In the Right Ballpark: Systematic Partial Learning of Hard Nouns from their Observational Contexts

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BACKGROUND

- Learning word meanings from their observational contexts is a notoriously difficult task (Bloom, 2000).
- This task is uniquely difficult for words that do not label concrete objects (or “hard words”; Gleitman et al., 2005).
- This difficulty has repeatedly been demonstrated in studies using the “Human Simulation Paradigm” (HSP; Gillette et al., 1999).
- In one HSP study, Kako (2005) revealed that whereas nouns that denote concrete objects were readily learned through their observational contexts alone, nouns that denote less concrete referents (e.g., “toy,” “breakfast”) required access to other kinds of contexts (i.e., linguistic).

METHODS

Participants

- 120 adults participated in an online study that was built and hosted on Gorilla Experiment Builder (Anwyl-Irvine et al., 2019).

Stimuli

Vignettes

- Target vignette: static picture book scene (see above) in which the target noun (e.g., “story”) had appeared
- Distraction vignette: scene in which the target noun had not appeared.

A Modified HSP Design

Categorization Phase

- Participants were shown either a target or distraction vignette and asked whether the mystery word (“MODI”) was present in the original text. Feedback followed each trial.
- 32 semi-randomized trials in total (16 targets, 16 distractors).

RESULTS

Word Identity Test

Type in the mystery English noun you think “MODI” is

Semantic Relatedness Test

How similar is the meaning of “MODI” to STORY

- Single word identity test following categorization phase
- 10 semantic relatedness tests, including the target noun

DISCUSSION

- The role (or lack thereof) of the observational contexts in learning hard words is a matter of great interest (Gleitman et al., 2005; Kako, 2005).
- The current study reveals that the informativity of a particular source of input may depend on how the output of learning is defined.
- Results confirm previous findings (e.g., Kako, 2005) that the observational context rarely leads to “full” learning of hard nouns.
- Nonetheless, the observational context leads to the systematic acquisition of partial knowledge of hard noun meanings.
- This partial knowledge may lay the foundation for full meaning acquisition upon the incorporation of linguistic information.

FUTURE DIRECTIONS

- Probing the nature of the partial participants acquired.
- Exploring variability among hard nouns such as “School” and “Morning.”

MEASUREMENTS

- Measuring learning when the observational contexts are supplemented by linguistic information.

REFERENCES / ACKNOWLEDGEMENTS


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