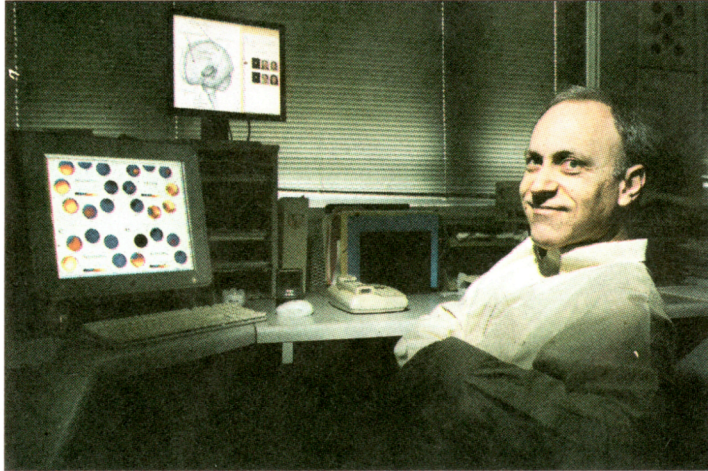


HEALTH BEAT



Tribune photo by Chris Walker

Some people are more sensitive to subtle expressions than others, says Ken Paller, a professor at Northwestern University.

PSYCHOLOGY

Reading a face comes down to microexpressions

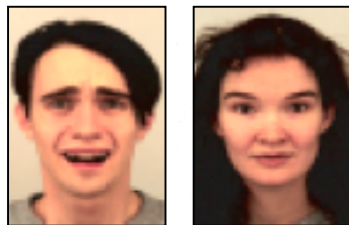
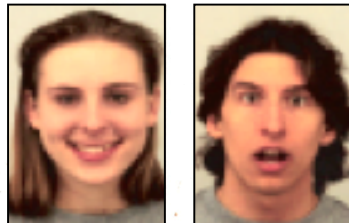
By Leslie Mann

Special to the Tribune

If you have a funny feeling about someone you meet, trust your instincts. Your subconscious "reads" more from that person's face than you know. Now a study from Northwestern University lends scientific evidence to this theory.

While volunteers were shown human faces on computer screens that expressed surprise, electrodes placed on their scalps monitored their neuroelectrical activity. What they didn't know is before they were shown the surprised faces, half were shown faces with fearful expressions and half faces with happy expressions. The fearful and happy faces were shown for 30 milliseconds, too brief to register consciously.

The volunteers then were asked to rate their reactions to the surprised faces from "extremely positive," such as one would feel during the sudden arrival of a friend, to "extremely negative," such as reacting to a violent act. The result: Those



Research subjects were shown video images of surprised faces (right, top and bottom) and asked to rate them positively or negatively. Unknown to them, images of happy and sad faces (left) were flashed on the screen for 30 milliseconds (too short to be consciously registered) before the surprised faces. The first faces influenced subjects' ratings of the surprised faces.

who had seen the fearful microexpressions rated the surprised faces more negatively than did those who had seen the happy microexpressions.

"In real life, we make these microexpressions, then make different voluntary expressions," said Ken Paller, co-investigator of the study and a professor of psychology at Northwestern University. "For example, when a criminal is asked if he committed a crime, he has a fearful microexpression but puts on a happy face when he says he didn't commit the crime. People who are very good judges of character pick up on this, but everyone cannot."

Unlike a dog that growls at a person he perceives as a threat, Paller said, social factors cause a human to express the emotion he intends to convey. But when an involuntary microexpression precedes the voluntary expression, others may pick up this subtle clue.

Although there have been more studies in recent years addressing conscious versus unconscious reactions, Paller said, the use of the electrodes gives them scientific weight.

This study also differed because volunteers were first asked to rate their degrees of social anxiety. Those who described themselves as anxious had the strongest brain responses to the microexpressions.

"This suggests that people with anxiety disorders are hypersensitive to microexpressions," Paller said. "So this can help us better understand people with disorders such as phobias or obsessive-compulsive disorder."

"We always knew that some people are just more intuitive than others," Paller added. "But studies like this show it isn't magic. There is scientific evidence that some people are better able to 'read' others."