Child-directed word associations reveal divergent semantic structure that improves models of early word learning

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Abstract

How words are associated within the linguistic environment conveys semantic content, and it is well known that adults speak differently to children than to other adults. We present results from a new word association study in which adult participants are instructed to produce either unconstrained or child-directed responses to each cue, where cues included 674 nouns, verbs, and adjectives from the McArthur-Bates Communicative Development Inventory (CDI). Child-directed responses consisted of higher frequency words with fewer letters and earlier ages of acquisition. The correlations among the responses generated for each pair of cues differed between unconstrained and child-directed responses, suggesting that child-directed associations imply different semantic structure. A comparison of growth models guided by semantic network structure revealed that child-directed associations are more predictive of early lexical growth. Thus, these new child-directed word association norms may provide more clear insight into the semantic context of young children.