

Researcher investigates how the gestures of the blind differ across cultures

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(PhysOrg.com) -- Gestures serve an important role in language learning and development, and differ depending upon the language and culture, notes a Georgia State University researcher who is investigating how children born blind use gestures as part of language development in the United States and Turkey.

Şeyda Özçalışkan, assistant professor of psychology, along with Susan Goldin-Meadow of the University of Chicago, recently received a grant from the March of Dimes Foundation to investigate patterns of gestures among congenitally blind speakers in the two different cultures.

In American English, gestures are tied more with concepts such as running or crawling, while in a structurally different language like Turkish, they are tied with concepts involving directions, such as moving up, down, exiting and entering.

Gestures also vary with age. From a very early age — around 9 to 10 months — children point to refer to objects, before they do so with descriptive words three months later. At ages 1 and 2, gestures become more pronounced and children begin to link single words such as “cookie” with a gesture such as “eat” to form sentences before they speak the complete sentence four months later.

By age 5, gestures can become more linked with abstract and metaphorical concepts — such as “time flying by.” Whereas a 3 or 4-year-old might flutter his or her arms about when asked about the

metaphor, focusing only on the physical motion itself, a 5-year-old might gesture near the head, Özçalışkan said.

“The use of gestural space becomes much more aligned with the abstract concept rather than the physical motion,” she said. “To me, it suggests evidence of emerging abilities, involving cognitive changes where children might be able to focus on multiple dimensions — both the physical and the abstract — simultaneously. And we find first evidence of these emerging abilities in gesture before they are expressed in speech.”

Gestures might be mimicry of what adults do in talking with their children, but how does a blind child learn how to gesture when he or she is unable to see?

The study takes both factors — sight and language differences — into account. “When you see your parent talking and performing manner-like gestures, it leads to gesturing in native-like ways,” Özçalışkan said. “Looking at children who are blind from birth, they do not see the gestures but hear their native speech. The question is whether or not their gesture patterns are similar to native, sighted speakers, or differ in some way.”

Özçalışkan is also researching how gestures can serve as a window into atypical language development in young children with disabilities, such as autism and Down syndrome.

This pilot research, in collaboration with Laura Adamson, dean of the College of Arts and Sciences, and Roger Bakeman, professor emeritus of psychology, is sponsored by a seed grant through Georgia State’s Language and Literacy Initiative.

The Language and Literacy Initiative focuses on individuals and groups

which face challenges to acquiring language and reading in typical ways, such as individuals with learning and intellectual disabilities, as well as adults acquiring reading skills for the first time or second language learners.

Provided by Georgia State University

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