

## On Adverbial Complements in German

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The syntactic heads of governed PPs are typically characterized as lacking in meaning, their lexical form being determined and hence fixed by an external governor. Adverbial PPs on the other hand are characterized as being headed by meaningful prepositions. An example of a prepositional complement in German is given in (1).

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

Adverbial *complements* combine prototypical properties of governed prepositions with those of adverbial modifiers: they cannot be omitted, and yet, they are headed by autosemantic prepositions. Examples of adverbial complements are given in (2) and (3):

- (2) Ein Schimmer lag [PP über dem gesamten Bild].  
a gleam lay above the whole picture  
'The whole picture was gleaming.'
- (3) Sie ziehen maschinell eine Sprengschnur [PP 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.'

It should be noted that the respective PPs in (2) and (3) cannot be substituted for each other: the process predicate *ziehen* requires a PP expressing a path relation, while stative *liegen* requires a locative relation. The PPs in (2) and (3) can be adverbially modified – which is impossible in (1).

- (4) a. [PP Nahezu über dem gesamten Bild] lag ein Schimmer.  
almost above the whole picture lay a gleam  
'The picture was glistening almost completely.'
- b. [PP 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.'

The topicalizations in (4) show that the P(P) is modified and not the verb. If the adverbials would modify the verb, the constructions in (4) would violate the verb second constraint. That the realization of adverbial complements is obligatory can be witnessed by the ungrammaticality of the examples in (5), where the adverbial complements are omitted. In this respect, the PPs in (2) and (3) differ from a construction discussed in Zifonun et al. (1997:1099ff.), which is illustrated in (6).

- (5) a. \*Ein Schimmer lag.  
b. \*Sie ziehen maschinell eine Sprengschnur.<sup>1</sup>
- (6) Fritz wirft Steine (gegen die Mauer/an die Mauer/auf die Mauer).  
Fritz throws stones (against the wall/to the wall/at the wall)

The PP in (6) is optional. What is more, if the PP is not realized, an endpoint of the action can be inferred from the predicate, so that *Fritz wirft Steine* will be interpreted as *Fritz throws stones at something*.

Adverbial complements also show surprising scope behaviour. While object quantifiers in English may receive wide scope without any further proviso, object quantifiers in German require topicalization (or scrambling) to allow wide scope readings (cf. Frey 1993). Governed PPs behave like NP objects of transitive verbs in this respect, as is illustrated in (7) and (8).

- (7) Jeder Mann freut sich auf eine Verabredung.  
every man look-forward REFL on a date

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<sup>1</sup> The example in (5) is not ungrammatical if a different interpretation of *ziehen* in the sense of *to tow* is considered.

'Every man looks forward to a date.'  $\sqrt{\forall E}, *E\forall$

- (8) Auf eine Verabredung freut sich jeder Mann.  
 on a date look-forward REFL every man  
 'Every man looks forward to a date.'  $\sqrt{\forall E}, \sqrt{E\forall}$

The scope relationships in (7) are fixed: the subject occupies a more prominent position than the object in terms of configuration *and* grammatical relation. In (8), the topicalized object is still less prominent in terms of grammatical relations, but occupies a more prominent position than the subject in the syntactic configuration. The example is ambiguous between a narrow scope and a wide scope reading of the object. Adverbial complements differ from governed PPs in that wide scope object quantification becomes possible without ostensible scrambling or topicalization of the adverbial complement, as is witnessed in (9).

- (9) Sie zogen eine Schnur durch jeden Abschnitt.  
 they pulled a cord through every section  
 'They pulled a cord through every section.'  $\sqrt{E\forall}, \sqrt{\forall E}$

The same pattern applies to the stative predicate in (2), where the adverbial complement receives wider scope than the topicalized subject, as is illustrated in (10).

- (10) Ein Schimmer lag über jedem Bild.  
 a gleam lay above every picture  
 'Every picture was glistening with a gleam.'  $\sqrt{\forall E}, \sqrt{E\forall}$

We assume that adverbial complements occur as syntactic arguments of predicates that impose selection restrictions on the relations introduced by the PP. The selection restriction imposed by the predicates represents the inherent locative or directional character of the predicates, but the argument structure of the predicates will not list the relation introduced by the PP as an *argument*. This can be illustrated by considering the semantic representation of (2) in (11).

- (11)  $\exists s \exists x \text{ located}(s, x) \ \& \ \text{gleam}(x) \ \& \ \text{above}(s, x, y) \ \& \ \text{picture}(y)$

Crucially, the variable  $y$  corresponding to the object of the preposition in (11) is not an argument of the 1-place predicate *located* (into which we translate *liegen*). The predicate only specifies that its subject is located, but not the mode of location. This bit of information is provided by the adverbial complement, which relates the internal argument  $y$  of the preposition to the external argument of the main predicate. Furthermore, the event (= state) variable of *located* is identified with the state variable introduced by the preposition. The constructions in (2) and (3) differ from constructions of type (6) in that the internal argument of the PP is present in the semantic representation of the main predicate in the latter. Thus *werfen* in (6) is represented as  $\text{throw}(e, x, y, z)$ , where  $z$  denotes the endpoint of throwing. It follows that the internal argument of the PP can be inferred by existential closure if the PP is omitted (cf. Tseng 2000:199f.). That an omission of the PP is possible in (6), but not in (2) and (3) might be derived from the same representation: neither the content of the PP nor the internal argument is present in the semantic representation of the main predicate. If the PP is omitted, the locative or directional component could not be derived by existential closure, as the pertinent variable is provided by the adverbial complement's semantics, not by the main predicate.

With regard to the wide scope interpretations of adverbial complements, we will assume that the examples do involve dislocation of the NP object, and consequently, that the PP occupies a more prominent position in terms of grammatical relations than the object in (9) or the subject in (10). In favour of this conclusion, it should be noted that a PP preceding an NP is often classified as marked, both orders are equally judged with adverbial complements. Moreover, we find a lack of scope ambiguity if the PP is realized to the left (and hence above) the NP object or subject, as can be witnessed in (12).

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

## References

Frey, Werner. 1993. *Syntaktische Bedingungen für die semantische Interpretation*. Berlin: Akademie Verlag. Tseng, Jesse L. 2000. *The Representation and Selection of Prepositions*. PhD Dissertation. University of Edinburgh. Zifonun, Gisela, Ludger Hoffmann and Bruno Strecker. 1997. *Grammatik der deutschen Sprache*. Berlin: Walter de Gruyter Verlag.