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German Particle Verbs and the Predicate Complex

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12.1 Introduction

In German there is a class of verbs that can appear discontinuously (1). The part that appears to the left of the main verb in verb final position and that is stranded when the finite verb is in initial position is traditionally called a separable prefix. Since prefixes are by definition not separable, the terms particle and preverb are used in more recent work.

(1) a. Setzt der Fährmann Karl über?
       takes the ferryman Karl across
       'Does the ferryman take Karl across?'

    b. daß der Fährmann Karl übersetzt.
       that the ferryman Karl across.takes

In (1a), where the verb is in initial position, the preverb is stranded.

Below I will argue that separable verbs in German behave like other elements in the predicate complex. This view is supported by the following facts: Preverbs are serialized like verbal or predicative adjectival complements in the right sentence bracket (the right periphery of a clause that does not contain extraposed elements), they can be fronted as can be done with single verbs or predicative adjectives. If preverbs are analyzed as part of the predicate complex, the fronting data can be accounted for as an instance of complex fronting (Partial Verb Phrase Fronting (PVP)). The inability of particles and predicates in resultative constructions to co-occur and the non-iterability of preverbs will be explained by the fact that particles and resultative predicates occupy a designated valance position that does not allow more than one particle

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or resultative predicate.

12.2 The Phenomena

12.2.1 Fronting

Preverbs can be fronted, although this is often denied. Different claims about non-frontability have been made by Bierwisch (1963, p. 103), Kiss (1994, p. 100), Olsen (1997, p. 307), Zifonun (1999, p. 227), Eisenberg (1999, p. 306), and others. Due to space limitations I cannot discuss all claims here, but see Müller 2000. Usually fronted particles are contrasted, or a focus (on the complete verb) is established.

(2) a. Los   ging es schon   in dieser Woche.[1]
     PART went it already in this   week
     'It already started this week.'

   b. Vor   hat er das   jedenfalls.[2]
     PART has he that in any case
     'But he does plan this.'

   c. Entgegen kam der EuGH den Streitkräften, indem er der Regierung die Entscheidung überlässt, welche Verwendungsbereiche sie von dem Gleichbehandlungsgebot ausnehmen wollen.[3]

     'The European Court of Justice accommodated the troops by leaving it to the government to decide which areas to exclude from the equal treatment ruling.'

   d. Auf   fällt, daß ...[4]
     PART falls that
     'It is noticed that ...'

In Müller 1999, Ch. 19.1.2 and Müller 2000, I provided more fronting examples with preverbs that are related to nouns, adjectives, and adverbs.

A non-finite particle verb cannot be fronted without its preverb (Uszkoreit, 1987, p. 104):

(3) * Schlafen wird Karl ein.
    sleep   will Karl PART
    Intended: 'Karl will fall asleep.'

The examples of particle fronting in (2) are parallel to examples where verbs or adjectives are fronted.

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[1] taz, 11.10.95, p. 4. The *taz* is a newspaper that appears nation-wide in Germany (http://www.taz.de).

[2] taz, 07.15.1999, p. 19

[3] taz, 01.12.2000, p. 1

[4] (Duden, 1991, p. 62)

(4) a. Erzählen wird er   seiner Tochter   ein Märchen.[5]
       tell   will   he his daughter   a fairy tail
       'He will tell his daughter a fairy tale.'

   b. Treu   will   Karl seiner Frau sein.
       faithful wants Karl his   wife   be
       'Karl wants to be faithful to his wife.'

In (4a) only the verb *erzählen* is fronted. The complements of this verb remain in the *Mittelfeld*. (4b) is an example of a fronted adjective. The example in (3) is parallel to (5).

(5) a. * Müssen wird er   ihr   ein Märchen   erzählen.
         must   will   he her   a story   tell

   b. * Sein will   Karl seiner Frau treu.
         be   wants Karl his   wife   faithful

The generalization about these ungrammatical examples is that if parts of the predicate complex are fronted (alone or with adjuncts or complements), all parts of the predicate complex that are governed by fronted heads have to be fronted together with this head. So in (5a) *müssen* governs *erzählen*. If *müssen* is fronted *erzählen* has to move as well. If particles are analyzed as parts of the predicate complex, the ungrammaticality of (3) is explained.

12.2.2 Linearization

Finally, it can be observed that preverbs behave similarly to verbs and adjectives in respect to serialization. They are located in the right sentence bracket.[6] The control verb *vorschlagen* can appear discontinuously.

(6) a. Karl schlägt der Frau   vor   zu gehen.
       Karl beats   the woman PART to go
       'Karl suggests to the woman to go.'

   b. daß Karl der Frau vorschlägt zu gehen.

   c. * Karl schlägt vor, der Frau zu gehen.

If serializations of the preverb in adverb positions were possible, orders like those in (6c) should also be possible, since they are possible with adverbs, as (7) shows.

(7) a. Karl überredete die Frau   gestern   zu gehen.
       Karl persuaded   the woman yesterday to go

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[5](Haftka, 1981, p. 720–721). For more data see Müller 1999, Chapter 18.
[6]Cf. (Drach, 1937, p. 55)

     b. Karl überredete gestern die Frau zu gehen.

But this is not the case. (6c) is totally out since it would be an instance of multiple extraposition with an NP and a VP. NP extraposition as such is rather marked, but together with an extraposed infinitive the sentence becomes unacceptable. This suggests that preverbs occupy the same position as that occupied by non-finite verbs in sentences like (8), that do not contain a finite particle verb.

(8) Er hat den Hund geschlagen.
    he has the dog   beaten
    'He beat the dog.'

The particle marks the right sentence boundary. If the preverb + verb combination in (7) is licensed by the same grammar rule as the auxiliary + verb combination in (8), the facts can be explained easily.

    In Dutch, preverbs can be separated from their main verb (Koster, 1975, p. 126) and the same is true for some variants of German. Grewendorf (1990, p. 99) gives the German example in (9).

(9) Daß ich an   zu weinen fing[7]
    that I PART to cry   caught
    'that I started to cry'

It is tempting to count this example as an intentional breach of the rules, but such orders are attested to be possible in some German dialects:

(10) a. a ... hot aa   ze schimpfm gfanga
      he   has PART to get.angry caught
      'He started to get angry.'

     b. die ham ... auf zu arwettn ghört
      they have   PART to work   heard
      'They stopped working.'

Werner (1994, p. 356) gives the examples in (10), which are quoted from Sperschneider and were spoken in the northwest of Sonneberg/Thuringia.

    Furthermore, Werner (1994, p. 355) discusses data like those in (11).

(11) Wos da sich ölles aahotmüßhör!
    what the REFL all   PART.has.must.hear
    'All these things he had to listen to!'

He argues that these orderings follow the pattern in (12).

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[7] Joseph von Eichendorff, *Erinnerung, Gedichte*, Eichendorff-W. Vol. 1, p. 77

(12) a. , weil   er in die Stadt / fort   geht.
          because he in the town   away goes
          'because he goes to town / away.'

   b. , weil   er in die Stadt / fort   hat müssen gehen.
          because he in the town   away has must   go
          'because he had to go to town / away.'

Particle verbs historically developed from adverb+verb combinations. The canonical position of adverbs is in front of the verbal complex. Most of these adverbs changed their meaning and the combinations became lexicalized. In the East Franconian/Thuringian dialect the canonical order in respect to modals is preserved. In head final sentences the preverb has to be immedeately to the left of the verbal material, the adverbial elements got reanalyzed as parts of the verbal complex.

12.2.3 Resultative Constructions

Resultative constructions and object predicatives share a lot of properties with particle verbs. In this and the next subsection, I will give a short overview of these constructions in order to be able to sketch analyses in sections 12.3.2 and 12.3.3.

The formation of resultative constructions in German is a process of transitivization that takes an intransitive verb as input and produces a transitive verb + predicate (Oppenrieder 1991, Chapter 1.5.3.7.4; Wunderlich 1997).[8]

(13) Sie   fischen den Teich   leer.
     they fish   the pond-ACC empty

The accusative object in (13) has to be an object of the verb since it can appear in the nominative in passive constructions. However, no selectional restrictions are imposed on this kind of object by the matrix verb. The only restriction is that the result state might be caused by the verb.

Again, the predicate can be fronted, but the fronting of the verb that governs the predicate is out.

(14) a. Klein müssen Sie   das Fleisch schneiden.
     small must   you the meat   cut
     'You have to cut the meat into small pieces.'

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[8]German resultative constructions differ from English ones in several respects. For analyses and data see Rothstein 1985; Wechsler 1997. Some notes about the differences between English and German can be found in Wunderlich 1997. Due to space limitations it is impossible to give more details here.

    b. ?? Schneiden müssen Sie das Fleisch klein![9]
        cut   must   you the meat   small

    c. * Das Fleisch schneiden müssen Sie klein!
        the meat   cut   must   you small

As Keyser and Roeper (1992, p. 97), Neeleman and Weermann (1993), Lüdeling (1998, p. 129–130) and others observed, resultative constructions are impossible with particle verbs.

12.2.4 Object Predicatives

Verbs like *nennen* ('call') and *finden* ('find') embed a predicate. The subject of this predicate is raised to the object of the matrix verb (Pütz, 1982, p. 353).

(15) Man findet ihn   gut.
     one finds him-ACC good

As the object of the matrix verb, the subject of the embedded predicate is marked accusative. In passive constructions it functions as the subject and is marked nominative.

    Again, the fronting of the matrix verb without the embedded predicate is impossible:

(16) * Gefunden hat er ihn gut.
       found   has he him good

There are also particle verbs that embed predicates:

(17) Das kam ihm dumm vor.
    this came him silly   PART
    'This seemed silly to him.'

    To sum up, one can conclude that the preverbs behave in a way that is known from other elements in the predicate complex.

12.3 The Analysis

For the analysis I use a variant of Head-Driven Phrase Structure Grammar (HPSG) as the grammar framework. The standard grammar by Pollard and Sag (1994) is extended by word order domains Reape (1990). Word order domains are lists that contain dependants of a head in a serialization that corresponds to the surface order. These word order domains are used by Reape, Kathol (1995) and Müller (1999) to account for the relatively free constituent order in German. Domain elements may be permutated freely provided no linear precedence rule (LP rule)

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[9](Oppenrieder, 1991, p. 127)

is violated. I assume that all grammar rules are binary branching. If a head is combined with an adjunct, with a complement, or with a filler, the non-head element is inserted into the domain of the head (Müller, 1999, Ch. 11). Furthermore, I follow Hinrichs and Nakazawa (1994) in assuming a special schema for the formation of a verbal complex. In Müller 1997, I suggested extending the notion of verbal complex to a predicate complex and analyzing adjectives as parts of this predicate complex. The non-head daughter that is licensed by the predicate complex schema is also inserted into the domain of its head. The head selects its complex forming complement via a special valence feature called VCOMP (Chung, 1993; Rentier, 1994).

12.3.1   Particle Verbs

Due to the data in section 12.2, it seems reasonable to treat preverbs as elements that take part in complex formation.[10] In the following subsections, I will provide the basic lexical entries for non-transparent particle verbs. Analyses for the verb position, for the fronting of particles and for the verbal complex in Franconian/Thuringian will be provided.

(18) shows the lexical entry for *vorhaben* ('to plan'). I assume that

(18) (*vor*) *hat* ('plans'):

$$
\begin{bmatrix}
\text{SUBCAT } \langle \text{ NP}[nom], \text{ NP}[acc] \rangle \\
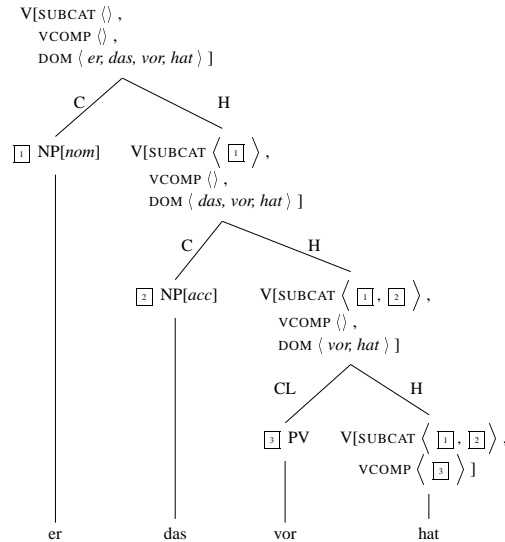\text{VCOMP } \langle \text{ PV}[vor] \rangle \\
cat
\end{bmatrix}
$$

the subject is represented at the subcat list for finite verbs only. For non-finite verbs and other predicates it is represented as a head feature (Kiss 1995). The preverb is selected like other complements that take part in complex formation via VCOMP. For the productive formations of particle verbs I assume a lexical rule that adds the appropriate particle to verbs without a particle. This lexical rule is very similar to the lexical rule for resultative constructions that will be discussed in the next section.

Figure 1 shows the analysis for (19), where the verb is in final position.

(19) , weil   er   das   vorhat?
       because he   that   PART.has
       'because he plans to do this'

An H stands for head, a C for complement, an F for filler, and a CL for cluster daughter. I assume that preverb and verb are two separate

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[10]Höhle (1982) suggested using the same rule for the combination of preverb and verb as for the verbal complex. Höhle deals mainly with morphological problems. The syntactic properties of the particle verb constructions are not explored in detail.

V[SUBCAT ⟨⟩ ,
  VCOMP ⟨⟩ ,
  DOM ⟨ *er, das, vor, hat* ⟩]

C   H

[1] NP[*nom*]   V[SUBCAT ⟨ [1] ⟩ ,
  VCOMP ⟨⟩ ,
  DOM ⟨ *das, vor, hat* ⟩]

C   H

[2] NP[*acc*]   V[SUBCAT ⟨ [1] , [2] ⟩ ,
  VCOMP ⟨⟩ ,
  DOM ⟨ *vor, hat* ⟩]

CL   H

[3] PV   V[SUBCAT ⟨ [1] , [2] ⟩ ,
  VCOMP ⟨ [3] ⟩]

er   das   vor   hat

FIGURE 1   Analysis of *weil er das vorhat?*

syntactic objects that are merely serialized in adjacent positions.

The dominance structure for the sentence (20) is entirely the same, only the serialization of the main verb differs.

(20) Hat er das vor?
     has he that PART
     'Does he plan to do this?'

Instead of being serialized to the right of the complements and the preverb, the verb is serialized sentence initially.

The sentence (2b) gets the structure in (21).

(21) [Vor]$_j$ hat er das jedenfalls _$_j$.

Since I do not assume that the base verb in (20) is extracted out of the complete verb *vorhat*, I do not have to assume that the base verb is scrambled back somehow into the *Mittelfeld*, as is done in some GB analyses. The analysis of (2b) is shown in figure 2. Note that in HPSG there are no restrictions on the phrasehood of the fronted constituent (the filler daughter). The filler in figure 2 is a word. In theories that assume that only maximal projections may be fronted, it has to be assumed that preverbs are projected to maximal phrases (see Lüdeling 1998 for such an approach). There is no evidence whatsoever that preverbs like *vor* or preverbs that are related to bare nouns do project to
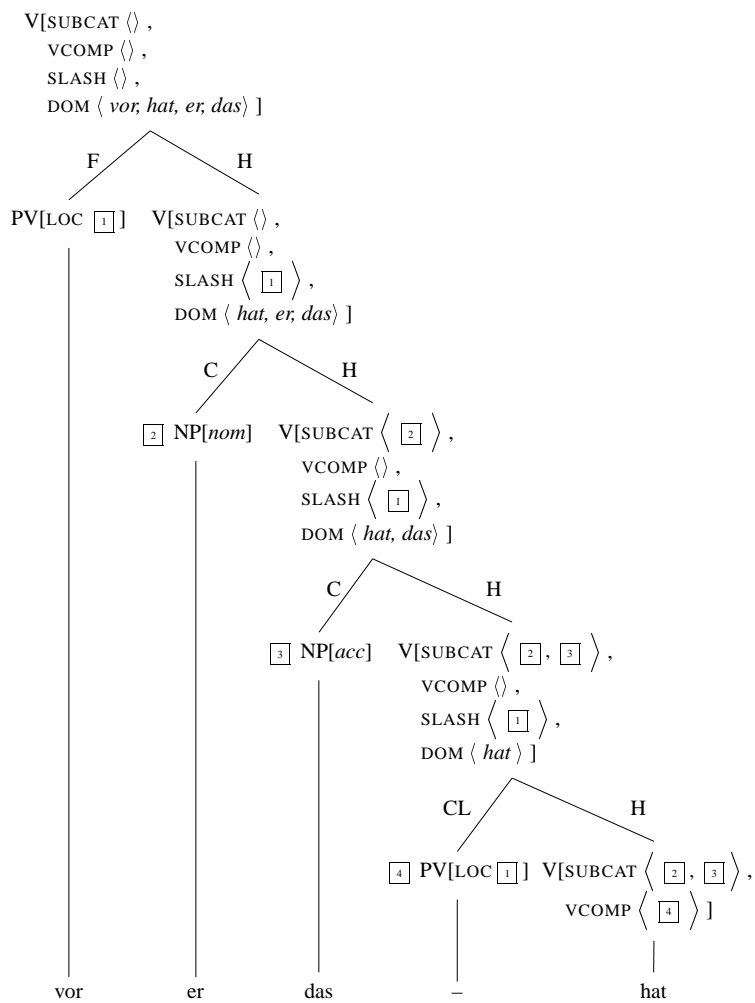
V[SUBCAT ⟨⟩ ,
  VCOMP ⟨⟩ ,
  SLASH ⟨⟩ ,
  DOM ⟨ *vor, hat, er, das* ⟩]

F   H

PV[LOC 1]   V[SUBCAT ⟨⟩ ,
             VCOMP ⟨⟩ ,
             SLASH ⟨ 1 ⟩ ,
             DOM ⟨ *hat, er, das* ⟩]

C   H

2 NP[*nom*] V[SUBCAT ⟨ 2 ⟩ ,
             VCOMP ⟨⟩ ,
             SLASH ⟨ 1 ⟩ ,
             DOM ⟨ *hat, das* ⟩]

C   H

3 NP[*acc*] V[SUBCAT ⟨ 2 , 3 ⟩ ,
             VCOMP ⟨⟩ ,
             SLASH ⟨ 1 ⟩ ,
             DOM ⟨ *hat* ⟩]

CL   H

4 PV[LOC 1] V[SUBCAT ⟨ 2 , 3 ⟩ ,
              VCOMP ⟨ 4 ⟩]

vor   er   das   –   hat

FIGURE 2 Analysis of *Vor hat er das.*

full phrases.

12.3.2 Object Predicatives

The lexical entry in (22) for object predicative taking verbs like *finden* is similar to the entry for the copula *sein* ('be') that was formulated in Müller 1999, p. 314.

(22) *findet* ('finds'):

$$
\begin{bmatrix}
\text{SUBCAT} & \left\langle \text{NP}, \boxed{2} \right\rangle \\
\text{VCOMP} & \left\langle \text{AP}[\ \text{SUBJ}\ \left\langle \boxed{2}\,\text{NP} \right\rangle ,\ \text{SUBCAT}\ \langle\rangle\ ,\ \text{VCOMP}\ \langle\rangle\ ] \right\rangle \\
\textit{cat}
\end{bmatrix}
$$

As Pütz (1982, p. 353) observed, this kind of object predicate construction is a raising construction: The object predicate is embedded under VCOMP (*gut* in (15)). The subject (*ihn*) of the embedded predicate is raised to the object of the matrix verb. The matrix verb does not assign a semantic role to the raised NP, and therefore the embedding of expletive constructions is possible.

(23) Ich finde es   hier zu kalt.
     I   find   it-EXPL here too cold

12.3.3 Resultatives

The lexical rule in (24) shows how resultatives are formed:

$$
(24)\quad
\begin{bmatrix}
\text{SYNSEM}|\text{LOC}
\begin{bmatrix}
\text{CAT} &
\begin{bmatrix}
\text{HEAD}|\text{SUBJ} & \left\langle \text{NP} \right\rangle \\
\text{SUBCAT} & \langle\rangle \\
\text{VCOMP} & \langle\rangle
\end{bmatrix} \\
\text{CONT} & \boxed{1}
\end{bmatrix}
\end{bmatrix}
\Rightarrow
$$

$$
\begin{bmatrix}
\text{SYNSEM}|\text{LOC} \\
\quad
\begin{bmatrix}
\text{CAT} &
\begin{bmatrix}
\text{SUBCAT} & \boxed{2} \\
\text{VCOMP} &
\left\langle
\text{L}
\begin{bmatrix}
\text{C}
\begin{bmatrix}
\text{H}
\begin{bmatrix}
\text{PRD} & + \\
\text{SUBJ} & \boxed{2}\ \left\langle \text{NP}_{ref} \right\rangle \\
\textit{adj-or-prep}
\end{bmatrix} \\
\text{SUBCAT}\ \langle\rangle \\
\text{VCOMP}\ \langle\rangle
\end{bmatrix} \\
\text{CONT}\ \boxed{3}
\end{bmatrix}
\right\rangle
\end{bmatrix} \\
\text{CONT}\ cause(\boxed{1}, become(\boxed{3}))
\end{bmatrix}
\end{bmatrix}
$$

An intransitive verb is the input for this rule. The output is a verb that

selects a predicate via its valance feature VCOMP. The subject of this predicate ($\boxed{2}$) is identical to the object of the matrix verb. The subject of the embedded predicate has to be referential since it is the nature of these resultative constructions that an entity is affected by the action expressed by the matrix verb. The resultative meaning of the whole construction is represented under CONT in the output of the rule. For the example in (13), the lexical rule is applied to the intransitive verb *fischen*, and the valance information for a predicate and an object that is raised from the subject of the predicate is added.

(25) *fischen* ('fish' as is used in 'fish empty'):

$$
\begin{bmatrix}
\text{SUBCAT} & \left\langle \text{NP}, \boxed{2} \right\rangle \\
\text{VCOMP} & \left\langle \text{A/PP}[\text{ SUBJ } \left\langle \boxed{2}\text{NP}_{ref} \right\rangle, \text{ SUBCAT } \langle\rangle, \text{ VCOMP } \langle\rangle] \right\rangle \\
cat &
\end{bmatrix}
$$

The predicate gets saturated by *leer* in (13) and the object by *ihn*.

Since the output of the rule does not match the input specification, it follows that at most one result predicate per verb is allowed. It is also clear that the rule cannot be applied to particle verbs or other verbs that select a complement via VCOMP. The rule for the productive particle formations cannot be applied to resultative constructions for the same reason. Therefore, the iteration of resultative predicates and of particles, and the combination of particles and resultatives or other complex predicates, is correctly ruled out. The only way for more than one element to get into VCOMP is by direct specification in the lexicon. Examples for such cases are the object predicate verb *vorkommen* (see (17)) and the phase verb *anfangen* (see below).

12.3.4 Phase Verbs and the Verbal Complex in Thuringian

Phase verbs like *anfangen* ('start') and *aufhören* ('stop') are raising verbs. They are able to form a verbal complex with the verb they embed. Space considerations preclude a detailed justification here of this kind of verb, but see Kiss 1995; Müller 1999 for details. The important thing to focus on here is the relation between base verb and particle, and how the order in the verbal complex in the examples in (10) can be accounted for. (26) shows the relevant CAT features of *anfangen* (see also Kathol 1995, p. 244–248).

(26) (*an*) *fang-* (finite form):

$$
\begin{bmatrix}
\text{SUBCAT} & \boxed{1} \oplus \boxed{2} \\
\text{VCOMP} & \left\langle \text{V}[\text{SUBJ } \boxed{1}, \text{ SUBCAT } \boxed{2}, \textit{inf}, \text{LEX+}]{:}\boxed{3}, \text{PV}[an] \right\rangle \\
cat &
\end{bmatrix}
$$

Figure 3 shows how the sentence in (27) can be analyzed.

(27) , daß ich zu weinen anfing.
     that I   to cry   started
     'that I started to cry.'

A verbal complex is built from *an* and *fing*. This complex is combined with the infinitive *zu weinen*. All three elements are serialized in the same order domain. (9) can be analyzed completely analogously: Since
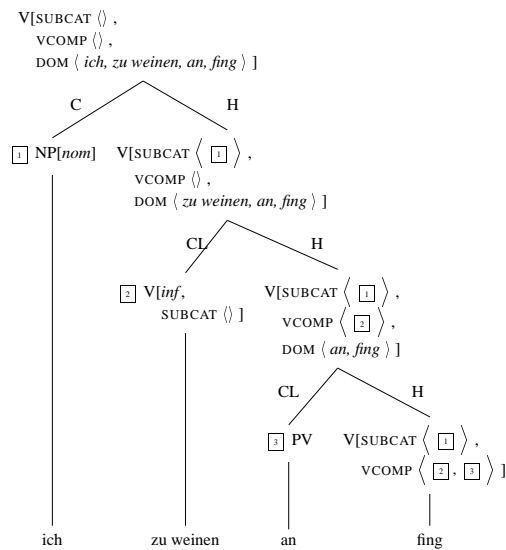
V[SUBCAT ⟨⟩ ,
  VCOMP ⟨⟩ ,
  DOM ⟨ *ich, zu weinen, an, fing* ⟩]

C   H

[1] NP[*nom*]   V[SUBCAT ⟨ [1] ⟩ ,
               VCOMP ⟨⟩ ,
               DOM ⟨ *zu weinen, an, fing* ⟩]

CL   H

[2] V[*inf*,   V[SUBCAT ⟨ [1] ⟩ ,
    SUBCAT ⟨⟩]   VCOMP ⟨ [2] ⟩ ,
                DOM ⟨ *an, fing* ⟩]

CL   H

[3] PV   V[SUBCAT ⟨ [1] ⟩ ,
        VCOMP ⟨ [2], [3] ⟩]

ich   zu weinen   an   fing

FIGURE 3 Analysis of *daß ich zu weinen anfing?*

an, *zu weinen*, and *fing* are in the same word order domain, the serialization of *an* to the left of the verbal complex is possible if required by the ordering rules of the specific variant of German. For standard German, an LP rule with high preference states that preverb and verb have to be adjacent in verb final sentences.

12.4 Conclusion

An account of particle verbs has been developed that treats preverbs as part of the verbal complex. Preverb fronting can be analyzed as an instance of complex fronting. No new mechanisms have to be introduced. In particular no extraction of the finite verb from the fronted constituent as is needed in other theories is necessary. The preverb is selected by the same valence feature as other complements that form a

complex with their head. Therefore, similarities with object predicatives and resultative constructions can be explained. The impossibility of resultative constructions with particle verbs also follows from the valance specification of the latter. Since preverbs are selected via VCOMP the resultative formation lexical rule cannot introduce a resultative predicate because VCOMP is filled already. It is difficult to see how approaches that use just one valance feature (SUBCAT) to represent complements, verbal complements, and preverbs, as for instance that of Bouma and van Noord (1998), can account for the non-iterability of preverbs. Accounts that assume different valence features for preverbs (PART) and verbal elements (AUX), as for instance that of Ackerman and Webelhuth (1998), cannot capture the similarities between the constructions.

Finally, it was shown how word order in the verbal complex in some variants of German can be handled. Since the preverb is selected in the same way as other parts of the verbal complex, the position of the preverb can be accounted for with linear precedence rules. If the preverb were analyzed as a part of the word in verb final constructions, the separability which is also possible in head final constructions could not be explained.

Of course there is a lot more to say about resultatives and other predicative constructions in general, but due to space limitations this could not be done in this paper. Nevertheless, I hope to have made clear both the commonalities of the discussed phenomena, and that they should be treated in the same way.

Acknowledgments

References

Ackerman, F. and G. Webelhuth. 1998. *A Theory of Predicates*. No. 76 in CSLI Lecture Notes. Stanford, California: CSLI Publications.

Bierwisch, M. 1963. *Grammatik des deutschen Verbs*. studia grammatica II. Berlin: Akademie Verlag.

Bouma, G. and G. van Noord. 1998. Word order constraints on verb clusters German and Dutch. In E. W. Hinrichs, A. Kathol, and T. Nakazawa, eds., *Complex Predicates in Nonderivational Syntax*,

vol. 30 of *Syntax and Semantics*, pages 43–72. San Diego: Academic Press. http://www.let.rug.nl/~vannord/papers/. 03.30.98.

Chung, C. 1993. Korean auxiliary verb constructions without VP nodes. In S. Kuno, I.-H. Lee, J. Whitman, J. Maling, Y.-S. Kang, and Y. joo Kim, eds., *Proceedings of the 1993 Workshop on Korean Linguistics*, no. 5 in Harvard Studies in Korean Linguistics, pages 274–286. Cambridge, Massachusetts: Harvard University, Department of Linguistics.

Drach, E. 1937. *Grundgedanken der deutschen Satzlehre*. Darmstadt: Wissenschaftliche Buchgesellschaft.

Duden. 1991. *Die deutsche Rechtschreibung*, vol. 1. Mannheim, Leipzig, Wien, Zürich: Dudenverlag.

Eisenberg, P. 1999. *Grundriß der deutschen Grammatik*, vol. 2. Der Satz. Stuttgart, Weimar: Verlag J. B. Metzler.

Grewendorf, G. 1990. Verb-Bewegung und Negation im Deutschen. *Groninger Arbeiten zur Germanistischen Linguistik* 30:57–125.

Haftka, B. 1981. Reihenfolgebeziehungen im Satz (Topologie). In K. E. Heidolph, W. Fläming, and W. Motsch, eds., *Grundzüge einer deutschen Grammatik*, pages 702–764. Berlin – Hauptstadt der DDR: Akademie Verlag.

Hinrichs, E. W. and T. Nakazawa. 1994. Linearizing AUXs in German verbal complexes. In Nerbonne et al. (1994), pages 11–38.

Höhle, T. N. 1982. Über Komposition und Derivation: zur Konstituentenstruktur von Wortbildungsprodukten im Deutschen. *Zeitschrift für Sprachwissenschaft* 1:76–112.

Kathol, A. 1995. *Linearization-Based German Syntax*. Ph.D. thesis, Ohio State University.

Keyser, S. J. and T. Roeper. 1992. Re: The abstract clitic hypothesis. *Linguistic Inquiry* 23(1):89–126.

Kiss, T. 1994. Obligatory coherence: The structure of German modal verb constructions. In Nerbonne et al. (1994), pages 71–108.

Kiss, T. 1995. *Infinite Komplementation. Neue Studien zum deutschen Verbum infinitum*. No. 333 in Linguistische Arbeiten. Tübingen: Max Niemeyer Verlag.

Koster, J. 1975. Dutch as an SOV language. *Linguistic Analysis* 1(2):111–136.

Lüdeling, A. 1998. *On Particle Verbs and Similar Constructions in German*. Ph.D. thesis, Universität Tübingen.

Müller, St. 1997. Yet another paper about partial verb phrase fronting in German. Research Report RR-97-07, Deutsches Forschungszentrum

für Künstliche Intelligenz, Saarbrücken. A shorter version appeared in *Proceedings of COLING 96*, pages 800–805.

Müller, St. 1999. *Deutsche Syntax deklarativ. Head-Driven Phrase Structure Grammar für das Deutsche*. No. 394 in Linguistische Arbeiten. Tübingen: Max Niemeyer Verlag.

Müller, St. 2000. *Complex Predicates: Verbal Complexes, Resultative Constructions, and Particle Verbs in German*. Habilitationsschrift, Universität des Saarlandes, Saarbrücken.

Neeleman, A. and F. Weermann. 1993. The balance between syntax and morphology: Dutch particles and resultatives. *Natural Language and Linguistic Theory* 11:433–475.

Nerbonne, J., K. Netter, and C. J. Pollard, eds. 1994. *German in Head-Driven Phrase Structure Grammar*. No. 46 in CSLI Lecture Notes. Stanford: Center for the Study of Language and Information.

Olsen, S. 1997. Prädikative Argumente syntaktischer und lexikalischer Köpfe: Zum Status der Partikelverben im Deutschen und Englischen. *Folia Linguistica* 31:3–4.

Oppenrieder, W. 1991. *Von Subjekten, Sätzen und Subjektsätzen*. No. 241 in Linguisitische Arbeiten. Tübingen: Max Niemeyer Verlag.

Pollard, C. J. and I. A. Sag. 1994. *Head-Driven Phrase Structure Grammar*. Studies in Contemporary Linguistics. Chicago, London: University of Chicago Press.

Pütz, H. 1982. Objektsprädikate. In W. Abraham, ed., *Satzglieder im Deutschen – Vorschläge zur syntaktischen, semantischen und pragmatischen Fundierung*, no. 15 in Studien zur deutschen Grammatik, pages 331–367. Tübingen: Gunter Narr Verlag.

Reape, M. 1990. Getting things in order. In H. Bunt and A. van Horck, eds., *Discontinuous Constituency*, no. 6 in Natural Language Processing, pages 209–253. Berlin, New York: Mouton de Gruyter.

Rentier, G. 1994. Dutch cross serial dependencies in HPSG. In *Proceedings of COLING 94*, pages 818–822. Kyoto, Japan.

Rothstein, S. D. 1985. *The Syntactic Forms of Predication*. Ph.D. thesis, Bar-Ilan University. Reproduced by the Indiana University Linguistics Club.

Uszkoreit, H. 1987. *Word Order and Constituent Structure in German*. No. 8 in CSLI Lecture Notes. Stanford: Center for the Study of Language and Information.

Wechsler, S. 1997. Resultative predicates and control. In R. C. Blight and M. J. Moosally, eds., *Texas Linguistic Forum 38: The Syntax*

and Semantics of Predication. Proceedings of the 1997 Texas Linguistics Society Conference, pages 307–321. Austin, Texas: University of Texas Department of Linguistics.

Werner, O. 1994. Was da sich ölles aahotmüßhör! ,Was der sich alles hat anhören müssen!' Auxiliar-Inkorporation im Ostfränkisch-Thüringischen. In H. Löffler, K. Jakob, and B. Kelle, eds., *Texttyp, Sprechergruppe, Kommunikationsbereich. Studien zur deutschen Sprache in Geschichte und Gegenwart. Festschrift für Hugo Steger zum 65. Geburtstag*, pages 343–361. Berlin, New York: Walter de Gruyter.

Wunderlich, D. 1997. Argument extension by lexical adjunction. *Journal of Semantics* 14(2):95–142.

Zifonun, G. 1999. Wenn *mit* alleine im Mittelfeld erscheint: Verbpartikeln und ihre Doppelgänger im Deutschen und Englischen. In H. Wegener, ed., *Deutsch kontrastiv. Typologisch-vergleichende Untersuchungen zur deutschen Grammatik*. Stauffenberg Verlag.