Toddlers learn multiple new words in 3 seconds flat
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Abstract
We ask whether 24-36 month olds can learn multiple novel labels after a single brief exposure in an ambiguous setting.
Results suggest that 2-year-olds can fast-map multiple novel nouns from a single, 3-second exposure and retain these mappings over the course of multiple intervening trials.

Introduction
We explored the limits of fast-mapping in ambiguous settings. We separately examined the two components of word learning: referent selection (initial mapping) and retention. What are the limits of fast-mapping in ambiguous contexts? -Number of labels learned? -Effect of delay? -Effect of age? What is the relationship between referent selection and retention?

Methods
Subjects: 24-36 month old children (N=72)
Referent selection: 6 novel label/novel obj. pairings over 24 trials, each exposure lasted 3 seconds from word onset to image offset
Retention test: At test the children were asked to find the correct referent for 1 of the novel labels from an array consisting of all 6 previously named novel objects

Stimuli
Presented in randomized pairs over 24 trials

Referent Selection Display
"Point at the blick"

Retention Test Display
"Can you find the tanzor?"

References

Discussion
2-year-olds can learn and retain novel words from a single, brief exposure in an ambiguous setting.
A developmental shift in performance takes place during the second year. This could be due to changes in learning or retention strategies/abilities.
Delays between learning and retention of approx. 3 minutes result in chance performance.

Retention Results

% Correct Pointing

Chance
Young (24-27, m=25.84)  Middle (28-31, m=29.93)  Old (32-35, m=33.68)

Referent Selection Results

% Correct Pointing

Young  Middle  Old