



October 19, 1998

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University of Chicago Researchers find that blind children use gestures just as sighted people do

Blind children use gestures as part of speech much the same way that sighted children do, according to a paper by University of Chicago scholars published Thursday in the journal *Nature*. "Gesture depends on neither a model nor an observer and thus appears integral to the speaking process itself," said Susan Goldin-Meadow, Professor of Psychology, who with her former student Jana Iverson, now a post doctoral fellow at Indiana University, co-wrote the article "Why do People Gesture?" "These findings suggest that the gestures which co-occur with speech may themselves reflect, or even facilitate, the thinking that underlies speaking.

"Our findings underscore the vital importance of gesture in speaking. Gesture is not just a flourish people use while they talk," Goldin-Meadow said.

Goldin-Meadow is a specialist on gesture in many of its guises—in deaf children, who create gestures on their own that resemble the gestures of signed and spoken languages, and in hearing children, who use gesture as a natural accompaniment to speech. In her studies on the gestures that co-occur with speech, she has found that gesture provides insight into the thoughts children do not yet express in words.

Iverson and Goldin-Meadow sought out children and adolescents ranging in age from 9 to 18 who were blind since birth and studied them to see if they gestured and whether those gestures resembled sighted children's gestures. They selected 12 sighted children and adolescents of similar ages, gender and ethnicity to serve as a control group.

The researchers videotaped the study participants in conversations with a sighted experimenter to see how the blind children responded to a series of tasks that normally prompt gesturing in sighted children.

"We found that all 12 blind speakers gestured as they spoke, despite the fact that they had never seen a gesture," Goldin-Meadow said. "The blind group gestured at the same rate as the sighted group and conveyed the same ideas using the same range of gesture forms as the sighted group."

The blind speakers indicated objects in the same way that the sighted participants did and also used more elaborate gestures, as did the sighted participants. For example, the blind children used a "C" handshape arched in the air to indicate the idea of pouring a liquid from one container to another.

The researchers then tested the possibility that the blind speakers were gesturing only to convey useful information to a listener. They asked four additional children, each blind since birth, to participate in the same reasoning tasks, but this time, the tasks were administered by a blind experimenter.

The children were told that they were talking with a blind adult. “Nevertheless, we found that all the blind speakers gestured when addressing the blind experimenter,” the researchers said. “Moreover, they gestured using the same forms and at the same rate as that observed in other encounters.”

Goldin-Meadow works with other faculty members as part of the Early Childhood Initiative at the University of Chicago, which is supported by a two-year grant from the Robert R. McCormick Tribune Foundation. The studies of gesturing in blind speakers are funded by the March of Dimes.

<http://www-news.uchicago.edu/releases/98/981019.gestures.shtml>
Last modified at 03:51 PM CST on Wednesday, June 14, 2000.

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