Wurmbrand 2007: How Complex are Complex Predicates?

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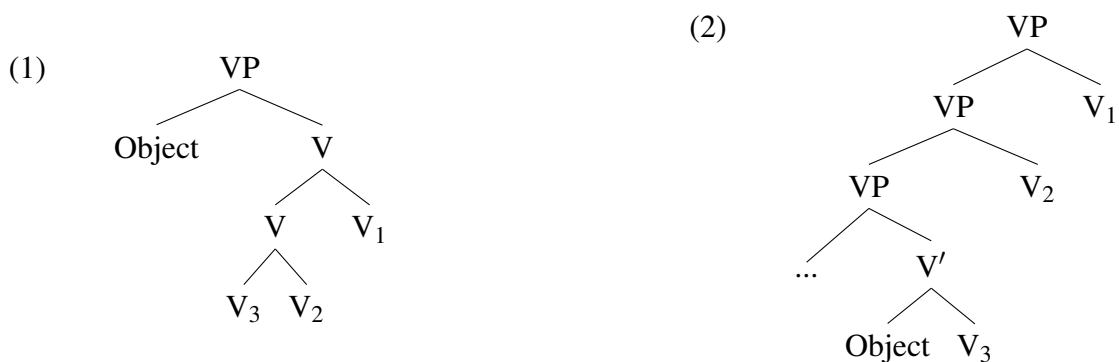
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1   Introduction

> **Main Claim:** Complex predicate formation in German verb clusters results from VP-complementation, not complex head formation.

In particular:

- **adjacency**, which follows naturally in complex head approaches, can also be derived in XP-complementation approach

- furthermore, properties of the cluster concerning constituency, modification, argument structure and event structure follow more straightforwardly in an XP-complementation approach

- the goal of this paper is to compare two approaches to complex predicate formation on the basis of empirical differences between them

(1) VP tree: VP → Object, V; V → V, V_1; V → V_3, V_2

(2) VP tree: VP → VP, V_1; VP → VP, V_2; VP → ..., V′; V′ → Object, V_3

2   German verb clusters

- in German, if a clause contains several verbs, they tend to form a **cluster** at the end

  1. the verbs appear together (in clause-final position)

  2. the cluster cannot be interrupted (no intervening material)

3. the question Wurmbrand addresses in this paper is how these clusters are formed. Note that both approaches she discusses belong to the class of *monoclausal* approaches.

(3)   a.   dass Leo {✓gut} schwimmen {*gut} kann
             that Leo {✓well} swim   {*well} can
             "that Leo can swim well"
        b.   dass Tim {✓nicht} schwimmen {*nicht} können {*nicht} will
             that Tim {✓not}   swim   {*not}   can   {*not}   wants
             "that Tim does not want to be able to swim"

Why would we think that German clusters involve complex head formation?

- as pointed out by Haider (eg. 2003), German is not the same as English. (4) shows that adjacency holds in German, but not in English for the adjunction of certain elements such as adverbs

- (5) shows Haider's Puzzle: extraposed material such as a relative clause must be placed at the end of a cluster, it cannot precede or interrupt it

(4)   a.   The new theory certainly may possibly have indeed been badly formulated.
        b.   dass die Theorie [...] schlecht formuliert (*) worden (*) sein (*) mag
             that the theory   badly   formulated   been   be   may
             "that the theory may have been badly formulated"

(5)   a.   dass er jenen, die ihn darum gebeten haben, etwas   gegeben hat
             that he those who him for.it asked   have   something given   has
             "that he gave something to those who asked him for it"
        b.   dass er jenen t_{REL} etwas gegeben hat, [$_{REL}$die ihn darum gebeten haben]
        c.   *dass er jenen t_{REL} etwas gegeben [$_{REL}$die ihn darum gebeten haben] hat
        d.   *dass er jenen t_{REL} etwas [$_{REL}$die ihn darum gebeten haben] gegeben hat

- Haider's explanation: English cluster are VP-complementation structures, German clusters are complex V^0 heads (see (6)).

- (7) shows that there is no general ban on extraposition to the lower VPs in German

(6)   a.   [$_{VP}$ ... V [$_{VP}$ ... V [$_{VP}$ ... V [$_{VP}$ ... V ...]]]]
        b.   [$_{VP}$ ...[$_{V^0}$...[$_{V^0}$... [$_{V^0}$ V^0 V^0] V^0] V^0]]

(7)   [[$_{VP}$Jenen t_{REL} etwas   gegeben] [die ihn darum geben haben]] hat er noch
      those   something given   who him for.it asked have   has he yet
      nie.
      never
      "He has never given something to those who asked him for it."

3 Complex heads vs. VP-complementation

Questions we want answers to and Wurmbrand's answers in a nutshell:

1. Can Haider's puzzle be solved without complex head formation?
   Yes, by adopting a PF-constraint to rule out (5) and (5). I will not discuss this in detail because the exact analysis is not crucial to Wurmbrand's point: as long as there *is* a way out of Haider's conclusion that the puzzle can only be solved by complex head formation, the door is open for the VP-complementation approach.

2. Can the verbs ever be seperated?
   Yes, and that supports the VP-complementation approach (through **constituency**).

3. Can adverbials modify different parts of the complex predicate (detectable by their scope)?
   Yes, and that supports the VP-complementation approach (through **having multiple adjunction sites**).

4. What kinds of events are denoted by complex predicates?
   Complex predicates can have complex event structures, which, again, supports the VP-complementation approach.

3.1 Lack of adjacency

(8)   a.   [$_{CP}$ Er [$_{C'}$ hat [ihm etwas   gegeben t_{AUX}]]]
            he   has him something given
          "He has given him something."
      b.   [Einen Millionär   einladen]$_{XP}$ hätte man sollen.
           a.ACC millionaire invite   had   one should
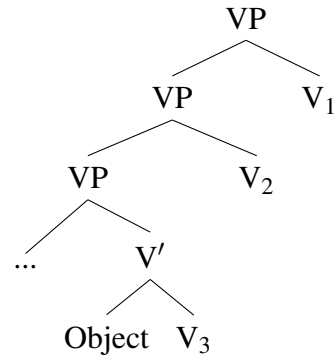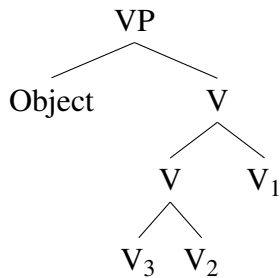   "One should have invited a millionaire."

- clusters can be separated by V2 and by topicalization

- this follows under the VP-complementation approach: Object and V form a constituent, can thus be moved as one

- under the complex head approach, it is not clear how to move only part of the complex head, Wurmbrand considers two options:

   1. excorporation of the finite and the middle verb, remaining to-be-fronted VP contains only the lowest verb and the object

   2. optional complex head formation

- both of these options face a number of problems, the most obvious one arises for both of them: if the cluster can be broken up by excorporation or its formation is optional from the start, why would adjacency ever hold?

3.2 Adverbial Modification

(9) a. The new theory certainly may possibly have indeed been badly formulated.

    b. dass die Theorie [...] schlecht formuliert (*) worden (*) sein (*) mag
        that the theory   badly   formulated   been   be   may
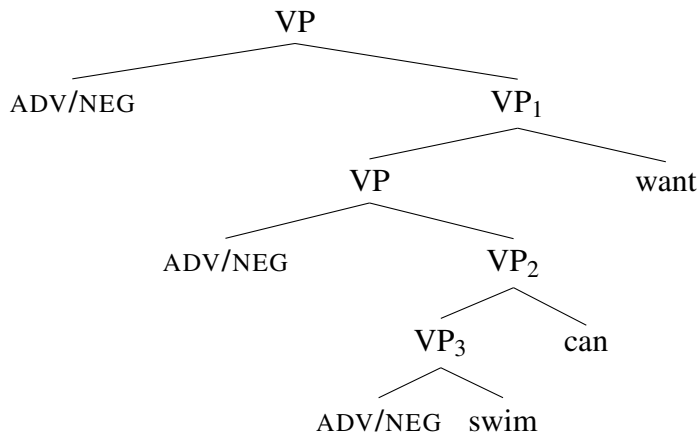   "that the theory may have been badly formulated"

(11)

(10)

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            VP                                           VP
           /  \                                         /  \
     Object    V                                      VP    V₁
              / \                                     / \
             V   V₁                                 VP   V₂
            / \                                     / \
          V₃  V₂                                 ...   V'
                                                      /  \
                                                 Object   V₃
```

- recall that adverbs cannot intervene in German clusters

- in the VP-complementation approach, this only follows if there is a ban on right adjunction for adverbs in German, otherwise, there *would* be intermediate projections to adjoin to (as opposed to the complex head approach)

- Wurmbrand argues that this ban is needed anyway (and, crucially, in both approaches) to account for the ungrammaticality of (12)

(12) *weil Leo schwimmen gehen will   oft/nie/selten
      since Leo swim   go   wants often/never/rarely
      "since Leo often/never/rarely wants to go swimming"

(13)

```
                    VP
                  /    \
           ADV/NEG      VP₁
                       /   \
                     VP     want
                    /  \
             ADV/NEG    VP₂
                       /  \
                    VP₃    can
                   /  \
            ADV/NEG    swim
```

- where the complex head approach only has one adjunction site, the VP-complementation tree has one for every verb, predicting scope ambiguity (with scope depending on the *actual* adjunction site)

- furthermore, since the semantic ambiguity is tied to the structural ambiguity, reducing the structural ambiguity (as through topicalization in (15)) also reduces the semantic ambiguity

- in particular, (15) shows that the adverb must have been attached low (modifying the lowest adverb) in order to be part of the fronted constituent to the exclusion of the next higher verb, which it therefore does not have scope over

(14)   a.   weil Leo oft   gewinnen will
             since Leo often win   want
             "since Leo often wants to win"
             "since Leo wants to often win"
   b.   dass Tim nicht schwimmen können will
             that Tim not   swim   can   wants
             "that Tim does not want to be able to swim"
             "that Tim wants to not be able to swim"
             "that Tim wants to be able to not swim"

(15)   a.   [Oft gewinnen wollen] wird nur der Leo.
             often win   want   will only the Leo
             "Only Leo will often want to win."   [often [win want]]
             "Only Leo will want to win often."   [[often win] want]
   b.   [Oft gewinnen] wird nur der Leo wollen.
             often win   will only the Leo want
             *"Only Leo will often want to win."   *[often [win want]]
             "Only Leo will want to win often."   [[often win] want]
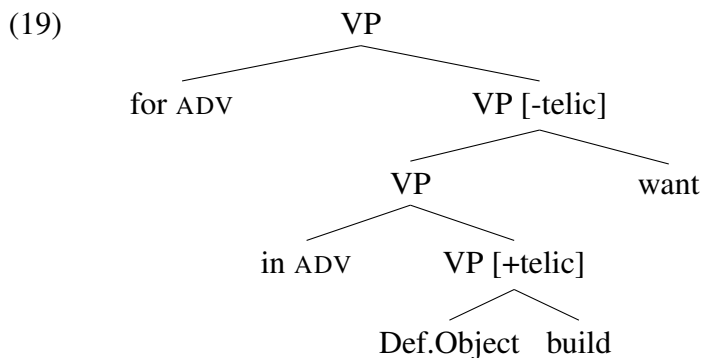
3.3   Type of Events

- because *telicity* (roughly, "having an endpoint") is a property of VPs, not of Vs, the VP-complementation approach predicts distinct event structures for every VP in the structure, while the complex head approach has only one VP and so predicts a unified event structure for the entire predicate

- recall that the telicity of a VP can be tested by including time-span adverbials: telic events take *in* adverbials, atelic events *for* adverbials

(16)   a.   They built the dam in an hour/*for an hour.
   b.   They built dams for an hour.

(17)   a.   Sie haben eine Woche lang Dämme gebaut.
             they have   one week   long dams   built
             "They built dams for a week."
   b.   *Sie haben den Damm eine Woche lang den Damm gebaut.
             they have   the dam   one week   long the dam   built
             *"They built the dam for a week."
   c.   Sie haben den Damm in zwei Monaten gebaut.
             they have   the dam   in two   months built
             "They built the dam in two months."

- crucially, with complex predicates, both *in* and *for* adverbials are possible if the predicate contains both an atelic and a telic VP

- furthermore, both adverbials can also occur simultaneously, but only in a fixed order, which corresponds to the hierarchical order of the involved VPs (I have included an additional example which sounds better to me (probably because it's more plausible))

- the complex head approach, on the other hand, predicts a unified event structure for the entire predicate, which should mean that it can only be either telic or atelic in its entirety

(18) a. Sie haben den Damm [ein Jahr lang [t_{OBJ} bauen wollen]].
           they have the dam   one year long   build want
           "They wanted for a year to build the dam."
    b. Sie haben den Damm [in zwei Monaten [t_{OBJ} bauen]] wollen.
           they have the dam   in two months   build   want
           "They wanted to build the dam in two months."

(19)

```
                      VP
              ┌───────┴───────┐
          for ADV          VP [-telic]
                        ┌──────┴──────┐
                       VP            want
                  ┌─────┴─────┐
               in ADV      VP [+telic]
                         ┌─────┴─────┐
                     Def.Object    build
```

(20) a. Sie haben den Damm ein Jahr lang in zwei Monaten t_{OBJ} bauen wollen.
           they have the dam   one year long in two months   build want
           "They wanted for a year to build the dam in two months."
    b. *Sie haben den Damm in zwei Monaten ein Jahr lang t_{OBJ} bauen wollen.
           they have the dam   in two months one year long   build want
           *"They wanted in two months to build a dam one year long."
    c. ?Sie haben ein Jahr lang zwei Monate lang Dämme bauen wollen.
           they have one year long two months long dams   build want
           "For a year, they wanted to build dams for two months."
    d. Auf der Kreuzfahrt haben sie   zwei Wochen lang einen Abend lang
           on   the cruise   have they two weeks   long one   evening long
           Weine verkosten wollen, aber der Raum war immer zu voll.
           wines taste   want,   but the room was always too crowded.
           "For two weeks on the cruise they wanted to taste wines for one evening, but the room was always too crowded."

4 Summary

Wurmbrand (2007) provides arguments for a VP-complementation approach to (German) complex predicate formation (and against a complex head approach). This is done by

first dismissing adjacency as an argument *for* the complex head approach and then going through some properties of German clusters such as their behaviour under partial topicalization, adverbial modification and their event structure, all of which turn out to support the VP-complementation approach.

Questions:

1. We've seen that adjacency follows in the complex head approach. Does it also follow in the VP-complementation approach?

2. In your (German syntax expert) opinion, does Wurmbrand make (hidden or explicit) assumptions about German syntax that are problematic, controversial, or change the outcome of her investigation in any way?