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Authors

Grimmick, Chris
Kachergis, George
Gureckis, Todd

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How does of initial inaccuracy benefit cross-situational word learning?

Chris Grimmick
New York University

George Kachergis
Radboud University

Todd Gureckis
New York University

Abstract: Both children and adults are able to extract several intended word-referent mappings from a series of scenes containing multiple words and objects. Known as cross-situational learning, this ability is thought to be an important means of acquiring language. Proposed models of this ability range from hypothesis-testing accounts to associative accounts, but most formal models assume learners store one or more feasible word-referent mappings per experience, and that the correct mappings emerge through consistent co-occurrence. These theories would all predict that presenting unambiguous evidence for a correct pair would benefit learning, but recent evidence indicates the reverse is true: giving unambiguous evidence for incorrect pairs improves subsequent cross-situational learning (Fitneva and Christiansen, 2015). With some nuances, we replicate these results, and show why future models may need to include an error-driven learning mechanism to explain word learning.