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Update 1: Soldiers Get Crash Courses on Gestures

By ANDREW BRIDGES , 02.18.2006, 12:54 PM

An aid to soldiers and students, unspoken gestures can speak volumes and are gaining acceptance from researchers for accurately revealing how people think.

"It tells you what people have in their heads. As such, it is a clear window into what they're thinking," said Justine Cassell, a professor of media technology and society at Northwestern University.

In Iraq, Afghanistan and elsewhere, this knowledge has found its way into a video game and training program the Pentagon uses to give soldiers a crash course in how to speak and gesture like the people they run across.

"Many of the conflicts in the world today could be avoided if people could communicate better," said Hannes Vilhjalmsson, a research scientist at the University of Southern California. Vilhjalmsson helped create the Tactical Iraqi and similar simulation programs with money from the Defense Department.

Details were presented Friday at the annual meeting of the American Association for the Advancement of Science.

The programs place soldiers in simulated, three-dimensional Middle Eastern environments and expose them to a variety of social situations.

The soldiers can interact with residents after learning basic language and gesturing skills. The residents react according to how well or poorly a soldier handles a situation.

A single woman will turn away - and a nearby group of men bristle - if a soldier charges up to her. Young children will warm to a soldier who stoops to their level and removes his sunglasses before asking simple questions, Vilhjalmsson said in displaying the program.

"They are building an impression of you as you interact with them," he said.

Simple motions are important, such as placing a hand over the heart in greeting.

"Gesturing is not merely hand-waving. It conveys substantive information - thoughts that often are not conveyed in words," said Susan Goldin-Meadow, a professor of psychology at the University of Chicago.

In the classroom, her work has shown that students who mimic a math teacher's gestures learn new problem-solving strategies more quickly than do their peers who do not gesture.

"If you move your hands - if you represent your ideas not only in the mouth but in the hands as well, you are more likely to benefit from instruction than you will if you don't move your hands," Goldin-Meadow said. Gesturing also may make thinking easier by lessening the "cognitive burden" of having to receive or convey a message solely with the spoken word, she said.

Children who use mismatched gestures, conveying information different from what is spoken, tend to learn faster than their peers as well, Goldin-Meadow said.

"The real question is why? Are they learning because they're ready to learn or are their teachers adjusting" their instruction? she asked.

When researchers asked children and adults to do two things at once - solve a math problem and remember a short list of words - those who gestured outperformed others who did not.

"I am trying to argue here gesturing is facilitating learning," Goldin-Meadow said.

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