

At the level of information structure, preposing only a subpart of the focus (4) is equivalent to fronting the whole focal constituent, as in (6):

(6) Was hat er gemacht?
'What has he done?'
Ein BUCH gelesen hat er.
a book read has he

Accordingly, following Fanselow (2003), we can analyze (7a) as a pars-pro-toto-construction that is equivalent to (7b) at the level of information structure.[3]

(7) a. VOR haben wir das schon gehabt.
PART have we that well had
b. VORgehabt haben wir das schon.
PART.had have we that well
'We had intended that.' (Fanselow 2003: 35)

The topicalization of non-contrastable elements is a regular option in German syntax. It also shows up in phrasal idioms, like in (8a), which is equivalent to (8b); cf. similar cases in Müller (2002b).

[2] In the literature, these constructions are referred to as cases of so-called 'pars-pro-toto-movement' (Fanselow 2003). In this paper, we abstract away from theoretical issues such as the question if and how discourse features in general – including information structural aspects – should be represented in the syntax and trigger movement (for discussion, cf. Horvath 2010; Rizzi 2014; Trotzke 2010, 2015; Trotzke & Zwart 2014). Accordingly, we use the more neutral term 'pars-pro-toto-construction'.

[3] As already indicated by example (2), the option of topicalizing the particle 'pars-pro-toto' is not available in all cases involving non-contrastable particles. We will address this issue in section 4.5.

(8) den Löffel abgeben ('to die', lit. 'the spoon pass')
a. [Den LÖffel] hat er abgegeben.
the spoon has he passed
b. [Den LÖffel abgegeben] hat er.
'He died.' (Trotzke & Zwart 2014: 138)

If we analyze particle verb constructions such as (7a) as pars-pro-toto-constructions, then we also make a prediction concerning the acceptability of non-adjacent vs. adjacent configurations of the verb and the particle. In particular, Zeller (2001, 2003) claims that adjacency is strongly preferred if the interpretation of predicate focus is the only available option due to the non-contrastability of the particle (cf. also McIntyre 2001: 44 for similar remarks).[4]

(9) a. * Ab ist Nixon 1974 getreten.
PART is Nixon 1974 stepped
b. Abgetreten ist Nixon 1974.
PART.stepped is Nixon 1974
'Nixon resigned in 1974.' (Zeller 2001: 97)

Recently, Heine, Jacobs & Külpmann (2010) objected to the claim that the particle verb receives a focal interpretation when it occurs in the left periphery. They discuss examples like (10), taken Müller (2002a), and claim that in none of these cases it is very plausible that they involve an interpretation in terms of predicate focus.

(10) Auftritt im blauen Anzug der König.
PART(up).steps in.the blue suit the king
'The king appears in a blue suit.' (Müller 2002a: 273)

We leave aside the fact that we consider (10) as belonging to a poetic or a specific professional register. The reason (in addition to what we said in footnote 4) why their discussion of configurations such as (10) is not relevant for the purposes of our paper is that all their examples suggest an interpretation of presentative focus in the sense of Hetzron (1975). That is, the occurrence of the particle in the prefield (together with other reordering operations in the middle

[4] The adjacency of a particle and a verb in the left periphery can also be achieved by topicalizing the particle and preposing the verbal part of the particle verb to the second position in the clause, as in (i), also taken from (Zeller 2001: 97):

(i) ? Ab trat Nixon 1974.
PART stepped Nixon 1974

However, in the rest of the article, we focus on cases involving non-contrastable particles such as (9b) where an information structural explanation in terms of predicate focus follows straightforwardly. Accordingly, when we talk about adjacency of a non-contrastable particle and a verb, we refer to configurations such as (9b).

field of the clause) yields a rhematization of the subject, thereby creating more tension (Zifonun, Hoffmann & Strecker 1997: 1621).[5]

In what follows, we are concerned only with configurations such as (7) where either the particle or the whole particle verb appears in front of the finite verb in V2 clauses. Furthermore, focusing on these structures, our goal is not to contribute to the debate of what kind of information structural interpretation particle topicalization exactly yields. In the literature on particle topicalization, both topic and focus interpretations are attributed to these constructions. Therefore, we can merely observe, in accordance with Wurmbrand (2000: 8), that "the claim that topicalization […] has some effect on the interpretation seems to be a minimal assumption of all approaches" that are concerned with particle topicalization and its information structural impact. Consequently, we adopt the broad notion of an information structural effect according to which focus on an item α (in a pars-pro-toto-setting or not) indicates that alternatives to the denotation of α are relevant for the interpretation of the utterance (Rooth 1992). This general notion underlies the concepts of both contrastive topic and contrastive focus (Repp 2010), and thus it does not contradict concrete proposals such as Zeller's (2003) claim that the topicalization of a non-contrastable particle such as in (7) is always interpreted as a contrastive topic and always resists a focus interpretation. Since the goal of our study is to examine to what extent and how the semantic transparency of particle verbs interact with their topicalization patterns, we now turn to a classification of the semantic transparency of particle verbs.

3 Particle verbs and semantic transparency

Apart from particle verbs in topicalization structures, it is generally observed that the discontinuous appearance of a particle and its verb is strongly dispreferred if the particle semantically depends on the verb to a certain extent (Hawkins 2011).[6] In this context, it is very common to distinguish between two classes of particle verbs: 'idiomatic/opaque' and 'literal/transparent' configurations (e.g. Chen 1986; but see Jackendoff 2002). In what follows, we want to operationalize the notion of 'semantic transparency' by adopting a test proposed

[5] In addition, it can be argued that these structures are actually V1-declarative structures, as Heine, Jacobs & Külpmann (2010: 41) point out themselves. However, this hypothesis is probably unsound, given that in the string [auftrɪt] it is the particle that bears primary stress (['auftrɪt]) and not the verb stem (*[auf'trɪt]), as in prefix verbs (e.g. Stiebels & Wunderlich 1994: 921). In other words, the V1-explanation would only work if the particle verb could be analyzed as a prefix verb, which is not the case in (10). Therefore, it seems that in examples like (10) the particle *auf* indeed occupies the prefield, while the inflected lexical verb appears in second position.

[6] There is a systematic exception to this generalization in German syntax, though: separation of verb and particle under V2. In this context, discontinuity seems not to affect acceptability in any way.

by Lohse, Hawkins & Wasow (2004) that concerns the relation of dependency between the verb and the particle (i = independent; d = dependent).

(11) Particle entailment test (Lohse, Hawkins & Wasow 2004: 245)
If [X V NP Pt] entails [NP PredV Pt], then assign Pt_i. If not, assign Pt_d.
PredV = predication verb (BE, BECOME, COME, GO, STAY)[7]

Given this diagnostics, we can distinguish transparent (independent) cases such as (12) from non-transparent (dependent) cases like (13).

(12) a. die Tür zu-machen ('to close the door', lit. 'the door close-make')
b. Die Tür ist zu. ('The door is closed.') [+ predicative]

(13) a. etwas vor-haben
('to intend something', lit. 'something before-have')
b. * Etwas ist vor. [– predicative]

In section 2, we already saw that *vor* in *vorhaben* is also not contrastable (i.e. *vor* cannot be singled out from a set of alternatives). A possible formulation of this property is the following.

(14) Particle contrastability test
Assign a particle Prt (in a particle verb [Prt V]) the feature [+ contrast] iff Prt triggers a set of alternatives different from the empty set.

When we take into account (14) and combine it with the test given in (11), we observe that the semantic autonomy with predication verbs and the property of contrastability do not always co-occur. Consider (15), where the particle has no such autonomous denotation, but a contrast is nevertheless possible (cf. *ab-nehmen* vs. *zu-nehmen*).

(15) Nein, nicht ab muss er nehmen, sondern zu.
No not PART has.to he take but PART
'He has to increase and not decrease in weight.' (Müller 2002a: 265)

We thus suggest that both contrastability and semantic autonomy as detected by predicativity are relevant in measuring the semantic bond between verb and particle. By combining the two criteria of semantic transparency, we arrive at the following four classes.

[7] This corresponds to Wurmbrand's (2000) proposal to refer to a particle verb as transparent if the particle can be a predicate in a copula construction. However, we refer to the more broad version of this test by Lohse, Hawkins & Wasow (2004), since it has been demonstrated that the 'copula test' is too restrictive in the context of particle verbs (McIntyre 2002: 97–98).

(16) [+ contrast, + predicative]
a. die Tür zu-machen vs. die Tür auf-machen
'to close the door vs. to open the door'
b. Die Tür ist zu./Die Tür ist auf.
'The door is closed./The door is open.'

(17) [– contrast, + predicative]
a. die Tür zu-knallen (*die Tür auf-knallen)
'to slam the door'
b. Die Tür ist zu.
'The door is shut.'

(18) [+ contrast, – predicative]
a. aus-ziehen vs. an-ziehen
'to take off clothes vs. to put on clothes'
b. * Das Kleid ist/geht/wird/bleibt aus./*Das Kleid ist/geht/wird/bleibt an.
'The dress is/goes/becomes/stays off./The weight is/goes/becomes/stays on.

(19) [– contrast, – predicative]
a. etwas vor-haben (*etwas hinter-haben)
'to intend something'
b. * Etwas ist vor.
'Something is before.'

In sum, the present classification not only distinguishes between fully transparent (16) and fully non-transparent (19) particle verbs, but also identifies intermediate classes, which capture gradual dependencies between the verb and the particle. In the next section, we report on a questionnaire study on the acceptability of topicalization patterns in particle verb configurations. Crucially, in this study we only used either fully transparent (16) or fully non-transparent (19) particle verbs in order to gain clear results regarding the interaction between semantic transparency and syntactic flexibility in the context of topicalization.

4 Topicalization in particle verb constructions and acceptability

4.1 Method

For reasons discussed in section 2, we wanted to avoid referring to contexts that trigger a specific information structural interpretation (i.e. we did not want to specify either a focal or a topical reading). Thus, our cover story to participants was that they would be exposed to fragments of a dialogue between two elderly ladies at a café, which we as researchers had transcribed. We also told the participants that since the location had a lot of background noise, the transcription

might not have been correct in all passages. The participants' job would be to judge how likely it is that the transcription was correct (see http://tinyurl.com/PV-SupplementalMaterial for complete instructions and materials). A filler example of how the questions were presented is given below. Preceding each example, the participants saw a random made-up time (first line of (20), in double brackets) that indicated when in the transcribed dialogue the utterance supposedly appeared. Since time specifications were randomized over the questionnaire, we thus reinforced the impression that there is no contextual coherence between the items following each other in the questionnaire. Then, we specified which of the ladies was speaking; then, the utterance followed. After each utterance, we asked participants how likely it is that the transcription is correct, and gave them six options in 20% intervals.

(20) ((27:01))
Müller: „Damals hatte ich ja noch die Bild-Zeitung abmoniert."
('Back then, I had subscribed [*abmoniert*, correct form: *abonniert*] to the *Bild-Zeitung*.')
Mit welcher Wahrscheinlichkeit haben wir das richtig transkribiert?
('How likely is it that we transcribed the utterance correctly?')
☐0% ☐20% ☐40% ☐60% ☐80% ☐100%

This methodology allowed us to a) avoid providing explicit contrast categories, yet making particle fronting in principle felicitous, b) avoid explicit judgments about grammaticality or acceptability, which are sometimes problematic (see Myers 2009 for an overview and discussion), and c) avoid binary judgments, instead providing a range of possibilities for finer-grained distinctions. A follow-up question confirmed that most participants did not doubt the cover story and were not aware of the true manipulation (only five participants noted that the focus of the questionnaire was word order variation).

4.2 Materials

Our experimental sentences were manipulated at two levels: type, that is, whether the particle verbs were transparent (21 a, c, e) or not (21 b, d, f), and site, that is, whether the particle was in situ (21 a, b), fronted and adjacent to the verb (21 c, d), or fronted and non-adjacent to the verb (21 e, f). The in-situ position items served as baseline to determine whether the lexical items, in the general context we chose, sounded plausible.

(21) a. Heute morgen hat sie den Eingang zugeschlossen.
this morning has she the entrance PART(close).locked
'This morning, she locked the entrance.'

b. Der Bankdirektor hat das nächstes Jahr eigentlich vorgehabt.
the bank.director has that next year actually PART.had
'The bank director actually intended to do that next year.'

c. Ausgegangen ist die Musik diesmal schon früh.
PART(out).gone is the music this.time already early
'The music went out early this time.'

d. Runtergemacht haben ihn seine gemeinen Schulkameraden jahrelang.
PART.made have him his mean classmates for.years
'His mean classmates bullied him for years.'

e. Aus sind die Lampen erst vorhin gegangen.
PART(out) are the lamps only a.short.while.ago went
'The lamps went out only a short while ago.'

f. Auf ist der Betrüger erst letzte Woche geflogen.
PART is the cheater only last week flown
'The cheater's actions have been revealed only last week.'

For each combination, there were five examples. In addition, we constructed seven fillers we expected to get 'very likely' judgments ('good' fillers), seven fillers we expected to get mixed judgments ('medium' fillers), and seven fillers we expected to receive 'very unlikely' judgments ('bad' fillers). Thus, there were 51 sentences in total (for a full stimuli set, see http://tinyurl.com/PV-SupplementalMaterial). Each participant saw all items; in order to avoid repetition effects, we varied all lexical items except for the verb between the in-situ, the adjacent, and the non-adjacent condition. The utterances were presented in random order, starting with two fillers.

4.3 Participants

We collected judgments from 37 native German speakers, all of them students at the University of Konstanz. One participant routinely checked more than one option in her answers, thus data obtained from her was excluded from the analysis, resulting in 36 participants (25 female, average age: 23.8).

4.4 Results

All data were analyzed using R, specifically, the R packages lme4 and languageR (Baayen 2008; Bates, Maechler & Bolker 2012). Filler data were analyzed using ANOVAs. Since Levene's test did not reach significance, we report results of Welch's test, which does not assume equal variances. The parti-

cle verb data were analyzed by fitting a linear mixed-effects model with random intercepts for items and participants (cf. Baayen, Davidson & Bates 2008).

4.4.1 Fillers

Figure 1 shows that the fillers were judged as we had expected: Participants thought that it was likely that we had transcribed the 'bad' fillers wrong (26.5%, SD: 34.9); judgments for 'medium' fillers were at chance (51.5%, SD: 36); and 'good' fillers were thought to have been transcribed correctly most of the time (91.1%, SD: 16.7). The differences were significant between filler types: Welch's F (2, 64.5) = 299.7, p<.0001. This data on fillers shows that our participants not only understood the task well, but that they also used the full range of options for their judgments.

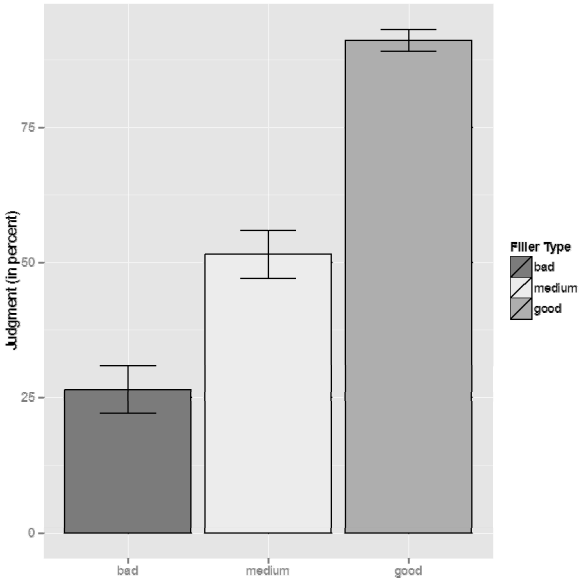

Figure 1: Judgments of filler items. Whiskers represent standard errors.

4.4.2 Particle verbs

The judgments for the particle verbs are summarized in Table 1. Figure 2 shows that the judgments did not differ between construction types in the in-situ condition. That shows that transparent and non-transparent particle verbs were judged as being correctly transcribed equally likely (83% vs. 84%), and that there was no inherent lexical bias for one or the other.

Position	Type	Likelihood ratings
in situ	non-transparent	84.2% (21.9)
	transparent	83.3% (23.6)
adjacent	non-transparent	73.3% (24.9)
	transparent	56.3% (28.6)
non-adjacent	non-transparent	28.7% (28.4)
	transparent	39.7% (29.4)

Table 1: Ratings of particle verbs in percent with standard deviation (in brackets).

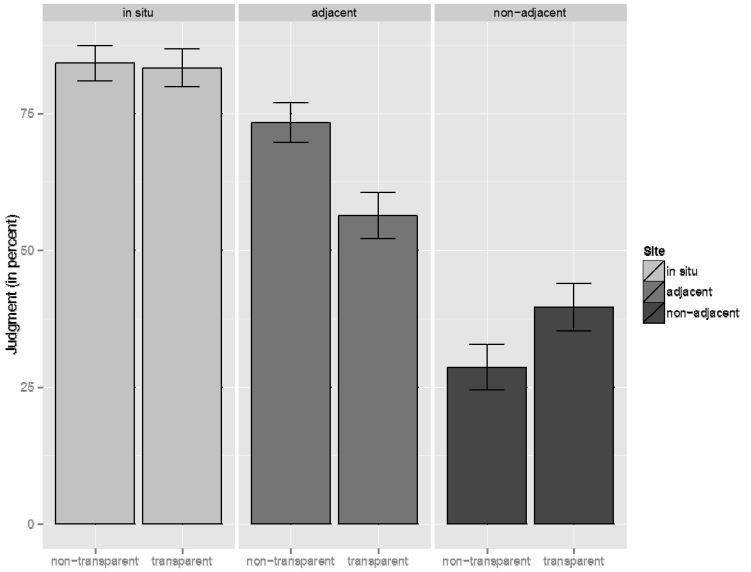

Figure 2: Judgments of particle verbs in situ, adjacent, and non-adjacent. Whiskers represent standard errors.

When both the verb and the particle were fronted (adjacent), people thought it less likely that we had transcribed the utterances correctly. They judged it as particularly unlikely that we correctly transcribed the sentences with transparent particle verbs (56%), even less likely than with non-transparent particle verbs (73%). Finally, when the particle alone was fronted, participants thought it most likely that we mistranscribed the utterance. Here, as well, we can observe a difference between the type of particle verbs: sentences with non-transparent parti-

cle verbs received a likelihood rating of only 29%, and sentences with transparent particle verbs a rating of 40%.

The statistical analysis confirms the visual impression (see Table 2). With non-transparent verbs, there was no effect of transparency in the in-situ condition (which served as baseline for the regression analysis), confirming the visual impression that the particle verb type did not influence ratings in situ. However, main effects of site were significant, as were the interactions between site and particle verb type.

	Estimate	**SE**	**t value**	**Pr(>|*t*|)**
(Intercept)	84.22	3.68	22.88	<.001
Type (transparent vs. non-transparent)	-0.89	4.62	-0.19	>0.85
Site (in situ vs. adjacent)	-10.89	2.49	-4.37	<.001
Site (in situ vs. non-adjacent)	-55.56	2.49	-22.29	<.001
Type (transparent)*Site (adjacent)	-16.11	3.53	-4.57	<.001
Type (transparent)*Site (non-adjacent)	11.89	3.53	3.37	<.001

Table 2: Regression results for critical items.

One additional result of our study that is potentially interesting is that in case of non-transparent particle verbs occurring non-adjacently, the judgments vary considerably compared to the variation we see in the other five type and position combinations. In particular, looking at the mean judgments of the individual non-transparent particle verbs in non-adjacent position, we see that *nach-geben* ('to give way under pressure'), *auf-machen* ('to head off'), and *auf-fliegen* ('to leak out') were all judged at or below 20%. In contrast, the two items *vor-haben* ('to intend') and *runter-machen* ('to bully sb.') both received a rating of above 40% (see Figure 3).

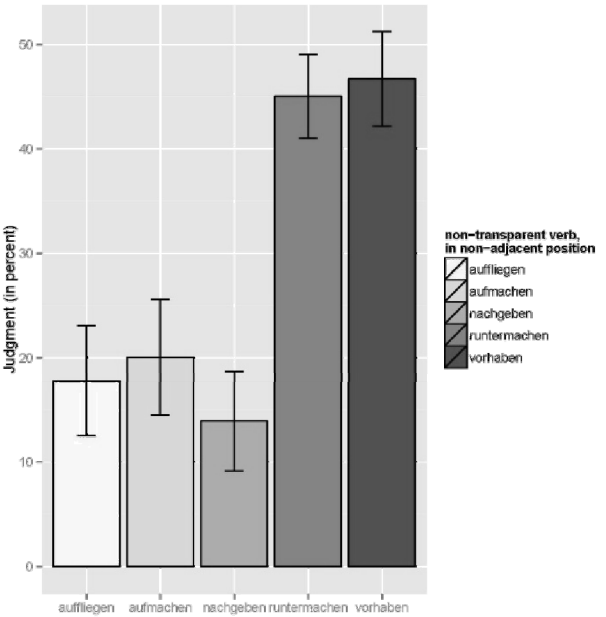

Figure 3: Mean likelihood ratings on non-transparent, non-adjacent particle verbs. Whiskers represent standard errors.

4.5 Discussion

Our study supports the general observation that topicalization in German particle verb configurations seems to be more expected, and less marked, when the particle and the verb occur adjacently in the prefield. Since we distinguished between transparent and non-transparent particle verb constructions, we arrive at a more detailed picture, however. In particular, the difference between non-transparent and transparent particle verbs regarding the adjacent and non-adjacent occurrence of the particle clearly shows that information structural constraints govern topicalization patterns in particle verb configurations.

In section 2, we saw that topicalization of particles of non-transparent particle verb constructions can only be analyzed as pars-pro-toto-constructions at the level of information structure. On the other hand, the preposing of particles of transparent particle verb constructions can also be interpreted as contrasting only the denotation of the particle instead of the whole predicate. We thus predicted that adjacency is strongly preferred in the non-transparent cases, since the interpretation of predicate focus is the only available option due to the non-contrastability of the particle. In the transparent cases, on the other hand, we predict that the preference for adjacency is not as strong as in the non-transparent cases. Our results confirm this reasoning: the transparent cases are judged as being less likely in the adjacent condition. The non-transparent cases,

on the other hand, received a higher rating in terms of likelihood in the adjacent condition because predicate focus is the only available interpretive option. Apart from this difference, in both conditions, transparent and non-transparent, the adjacent occurrence is preferred to the non-adjacent occurrence. The fact that adjacency is strongly preferred even in the transparent cases is an interesting data point, and worth investigating further. We hypothesize that the narrow focus interpretation of contrasting only the particle is harder to get in a setting where no specific context triggering this interpretation is provided, as was the case in our study. In sum, the results of our study confirm that information structural constraints in combination with the degree of semantic transparency govern topicalization patterns in particle verb configurations. However, our findings go beyond hypotheses formulated in the literature (e.g. by Zeller 2001). More specifically, in the literature, we find no explicit predictions with respect to differences in acceptability of transparent vs. non-transparent particle verb constructions when the verb and the particle occur adjacently in the prefield. In fact, the literature suggests that both classes behave alike in the adjacent configuration, differently from what our findings show.

Let us now turn to the variation in judgments of the non-adjacent cases of non-transparent particle verb constructions (see Figure 3). No such effect is predicted by the information structural hypotheses that we discussed in section 2. That is, all non-transparent particles should behave alike. As Figure 3 shows, however, in the cases of *runtermachen* ('to bully sb.') and *vorhaben* ('to intend'), participants thought it more likely that we had transcribed the utterances correctly than in the cases of the other three items. Let us point out right away that we do not have a satisfying explanation for this finding. An obvious account in the case of *runtermachen* would be to follow Stiebels & Wunderlich (1994) who argue that topicalization of resultative or directional particles (like *runter*) clearly improves the acceptability of such configurations (cf. also Webelhuth & Ackerman 1999: 44–51 for related observations). We hypothesize, however, that this is not the whole story. Note that there are differences like the following between particles with a clear directional semantics:

(22) a. (Regelrecht) Raus ist er geflogen!
downright PART(out) is he flown
'He got kicked out yesterday.'

b. # (Regelrecht) Raus hat die Band ihr neues Album
downright PART(out) has the band their new album
gebracht!
brought
'The band published their new album.'[8]

[8] In these cases, the particle verbs are not fully non-transparent according to our classification in section 3. In particular, one can replace the directional particle (*he*)*raus* with a stative prefix (and the required suffix), resulting in a predicative construction such as *Er ist draußen* ('He is out', intended: 'He is out of his job'). However, this is not the case in the even more metaphorical case *runtermachen* (for the complex metaphorical meaning involved, cf. McIntyre 2001: 156).

While *rausfliegen* entails that someone has been dismissed in a harsh way, *rausbringen* does not refer to any such intensity scale: either the band published or published not. The option of topicalizing the particle here seems to depend on the lexical aspect of the verb and its aspectual composition with degrees (e.g. Caudal & Nicolas 2005). This is also indicated by using the degree modifier *regelrecht* in (22), thereby applying a common diagnostics to identify different types of scales in an entry of a lexical item (Kennedy & McNally 2005).

However, this explanation, even if tenable, does not hold for *vorhaben*. In this case, we can only speculate on the basis of what we found in a preliminary corpus search via http://www.ids-mannheim.de/cosmas2. In particular, in the case of *vorhaben*, we found that 80% of all occurrences of left peripheral *vor* contained modal licensers such as *allerdings* (lit. 'indeed'), *eigentlich* (lit. 'actually'), and *schon* (lit. 'already', here used as the homonymous discourse particle). Note that in our materials (see http://tinyurl.com/PV-Supplemental Material), we also used the discourse particle *schon*. All these particles reinforce a concessive reading of utterances with left peripheral *vor* in the construction with *vorhaben*, which could be paraphrased as 'I really intended that, but then I did not put this into practice.' The interaction between the presence of such modal elements and the possibility of the occurrence of non-contrastable *vor* in the prefield could be explained by the speaker's intention to add an extra touch of emphasis to his utterance, scoping over the whole predicate and highlighting the sincerity of the intention (for a suitable notion of the speaker's emphasis in this context, cf. Bayer & Trotzke 2015; Trotzke & Turco in press).

5 Conclusion

In this paper, we proposed a classification of German particle verbs that allows us to cover the whole transparency spectrum and to distinguish between fully transparent and fully non-transparent particle verb constructions. Based on this classification, we reported on a questionnaire study that provides empirical evidence for the claim that information structural constraints in combination with the degree of semantic transparency govern topicalization patterns in particle verb configurations. Moreover, we pointed to potential additional constraints on topicalization in particle verb constructions that go beyond information structure.

Our paper provides a first step towards an empirical foundation of an aspect of particle verb behavior that is hallmarked by disagreement in the literature because most studies are based on varying introspective judgments of the authors (for discussion in this context, cf. Meurers & Müller 2009; Müller 2007). By providing such evidence, our paper may prove useful not only for theoretical discussion, but also for a growing literature in psycholinguistics, where the processing and representation of both semantically transparent and non-transparent particle verbs has been gaining attention (Konopka & Bock 2009; Piai et al.

2013; Smolka, Preller & Eulitz 2014). In addition, we have determined that topicalization options and semantic transparency are closely linked, which might not only advance the discussion limited to particle fronting, but might also prove useful for the analysis and psycholinguistic investigations of other constructions, such as verbal idioms (Rommers, Dijkstra & Bastiaansen 2013) or light verb constructions (Wittenberg et al. 2014; Wittenberg & Snedeker 2014; Wittenberg & Levy under review), where the notion of semantic transparency is an interesting factor in processing.

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