Complex Predicates in Head-Driven Phrase Structure Grammar

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Outline

- The Verbal Complex
  - Incoherent Constructions
  - Scrambling
  - Remote Passive
  - (Partial) Fronting
  - The Analysis
- Copula Constructions
- consider-Type Predicates
- Resultative Constructions
- Particle Verbs
The Verbal Complex

- Certain verbs have to or may form a topological unit (Bech, 1955):

  \[(1) \text{ weil} \quad \text{er ihm das Buch zu lesen versprochen hat} \]
  
  because he him the book to read promised has
  `because he promised him to read the book`
The Verbal Complex

• Certain verbs have to or may form a topological unit (Bech, 1955):

(1) weil er ihm das Buch zu lesen versprochen hat
    because he him the book to read promised has
    ‘because he promised him to read the book’

• The finite verb may be separated from the remaining complex, but in our analysis, there is a trace that is part of the verbal complex:

(2)  a. Hat er ihm das Buch zu lesen versprochen?
    has he him the book to read promised
    ‘Did he promise him to read the book?’

    b. Das Buch hat er ihm zu lesen versprochen.
    the book has he him to read promised
    ‘He promised him to read the book.’
Coherent and Incoherent Constructions

- Forming a verbal complex is not the only option:

  (3)  a. weil er ihm das Buch zu lesen versprochen hat  
       because he him the book to read promised  has  
       ‘because he promised him to read the book’

  b. weil er ihm versprochen hat, das Buch zu lesen  
     because he promised has  him the book to read  
     ‘because he promised him to read the book’

(3a) is called the coherent construction and
(3b) is the incoherent construction.
Coherent and Incoherent Constructions

• Forming a verbal complex is not the only option:

  (3)  a. weil er ihm das Buch zu lesen versprochen hat
       because he him the book to read promised has
       ‘because he promised him to read the book’

    b. weil er ihm versprochen hat, das Buch zu lesen
       because he promised has him the book to read
       ‘because he promised him to read the book’

(3a) is called the **coherent construction** and
(3b) is the **incoherent construction**.

• All verbs governing participles or bare infinitives have to form a verbal complex.
Coherent and Incoherent Constructions

There are also obligatorily coherent verbs that govern zu infinitives:

(4) a. weil er das Buch zu lesen scheint
   because he the book to read seems
   ‘because he seems to read the book’

b. * weil er scheint das Buch zu lesen
   because he seems the book to read

But most verbs taking zu infinitives allow for both coherent and incoherent constructions.
Permutation of Arguments

Arguments of complex forming verbs do not have to be realized adjacent to their verbs:

(5) weil es ihm jemand zu lesen versprochen hat (Haider, 1990a) 
   because it him somebody to read promised has
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(5) weil es ihm jemand zu lesen versprochen hat (Haider, 1990a)
    because it him somebody to read promised has
The Remote Passive

Accusative objects of embedded verbs can be realized as nominative in passive constructions:

(6)  a. weil er den Wagen oft zu reparieren versuchte
     because he-NOM the car-ACC often to repair tried
     ‘because he often tried to repair the car’

     b. weil der Wagen oft zu reparieren versuchte wurde.
     because the car-NOM often to repair tried was
     ‘because many attempts were made to repair the car.’

*den Wagen* is the object of *reparieren*, but is realized as nominative in (6b).

Explanation: *zu reparieren versucht* acts as a complex verb and is passivized as if it were a simplex verb.
The Remote Passive

- Supporting evidence:
  Remote passive is only possible in coherent constructions:

(7) a. weil oft versucht wurde, den Wagen zu reparieren.
   because often tried was the car-ACC to repair
   ‘because many attempts were made to repair the car.’

b. *weil oft versucht wurde, der Wagen zu reparieren.
   because often tried was the car-NOM to repair

c. Den Wagen zu reparieren wurde oft versucht.
   the car-ACC to repair was often tried

d. *Der Wagen zu reparieren wurde oft versucht.
   the car-NOM to repair was often tried
Fronting

Parts from the left periphery of the verbal complex including non-verbal material may be placed in front of the finite verb:

(8) a. weil er ihr das Märchen erzählen müssen wird.
   because he her the fairytale tell must will
   ‘because he will have to tell her the fairytale’
Fronting

Parts from the left periphery of the verbal complex including non-verbal material may be placed in front of the finite verb:

(8) a. weil er ihr das Märchen erzählen müssen wird.  
   because he her the fairytale tell must will  
   ‘because he will have to tell her the fairytale’

b. Erzählen wird er ihr das Märchen erzählen müssen.  
tell will he her the fairytale tell must
Fronting

Parts from the left periphery of the verbal complex including non-verbal material may be placed in front of the finite verb:

(8) a. weil er ihr das Märchen erzählen müssen wird.
   because he her the fairytale tell must will
   ‘because he will have to tell her the fairytale’

b. Erzählen wird er ihr das Märchen erzählen müssen.
   tell will he her the fairytale tell must

c. Erzählen müssen wird er ihr das Märchen erzählen müssen.
   tell must will he her the fairytale tell must
Fronting

Parts from the left periphery of the verbal complex including non-verbal material may be placed in front of the finite verb:

(8) a. weil er ihr das Märchen erzählen müssen wird.  
because he her the fairytale tell must will  
‘because he will have to tell her the fairytale’

b. Erzählen wird er ihr das Märchen erzählen müssen. 
   tell will he her the fairytale tell must

c. Erzählen müssen wird er ihr das Märchen erzählen müssen. 
   tell must will he her the fairytale tell must

d. Das Märchen erzählen wird er ihr das Märchen erzählen müssen. 
   the fairytale tell will he her the fairytale tell must
Fronting

Parts from the left periphery of the verbal complex including non-verbal material may be placed in front of the finite verb:

(8) a. weil er ihr das Märchen erzählen müssen wird.
   because he her the fairytale tell must will
   ‘because he will have to tell her the fairytale’

b. Erzählen wird er ihr das Märchen erzählen müssen.
   tell will he her the fairytale tell must

c. Erzählen müssen wird er ihr das Märchen erzählen müssen.
   tell must will he her the fairytale tell must

d. Das Märchen erzählen wird er ihr das Märchen erzählen müssen.
   the fairytale tell will he her the fairytale tell must

e. * Müssen wird er ihr das Märchen erzählen müssen.
   must will he her the fairytale tell must

Parts from the middle of the verbal complex may not be fronted.
Tests for Coherence/Incoherence

- Reordering of arguments $\rightarrow$ coherent
Tests for Coherence/Incoherence

- Reordering of arguments $\rightarrow$ coherent
- Extraposition or intraposition of a verb and all its complements/adjuncts $\rightarrow$ incoherent
Tests for Coherence/Incoherence

- Reordering of arguments → coherent
- Extraposition or intraposition of a verb and all its complements/adjuncts → incoherent
- partial fronting → strictly speaking nothing but patterns with the coherent verbs
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- Extraposition or intraposition of a verb and all its complements/adjuncts → incoherent
- partial fronting → strictly speaking nothing but patterns with the coherent verbs
- remote passive possible with the coherent construction
Tests for Coherence/Incoherence

- Reordering of arguments $\rightarrow$ coherent
- Extraposition or intraposition of a verb and all its complements/adjuncts $\rightarrow$ incoherent
- partial fronting $\rightarrow$ strictly speaking nothing but patterns with the coherent verbs
- remote passive possible with the coherent construction
- Additional test: scope of an adjunct over a higher verb $\rightarrow$ coherent
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• Copula Constructions

• consider-Type Predicates

• Resultative Constructions

• Particle Verbs
The Lexical Entry for Obligatorily Coherent Verbs

(9) müssen (‘must’ finite, obligatorily coherent):
\[
\text{SUBCAT } 1 \oplus 2 \oplus \langle V[bse, LEX+, SUBJ 1, SUBCAT 2] \rangle
\]

This is parallel to the lexical entry for the auxiliaries discussed in the passive session, except that the \text{LEX} value was left out there.

\text{LEX+} describes word like clusters.

No non-verbal arguments have been combined with the embedded infinitive. Thus we can ensure that the bare verb is combined with \text{scheinen}. (10a), but not (10b).

(10) a. weil er ihr das Märchen [erzählen muß]
because he her the fairytale tell must
‘because he must tell her the fairytale’

b. weil er [[ihr das Märchen erzählen] muß]]
because he her the fairytale tell must
The Predicate Complex Schema

• Elements from the verbal cluster may not be reordered as normal arguments may.

(11) * daß das Buch lesen niemand wird
that the book read nobody will
The Predicate Complex Schema

- Elements from the verbal cluster may not be reordered as normal arguments may.

(11) * daß das Buch *lesen* niemand wird
   that the book *read* nobody *will*

- A separate schema for predicate complexes:
  
  \[
  \begin{array}{c}
  \text{head-cluster-structure} \rightarrow \\
  \text{SYNSEM} \begin{bmatrix}
  \text{LOC} | \text{CAT} | \text{SUBCAT} [1]
  \end{bmatrix} \\
  \text{HEAD-DTR} \begin{bmatrix}
  \text{SYNSEM} | \text{LOC} | \text{CAT} | \text{SUBCAT} [1] \oplus \langle 2 \rangle
  \end{bmatrix} \\
  \text{NONHEAD-DTRS} \langle \begin{bmatrix}
  \text{SYNSEM} [2]
  \end{bmatrix} \rangle
  \end{array}
  \]
The Predicate Complex Schema

- Elements from the verbal cluster may not be reordered as normal arguments may.

(11) * daß das Buch lesen niemand wird
that the book read nobody will

- A separate schema for predicate complexes:

  head-cluster-structure $\rightarrow$

  \[
  \begin{align*}
  &\text{SYNSEM} \quad \begin{bmatrix}
  \text{LOC|CAT|SUBCAT} \ [1]
  \end{bmatrix} \\
  &\text{HEAD-DTR} \quad \begin{bmatrix}
  \text{SYNSEM|LOC|CAT|SUBCAT} \ [1] \oplus \langle \ [2] \rangle
  \end{bmatrix} \\
  &\text{NONHEAD-DTRS} \quad \langle \ [\text{SYNSEM} \ [2]] \rangle
  \end{align*}
  \]

- Looks like the head-argument schema from the first session.
The Predicate Complex Schema

- Elements from the verbal cluster may not be reordered as normal arguments may.

(11) * daß das Buch lesen niemand wird
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- A separate schema for predicate complexes:

  $\text{head-cluster-structure} \rightarrow$

  $\begin{bmatrix}
  \text{SYNSEM} & \text{LOC|CAT|SUBCAT} [1] \\
  \text{HEAD-DTR} & \text{SYNSEM|LOC|CAT|SUBCAT} [1] \oplus \langle 2 \rangle \\
  \text{NONHEAD-DTRS} & \langle [ \text{SYNSEM} 2 ] \rangle
  \end{bmatrix}$

- Looks like the head-argument schema from the first session.
- The difference is that we use $append$ instead of $del$. 
Analysis of the Verbal Complex

\[
\text{CL} \quad \text{H}
\]

\[
\begin{array}{c}
\text{HEAD} 1 \\
\text{SUBCATT} 2 \oplus 3
\end{array}
\]

\[
\begin{array}{c}
\text{LOC} \\
\text{HEAD} \\
\text{VFORM bse} \\
\text{verb}
\end{array}
\]

\[
\begin{array}{c}
\text{SUBJ} 2 \langle \text{NP[nom]} \rangle
\end{array}
\]

\[
\begin{array}{c}
\text{SUBCATT} 3 \langle \text{NP[acc]}, \text{NP[dat]} \rangle
\end{array}
\]

\[
\begin{array}{c}
\text{SUBJ} \langle \rangle
\end{array}
\]

\[
\begin{array}{c}
\text{HEAD} 1 \\
\text{VFORM fin} \\
\text{verb}
\end{array}
\]

\[
\begin{array}{c}
\text{SUBCATT} 2 \oplus 3 \oplus \langle 4 \rangle
\end{array}
\]

erzählen

muß
Accounting for the Ungrammatical Cases

- The constraints that were formalized so far do not rule out the following:

  (12) a. * daß lesen er den Aufsatz wird
      that read he the paper will
  
     b. * daß er lesen den Aufsatz wird
      that he read the paper will

There would be an analysis in which lesen is combined with werd via the head-argument schema.
Accounting for the Ungrammatical Cases

- The constraints that were formalized so far do not rule out the following:

  (12)  
  a. * daß lesen er den Aufsatz wird  
       that read he the paper will  
  b. * daß er lesen den Aufsatz wird  
       that he read the paper will

  There would be an analysis in which lesen is combined with wird via the 
  head-argument schema.

- Exclusion by specification of the LEX value of the daughter:
  
  head-argument-structure →  
  SYNSEM|LOC|CAT|SUBCAT del(1,2)  
  HEAD-DTR|CAT|SUBCAT 2  
  NON-HEAD-DTRS ⟨ [ SYNSEM 1 [LEX − ] ] ⟩
Partial VP Fronting

- The combination of obligatorily coherent verbs with phrases was successfully excluded, but what about (13b)?

(13)  a. er ihr [[ein Märchen erzählen] muß]]
      he hir a fairytale tell must
      b. Ein Märchen erzählen wird er ihr müssen.
      a fairytale tell will he her must

- No problem if \textsc{lex} is a feature that is not inside of \textsc{local}, but under \textsc{synsem} (Müller, 1997, 1999, 2002a; Meurers, 1999). Since only information under \textsc{local} is shared between trace and filler, the \textsc{lex} value may differ.

- Structure Preservation Principle of Emonds (1976) does not hold. But this is the case for HPSG grammars anyway, since \textsc{phon} values differ and \textsc{dtr}s may differ.
Analysis of *Seiner Tochter erzählen wird er das Märchen.*
Exclusion of Ungrammatical Cases

• What excludes (14)?

(14) * Müssen wird er ihr ein Märchen erzählen.
   must will he her a fairytale tell
Exclusion of Ungrammatical Cases

- What excludes (14)?
  
  \[
  (14) \quad * \text{Müssen wird er ihr ein Märchen erzählen.}
  \]
  
  must \quad will \quad he \quad her \quad a \quad fairytale \quad tell

- \textit{wird} selects an infinitive in \textit{bse} form the arguments of which it attracts. The attracted elements have to be LEX-. Therefore \textit{erzählen} cannot be attracted $\rightarrow$ structure in (15) is ruled out.

  \[
  (15) \quad * \text{Müssen}_{i} \text{ wird}_{j} \text{ er ihr ein Märchen [erzählen [~i ~j]].}
  \]
Exclusion of Ungrammatical Cases

• What excludes (14)?

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

• \textit{wird} selects an infinitive in \textit{bse} form the arguments of which it attracts. The attracted elements have to be \textit{LEX}. Therefore \textit{erzählen} cannot be attracted $\rightarrow$ structure in (15) is ruled out.

(15) * Müssen\textsubscript{i} wird\textsubscript{j} er ihr ein Märchen [erzählen \[\_i \_j\]].

• The analysis in (16) is excluded, since extraction traces are not allowed in head positions:

(16) * Müssen\textsubscript{i} wird\textsubscript{j} er ihr ein Märchen [[erzählen \_i] \_j].
Optional Coherence

*versuch*- (control verb, optionally coherent):

\[
\text{versuchen} \text{ is a control verb: the index of its subject is identified with the subject index of the embedded verb.}
\]
Optional Coherence

**versuch**- (control verb, optionally coherent):

\[
\left[ \text{SUBCAT} \left( \text{NP}[str]_1 \right) \oplus \text{2} \oplus \left( \text{V[inf, SUBJ} \left( \text{NP}[str]_1 \right), \text{SUBCAT 2} \right) \right]
\]

- **versuchen** is a control verb: the index of its subject is identified with the subject index of the embedded verb.
- The LEX value of the embedded verb is not specified → both values are possible.
Optional Coherence

**versuch-** (control verb, optionally coherent):

\[
\text{SUBCAT} \left( \text{NP}[str_1] \oplus 2 \oplus \left< \text{V}[inf, \text{SUBJ} \left( \text{NP}[str_1], \text{SUBCAT} 2 \right) \right] \right)
\]

- **versuch**en is a control verb: the index of its subject is identified with the subject index of the embedded verb.
- The **LEX** value of the embedded verb is not specified → both values are possible.
- If it is ‘+’, we get the coherent construction, if it is ‘−’ we get the incoherent construction.
Remote Passive

(17) a. weil er den Wagen oft zu reparieren versuchte
   because he-NOM the car-ACC often to repair tried
   ‘because he often tried to repair the car’

   b. weil der Wagen oft zu reparieren versuchte wurde.
   because the car-NOM often to repair tried was
   ‘because many attempts were made to repair the car.’

(18) a. zu reparieren:
    SUBJ ⟨ NP[\textit{str}]_i ⟩ SUBCAT ⟨ NP[\textit{str}]_j ⟩

    b. versucht:
    SUBCAT ⟨ NP[\textit{str}]_k ⟩ ⊕ \textbf{1} ⊕ ⟨ V[SUBJ ⟨ NP[\textit{str}]_k ⟩, SUBCAT \textbf{1}] ⟩

    c. zu reparieren \textit{versucht} (finite):
    SUBCAT ⟨ NP[\textit{str}]_k, NP[\textit{str}]_j ⟩

    d. zu reparieren \textit{versucht wurde} (passive):
    SUBCAT ⟨ NP[\textit{str}]_j ⟩
Remote Passive vs. Incoherent Constructions

The data explained:

(19) a. weil oft versucht wurde, den Wagen zu reparieren.
   because often tried was the car-ACC to repair
   ‘because many attempts were made to repair the car.’

b. * weil oft versucht wurde, der Wagen zu reparieren.
   because often tried was the car-NOM to repair

c. Den Wagen zu reparieren wurde oft versucht.
   the car-ACC to repair was often tried

d. * Der Wagen zu reparieren wurde oft versucht.
   the car-NOM to repair was often tried

The examples in (19) are incoherent constructions → Nothing is raised → Case is assigned in the VP. → Object of reparieren gets accusative.

(19a) and (19c) are impersonal passives.
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• consider-Type Predicates
• Resultative Constructions
• Particle Verbs
Scrambling

den Besten (1985, p. 60):

(20)  a. daß die Sache dem Minister ganz klar war.
     that the matter-NOM the minister-DAT completely clear was
     ‘that the matter was completely clear to the minister.’

     b. daß dem Minister die Sache ganz klar war.
     that the minister-DAT the matter-NOM completely clear was
Fronting

(21) a. Treu will Karl seiner Frau sein.
   faithful wants Karl-NOM his wife-DAT be
   ‘Karl wants to be faithful to his wife.’

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

c. Seiner Frau treu will Karl sein.
   his wife faithful wants Karl be

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

The adjective may be fronted with or without its complements.
Fronting

(21) a. Treu will Karl seiner Frau sein.
faithful wants Karl-NOM his wife-DAT be
‘Karl wants to be faithful to his wife.’
b. Treu sein will Karl seiner Frau.
faithful be wants Karl his wife

c. Seiner Frau treu will Karl sein.
his wife faithful wants Karl be

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

The adjective may be fronted with or without its complements.
Impossible to front the copula without the adjective.
Fronting

(21) a. Treu will Karl seiner Frau sein.
faithful wants Karl-\text{NOM} his \text{wife-\text{DAT}} be
‘Karl wants to be faithful to his wife.’

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

c. Seiner Frau treu will Karl sein.
his wife faithful wants Karl be

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

The adjective may be fronted with or without its complements.
Impossible to front the copula without the adjective.
Like partial verb phrase fronting.
Intraposition and Extraposition

(22) weil stolz auf seinen Sohn nur Karl gewesen ist. because proud of his son only Karl been is ‘because only Karl was proud of his son.’

Hoberg (1997, p. 1574) calls this focus split (focus movement).
Extraposition

(23)  a. Karl ist auf seinen Sohn stolz gewesen.
  Karl is on his son proud been
  ‘Karl was proud of his son.’

* Karl ist gewesen auf seinen Sohn stolz.
  Karl is been on his son proud

  c. * Karl ist gewesen stolz auf seinen Sohn.
    Karl is been proud on his son

Extraposition of AP is impossible.
Extraposition

(23)  a. Karl ist auf seinen Sohn stolz gewesen.
    Karl is on his son proud been
    ‘Karl was proud of his son.’

    b. * Karl ist gewesen auf seinen Sohn stolz.
       Karl is been on his son proud

    c. * Karl ist gewesen stolz auf seinen Sohn.
       Karl is been proud on his son

Extraposition of AP is impossible.

Compare the incoherent construction with versuchen:

(24) Karl hat versucht, dem Mann zu helfen.
    Karl has tried the man to help
    ‘Karl tried to help the man.’
Passive

The copula cannot be passivized.
Sketch of the Analysis

- Adjective and copula form a complex
Sketch of the Analysis

- Adjective and copula form a complex
- Arguments of the adjective are attracted.
Sketch of the Analysis

- Adjective and copula form a complex
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Sketch of the Analysis

- Adjective and copula form a complex
- Arguments of the adjective are attracted.
- Arguments in the list are saturated one after the other.
Sketch of the Analysis

- Adjective and copula form a complex
- Arguments of the adjective are attracted.
- Arguments in the list are saturated one after the other.
The Lexical Entries

sei- (copula):

\[\begin{align*}
\text{HEAD} & \quad \text{verb} \\
\text{SUBCAT} & \quad \langle \text{NP}[str], 1 \rangle \oplus 2 \oplus \langle [\text{PRD} +, \text{SUBJ} \langle 1 \rangle, \text{SUBCAT} 2] \rangle
\end{align*}\]

sein embeds a predicative phrase
The Lexical Entries

sei- (copula):

\[
\begin{align*}
\text{HEAD} & \text{ verb} \\
\text{SUBCAT} & \langle \text{NP}[str], 1 \rangle \oplus 2 \oplus \langle \text{PRD}+, \text{SUBJ} \langle 1 \rangle, \text{SUBCAT} 2 \rangle
\end{align*}
\]

\text{sein embedds a predicative phrase and raises its subject}
The Lexical Entries

sei- (copula):

\[
\begin{align*}
\text{HEAD} & \quad \text{verb} \\
\text{SUBCAT} & \quad \langle \text{NP}[\text{str}], 1 \rangle \oplus 2 \oplus \langle [\text{PRD} +, \text{SUBJ} \langle 1 \rangle, \text{SUBCAT} 2] \rangle
\end{align*}
\]

sein embeds a predicative phrase and raises its subject and the other arguments.
The Lexical Entries

sei- (copula):

\[
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\text{HEAD} & \quad \text{verb} \\
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\end{align*}
\]

sei embeds a predicative phrase and raises its subject and the other arguments.

treu (‘faithful’):

\[
\begin{align*}
\text{HEAD} & \quad \text{PRD} + \\
\text{SUBJ} & \quad \langle \text{NP}[str] \rangle \\
\text{adj} & \\
\text{SUBCAT} & \quad \langle \text{NP}[ldat] \rangle
\end{align*}
\]
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consider-Type Predicates

(25) daß jeder ihn klug findet
that everybody-NOM him-ACC smart finds
‘that everybody finds him smart’
Scrambling

(26) a. daß jeder ihn klug findet
               that everybody-NOM him-ACC smart finds
‘that everybody finds him smart’

b. daß ihn jeder klug findet
               that him-ACC everybody-NOM smart finds
‘that everybody finds him smart’
Fronting

\[(27)\]  
\begin{align*}  
a. \quad \text{Klug findet er ihn.} \\
\quad \text{smart finds he him} \\
\quad \text{Intended: ‘He considered him to be clever.’} \\
\end{align*}

b. \quad \text{* Gefunden hat er ihn klug.} \\
\quad \text{found has he him smart} \\
\quad \text{The adjective may be fronted.}
Fronting

(27)  a. Klug findet er ihn.
      smart finds  he him

         b. * Gefunden hat er ihn klug.
            found   has he him smart

         Intended: ‘He considered him to be clever.’

The adjective may be fronted.

Impossible to front the consider-type predicate without the adjective.
Fronting

(27)  

(a) Klug findet er ihn.
smart finds he him

(b) * Gefunden hat er ihn klug.
found has he him smart

Intended: ‘He considered him to be clever.’

The adjective may be fronted.

Impossible to front the consider-type predicate without the adjective.

Like partial verb phrase fronting.
Intraposition and Extraposition

(28) a. weil er niemanden klug findet.  
   because he nobody smart finds  
   ‘because he doesn’t consider anybody to be clever.’

b. ?? weil er klug niemanden findet.  
   because he smart nobody finds

Reordering marked, only under special conditions possible:

(29) die Virtuosität pur will einem so virtuos nicht mehr  
    the virtuosity pure wants one so virtuoso not more  
    vorkommen, [...]\(^1\)  
    appear  
    ‘The pure virtuosity doesn’t seem quite so virtuoso anymore.’

\(^1\)Züricher Tagesanzeiger, 09.03.1996, p. 57.
Extraposition

\[ (30) \]

a. daß jeder ihn klug gefunden hat
   that everybody-NOM him-ACC smart found has
   ‘that everybody found him smart’

b. * daß jeder ihn gefunden hat klug
   that everybody-NOM him-ACC found has smart
Extraposition

(30)  a. daß jeder ihn klug gefunden hat
     that everybody-NOM him-ACC smart found has
     ‘that everybody found him smart’

b. * daß jeder ihn gefunden hat klug
     that everybody-NOM him-ACC found has smart

Similar with PP-like predicate:

(31)  a. Ich habe ihn für einen Lügner gehalten.
     I have him for a liar hold
     ‘I took him for a liar.’

b. * Ich habe ihn gehalten für einen Lügner.
     I have him hold for a liar

PPs can extrapose in German.
Sketch of the Analysis

- Adjective and consider-type predicate form a complex
Sketch of the Analysis

- Adjective and *consider*-type predicate form a complex
- Arguments of the adjective are attracted.
Sketch of the Analysis

- Adjective and *consider*-type predicate form a complex
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Sketch of the Analysis

- Adjective and consider-type predicate form a complex
- Arguments of the adjective are attracted.
- Arguments in the list are saturated one after the other.
Sketch of the Analysis

- Adjective and *consider*-type predicate form a complex
- Arguments of the adjective are attracted.
- Arguments in the list are saturated one after the other.
The Lexical Entries

find- (‘find’):

\[
\begin{aligned}
\text{HEAD} & \quad \text{verb} \\
\text{SUBCAT} & \quad \left< \text{NP}[str], 1 \right> \oplus 2 \oplus \left< \text{ADJ}[\text{PRD} +, \text{SUBJ} \left< 1 \right>, \text{SUBCAT} 2] \right>
\end{aligned}
\]

*finden* embeds a predicative adjective
The Lexical Entries

find- (‘find’):

\[
\begin{align*}
\text{HEAD} & \quad \text{verb} \\
\text{SUBCAT} & \quad \langle \text{NP}[^{str}], \begin{array}{c} 1 \end{array} \rangle \oplus \begin{array}{c} 2 \end{array} \oplus \langle \text{ADJ}[^{PRD +}, \text{SUBJ} \langle \begin{array}{c} 1 \end{array} \rangle, \text{SUBCAT} \begin{array}{c} 2 \end{array} \rangle \rangle
\end{align*}
\]

\text{finden} embedds a predicative adjective and raises its subject
The Lexical Entries

`find-` ('find'):

```
[HEAD  verb
 SUBCAT ⟨ NP[\text{str}], 1 ⟩ ⊕ 2 ⊕ ⟨ ADJ[PRD +, SUBJ ⟨ 1 ⟩, SUBCAT 2] ⟩
```

`finden` embeds a predicative adjective and raises its subject and the other arguments.
The Lexical Entries

**find-** (‘find’):

```
HEAD  verb
 Subcat (NP[str], 1) ⊕ 2 ⊕ (ADJ[PRD +, subj ⟨1⟩, subcat 2])
```

*finden* embeds a predicative adjective and raises its subject and the other arguments.

**klug** (‘clever’):

```
HEAD  PRD +
 Subj ⟨NP[str]⟩
 Subcat ⟨⟩
 adj
```

```
The Passive

(32) a. weil ich ihn klug finde
   because I-nom him-acc clever consider
   ‘because I consider him to be clever’

   b. weil er klug gefunden wird
   because he-nom clever found  is
   ‘because he is considered to be clever’

(33) a. klug finde: SUBCAT ⟨ NP[\textit{str}], NP[\textit{str}] ⟩

   b. klug gefunden wird: SUBCAT ⟨ NP[\textit{str}] ⟩
Outline

- The Verbal Complex
- Copula Constructions
- consider-Type Predicates
- Resultative Constructions
  - Scrambling
  - (Partial) Fronting
  - Intraposition and Extraposition
- The Passive
- The Analysis

- Particle Verbs
Resultative Constructions

A verb (mono valent) plus accusative + predicate.

(34) a. weil niemand den Teich leer fischt
   because nobody-NOM the pond-ACC empty fishes
   ‘because nobody fishes the pond empty’

b. weil er die Zwiebel in Stücke schneidet
   because he the onion in pieces cuts
   ‘because he cuts the onion in pieces’
Resultative Constructions

A verb (mono valent) plus accusative + predicate.

(34) a. weil niemand den Teich leer fischt
because nobody-NOM the pond-ACC empty fishes
‘because nobody fishes the pond empty’

b. weil er die Zwiebel in Stücke schneidet
because he the onion in pieces cuts
‘because he cuts the onion in pieces’

Accusative is not necessarily an argument of the matrix verb:

(35) * weil niemand den Teich fischt
because nobody-NOM the pond-ACC fishes
argument of *leer* can be placed before the arguments of the matrix verb:

(36) a. weil niemand *den Teich* leer fischt
because nobody-NOM the pond-ACC empty fishes

b. weil *den Teich* niemand leer fischt
because the pond-ACC nobody-NOM empty fishes
Fronting

Predicate can be fronted allone or with the governing verb:

(37)  
   a. weil er den Teich leer gefischt hat.  
       because he the pond empty fished has  
   b. Leer hat er den Teich (nicht) gefischt.  
       empty has he the pond not fished  
   c. Leer gefischt hat er den Teich (nicht).  
       empty fished has he the pond not  
   d. Den Teich leer gefischt hat er (nicht).  
       the pond empty fished has he not  
   e. ?* Gefischt hat er den Teich (nicht) leer.  
       fished has he the pond not empty

Fronting the verb allone is rather bad.
Intraposition

(38)  a. Ich wollte die Zuchetti in Scheiben schneiden.
I wanted the Zuchetti into slices cut

b. * Ich wollte in Scheiben die Zuchetti schneiden.
I wanted into slices the Zuchetti cut

(39)  * Gustav hat die Tasse leer mit großen Schlucken getrunken.²
Gustav has the cup empty with big gulps drunk
Intended: ‘He drained the cup with big gulps.’

Intraposition: Focus Movement

Neeleman (1994, p. 85) for Dutch:

\[(40)\]  
\[\text{a. daß so grün selbst Jan die Tür nicht streicht.}\]  
that that green even Jan the door not paints  
‘that not even Jan would paint the door that green.’

\[\text{b. daß Jan so grün selbst die Tür nicht streicht.}\]  
that Jan that green even the door not paints
Intraposition: Focus Movement

Neeleman (1994, p. 85) for Dutch:

(40) a. daß so grün selbst Jan die Tür nicht streicht.
    that that green even Jan the door not paints
    ‘that not even Jan would paint the door that green.’

    b. daß Jan so grün selbst die Tür nicht streicht.
    that Jan that green even the door not paints

Lüdeling (2001, p. 50):

(41) Ich möchte, daß der Prinz die Zwiebeln in feine Würfel für die
I want that the prince the onions in fine cubes for the
Suppe und in Ringe für den Salat schneidet.
soup and in rings for the salad cuts
‘I want the prince to cut the onions into small cubes for the soup
and into rings for the salad.’
The argument of *leer* can become the subject of the whole construction:

(42)  

a. weil *er* *den Teich* *leer* fischt  
    because *he*-Nom *the* pond-*ACC* empty fishes  

b. weil *der Teich* *leer* gefischt wurde  
    because *the* pond-*Nom* empty fishes
The Analysis

- parallel to verb complexes: Subject of the embedded Adj becomes object of the embedding predicate
The Analysis

- parallell to verb complexes: Subject of the embedded Adj becomes object of the embedding predicate
- Lexical entry for the verb in resultative constructions is licensed by a lexical rule.
The Analysis

- parallel to verb complexes: Subject of the embedded Adj becomes object of the embedding predicate
- Lexical entry for the verb in resultative constructions is licensed by a lexical rule.
- The LR also contributes the causative meaning.
Lexical Rule for Resultatives with Unergative Verbs

\[
\begin{align*}
\text{HEAD} & \quad \left[ DA \left\langle 1 \right\rangle \right] \\
\text{verb} & \quad \left[ \right] \\
\text{SUBCAT} & \quad \left[ 2 \left\langle 1 \right\rangle \text{NP}[str] \right]
\end{align*}
\]

\[
\begin{align*}
\text{stem} & \quad \left[ \right] \\
\text{SUBCAT} & \quad \left[ 2 \oplus 4 \oplus \right]
\end{align*}
\]

\[
\begin{align*}
\text{stem} & \quad \left[ \right] \\
\text{PRD} & \quad \left[ \text{SUBJ} \left\langle \text{NP}_{ref} \right\rangle \right]
\end{align*}
\]

\[
\begin{align*}
\text{adj-or-prep} & \quad \left[ \right]
\end{align*}
\]

\[
\begin{align*}
\text{SUBCAT} & \quad \left[ \right]
\end{align*}
\]
The Rule in Operation

(43)  a. *fisch*- (intrans): \( \text{SUBCAT} \langle \text{NP}[str] \rangle \)
    b. *fisch*- (resultative): \( \text{SUBCAT} \langle \text{NP}[str], \text{NP}[str], \text{PRED} \rangle \)

After inflection (43a) can be used to analyze (44a) and
(43b) can be used to analyze (44b).

(44)  a. Er fischt.
       he-NOM fishes

       b. Er fischt den Teich leer.
          he-NOM fishes the pond-ACC empty
Embick’s Argument Against Lexicalist Theories

(73)  a. The door remained opened.
     b. The metal remained flattened.
     c. the recently hammered metal

[...]

(75)  The metal is [hammered [aP flatter than a pancake that has been run over by a steamroller and stomped on by elephants]].

Clearly, one would not want to derive the predicate (75) in the lexicon; it is a syntactic structure. Within standard Lexicalist assumptions, a lexical process cannot form an adjective out of hammer and the resultative secondary predicate in (75) because lexical processes cannot follow syntactic processes. Thus, the formation of resultative participles that have resultative secondary predicates must be syntactic, according to Lexicalist assumptions. If the Lexicalist view is to be maintained, this means that there must be two ways of forming resultative participles: one lexical rule for forming adjectival passive predicates like those in (73); and a second, syntactic process that creates an adjective out of hammer flat and the like. (Embick, 2004, p. 389)
Rule Interaction: Passive

Lexical rule for participle formation applies to (45a) and licences (45b):

(45) a. *fisch- (resultative): SUBCAT ⟨ NP[\textit{str}], NP[\textit{str}], \texttt{PRED} ⟩

b. *gefischt (resultative, participle): SUBCAT ⟨ NP[\textit{str}], \texttt{PRED} ⟩
Rule Interaction: Passive

Lexical rule for participle formation applies to (45a) and licences (45b):

(45)  
   a. *fisch*- (resultative): \textsc{subcat} \langle \text{NP}[str], \text{NP}[str], \text{Pred} \rangle 
   b. *gefischt* (resultative, participle): \textsc{subcat} \langle \text{NP}[str], \text{Pred} \rangle 

(45b) may be used to analyze sentences like (46):

(46)  
  Der Teich \textit{wurde leer gefischt}.  
  the pond\text{-}\textsc{nom} was empty fished

The passive auxiliary does not deblock the blocked elements.

The Case Principle assigns the first element in the \textsc{subcat} list nominative.
Rule Interaction and Refutation of Embick’s Argument

(47a) is input to the adjective formation lexical rule, which licences (47b):

(47)

a. *gefischt* (resultative, participle): $\text{SUBCAT} \langle \text{NP}[\text{str}], \text{PRED} \rangle$
b. *gefischt-* (adjectival stem): $\text{SUBCAT} \langle \text{PRED} \rangle$
Rule Interaction and Refutation of Embick’s Argument

(47a) is input to the adjective formation lexical rule, which licences (47b):

(47)  a. gefischt (resultative, participle): subcat ⟨ NP[\text{str}], \text{Pred} ⟩

b. gefischt- (adjectival stem): subcat ⟨ \text{Pred} ⟩

(47b) can be used to analyze:

(48) der leer gefischte Teich

the empty fished pond

The complexity of the predicate does not matter.

The mistake in Embick’s thinking is that he believes that lexicalists combine actual words in the lexicon.
Outline

- The Verbal Complex
- Copula Constructions
- consider-Type Predicates
- Resultative Constructions
- Particle Verbs
  - Morphology or Syntax?
  - Arguments of Particle Verbs
  - Scrambling
  - The Passive
  - (Partial) Fronting
  - The Analysis
Particle Verbs

- Particle Verbs consist of a verb, which usually also appears in isolation, and a particle, often a preposition.

(49) Er lacht ihn an.
Particle Verbs

- Particle Verbs consist of a verb, which usually also appears in isolation, and a particle, often a preposition.
  
  \[(49) \quad \text{Er lacht ihn an.}\]

- Particle Verbs are usually written together:

  \[(50) \quad \text{weil er ihn anlacht.}\]
Particle Verbs

- Particle verbs are morphologically and syntactically separable
  Example: *einschlafen* (‘to fall asleep’)

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Particle Verbs

- Particle verbs are morphologically and syntactically separable

Example: *einschlafen* (‘to fall asleep’) *zu* and *ge* separate the particle from the verb:

\[(51)\]
\[
\begin{align*}
\text{a. Peter ist } & \text{eingeschlafen.} \\
\text{b. Peter versucht, nicht } & \text{einzuschlafen.}
\end{align*}
\]
Particle Verbs

- Particle verbs are morphologically and syntactically separable.
  Example: *einschlafen* (‘to fall asleep’) *zu* and *ge* separate the particle from the verb:

(51)  
    a. Peter ist *eingeschlafen*.
    b. Peter versucht, nicht *einzuschlafen*.

Syntactic material separates particle and verb:

(52)  
    a. daß Peter nicht *einschläft*.
    b. *Schläft* Peter nicht *ein*?
Particle Verbs

- Particle verbs are morphologically and syntactically separable
  Example: *einschlafen* (‘to fall asleep’) *zu* and *ge* separate the particle from the verb:

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  a. Peter ist *eingeschlafen*.
  b. Peter versucht, nicht *einzuschlafen*.

  syntactic material separates particle and verb:

  (52)  
  a. daß Peter nicht *einschläft*.
  b. *Schläft* Peter nicht *ein*?

- Question: Should particle verbs (always) be treated in the morphology component or should they always be analysed in the syntactic component?
Arguments for a Morphological Analysis

- Nominalizations in German Dialects
- Nontransparency of Certain Particle Verbs
- Changes in the Argument Structure
- Fronting of Particles / Positioning of the Particle in the Mittelfeld
Nominalizations in German Dialects (I)

Stiebels and Wunderlich (1994):

a. Er ist sein Zimmer am aufräumen.
   he is his room at the \textsc{part}(up).clearing
   ‘He is clearing up his room.’

b. * Er ist am sein Zimmer aufräumen.
   he is at the his room \textsc{part}(up).clearing

c. * Er ist sein Zimmer auf am räumen.
   he is his room \textsc{part}(up) at the clearing
   ‘He is clearing up his room.’

Claim: Only words can follow \textit{am}
Particle verbs may appear there. → Particle verbs are words.
Nominalizations in German Dialects (II)

Claim is empirically not correct:

(54)  

a. Wir sind die grade am komplett
   we are them just at.the completely
   Durchbestellen.³
   PART (through).ordering
   ‘We are ordering all of them now.’

b. Er ist ständig am Werbung für sich Machen.
   he is constantly at.the advertisement for self make
   ‘He is permanently indulging in self-promotion.’
Nontransparency of Certain Particle Verbs (I)

• Levitiene (1966): non transparent → word
Nontransparency of Certain Particle Verbs (I)

- Levitiene (1966): non transparent → word
- Reis (1985), Fanselow (1987): idioms are non-transparent, but nevertheless syntactically active. Various passives exist, case of idiom parts changes:

\[(55)\]

a. Man liest den Regierenden in Bonn die Leviten.  
\(\text{one-NOM reads the governors-DAT in Bonn the Leviticus-ACC}\)  
‘The rulers in Bonn are read the riot act.’

b. Am 1. Mai werden den Regierenden in Bonn die Leviten gelesen. (MM, 05.02.1998)  
‘On 1 May the rulers in Bonn will be read the riot act.’

c. Ein Mann bekommt von seiner Frau die Leviten gelesen, weil er beim Fernsehquiz versagte. (MM, 10.09.1989)  
‘A man is read the riot act by his wife because he did not do well in the TV quiz.’
Nontransparency of Certain Particle Verbs (II)

(56) a. die Hunderttausende, die wochenlang auf die Straße gegangen sind und einem verrotteten Regime den Garaus gemacht haben

‘The hundred thousands who went on the streets for weeks on end to put a stop to a decayed regime.’ (Bundestagsprotokolle)

b. in Heidelberg wird „parasitären Elementen“ unter den Professoren der Garaus gemacht (MM, 28.06.1999)

‘In Heidelberg “parasitic elements” among the professors are done away with’

Apart from this idiom parts may be scrambled and fronted.
Changes in the Argument Structure (I)

• Some particle verb combinations result in a change of the argument structure:

(57)  
  a. Der Junge schreit.  
      the boy shouts  
  b. *Der Junge schreit den Lehrer.  
      the boy shouts the teacher  
  c. Der Junge schreit den Lehrer an.  
      the boy shouts the teacher \textsc{PART.}(towards)  
      ‘The boy shouts at the teacher.’
Changes in the Argument Structure (I)

• Some particle verb combinations result in a change of the argument structure:

(57)  

a. Der Junge schreit.  
the boy   shouts  

b. * Der Junge schreit den Lehrer.  
the boy   shouts the teacher  

c. Der Junge schreit den Lehrer    an.  
the boy   shouts the teacher     PART.(towards)  
‘The boy shouts at the teacher.’

• Some authors regard this as evidence for the morphological status of particle verbs: (Levitiene, 1966; Booij, 2002).
Changes in the Argument Structure (II)

• But: Resultative Constructions:

(58) Der Junge schreit sich heiser.
    the boy shouts himself hoarse

Everybody treats resultative constructions in syntax.
PPs can be resultative predicates →
Morphological analysis is not an option.
Changes in the Argument Structure (II)

• But: Resultative Constructions:

\[(58) \quad \text{Der Junge schreit sich heiser.} \]
\[
\text{the boy shouts himself hoarse}
\]

Everybody treats resultative constructions in syntax. PPs can be resultative predicates →
Morphological analysis is not an option.

• We have to differentiate between morphological and lexical. Both particle verbs and resultative constructions should be licensed in the lexicon component.
Fronting of Particles (I)

- Argumentation:
  Extraction out of words is impossible. (Movement of the finite verb is different (Head-Movement))
Fronting of Particles (I)

- Argumentation:
  Extraction out of words is impossible. (Movement of the finite verb is different (Head-Movement))

Fronting of Particles (II)

• Empirically not correct. Examples for particle frontings can be found in:
  • for Dutch: Hoeksema (1991) and Bennis (1991)

(59) Auf *geht* die Sonne im *Osten*, aber unter *geht* sie im *Westen*.
*PART (up) goes the sun in.the east but *PART (down) goes she in.the west
‘The sun rises in the east, but sets in the west.’
Position of the Particle in the Mittelfeld (I)

- The Mittelfeld is the area between the complementiser and the non-finite verbs and the finite verb.
- Analogous claim: Particles are a part of a word. Therefore syntactic material between particle and verb (in final position) is excluded. Moving the particle to the left in the Mittelfeld is impossible.
Position of the Particle in the Mittelfeld (I)

- The Mittelfeld is the area between the complementiser and the non-finite verbs and the finite verb.
- Analogous claim: Particles are a part of a word. Therefore syntactic material between particle and verb (in final position) is excluded. Moving the particle to the left in the Mittelfeld is impossible.
- This is also not correct:

(60) Andrew Halsey ist auf dem Weg von Kalifornien nach Australien weit ab vom Kurs gekommen. (taz, 04.10.1999, p. 20)

‘On the way from California to Australia Andrew Halsey strayed way off course.’

*abkommen* is a particle verb. If *weit ab vom Kurs* is treated as an adverbial phrase, meaning changes.
Position of the Particle in the Mittelfeld (II)

(61) Andrew Halsey ist auf dem Weg von Kalifornien nach Australien weit ab vom Kurs gekommen. (taz, 04.10.1999, p. 20)

‘On the way from California to Australia Andrew Halsey strayed way off course.’

meaning of the particle ab is further specified by a von-PP
Position of the Particle in the Mittelfeld (III)

- Olsen (1997a):

  (62) a. Er legte die Folie auf den Projektor auf.
      he laid the transparency on the projector on
      ‘He placed the transparency on the overhead projector.’
  
  b. Erwarf die Briefe in den Briefkasten ein.
      he threw the letters in the letter.box in
      ‘He posted the letters.’

  There are no particle verbs in German that have a von as particle. ab is
  used instead (Fourquet, 1974; Stiebels, 1996, p. 86, p. 94).

- If the particle ab is further specified, a von-PP is used, as in (61).
Projection of the particle is adjacent to the verb in (61), but also other data: Hoberg (1997), Lüdeling (2001):

(63) Ich weiß, daß die Sonne **auf** im Osten und **unter** im Westen **geht**.

‘I know that the sun rises in the east and sets in the west.’
Position of the Particle in the Mittelfeld (V)

Parallel to focus-split in copula constructions:

(64) a. Sie wuchsen in einem gesellschaftlichen Klima auf, das freier in Deutschland nie war.⁴

‘They grew up in a social climate that was freer than ever in Germany.’

b. daß passivierbar nur solche Verben sind, die ein Tätigkeitsprädikat ausdrücken. . .⁵

‘that only verbs expressing an action predicate can be passivised.’

Usually adjective and copula are adjacent in verb final sentences.

⁴taz, 01.07.1995, p. 10, (Müller, 1999)
⁵In the main text of (Helbig, 1987)
Summary of the Discussion

• All arguments are wrong.
• Some of the arguments are arguments for a lexical treatment.
Outline

- The Verbal Complex
- Copula Constructions
- *consider*-Type Predicates
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- The Analysis
The Particle May Contribute Arguments (I)

• Some particles license additional arguments:

(65)  a. weil niemand lacht
      because nobody laughs

   b. * weil niemand ihn lacht
      because nobody him laughs

   c. weil er ihn anlacht
      he-NOM him-ACC PART (at).laughs
      ‘because nobody smiles at him.’
The Particle May Contribute Arguments (II)

- This is particle (verb) specific:

(66)  

a. weil er lacht  
because he laughs

b. weil er loslacht  
because he PART.laughs

‘because he starts to laugh’

c. * weil er ihn loslacht  
because he him PART.laughs
Scrambling

(67)  a. weil niemand ihn anlacht
because nobody himPART(at).laughs

b. weil ihn niemand anlacht
because him nobody PART(at).laughs
Passive

The argument that is licenced by the particle can be promoted to subject:

(68)  a. weil ihn jemand anlacht
       because him somebody PART (at).laughs
       ‘because somebody laughs at him’

     b. weil er angelacht wird
       because he PART (at).laughs is
       ‘because he is laughed at’
Fronting

• As we saw, particles can be fronted in principle. →
  The syntax has to provide structures for these cases.
Fronting

- As we saw, particles can be fronted in principle. The syntax has to provide structures for these cases.


\[
\begin{align*}
(69) \quad & a. \text{ weil \ } \text{er einschlafen wird} \\
& \text{because he PART (in).sleep will} \\
& b. \text{ Einschlafen wird er nicht.} \\
& \text{PART (in).sleep will he not} \\
& c. \text{ * Schlafen wird er nicht ein.} \\
& \text{sleep will Karl not PART} \\
& \text{Intended: ‘Karl will not fall asleep.’}
\end{align*}
\]
Complex Predicates in Head-Driven Phrase Structure Grammar

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• (Partial) Fronting
• The Analysis
Sketch of the Analysis

- Productive particle verbs are also licensed by a lexical rule.
Sketch of the Analysis

- Productive particle verbs are also licensed by a lexical rule.
- If the particle contributes arguments, they are attracted and realized as arguments of the particle verb.
Summary of the Data

- In the following cases we have a topological unit:
  - coherent verbs (*lesen können wird*)
  - copula constructions
  - *consider*-type predication (*finden + Adj (blöd finden*))
  - resultative predicates (*leer fischen*)
  - particle + verb (*anlachen*)
Summary of the Data

- In the following cases we have a topological unit:
  - coherent verbs (*lesen können wird*)
  - copula constructions
  - *consider*-type predication (*finden + Adj (blöd finden]*)
  - resultative predicates (*leer fischen*)
  - particle + verb (*anlachen*)

- Arguments of all involved predicates may be permuted (modulo performance)
Summary of the Data

• In the following cases we have a topological unit:
  • coherent verbs (*lesen können wird*)
  • copula constructions
  • *consider*-type predication (*finden + Adj (blöd finden]*)
  • resultative predicates (*leer fischen*)
  • particle + verb (*anlachen*)

• Arguments of all involved predicates may be permuted (modulo performance)

• Objects of embedded predicates may become subjects in the passive.
Summary of the Data

- In the following cases we have a topological unit:
  - coherent verbs (lesen können wird)
  - copula constructions
  - consider-type predication (finden + Adj (blöd finden))
  - resultative predicates (leer fischen)
  - particle + verb (anlachen)

- Arguments of all involved predicates may be permuted (modulo performance)

- Objects of embedded predicates may become subjects in the passive.

- Only prefixes of the predicate complex may be fronted.
  (mit complements or without)
The Verbal Complex

- Coherent verbs form a complex.

er ihn zu reparieren versucht

NP[nom]

V'

NP[acc]

V

V

VP
Coherent verbs form a complex.

Arguments of the embedded verb get attracted (Hinrichs and Nakazawa, 1989, 1994; Kiss, 1995)
The Verbal Complex

- Coherent verbs form a complex.
- Arguments of the embedded verb get attracted
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- Arguments can be cancelled off from the SUBCAT list in any order.
The Verbal Complex

- Coherent verbs form a complex.
- Arguments of the embedded verb get attracted (Hinrichs and Nakazawa, 1989, 1994; Kiss, 1995)
- Arguments can be cancelled off from the SUBCAT list in any order.
- Case is not fully specified in the lexicon → We get the remote passive for free.
Resultative Constructions

- parallel to verb complexes: Subject of the embedded Adj becomes object of the embedding predicate
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- parallel to verb complexes: Subject of the embedded Adj becomes object of the embedding predicate
- Lexical entry for the verb in resultative constructions is licensed by a lexical rule.
Resultative Constructions

- parallel to verb complexes: Subject of the embedded Adj becomes object of the embedding predicate
- Lexical entry for the verb in resultative constructions is licensed by a lexical rule.
- The LR also contributes the causative meaning.
Particle Verbs

- Productive particle verbs are also licensed by a lexical rule.
Properties of These Analyses

- The combinatorics of words/phrases is parallel.
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- Thinks like constituent reordering, passivization, and verb placement are independent from the phenomena under discussion.
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- The combinatorics of words/phrases is parallel.
- Thinks like constituent reordering, passivization, and verb placement are independent from the phenomena under discussion.
- This is a crucial difference between this analysis and certain analyses in Construction Grammar! (Müller, 2004)
Summary

- Argument attraction is the key mechanism for the analysis of complex predicates.
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