

Researchers help uncover how infants learn word meanings

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Nancy Rader and students

Research conducted in the Cognition Laboratory at Ithaca College is helping those who study child development gain a better understanding of how children learn the meanings of words. The researchers found that if a person holding an object while talking makes hand gestures that move the object in rhythm with speech, an infant's attention will be drawn away from the speaker's mouth and to the object.

“The gestures help ‘unstick’ the child’s attention from the speaker’s mouth — where the sound is coming from — and direct it to the thing being held,” said Nancy Rader, professor of psychology in the Ithaca College School of Humanities and Sciences.

Rader and her coauthor, Patricia Zukow-Goldring of UCLA, recently

published their research in the journal “*Language Sciences*.” It was funded by a grant from the National Science Foundation and with support from Ithaca College. Rader and a team of undergraduate psychology students used eye-tracking cameras and software to follow an infant’s gaze as a speaker on videotape gestured and talked while holding a toy. Infants in the study were 9-14 months of age.

Previous research at the Ithaca College lab established that infants at this age will focus on the mouth of a speaker, an important aspect in learning the sounds of a language. What Rader and her colleagues have found in this new research is that the speaker’s gestures function to redirect the infant’s gaze from the mouth to the object as the word for the object is uttered. By bringing sight and sound together, this shift in attention helps [infants](#) associate a word-sound with an object, a basic challenge of early-language learning.

“By understanding the early development pathways to language learning, we can also gain a better understanding of what goes wrong with some children, such as those with Autism Spectrum Disorders and other developmental disabilities involving early language problems.”

The research results have also been published in the book “Gesture and Multimodal Development.”

Located within the Department of Psychology, the Cognition Laboratory is used for research that is designed to help us understand more about such topics as perception, [language](#), problem solving and emotion. Under Rader’s supervision, undergraduate psychology majors gain valuable experience working with children and families as well as a greater appreciation and knowledge of the nature of research.

Provided by Ithaca College

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