Ideas Bank

# The science of touch: why physical contact can make you happier and more successful

Touch can deactivate stress regions and was used by primates to form alliances

*By* **DACHER KELTNER**

*15 Jan 2017*

**Touch can communicate 12 different emotions, from gratitude, to sympathy and love**

Credit **Xesai/iStock**



**"What is the good life?" is one of life's most vexing questions. Knowing what makes us happy, and how to** bring happiness to others, has been the bread and butter of philosophers since Lao Tzu and Aristotle. But the answer to this is not as complex as one might imagine. In fact, we need look no further than our own hands. The roots of human goodness are to be found in the nascent science of human touch.

Tactile communication involves a complex communicative system that has been shaped by millions of years of mammalian evolution. It includes the human hand, a five-digit dexterous wonder, which evolved to gesture, clasp, hold, use tools and touch. Touch is first processed by the skin, an organ made up of billions of cells, which sends neurochemical signals to a large region of the cortex - the somatosensory cortex - which brings to consciousness the precise nature of each tactile contact with the outer world, whether it is friend or foe, potential lover or letch, toxin or harmless element.

Early clues to how tactile contact is a foundation of the good life were found in studies of nonhuman primates, which spend upwards of 15 per cent of their waking hours grooming one another. They do so not to find nits or nats or curb the spread of disease, but instead to form alliances, in particular in trades of grooming for food. Primatologist Frans de Waal first made this point, noting that chimps systematically share food with those that groomed them earlier in the day. Touch is the basis of that primordial act of kindness - sharing food with non-kin.

As humans evolved into the most social of primates, touch became an even richer language enabling moral ties with others. Touch is a powerful, direct means by which we give to others. Empirical studies find that the right kind of touch, the reassuring pat on the back or warm embrace, elicits in the recipient the release of oxytocin, a neurochemical that promotes trust and co-operation. A soft touch to the arm elicits activation in the orbitofrontal cortex, a region of your frontal lobes that signals expected rewards of an action. Warm, friendly touches of appreciation make others feel esteemed, valued and good.

Warm, friendly patterns of touch also calm down the recipient's neurophysiology of stress. In one study, simply holding the hand of a loved one deactivated stress-related regions of the brain when anticipating going through a stressful experience.

Researchers at Berkeley have sought to pinpoint how touch may be a language of moral connection. In a study led by Matthew Hertenstein, two strangers came to the lab and were separated by a barrier, preventing all forms of communication except touch through a small hole. One participant stuck their arm through a hole in the barrier, at which time the individual on the other side attempted to communicate 12 different emotions, one at a time, with brief touches to the other person's forearm.

The emotions included gratitude, sympathy, and love - quintessential moral sentiments. After each touch, the recipient guessed what emotion was just communicated. In this study, subjects could detect gratitude, sympathy and love about 55 to 60 per cent of the time. This shows that as the day unfolds we can rely on touch to convey gratitude, sympathy and love with brief touches.

Given the rewarding and calming effects of touch, Michael Kraus and I sought to document whether touch enables teams to collaborate better. Sports teams are known for their ritualised touch - think of the celebratory piles of bodies of football players after a goal is scored. For seven months our research team coded all of the observed touches in games played by each team in the US National Basketball Association at the start of the 2008 season. More than 25 kinds of touch were coded, including high fives and fist bumps, bear hugs and embraces, flying hip bumps and chest bumps and raps to the head expressing approval. On average, each player touched his teammates for about two seconds during the game. Just two seconds.

But those brief touches mattered. The more a team's players touched each other at the beginning of the season, the better the team played at the season's end: they were more efficient with each possession on offence, helped each other out more on defence and hustled for loose balls. In the end, the high-touch teams won a couple more games during the season.



Still further analyses found that touch improved team performance even when controlling for whether or not the team was winning in the game that we coded, how well the team was expected to do in the preseason, and how much money the players were making. And remember: each player was only touching teammates on average for two seconds during the game.

There is an old philosophical tradition that holds that the keys to the good life are to be found in moral sentiments such as gratitude, compassion and awe. Champions of this perspective include Adam Smith, David Hume and Charles Darwin. Even these prescient thinkers would likely be surprised by the extent to which the good life rests in the simplest of actions: human touch.

*Dacher Keltner is a professor of psychology at the University of California, Berkeley. He has served as a consultant to Google and Facebook and was psychology adviser on* Inside Out.


**This article was first published in the February 2017 issue of WIRED magazine**

VIEW ISSUE

IDEAS BANK | SCIENCE | HUMANS | TOUCH

**SHARE THIS ARTICLE**

## RECOMMENDED

### Science on the brain: how your mind's hidden 'physics engine' can predict the future

*By* **RUSS SWAN**

Physics | 08 Aug 2016

### Destiny's Sparrow Racing League is returning - and it could become a permanent fixture

*By* **MATT KAMEN**

Interviews | 28 Aug 2016

## This is what Pong would look like in real life

*By* **EMILY REYNOLDS**

Culture | 31 May 2016

## Google's AI could soon help you shop smarter and faster

*By* **MATT BURGESS**

Retail | 16 Nov 2016