Complex Predications in Argument Structure
Alternations

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Constructional variability

Project: „Polyseme und konstruktionelle Varianz“
(Polysemy and constructional variability)
- Located: Institut für Deutsche Sprache.
- Members: Stefan Engelberg, Jens Gerdes, Svenja König, Kristel Proost, Edeltraud Winkler.
- Investigates: argument structure alternations in German; description of types and distribution of argument structure patterns; exploring theoretical options for explanation.
- Data: based on text corpora; development of a large database of annotated sentences.

Project: „Syntactic and semantic parameters in the distribution of embedded complex predicates“
- Institutspartnerschaft Bucharest/Mannheim.
- Contribution of „Polyseme and constructional variance“: Investigation of argument structure alternations in the domain of embedded complex predicates.
**Phenomena**

Complex predications (cpr) as arguments of verbs = arguments that involve an internal predicational relation

**Sentential subjects**

\[
\text{die Sonne} \quad \text{scheint} \quad \text{V} \quad \text{arg} \\
\]

*Dass die Sonne scheint, hilft bei den Vorbereitungen.*
that the sun shines helps with the preparations

versus

*Sie hilft bei den Vorbereitungen.*
she helps with the preparations

**Resultatives**

\[
\text{arg} \quad \text{V} \quad \text{cpr-arg} \\
\]

*Sie tanzt ihn schwindlig.*
she dances him dizzy

versus

*Sie tanzt einen Walzer.*
she dances a waltz
Cognate objects

Sie kämpft einen schweren Kampf.

She fights a hard fight

Particle verbs

Sie bindet das Paket zu.

She ties the package up

Sie bindet einen Strauß.

She binds a bouquet
What we have to explain

**Question 1**: How is the distribution of particular CPR arguments accounted for?
E.g., what types of verbs occur with sentential subjects?

**Question 2**: How is the syntactic form and function of particular CPR arguments accounted for?
E.g., what accounts for the fact that the sentential subject with *helfen* occurs as a finite *dass*-clause?

**Question 3**: How is the semantic contribution of particular CPR arguments accounted for?
E.g., what accounts for the fact that the effect expressed by *helfen* depends on the state of affairs expressed by the sentential subject?

**Question 4**: How do particular CPR arguments interact with general syntactic and semantic rules?
E.g., what are the word order properties of the sentential subject of *helfen*?

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Theoretical options – Three hypotheses

**Hypothesis A (lexicon-free)**

The four questions can be answered by reference to general syntactic, semantic, and pragmatic rules.

*Dass die Sonne scheint, hilft bei den Vorbereitungen.*
that the sun shines helps with the preparations

**Lexicon**

*helfen*: [some unstructured encyclopedic knowledge]

**Grammar**

rules from which follows that a subordinate *dass*-sentence S can occur in subject position (or some specific functional projection), where this projection is connected to an interpretation according to which the particular effect/state expressed by V depends on the state of affairs expressed by S; rules that account for word order variation, etc.

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### Hypothesis B (valency-based)

The four questions can be answered by reference to general syntactic, semantic, and pragmatic rules and verb-specific valency information.

\[ \text{Dass die Sonne scheint, } \text{hilft} \quad (\text{ihm}) \quad (\text{bei den Vorbereitungen}). \]

**Lexicon**

\textit{helfen} (reading 2):

\[
\begin{array}{ccc}
 x & y & z \\
\text{Syn:} & \text{dass} & (\text{NPdat}) & (\text{PPbei}) \\
\text{Sem:} & \text{the helping effect for} \ y \ \text{with respect to} \ z & \text{depends on the state of affairs} \ x
\end{array}
\]

**Grammar**

principles for valency patterns and valency projections; rules that account for word order variation, etc.

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### Hypothesis C (construction-based)

The four questions can be answered by reference to specific constructions that bundle the syntactic, semantic and pragmatic properties of the patterns.

\[ \text{Dass die Sonne scheint, } \text{hilft} \quad \text{bei den Vorbereitungen}. \]

**Lexicon (Constructicon)**

\textit{Sentential Subject Dependency Construction}

\[
\begin{array}{c}
\text{Phon:} \quad \text{dass} \ X \ Y \\
\text{Syn:} & \text{[dass} \ S^e] \ [V^y \ [\ldots]] \\
\text{Sem:} & \text{the effect/state expressed by} \ Y \ \text{depends on the state of affairs expressed by} \ X
\end{array}
\]

**Grammar**

principles for unification of constructions and for inheritance relations between constructions, etc.
How to decide – 3 criteria

(Criterion 1) Generality of Syn-Sem-Association
How general is the association between the morphosyntactic and the semantic properties of the pattern (and how is that accounted for)?

Dass die Sonne scheint, hilft bei den Vorbereitungen.
that the sun shines helps with the preparations
SEM: the effect/state expressed by helfen depends on the fact that the sun is shining

Dass der Zweig brach, geschah ganz plötzlich.
that the twig broke happened quite suddenly
SEM: the effect/state expressed by geschehen depends on the fact that the twig broke

Observation: The syntactic-semantic pattern is restricted to some fairly large verb classes; it is neither idiosyncratic for single verbs nor do dass-S subjects always convey the same meaning relation.


Hypothesis 1 (lexicon-free)
a) some stipulation that facts are best expressed as dass-clauses
b) encyclopedic (??) knowledge that effects/states like help, endanger, facilitate always depend on some other fact [dubious]
c) there is a functional projection (= subject) where agents, causes and similar relations (of semantic dependency) are attached to [depends on b]

Hypothesis 2 (valency-based)
a) explicit statement about syn-sem association in lexical entry
b) additional lexical (redundancy) rule needed in order to generalize the pattern over verb classes

Hypothesis 3 (construction-based)
a) explicit construction captures syn-sem association and the generalization over verb classes
b) no additional lexical information needed if (!) the verb class can be properly defined

Stefan Engelberg (IDS Mannheim), Universitatea din București, November 2008 [Folie 12]
**Criterion 2: Interaction with grammatical regularities**

How does the pattern interact with more general syntactic and semantic rules (and how is that accounted for)?

| OK | Dass die Sonne scheint, hat bei den Vorbereitungen geholfen. |
| OK | Es hat bei den Vorbereitungen geholfen, dass die Sonne scheint. |
| ?/* | Es hat dass die Sonne scheint bei den Vorbereitungen geholfen. |

Observation: Finite complement clauses do not occur in the Mittelfeld (while, e.g., adverbial clauses do).

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### Hypothesis 1 (lexicon-free)

a) the word order peculiarity does not fall out from general rules for word order in German; explanation might remain stipulative and hard to express

### Hypothesis 2 (valency-based)

a) according to basic principles of valency word-order peculiarities are not captured in lexical entries

b) doesn’t fall out from general rules for word order in German; explanation might remain stipulative and hard to express

### Hypothesis 3 (construction-based)

a) word order peculiarities can be expressed by inheritance from specific word order constructions [by stipulation]
### (Criterion 3) Lexical variance

How much and how idiosyncratic does a particular argument slot of a verb vary with respect to its syntactic realization (and how is that accounted for)?

<table>
<thead>
<tr>
<th>Hypothesis 1 (lexicon-free)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>a) it is not clear how the tremendous amount of lexical idiosyncrasies in argument realization can be explained without a lexicon</td>
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</table>

<table>
<thead>
<tr>
<th>Hypothesis 2 (valency-based)</th>
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<tbody>
<tr>
<td>a) lexical idiosyncrasies can be easily captured</td>
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<tr>
<td>b) fairly regular alternations will be captured by lexical (redundancy) rules</td>
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<th>Hypothesis 3 (construction-based)</th>
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<td>a) alternations that pertain to lexical classes can be easily captured</td>
<td></td>
</tr>
<tr>
<td>b) lexical idiosyncrasies in alternations require a rather complex interaction between atomic constructions, non-atomic constructions and inheritance rules</td>
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Slides:
http://www.ids-mannheim.de/ll/lehre/engelberg/talks/talks.html