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Proceedings of the Annual Meeting of the Cognitive Science Society

Title

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Permalink

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Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 44(44)

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Publication Date

2022

Peer reviewed

Learners Integrate Syntactic Frames and Semantic Hypotheses in Cross-situational Verb Learning

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Abstract

Previous research suggests that a verb's meaning is learned partly through the aggregated profile of syntactic frames associated with it. For example, "turn" occurs with transitive and intransitive frames in causative alternation ("He turned the car"/"The car turned"), indicating it is a causal verb. Some evidence demonstrates that young children combine multiple frames to map verbs to appropriate events. However, previous work always presented these frames together, in a single dialogue. What remains unknown is how verb learning occurs when the frames are separated, uttered in different referential contexts, as is likely in children's everyday life. In a series of cross-situational word-learning experiments, we show that adult learners update their hypothesis about a novel verb's meaning when they encounter the verb again in a new frame, integrating their previous hypothesis about the verb's meaning with the new frame. These results shed light on the cross-situational mechanisms of syntactic bootstrapping.