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On autonomous PP complements in German

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Governed PPs

- Prototypical PP complements are headed by *governed prepositions* (which cannot be replaced by other prepositions with the same meaning, and have a weak meaning if they have a meaning at all).
 - Governed PP complements are obligatory.
 - Governed prepositions cannot be replaced by near-synonymous prepositions.
 - Governed prepositions have a weak meaning if at all.

- (1) Er freute sich **auf** das Spiel.
he looked-forward REFL on the game
'He looked forward to the game.'

Autonomous PP complements

- Autonomous PP complements combine properties of governed prepositions with properties of adverbial modifiers.
 - They cannot be omitted.
 - They are headed by autosemantic prepositions.
 - They are related to certain verb classes (stative locatives, as e.g. *liegen* (to be located), *sich befinden* (to reside), *hängen* (to hang), process predicates with path component).
- (2) Ein Schimmer lag **über** dem gesamten Bild.
a gleam lay above the whole picture
'The whole picture was gleaming.'
- (3) Sie ziehen maschinell eine Sprengschnur **durch** den Abschnitt.
they distend mechanically a detonating cord through the section
'They distend a detonating cord through the section by use of a machine.'

Properties of autonomous PP complements

- Omission of the complement leads to ungrammaticality.

- (4) a. *Ein Schimmer lag.
 b. *Sie ziehen maschinell eine Sprengschnur.

- The prepositions can be modified.

- (5) a. Nahezu über dem gesamten Bild lag ein Schimmer.
 almost above the whole picture lay a gleam
'The picture was glistening almost completely.'
- b. Quer durch den Abschnitt wird eine Sprengschnur gezogen.
 across through the section PASS-AUX a detonating cord pulled
'They pulled a detonating cord right across the section.'

- Please note the topicalizations in (5)!

Properties of autonomous PP complements

- Autonomous PP complements are subject to the one-per-sent constraint.
 - Governed PPs are exempt from the one-per-sent constraint (which presumably follows from the fact that the semantic relation of the Governed PP is not determined by P but by the governor of P).
- (6) a. **Auf der Party** freute er sich **auf die Verabredung**.
 on the party looked-forward he REFL on the date
'He looked forward to the date at the party.'
- b. ***Über dem gesamten Bild** lag ein Schimmer **über dem Rahmen**.
 above the whole picture lay a gleam above the frame

Scope and scrambling

- Understanding a further property of autonomous PP complements requires some consideration of scope and dislocation (scrambling, topicalization) in German.
 - Object quantifiers in German require either topicalization or scrambling to allow wide scope readings (cf. Frey 1993, Kiss 2001, Sauerland and Elbourne 2002).
 - Governed PPs behave like NP objects of transitive verbs in this respect.
- (7) Jeder Mann freut sich auf eine Verabredung.
 every man looks-forward REFL on a date
 'Every man looks forward to a date.' $\checkmark EA\checkmark, *AE$
- (8) Auf eine Verabredung freut sich jeder Mann.
 on a date looks-forward REFL every man
 'Every man looks forward to a date.' $\checkmark EA\checkmark, \checkmark AE$

Scopal variance and prominence scales

- Kiss (2001): Scopal ambiguity arises if a quantifier Q_1 can be more prominent than a quantifier Q_2 on one scale, while Q_2 is more prominent than Q_1 on another scale.
- This may happen if Q_1 is more prominent than Q_2 in terms of syntactic configuration but less prominent in terms of positions on ARG-ST.
 - (7) Jeder Mann freut sich auf eine Verabredung.
 every man looks-forward REFL on a date
 'Every man looks forward to a date.' \sqrt{EA} , $*AE$
 - (8) Auf eine Verabredung freut sich jeder Mann.
 on a date looks-forward REFL every man
 'Every man looks forward to a date.' \sqrt{AE} , \sqrt{EA}
- The subject has been topicalized in (7). It occupies a more prominent position than the object both in terms of configuration and of ARG-ST, where the subject is located to the left of the object.
- The object has been topicalized in (8). It is less prominent on ARG-ST, but occupies a more prominent position than the subject in the syntactic configuration.

The scope of autonomous PP complements

- With autonomous PP complements wide scope object quantification becomes possible without ostensible scrambling (or topicalization) of the complement!

(9) Sie zogen eine Schnur durch jeden Abschnitt.
 they pulled a cord through every section
'They pulled a cord through every section.' ✓EA✓, ✓EVA

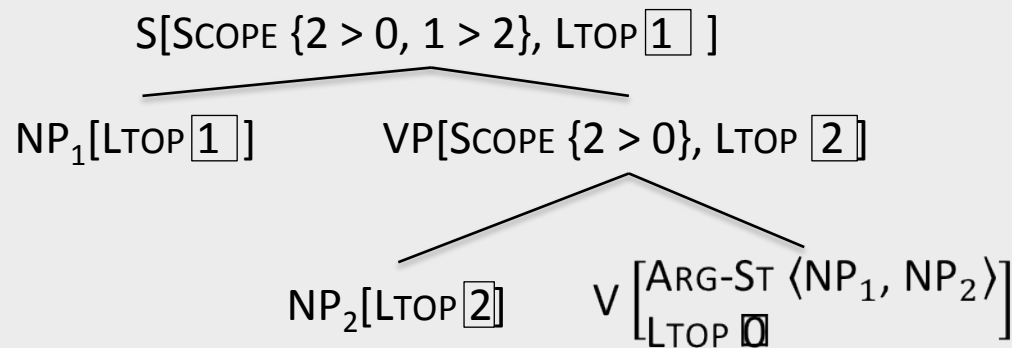
(10) Ein Schimmer lag über jedem Bild.
 a gleam lay above every picture
'Every picture was glistening with a gleam.' ✓EA✓, ✓EVA

Scope in Minimal Recursion Semantics

- As scope options in German are more restricted than scope options in English, we cannot apply Copestake et al. (2005) directly to deal with scope ambiguities and the lack thereof.
- We exploits mismatches between syntactic structure and ARG-ST by assuming a disjunctive HANDLE constraint
 - The SCOPE argument of the quantifier is either identified with the *label* of the syntactic sister of the quantifier, or
 - with the *label* of a quantifier that appears in less prominent position on the same ARG-ST.
- The disjunctive nature of the constraint has been criticized in Payne and Cook (2006).

Scope in MRS

- The HANDLE constraint is tied to LTOP projection:
 - The LTOP of the resulting phrase will be the LTOP of the quantifier, if the SCOPE of the quantifier is identified with the label of its syntactic sister.
- (11) Narrow scope of non-scrambled object quantifier, $2 > 0$ & $1 > 2$, i.e. $1 > 2 > 0$

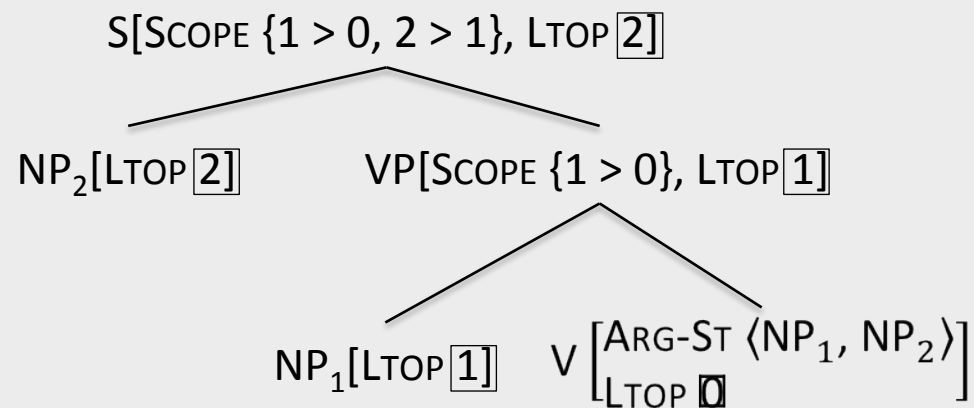


- *The SCOPE values in (11) are abbreviations for actual SCOPE values of quantifiers contained in the CONTRELS values of the phrases: $x > y$ is to be interpreted as “the element with LTOP x immediately outscopes the element with LTOP y .”*
- If the word order corresponds to the configurational structure, scope ambiguity may not arise, since the lowest quantifier cannot take any lower element on ARG-ST as its scope.

Scope in MRS

- A wide scope analysis of a scrambled quantifier is actually identical to the analysis of (11).
 - The quantifier NP_1 takes the LTOP of its sister as its SCOPE.
 - The scrambled quantifier NP_2 takes the LTOP of its sister as its SCOPE (the LTOP being the LTOP of NP_1).

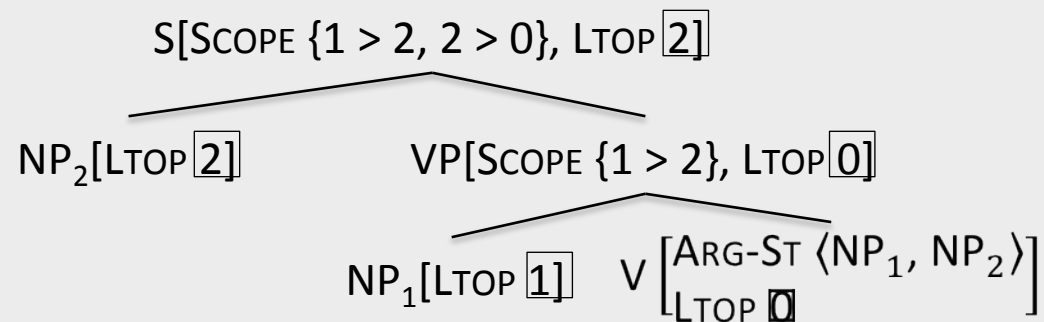
(12) Wide scope of scrambled object quantifier, $1 > 0$ & $2 > 1$, i.e. $2 > 1 > 0$



Scope in MRS

- The LTOP of the resulting phrase will be the LTOP of the semantic head, if the quantifier, however, selects a less prominent co-argument as its SCOPE.
 - In these cases, the LTOP of the semantic head will be the LTOP of the non-quantificational daughter of the phrase.

(13) Narrow scope of scrambled object quantifier, $1 > 2$ & $2 > 0$, i.e. $1 > 2 > 0$



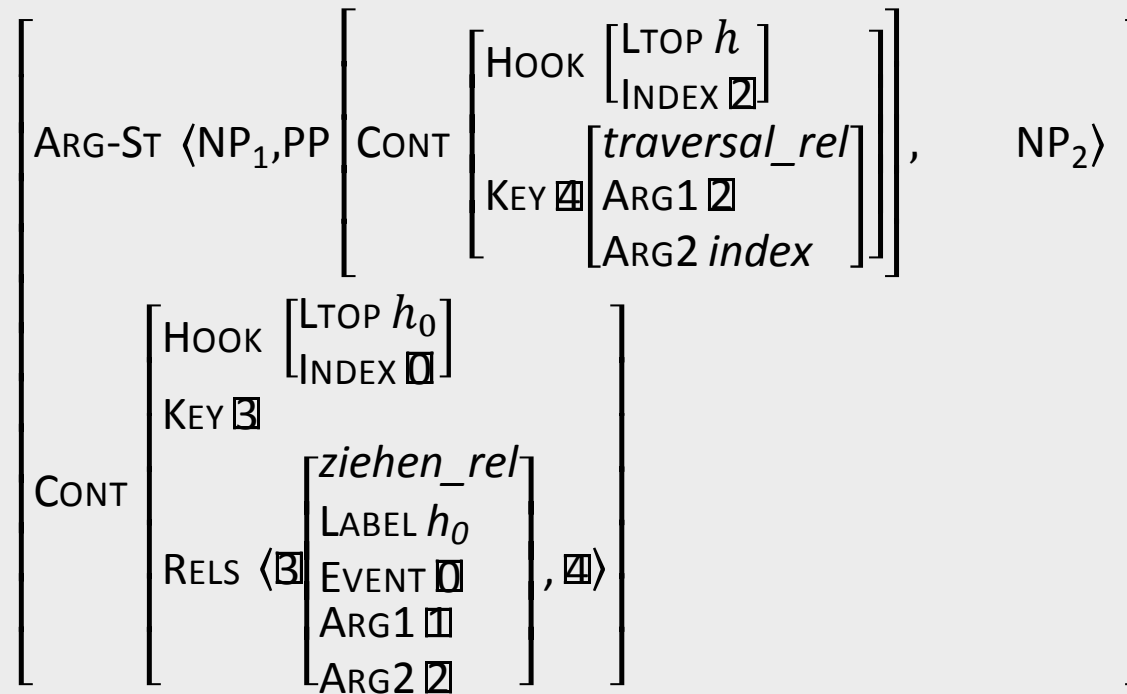
- The LTOP of S in (13) is indeed 2, which may sound counterintuitive. The *Tree Condition* of Copestake et al. (2005) rules out MRS structures that may take up 2 subsequently.

The grammar of autonomous PP complements

- Autonomous PPs do only occur with certain predicates.
 - We assume that autonomous PPs are true syntactic arguments of certain (verbal) predicates, and hence are specified on their COMPS and ARG-ST.
- Autonomous PP complements are headed by full-fledged autosemantic prepositions with intersective semantics.
 - We assume that autonomous PP complements are not subordinated semantically to the head, but are combined semantically by intersective modification (which is implemented in the lexical specification of the governing verb).
- The respective predicates do not allow arbitrary autonomous PP complements.
 - We assume that the governing predicate selects the KEY of the complement.
- Autonomous PPs allow wide scope interpretations without ostensible scrambling.
 - We assume that autonomous PPs involve scrambling of the NP object, and consequently, that the PP occupies a more prominent position on ARG-ST than the object in (9) or even the subject in (10).

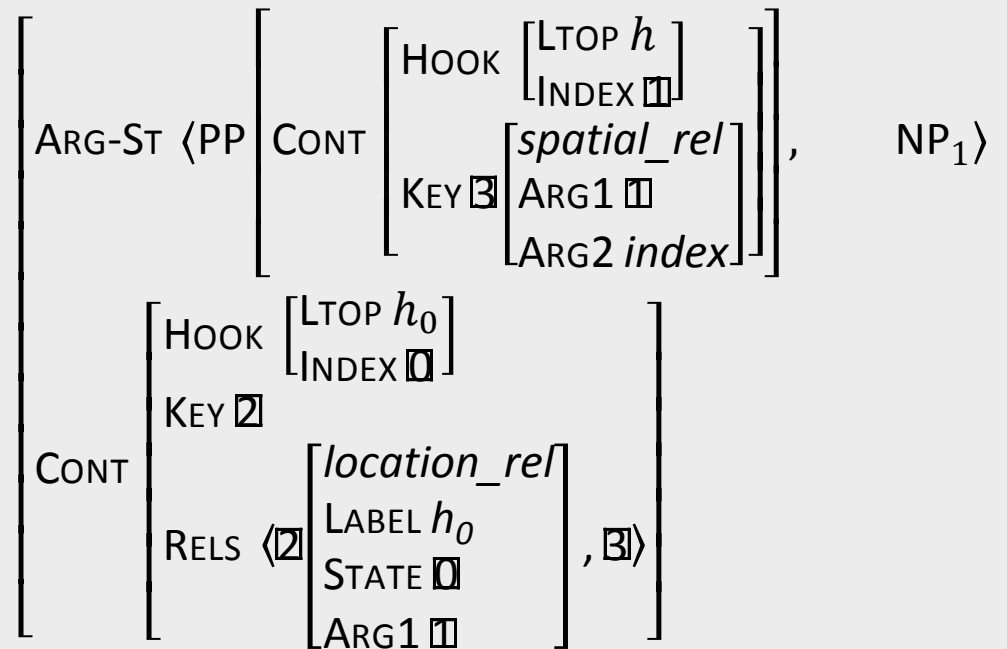
A lexical representation

(16) a. *ziehen*



A lexical representation

(16) b. *liegen*



Empirical corroboration of a controversial conclusion

- A PP preceding an NP is often classified as marked, but both orders are equally judged with autonomous PP complements (cf. (14a) below to (9), (14b) to (10)).
- There is a lack of scope ambiguity if the PP is realized to the left (and hence above) the NP-object (for transitives) or subject (for intransitives).

(14) a. Sie zogen durch jeden Abschnitt eine Schnur. $\sqrt{EA}, *EA$
 b. Es lag über jedem Bild ein Schimmer. $\sqrt{EA}, *EA$

- There is conspicuous scope interaction between the autonomous PP complement and the NP complement in (9), no such interaction can be observed between an autonomous PP complement of a transitive verb and the *subject*.

(15) Ich sah, dass jeder Mann die Schnur durch einen Abschnitt zog. $\sqrt{EA}, *EA$
 I saw that every man the cord through a section pulled

Empirical corroboration of a controversial conclusion

- Intransitive verbs with autonomous PP complements do not passivize.
 - The *Passive Lexical Rule* (Pollard and Sag 1994:121f.) affects only transitive predicates – but this analysis applies to English only and cannot be maintained for German, where impersonal passivization is ubiquitous.
 - Yet passivization in German requires that the input structure provides a subject in first position of ARG-ST; thus raising verbs, subjectless predicates, and object-experiencer psych-verbs do not passivize.
- (17)a. Eine Schnur wurde durch jeden Abschnitt gezogen.
a cord PASS-AUX through every section pulled
- b. *Über jedem Bild wurde gelegen.
above every picture PASS-AUX laid.

But why? (a speculation)

- Although we find empirical corroboration of a PP being located higher than transitive objects and intransitive subjects (or, more precisely, of a PP occurring to the left of the first argument of a verbal predicate), we would like to know *why* the PP complement occurs in this position.
- It has long been observed for some time that syntactic combinations with V sometimes have a semantic effect on an argument of V (Wunderlich 1991).
 - (18) The Cincinnati Kid is [_{VP} sitting [_{PP} at table 5]].
 - (19) The Cincinnati Kid is [_{VP} playing cards [_{PP} at table 5]].
- For (18) to be true, it is insufficient that a sitting-event is located at table 5, it is necessary to locate the participant of the sitting-event at this table. Ex. (19) can be true while the Cincinnati Kid not being at the table.
- The external argument of a PP that syntactically modifies V can be an individual, and does not have to be an event.

But why?

- The external argument of a PP is identified through the MOD feature of P(P) – we have ignored this feature in the present analysis, as we assume that autonomous PP complements are combined with heads through the head-complement-schema.
- But – the MOD feature is a valency feature, in a certain sense. Its value has to be identified (it might be considered a feature that is required to be cancelled through valuation in the syntax, as syntax does not like open values).
- It might be the case that the MOD feature is active even in a case of ostensive complementation – but requires that the modified element be syntactically present (like relative clauses require the modified element be syntactically inferior to them).
- If this is on the right track, then the position of the PP on ARG-ST may reflect just this requirement.

An addendum, if time permits

- Payne and Cook (2006) have proposed that the analysis of scope ambiguities in Kiss (2001) should be replaced by an analysis based on *topicality*.
- A topic can be
 - the subject, *or*
 - a dislocated object, *or*
 - an in-situ object with special intonational mark-up (hat-contour)
- But: examples like (2) and (3) exhibit scope ambiguity in the absence of the pertinent quantifier being a topic.
- And: examples like (2) and (3) allow a wide-scope reading of the PP complement without overt dislocation, or intonational mark-up, if a topical reading is forced.