

# Empirical approaches to competing future constructions: Converging evidence from corpus and experimental studies

Stefan Hartmann  
University of Bamberg  
stefan1.hartmann@uni-bamberg.de

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Investigating speakers' choices between competing constructions has proven highly insightful in assessing the semantics of constructions, but also in approaching the interplay between different factors that determine speakers' choice between constructions (see e.g. Goldberg 2006). In this talk, I focus on the variation between two different ways to express future events in German, namely the *werden* + Infinitive-construction and the futurate present (see e.g. Hilpert 2008, Hacke 2009). Sentences like (1) and (2) can arguably be used interchangeably in German.

- (1) *Ich gehe morgen ins Kino.* (lit. 'I go to the cinema tomorrow')  
(2) *Ich werde morgen ins Kino gehen.* ('I will go to the cinema tomorrow')

However, the two variants can be argued to exhibit subtle differences in meaning. Firstly, given that *werden* + Inf. conveys epistemic stance, the variants might differ in the degree of certainty with which the speaker expects the event to occur. Secondly, given the explicit encoding of the future meaning in (2), the second variant might convey a greater (subjective) temporal distance. The present study focuses exclusively on the latter aspect, i.e. the temporal interpretation of the variants. To investigate this aspect, a corpus study is combined with an experimental approach.

For the corpus study, future-related sentences were extracted from the DWDS Core Corpus of the 21<sup>st</sup> century (DWDS21), following Hilpert's (2008) approach of using temporal adverbials as an indicator for future-relatedness. The sample was cleaned manually and coded for a number of variables: the use of *werden* + Infinitive vs. futurate present, the sentence type (main vs. subordinate clause), voice, and temporal distance (operationalized in a very simplistic way, using a binary distinction near/distant future). According to a quantitative analysis using conditional inference trees and random forests, all these factors emerge as significant predictors for the choice between the two constructions. This supports the hypothesis that *werden* + Infinitive is used to encode a larger temporal distance.

In order to assess whether sentences framed using the *werden* + Infinitive-construction are also *interpreted* differently compared to sentences framed in the futurate present, an online study was conducted using *jsPsych* (de Leeuw 2015). Participants were asked to judge how far in the future a specific event will take place using a continuous slider. They did so for 12 different stimuli sentences, which varied (i) between *werden* + Inf. and the futurate present and (ii) between near-future and distant-future events, encoded using four different temporal adverbials. The data were analyzed using linear mixed-effects modelling, with the distance estimate as response variable, the temporal adverbial and the grammatical framing as predictor variables, and the subject as well as the lemma of the full verb as random effects. The results, however, show that the grammatical framing does not significantly affect participants' estimates of the temporal distance of the events to which the stimuli sentences refer. Instead, only the temporal adverbial has a significant affect on the distance estimate. However, the experimental approach should be extended to stimuli that do not contain a temporal adverbial in order to test whether or not the two constructions entail differences in interpretation in the absence of overt markers of temporal distance.

Even though some questions remain open, the two studies outlined here can help characterize the semantics of both constructions in more detail and give clues to syntactic, pragmatic, and extra-linguistic factors that determine their variation.

## References

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