German *beim*-progressive exists: Evidence from acceptability rating and self-paced reading

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Abstract

This study investigates the behavior of German prepositional progressive with respect to object complementation by running an acceptability rating and self-paced reading task. Previous corpus studies showed that complements are usually incorporated when occurring with the prepositional *am*- or *beim*-progressive. In contrast, this study provides empirical evidence that German natives accept also non-incorporated complements in *beim*-progressive, and even more, there is a tendency towards higher acceptability of *beim*-progressive than the similar, even though more frequent, *am*-progressive.

Key words: progressive, German, complementation, acceptability rating, self-paced reading

Progressive in German

In the non-progressive language German it is possible to express progressive meaning (e.g., Bergmann 2012, Engelberg 2003) via simple present and an optionally temporal adverbial expression. Moreover, there are several lexical expressions also conveying progressive meaning.

Considering previous corpus studies on German progressive based on frequency effects, it is assumed that *beim*-progressives including a complement that is not incorporated tend to be ungrammatical, whereas incorporated complements are grammatical (Krause 2002, Glück 2001). In more detail, both *am*- and *beim*-structures usually do not occur with direct objects as non-incorporated complements (Krause 1997), and further, non-incorporated prepositional phrases as complements are only found rarely in case of *am*-progressives (Krause 2002).

Methodology

In a combined self-paced reading (SPR) and acceptability rating study (n=39, German natives) it was investigated, whether the absence of a structure in a corpus is evidence enough for its non-acceptance. The current experiment implements the SPR-paradigm in combination with the method of acceptability rating by running the LINGER experimental software (Rohde 2003). More precisely, measures were taken for total reading times (RT) for complete sentences, and further, for upcoming acceptability ratings on a 1 (ungrammatical) to 7 (grammatical) scale.

Material

Due to the more investigated *am*-structure, and based on the assumption that the former can replace the latter (Van Pottelberg 2005), *am*- and *beim*-progressives were compared as minimal pairs both including incorporated and non-incorporated constituents. Critical items were composed on the assumption that the non-incorporated object must be realized structurally post-progressive (see Bergmann 2012 for a more detailed explanation). (1) exemplifies an experimental item for *beim*- and *am*-constructions consisting of an incorporated nominal phrase (iNP) (1a), a non-incorporated nominal phrase (nNP) (1b), or a non-incorporated prepositional phrase (nPP) (1c).

- (1) a. Paul ist *am/ beim* Zeitunglesen.
Paul is AM/ BEIM newspaper-reading
'Paul is reading the newspaper.'
- b. Paul ist *am/ beim* Lesen der Zeitung.
Paul is AM/ BEIM reading the_{genitive} newspaper
'Paul is reading the newspaper.'
- c. Paul ist heute Abend *am/ beim* Aushelfen in der Kneipe,
Paul is today evening AM/ BEIM helping-out in the pub
'Paul is helping out at the pub this evening.'

Results

The statistical analysis of acceptability ratings as well as reading time measures was performed via linear mixed models (Baayen 2008, Gelman & Hill 2007). The results showed that *beim*-progressive forms are significantly more accepted than *am*-progressives ($t = 2.81$) across all investigated complement types and irrespective of incorporation. Furthermore, mean rating values for both progressives with nPP ($M_{am} = 4.12 / 7$; $M_{beim} = 4.80 / 7$) showed a significant higher acceptability for *beim*-progressive ($t = 2.11$), which is in contrast to former observations (Krause 1997). Whereas mean rating values for iNP show a tendency to be higher for *beim*- than for the respective *am*-structures ($M_{am} = 5.12 / 7$; $M_{beim} = 5.49 / 7$), a marginal significant effect ($t = 1.78$) is revealed for *beim*-progressive including nNP ($M_{am} = 4.98 / 7$; $M_{beim} = 5.33 / 7$).

Assuming further that longer RTs indicate greater difficulties in processing (e.g., caused by ungrammatical structures, see Sekerina, Fernández & Clahsen 2008, Just, Carpenter & Woolley 1982), the current data do not verify differences in processing difficulties for both progressive types. In fact, no significant differences in reading times could be found for each complement type (iNP: $RT_{am} = 4097ms$, $RT_{beim} = 4171ms$; nNP: $RT_{am} =$

4353ms, $RT_{beim} = 4543ms$; nPP: $RT_{am} = 4976ms$, $RT_{beim} = 4196ms$). All mean rating values as well as total RTs are shown in table 1. The corresponding plots are depicted in figure 1.

Figure 1. Mean rating measure which showed a statistical significant effect on non-incorporated complementation for nNP and nPP. Line type indicates the progressive types: solid line for *am*-constructions and dashed line for *beim*-constructions. Complement types are defined as follows: incorporated noun (a), non-incorporated noun (b), and non-incorporated prepositional phrase (e). Error bars indicate the 95% confidence intervals. Note: Only the between-subjects variance was removed.

Table 1. Rounded rating means (numerical numbers) as well as totalRT (in ms) for all six conditions, that is, the progressive type of either *am* or *beim* including the respective complement type iNP, nNP or nPP.

Condition	<i>am</i> iNP	<i>beim</i> iNP	<i>am</i> nNP	<i>beim</i> nNP	<i>am</i> nPP	<i>beim</i> nPP
Rating means	5.12	5.49	4.98	5.33	4.12	4.80
Total RT (ms)	4097	4171	4353	4543	4976	4196

Conclusions

The current results suggest that *beim*-progressives are regardless of their complement type in the first place grammatical structures in German, contrary to former results inferred from frequency effects. In particular, the results of the present study raise serious doubts about previous claims such as non-incorporated complements are not possible with German prepositional progressive structures. Thus, acceptability in grammatical terms cannot be predicted sufficiently based on frequency in a corpus.

In sum, research on German progressive structures is still in its infancy, and therefore, further investigation needs to be done to provide a more detailed description, especially with respect to complementation and any restrictions that come with it.

The results of this study indicate a higher acceptability of *beim*-progressive structures in German.

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