

Talking about yesterday – postnominal temporal adverbs in the German prefield
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The data. Temporal adverbs like *gestern* (‘yesterday’) can occur post-nominally in the German prefield (e.g. Alexiadou et al. 2007, Bücking 2012, Gunkel & Schlotthauer 2012).

- (1) Das Mädchen **gestern** war im Kino.
the girl yesterday was in-the cinema

Adverbs in this position are nominal modifiers and do not temporally locate the event described by the verbal predicate. This is supported by the observation that sentences with postposed temporal adverbs in the prefield (2-a) and sentences where the same adverb occurs in the middle field (2-b) are not synonymous.

- (2) a. Das Mädchen **gestern** war im Kino.
the girl yesterday was in-the cinema
b. Das Mädchen war **gestern** im Kino.
the girl was yesterday in-the cinema

Intuitively, example (2-a) states that a girl who can be identified via something that “happened” the day before was at the movies at some time in the past, not necessarily the day before. In contrast, example (2-b) states that a girl (who is uniquely identified) was at the movies the day before. The aim of this talk is to present an analysis of the semantic contribution of these adverbs.

Central idea. We propose that in (2-a) the adverb locates an inferred event in which the girl was a participant, while in (2-b) the adverb is a genuine temporal adverbial and locates the reference time of the past tense introduced by *war* (Reichenbach 1947, Klein 1994). This predicts that postposed temporal adverbs in the prefield should be able to co-occur with potentially conflicting temporal adverbs in the middle field, (3).

- (3) Das Mädchen **gestern** war **heute Nachmittag** im Kino.
the girl yesterday was today afternoon in-the cinema

In this example, the temporal adverbial *heute Nachmittag* locates the reference time of the past tense, while the adverb *gestern* in the prefield temporally locates an inferred eventuality connected to the girl: The girl who can be identified via something that “happened” yesterday was at the movies today in the afternoon.

Event nouns. If a postposed temporal adverb temporally locates an eventuality, we expect to find that these adverbs locate events described by event nouns, (4).

- (4) Der Unfall **gestern** hat drei Menschenleben gekostet.
the accident yesterday has three human-lives cost

Again, the postposed adverb and the same adverb in the middle field have distinct effects.

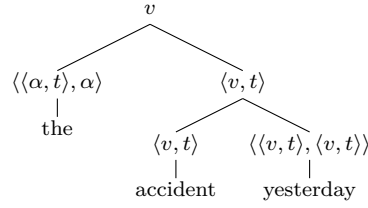
- (5) a. Der Unfall **gestern** hat drei Menschenleben gekostet.
the accident yesterday has three human-lives cost
b. Der Unfall hat **gestern** drei Menschenleben gekostet.
the accident has yesterday three human-lives cost

Example (5-a) states that three people (in total) died in the accident that happened the day before, while example (5-b) states that three people died the day before as a result of the accident (which might have happened the day before or earlier). This difference is supported by the fact that (5-b) can be followed up by (6). This is impossible for (5-a).

- (6) Zusammen mit den anderen Opfern sind bisher 10 Leute gestorben.
together with the other victims are up-until-now 10 people died
‘All victims taken together, 10 people have died up until now.’

A first analysis. Temporal adverbs have been analyzed to modify either properties of eventualities or times. Assuming that they modify properties of eventualities allows us to straightforwardly account for the combination of postposed adverbs with event nouns.

(7)



$$(8) \quad \llbracket \text{yesterday} \rrbracket^c = \lambda P_{\langle v, t \rangle} . \lambda e . P(e) \wedge \exists t [t \subset [0-24]^{t_c-1} \wedge \tau(e) \subset t]$$

$$(9) \quad \llbracket \text{the accident yesterday} \rrbracket^c = \iota e [\text{accident}(e) \wedge \exists t [t \subset [0-24]^{t_c-1} \wedge \tau(e) \subset t]]$$

The inferred eventuality that is understood with nouns denoting individual properties can be analyzed as the result of coercion: the adverb expects a property of eventualities, but has to combine with a property of individuals. To make the composition work, an event associated to these individuals (below: e^x) needs to be inferred.

$$(10) \quad \llbracket \text{the girl yesterday} \rrbracket^c = \iota x [\text{girl}(x) \wedge \exists e^x \exists t [t \subset [0-24]^{t_c-1} \wedge \tau(e) \subset t]]$$

A problem. The analysis above faces the serious problem that postposed adverbs can combine with event nouns without locating the events described by the noun, see (11).

[Context: A geography teacher teaching about one earthquake and its consequences per session to his students.] (We thank Sven Lauer for this example.)

$$(11) \quad \begin{array}{l} \text{Das Erdbeben gestern findet ihr auf Seite 23.} \\ \text{the earthquake yesterday find you on page 23} \end{array}$$

In (11), the teacher's utterance states that the students can find the earthquake that they talked about/covered the day before on page 23. The teacher does not state that the earthquake happened the day before. Hence, in parallel to (2-a), we would want to assume that an eventuality connected to earthquakes is inferred. However, since there is no type conflict, we would not expect coercion to take place at all.

A new analysis. To avoid the coercion problem, we want to assume that the temporal adverb modifies a property of times.

$$(12) \quad \llbracket \text{yesterday} \rrbracket^c = \lambda P_{\langle i, t \rangle} . \lambda t . P(t) \wedge t \subset [0-24]^{t_c-1}$$

One first consequence of this choice is that the adverb always combines with nouns denoting both individuals and eventualities via coercion of a temporal interval. Only temporal nouns are predicted to simply combine with the adverbs, as in (13).

$$(13) \quad \begin{array}{l} \text{Der Nachmittag gestern war sonnig.} \\ \text{the afternoon yesterday was sunny} \end{array}$$

For event nouns, we assume that the temporal intervals that are intimately associated with the eventualities described by the noun are their run-times ($\tau(e)$). This accounts for the natural interpretation of (5-a). Connecting the temporal adverb to a different temporal interval, as in (11), needs more contextual support.

Lastly, for individual property denoting nouns, we again predict coercion. Since no temporal interval is naturally associated with an individual (apart from its existence interval), some other interval needs to be inferred; salient temporal intervals that are connected to an individual are, we argue, run-times of eventualities in which the individual participated.

References Alexiadou et al. 2007. *Noun Phrase in the Generative Perspective*. • Bücking. 2012. *Kompositional flexibel*. • Klein. 1994. *Time in Language*. • Reichenbach. 1947. *Elements of Symbolic Logic*. • Gunkel & Schlotthauer. 2012. 'Adnominale Adverbien im europäischen Vergleich.'