The categorization and utility of ambiguity for cross-situational verb learning

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Abstract

Recent studies have shown that a majority of word learning input in the natural environment is highly ambiguous, with only a small handful of super-informative instances. This characterization, though, may obscure details of what that "ambiguity" comprises, and how it nonetheless supports learning. We advance this idea by distinguishing a typology of three classes of word learning contexts: highly-informative (H) cases, ambiguous (A) cases which result in many possible hypotheses for the underlying meaning, and misleading (M) cases which generate largely just a single response, but one that is incorrect. We present two experiments on verb learning: first, we used a Human Simulation Paradigm (HSP) to categorize videos extracted from a parent-infant toy-play video corpus into these H/A/M classes. Second, we used the output of the HSP to select stimuli for a new cross-situational verb learning experiment—utilizing different combinations of H/A/M videos to assess their cumulative impact of learning.

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