

Manners are Low - Processing Ambiguous Adverbials

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It has long been noted that adverbials can receive different interpretations dependent on their structural position. According to McConnell-Ginet (1982), an adverb like *rudely* in a low position like in (1a) gets a manner reading whereby Louisa departed in a rude manner. If the adverb appears in a higher position as in (1b), it receives a speaker-oriented reading whereby her act of departing was rude, according to the speaker (for similar observations and other types of position-dependent interpretation in different languages, see, e.g., Austin 1961, Jackendoff 1972, Ernst 2002, Rawlins 2008; Shaer 2000 for English; Schäfer 2013 for German; Kubota 2015 for Japanese).

- (1) a. Louisa departed rudely.
- b. Louisa rudely departed.

The German examples in (2) illustrate a similar interpretation difference. The adjective *sicher* in its adverbial use in (2a) receives a manner reading in the low position ('confident') whereas the high position of the adverbial in (2b) goes along with a speaker-oriented interpretation ('certainly'). Note that, dependent on information-structural constraints like definiteness of noun phrases and prosody, the low position in (2a) is also compatible with the speaker-oriented interpretation.

- (2) a. Peter hat heute Morgen das Gedicht sicher vorgetragen.
 Peter has today morning the poem confident recited.
 'Peter recited the poem with consummate ease this morning.'
- b. Peter hat sicher heute Morgen das Gedicht vorgetragen.
 Peter has secure today morning the poem recited.
 'Peter certainly recited the poem this morning.'

Starting from these intuitive judgements in the literature, the question arises whether the syntactic position of an ambiguous adverbial determines its interpretation also in an experimental setting with naïve participants. First evidence for this claim is presented by Stolterfoht (2015). She presented participants sentences as in (2) either paired with a manner paraphrase or with a speaker-oriented paraphrase. The results revealed a highly significant interaction of the two factors POSITION and INTERPRETATION: The manner reading is preferred for the low position whereas the speaker-oriented reading goes along with the high position. These results are first experimental evidence for a position-dependent interpretation of ambiguous adverbials. But one could object that a task like a paraphrase rating, which demands the use of explicit linguistic knowledge, induces participants to be aware of the ambiguity, and to use position to disambiguate between the two readings. Therefore, the question arises whether evidence for the interaction of position and interpretation can be found using a more subtle task. In doing so, the present study focuses on the manner reading. Landman & Morzycki (2003) and Anderson & Morzycki (2012, 2015) analyze manner adverbials as predicates of event kinds (see also Umbach & Gust, 2015, for a similar similarity-based approach). One important piece of evidence they present is the observation that German 'so' (and Polish 'tak' as well) serve as proforms for kinds as well as manner. As illustrated in (3), 'so' in its anaphoric use only allows for the manner interpretation of

the ambiguous adverbial. Therefore, this anaphor is the perfect tool to disambiguate between the two readings without presenting participants explicit paraphrases.

- (3) Peter hat das Gedicht **sicher** vorgetragen, und Maria hat es auch **so** vorgetragen.
Peter has the poem confident recited, and Maria has it also such recited.
 'Maria recited the poem with consummate ease, and Maria recited it like this, too.'

A further question targeted with the present study concerns the preferred position of manner adverbials. In testing more than the two positions illustrated in (2), the following experiments look at the base position(s) of manner adverbials assumed in the literature (Frey & Pittner 1998; Frey 2003; Haider 2000, 2012). In accordance with these accounts, the preferred position for a manner adverbial in a German verb-final sentence is adjacent to the verb as in (4a). The position preceding the object (4b) might receive another (event-related) reading in which the event as a whole, and not only the process expressed by the verb, is modified (according to Schäfer 2013; the role definiteness might play here was investigated with Experiment 3). The position preceding the subject (4c) should be ruled out since this position is restricted to propositional and speaker-oriented adverbs. The prefield position in contrast does not exhibit any semantic restrictions. Everything in the middlefield that forms a constituent can move to this position. But there are information-structural restrictions. A manner adverbial in the prefield is highly-marked and is only licensed with a contrastive reading (see e.g., Frey 2006).

- Adverbial preceding participle (AdvP)*
- (4) a. Heute morgen hat Peter das Gedicht **sicher** vorgetragen, ...
Today morning has Peter the poem confident recited
Adverbial preceding object (AdvO)
- b. ?Heute morgen hat Peter **sicher** das Gedicht vorgetragen, ...
Today morning has Peter confident the poem recited
Adverbial preceding subject (AdvS)
- c. *Heute morgen hat **sicher** Peter das Gedicht vorgetragen, ...
Today morning has confident Peter the poem recited
Adverbial Vorfeld (AdvV)
- d. ??**Sicher** hat Peter heute morgen das Gedicht vorgetragen, ...
Confident has Peter today morning the poem recited
 ... und Maria hat es auch so vorgetragen.
and Maria has it also such recited
 'This morning, Peter recited the poem confidently, and Maria recited it like this, too.'

Based on these considerations, the following predictions for the rating and processing of sentences like (4) can be derived:

- (H1) If reference to manner is affected by position, we should see a main effect of POSITION, with higher ratings/faster reading times for sentences like (4a) with an adverbial preceding the participle compared to all other conditions (4b-d).
- (H2) If the adverbial preceding the object can receive an event-related reading, higher ratings/faster reading times for sentences like (4b) compared to (4c) are expected.

(H2) If a manner adverbial is licensed in the prefield, but information-structurally marked, sentences like (4d) should reveal higher ratings/faster reading times than (4c), but lower ratings/slower reading times than (4a).

These predictions were tested with Experiment 1 and 2. With an acceptability judgment task (AJT) in Experiment 1 (24 items, 52 fillers, 36 participants) and a self-paced reading task (SPR) in Experiment 2 (24 items, 90 fillers, 48 participants), the availability of the manner reading in four different positions was tested. The results revealed evidence for all three hypotheses (see the descriptive results in Figure 1 and 2) and showed that syntactic position as well as information-structural markedness play a role in ambiguity resolution. A possibly intervening factor, (in-)definiteness of the direct object was tested in Experiment 3, but did not show any effect.

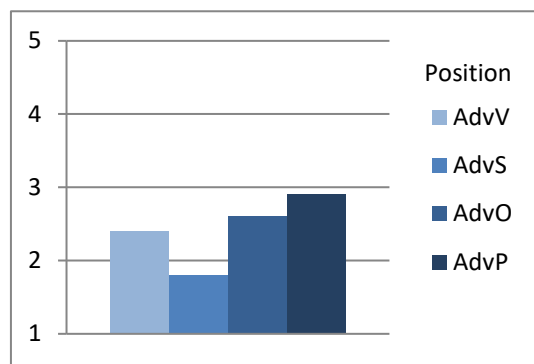


Figure 1. Mean ratings (scale 5-1, Experiment 1)

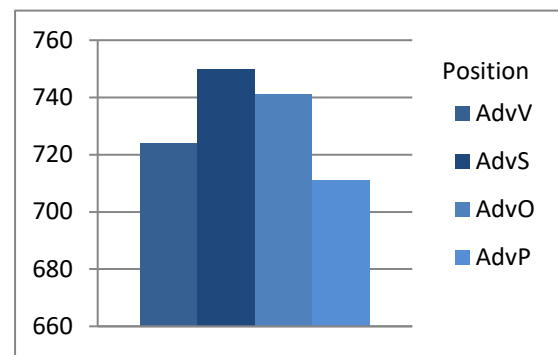


Figure 2. Mean reading times on the critical region (*so+participle*, Experiment 2)

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