Memory Constraints in Infants' Statistical Word Learning

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Abstract: Recent research indicates that infants use statistical learning to map linguistic labels to objects in the world (Smith & Yu, 2008). Here, we extend this work by examining how statistical word learning may be constrained or facilitated by memory development. Two groups of infants, 16- and 20-month-olds, were presented with a cross-situational word learning task. Half of the object-label pairings occurred in immediate succession and the other half of pairings were separated in time. We observed developmental differences in the ability to track, aggregate, and infer associations across time: 16-month-olds were able to learn pairings presented in immediate succession whereas 20-month-olds were able learn pairings both in immediate succession and across time. Results are discussed in terms of implications for theories of statistical learning, memory, and language and cognitive development.