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Mind

# Evidence That Little Touches Do Mean So Much

By BENEDICT CAREY

Psychologists have long studied the grunts and winks of nonverbal communication, the vocal tones and facial expressions that carry emotion. A warm tone of voice, a hostile stare — both have the same meaning in Terre Haute or Timbuktu, and are among dozens of signals that form a universal human vocabulary.

But in recent years some researchers have begun to focus on a different, often more subtle kind of wordless communication: physical contact. Momentary touches, they say — whether an exuberant high five, a warm hand on the shoulder, or a creepy touch to the arm — can communicate an even wider range of emotion than gestures or expressions, and sometimes do so more quickly and accurately than words.

"It is the first language we learn," said Dacher Keltner, a professor of [psychology](#) at the [University of California, Berkeley](#), and the author of "Born to Be Good: The Science of a Meaningful Life" (Norton, 2009), and remains, he said, "our richest means of emotional expression" throughout life.

The evidence that such messages can lead to clear, almost immediate changes in how people think and behave is accumulating fast. Students who received a supportive touch on the back or arm from a teacher were nearly twice as likely to volunteer in class as those who did not, [studies have found](#). A sympathetic touch from a doctor leaves people with the impression that the visit lasted twice as long, compared with estimates from people who were untouched. [Research by Tiffany Field](#) of the Touch Research Institute in Miami has found that a massage from a loved one can not only ease pain but also soothe depression and strengthen a relationship.

[In a series of experiments](#) led by Matthew Hertenstein, a psychologist at DePauw University in Indiana, volunteers tried to communicate a list of emotions by touching a blindfolded stranger. The participants were able to communicate eight distinct emotions, from gratitude to disgust to love, some with about 70 percent accuracy.

"We used to think that touch only served to intensify communicated emotions," Dr. Hertenstein said. Now it turns out to be "a much more differentiated signaling system than we had imagined."

To see whether a rich vocabulary of supportive touch is in fact related to performance, scientists at Berkeley recently analyzed interactions in one of the most physically expressive arenas on earth: professional basketball. Michael W. Kraus led a research team that coded every bump, hug and high five in a single game played by each team in the [National Basketball Association](#) early last season.

In a paper due out this year in the journal *Emotion*, Mr. Kraus and his co-authors, Cassy Huang and Dr. Keltner, report that with a few exceptions, good teams tended to be touchier than bad ones. The most touch-bonded teams were the Boston Celtics and the Los Angeles Lakers, currently two of the league's top teams; at the bottom were the mediocre Sacramento Kings and Charlotte Bobcats.

The same was true, more or less, for players. The touchiest player was [Kevin Garnett](#), the Celtics' star big man, followed by star forwards Chris Bosh of the Toronto Raptors and Carlos Boozer of the Utah Jazz.

"Within 600 milliseconds of shooting a free throw, Garnett has reached out and touched four guys," Dr. Keltner said.

To correct for the possibility that the better teams touch more often simply because they are winning, the researchers rated performance based not on points or victories but on a sophisticated measure of how efficiently players and teams managed the ball — their ratio of assists to giveaways, for example. And even after the high expectations surrounding the more talented teams were taken into account, the correlation persisted. Players who made contact with teammates most consistently and longest tended to rate highest on measures of performance, and the teams with those players seemed to get the most out of their talent.

The study fell short of showing that touch caused the better performance, Dr. Kraus acknowledged. "We still have to test this in a controlled lab environment," he said.

If a high five or an equivalent can in fact enhance performance, on the field or in the office, that may be because it reduces stress. A warm touch seems to set off the release of oxytocin, a hormone that helps create a sensation of trust, and to reduce levels of the stress hormone [cortisol](#).

In the brain, prefrontal areas, which help regulate emotion, can relax, freeing them for another of their primary purposes: problem solving. In effect, the body interprets a supportive touch as "I'll share the load."

"We think that humans build relationships precisely for this reason, to distribute problem solving across brains," said James A. Coan, a psychologist at the [University of Virginia](#). "We are wired to literally share the processing load, and this is the signal we're getting when we receive support through touch."

The same is certainly true of partnerships, and especially the romantic kind, [psychologists](#) say. In a recent experiment, researchers led by Christopher Oveis of Harvard conducted five-minute interviews with 69 couples, prompting each pair to discuss difficult periods in their relationship.

The investigators scored the frequency and length of touching that each couple, seated side by side, engaged in. In an interview, Dr. Oveis said that the results were preliminary.

"But it looks so far like the couples who touch more are reporting more satisfaction in the relationship," he said.

Again, it's not clear which came first, the touching or the satisfaction. But in romantic relationships, one has been known to lead to the other. Or at least, so the anecdotal evidence suggests.