

Surely You Gesture

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Some people keep their hands to themselves when they talk, while others “talk with their hands.” The latter occasionally results in knocked-over beverages, but research shows that gesturing while talking actually helps us think, and even aids learning.

Research by University of Chicago psychologists Susan Goldin-Meadow and Sian L. Beilock shows that gestures people produce when they talk aren’t just random hand movements, or solely made for the purpose of emphasis. They actually convey representations of real-world actions that complement and even add to what is being said. Gestures are a separate channel of information that may not be consciously perceived but that is highly meaningful to both speaker and listener.

In experiments involving teaching math to children, learners who watched teachers gesture learned more from that instruction than did children whose teachers only conveyed their instructions orally. Among other things, the type of gestures and the way those gestures related to what was being said was shown to have an influence. Children whose teachers used gestures that implied a different process of solving a math problem than the method being described verbally learned better than did those whose teachers used gestures that essentially mimed what was being taught.

Gesturing also helps the learner. Children instructed to gesture during a pretest to solve mental rotation problems, and then gesture while solving the problems after receiving instruction, profited more from the instruction than did non-gesturing children. Gesturing appears to affect thinking by grounding it in action, activating ideas that were present but not explicitly known. Moreover, by shifting from a more first-person type of gesturing (for instance, miming how they would hold the objects in the mental-rotation task) to a more **observer**-type viewpoint (rotating the hands as though they are the objects, but not miming holding them) may serve as a way of bridging concrete and abstract thought—leading to the ability to transfer new knowledge and skills to other types of problems.

To learn more about Goldin-Meadow and Beilock’s research on the effects of gesturing on how we think, see “Action’s Influence on Thought: The Case of Gesture,” in the November 2010 issue of *Perspectives on Psychological Science*, and “Gesture Changes Thought by Grounding It in Action,” in the November 2010 issue of *Psychological Science*.