

Abstract

In speaking, the time-course of sentence planning may reflect both the linear and the hierarchical structures of sentences. The current study examines how speakers plan sentences in which two words that form hierarchical dependency relationships - arguments and verbs - appear far apart in linear distance, to investigate how linear and hierarchical aspects of sentences simultaneously shape sentence planning processes. The results of five extended picture-word interference experiments, complemented by the temporal analysis of codability effects, suggest that speakers retrieve sentence-final verbs before the articulation of their sentence-initial patient or theme arguments, but not agent arguments, and before retrieving sentence-medial nouns inside modifiers. These results suggest that the time-course of sentence planning reflects hierarchically-defined dependency relationships over and above linear structure.

Keywords: Sentence production, Advance planning, Grammatical encoding, Argument structure, extended Picture-word interference