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# Aspectual coercion of telic verbs and atelic adverbials in German: Acceptability judgments on sentences with conflicting aspectual information by native speakers

Michael Richter<sup>a,\*</sup>, Roeland van Hout<sup>b</sup>

<sup>a</sup> Department of Computer Science, Natural Language Processing, Leipzig University, Germany

<sup>b</sup> Radboud University Nijmegen, Faculty of Humanities, Centre for Language Studies, The Netherlands

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## Abstract

The aim of this paper is to explain differences in the degrees of acceptability of sentences with co-occurring telic verbs and atelic durative time span adverbials. The interpretation of such sentences requires coercion of the aspectual information, solving the semantic mismatch by making the conflicting information compatible. Successful coercion means that a sentence will thereby achieve perfect acceptability, whereas less successful coercion will produce lower degrees of acceptability. The results of 37 participants rating the acceptability of 30 sentences with conflicting aspectual information were as follows: (1) Telic verbs describing a process promote successful coercion. (2) Specific semantic properties of the nominal phrases (NPs) contribute to coercion. Cumulative NPs denoting concrete entities (e.g., bare concrete mass nouns) promote coercion and so give higher acceptability scores. NPs denoting abstract entities promote coercion only when they are definite. The results show that the aspectual interpretation of sentences is supported by processes of semantic enrichment to resolve the co-occurrence of conflicting linguistic expressions. Our study also reveals that we need to address how we can implement contextual information in an experimental set-up to address the remaining gaps in explaining the differences in the acceptability ratings.

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## 1. Introduction

The topic of the paper is aspectual coercion: we aim to explain the differing grades of interpretability of sentences with co-occurring telic verbs and atelic (durative) adverbials by identifying the decisive properties within those conflicting co-occurrences. The method is an empirical test with raters who are native speakers and whose task is to assess the acceptability of a series of sentences. No contexts were given to the raters: hence their interpretation could be based on a combination of the elements of the sentences themselves and/or by constructing scenarios fitting the sentence on a case by case basis. In other words, in order to interpret a sentence raters would need to use their own knowledge of the work in order to provide possible scenarios to interpret the sentence.

\* Corresponding author at: Department of Computer Science, Natural Language Processing Group, Augustusplatz 10, 04109 Leipzig, Germany.

E-mail address: [richter@informatik.uni-leipzig.de](mailto:richter@informatik.uni-leipzig.de) (M. Richter).

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By asking native speakers for acceptability ratings of sentences requiring aspectual coercion, we aim to elicit their gradual, implicit, decisions about the sentences' telicity. The question "how understandable is this sentence?", is at the same time asking for a judgment on whether the sentence's telicity is determinable.

A couple of empirical studies have been carried out on aspectual coercion, the research questions being whether aspectual coercion would require high processing costs. The results are controversial. Some studies reported higher processing costs with aspectual coercion employing self-paced reading and MEG measures (Brennan and Pykkänen, 2010), and cross-modal lexical decisions (Piñango et al., 1999; Todorova et al., 2000). Other studies in contrast revealed that processing costs would not be higher with aspectual coercion, employing self-paced reading, eye-tracking experiments (Pickering et al., 2006), and self-paced reading experiments (Bott, 2010). These studies, however, did not set out to obtain differing grades of acceptability or interpretability of sentences with aspectual coercion. With our study we aim to fill this gap by modelling aspectual coercion as a complex mental process in order to combine competing semantic sentential features. In addition, the studies mentioned above do not explain how coercion works, that is to say, the studies do not disclose the semantic features and their interaction in sentences with aspectual coercion.

The term 'coercion' was originally used for programming languages, but since Moens and Steedman (1988) it is also used to denote a concept for linguistic processes. What does coercion mean? Bott (2010) for instance states that

"All the constituent parts of the Aktionsart fit together and interpretation works smoothly in a strictly compositional fashion. Nonetheless, there may be a clash between expressions of different semantic sorts. Still, the interpretational system often succeeds in arriving at a coherent interpretation. This phenomenon is called *coercion*." (p. 33).

This circumscription embraces both semantic and pragmatic (interpretational) parts of the process of coercion. de Swart (1998) and Rothstein (2004) describe *coercion* as a result of a semantic mismatch of two expressions in one and the same sentence. *Aspectual coercion* in particular is an operation which makes the aspectual properties of a verb, verbal phrase or sentence compatible with the aspectual properties of its context (Dölling, 2014). Piñango et al. (1999) define aspectual coercion as *enriched semantic composition*, in order to achieve aspectual compatibility between a verbal head and its temporal modifiers. Let us look at some examples of aspectual coercion in (1):

- (1) a Hans baut stundenlang das Haus  
Hans builds for hours the house  
'Hans has been building the house for hours'  
b Fred trinkt stundenlang die Flasche leer  
Fred drinks for hours the bottle empty  
'Fred has been drinking the bottle dry for hours'  
c Messner erreicht stundenlang den Gipfel  
Messner reaches for hours the summit  
'Messner has been reaching the summit for hours'

*Bauen* ('to build'), *leertrinken* ('to drink dry') and *erreichen* ('to reach') are all telic verbs: The former two are accomplishments, the latter is an achievement. *Leertrinken* or *leer trinken* is a complex resultative predicate formed by a verb and a secondary adjectival predicate. Aspectual coercion brings about an aspectual shift from an accomplishment to a process, as in (1)a. Despite the presence of the telic verb *bauen*, an atelic interpretation of the sentence emerges due to the durative adverbial. Without the adverbial, the sentence would express that after the process of building, the house is accomplished.

In (1)a–c, considerable acceptability contrasts can be observed. The combination of *bauen* with a durative adverbial is more acceptable than the combination of *leer trinken* and is much more acceptable than the combination of *erreichen* 'to reach' with a durative adverbial. While (1)a is still interpretable, (1)b cannot be interpreted without some effort, and making a sensible interpretation of (1)c seems almost impossible. Now consider (2), a variant of (1)b. The direct object is a bare plural and the acceptability is much higher as the sentence now expresses an iteration of drinking actions:

- (2) Fred trinkt stundenlang Flaschen leer  
Fred drinks for hours bottles empty  
'Fred has been drinking bottles dry for hours'

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