

# The Cryptic Language of Non-Verbal Communication

Scientists are starting to decipher the things we don't say with words



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Photo: Science Photo Library/Getty Images

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raveling through the Atlanta Airport recently during a period of heavy delays, Patti Wood could see the pain and stress etched on travelers'

bedraggled faces. Anybody could. You didn't need to be an expert in body language to pick up the cues. People were leaning on one another, slouching in their seats, or walking slowly as if through water with phased-out zombie-like stares. But Wood is an expert, author of seven books on communication, including *SNAP — Making the Most of First Impressions, Body Language, and Charisma*. So she did what she's compelled to do in such situations, she stopped and spoke with some of them.

“What I could do reasonably is sit with a few people and listen to their pain,” she explains. “Because listening deeply involves watching and listening for cues. When you listen deeply and someone feels heard and understood, it lightens their load, and they may not have to keep giving out the message verbally and nonverbally, ‘I am in pain!’”

But as Wood and anyone else who studies body language seriously will tell you, it's rarely so easy to read people.

The science of facial expressions and body language is incredibly complex, ever-evolving, and riddled with myths. Among the few certainties is that the nonverbal cues you give off can pack many different meanings to different people, and you can't fully predict how your little quirks will be perceived — whether by coworkers, acquaintances, or strangers, or even horses.

Among the biggest mistakes we make when trying to read someone's body language: “We think it's all about us,” says Wood, who speaks to and consults with Fortune 500 companies to improve their sales and leadership with nonverbal communication, and has appeared on just about any popular TV talk show you can think of.

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“People read someone's body language and assume they are, say, standing far away and leaning back, frowning, with their feet turned away from you because they don't like you,” Wood explains. “The most likely motivation from someone's body language is what is going on with them, so your first level of interpretation should be, ‘I wonder what's

going on with them that they would have these cues.” Next, consider the situation, the environment and whatever’s being discussed, she suggests. Could be you’ve brought up a topic that, unbeknownst to you, strikes deep in their heart. Only then should you wonder if you forgot to brush your teeth or if you’ve lost your social mojo.

All the while, keep this in mind: “The other misconception is that we are all the same, so every cue means the same thing for every person,” Wood says. “Nonverbal communication is a language, it’s a very complex language, and just like any language, the cues, like words, can mean more than one thing.”

Still, there’s a significant body of science to provide insight into what nonverbal cues most often mean and, more importantly, how they’re likely to be perceived.

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In a new study, people looked at pictures of faces with neutral expressions. One was head-on, one had a 10-degree upward tilt, and one had a 10-degree downward tilt. The people were asked to rate their agreement with statements like “this person would enjoy having control over others” and “this person would be willing to use aggressive tactics to get their way.”





People rated their perceptions of the different head tilts of real people in these photos as well as the avatar at the top. Credit: Witkower & Tracy, *Psychological Science*

When the head was tilted down, 76% of people said the person looked more dominant. By covering the eyes and eyebrows in one viewing, then covering everything else in another, the researchers isolated why.

“That tilting one’s head downward leads to the artificial appearance of lowered and V-shaped eyebrows — which in turn elicit perceptions of aggression, intimidation, and dominance,” they explain in the journal *Psychological Science*.

“When people were looking at only the eyes and eyebrows, the downwards head tilt was rated as a 5.3 on perceived dominance using a 7-point rating scale, whereas the neutral head angle was rated as a 3.7,” explains one of the researchers, Zachary Witkower at the University of British Columbia. “When participants were shown other parts of the face, head tilt had no effect on perceived dominance.”

The research was a collaboration between Witkower and Jessica Tracy, also at the University of British Columbia.

“These findings suggest that ‘neutral’ faces can still be quite communicative,” they write. “Subtle shifts of the head can have profound effects on social perception, partly because they can have large effects on the appearance of the face.”

There were other, secondary interpretations.

“People who tilted their head down were also perceived as being cold and influential,” Witkower says by email. And, he adds: “In some emerging work, we show that people tilting their head up are perceived as prestigious, competent, and proud.”

In a separate study published earlier this year in the *Journal of Personality and Social Psychology*, the same two researchers, along with other scientists, used similar techniques to uncover other behaviors that were perceived as dominant, including the lack of a smile as well as “bodily expansiveness,” or taking up space with the arms spread away from the body.

Whether dominance is a good or bad thing depends on how you look at it. The perception of dominance and prestige (or influence) can allow potential leaders to attain and then retain their rank, the thinking goes. The rest of us can benefit from at least being aware of how our body language might elevate our standing or merely muddle our intended messages.

The upshot, Witkower says: “An upwards head tilt, smile, and an expanded chest can communicate prestige — defined as the demonstration of knowledge and expertise for earned respect.”

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Facial expressions are just one way we give nonverbal clues to our intentions or emotional state, consciously or otherwise, Witkower and others are clear to note. And those clues are rarely definitive. Shifty eyes or an averted gaze are often said to be dead giveaways that someone is lying, for example. Not so, several experts agree. In fact, there’s no perfect clue for deception, argues Bella DePaulo, author of *The Psychology of Lying and Detecting Lies*.

“There is no behavior that always occurs when people are lying and never occurs at other times,” DePaulo has said. “The dead giveaway never did exist and never will.”

The false notion that people could be read so easily, already ingrained in the popular culture for decades, was elevated by the popular TV show *Lie to Me*, which ran from



2009 to 2011. The fictional Dr. Cal Lightman (Tim Roth) used his amazing face-reading abilities to bust the bad guys and carry out some deception of his own.

Lightman's sleuthing skills were loosely based on the real-life researcher Paul Ekman, a pioneer in facial-expression research who retired from the University of California, San Francisco in 2004. Now 80, Ekman studied, in particular, involuntary micro-expressions, tiny facial tics that give away, well... that's not always clear.

On his own website, Ekman also commented on the show episode-by-episode, not critiquing, but revealing in the following examples just how complex and convoluted the science of facial recognition can be:

"People look away when they are thinking carefully and considering each word before it is spoken, not just when they are making it up," Ekman writes of Season 1, Episode 1. And: "Oblique eyebrows are a very reliable sign of sadness. Very few people can make this movement voluntarily, so it is virtually never faked. And few people can prevent it if they feel sad."

Of Season 3, Episode 4, he writes: "Fear is registered in many parts of the face: The lips stretched horizontally, the eyebrows raised and pulled together, but the most obvious sign is the wide-open eyes, very wide, upper lids pulled up and lower lids tensed. It is unmistakable, but it is the part of the fear expression that is most easily faked; it is not hard to do deliberately."

It's a wonder Cal Lightman could ferret out anyone's secrets or intentions. And in fact, the show led to hundreds of supposed real experts teaching the art of deception detection, "ignoring or twisting what science actually supported and unfortunately further mucking-up the field with simplistic assertions," says Former FBI agent Joe Navarro, who used the science of non-verbal communication to help with counterintelligence efforts for 25 years. He is the author of *The Dictionary of Body Language: A Field Guide to What Every Body is Saying*.

"There is no single behavior indicative of deception," Navarro writes on his blog, adding: "We humans are no better than a coin toss at detecting deception — a mere 50–50 chance."

Navarro's researched 216 cases of DNA exonerating people who were on death row. None of the convictions were based on any bodily fluids — from blood to saliva — found at the crime scene.

“In each and every instance, the law enforcement officers were sure the suspect was lying, but not one officer could detect the truth,” he writes. “And that is one way you wind up with the innocent on death row.”

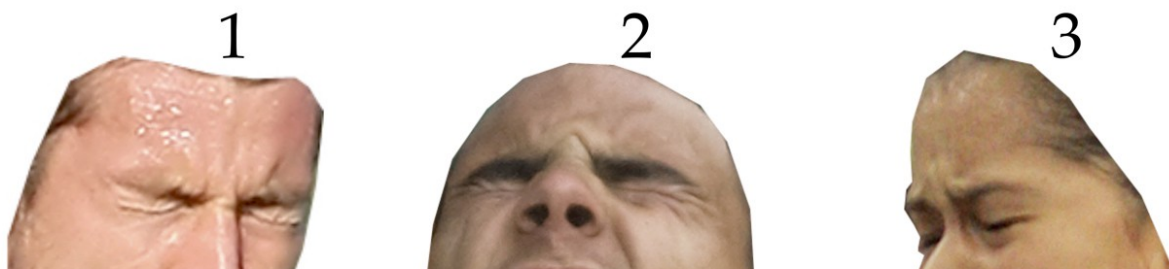
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Research of non-verbal communication isn't just for the sake of science, or television, or even catching criminals. It can help us understand ourselves.

Princeton University psychology professor Alexander Todorov studies how we use other individuals' facial expressions, body language, and other cues to evaluate and make sense of our world. His book *Face Value*, for example, explains how in a mere 10th of a second upon seeing a new face, we tend to decide if the person is attractive, trustworthy, and competent, among other traits.

In one study, Todorov and colleagues showed people pictures of other people experiencing extreme emotions, such as great loss, pain or victory. The pictured emotions were more accurately guessed when people based their decisions on body language alone, or body language and facial expressions, compared to when they relied on just facial expressions. For example, a tennis player would have a free hand clenched in a fist after winning a point, but not after losing, Todorov explains.

However, when asked how they arrived at their guesses, most of the people said the faces gave it away. That suggests people can't tell the difference between extreme positive and negative emotions based on facial expressions, Todorov says, “although they think they can.”





This is one of the image sets used in the study. Which faces belong to athletes who just had a sweet victory or a crushing defeat? Jot your guesses down, then see the answers below. Credit: Science Journal

The study, published in the journal *Science* in 2012, “counters popular theories holding that facial expressions are universally consistent indicators of emotion,” according to Todorov and his colleagues.

Quiz answers:

Losers: 1, 4, 6

Winners: 2, 3, 5

Todorov says the new study by Witkower and Tracy is valid in the context of rating or evaluating isolated facial images. But he sets a high bar for research that might yield broader conclusions: “One needs to do a set of studies manipulating body shapes and gestures to find out whether these facial cues can be overwritten by bodily cues.”

“The greatest myth is that facial expressions provide completely unambiguous information about the emotional state of the person,” he says in an email. “Real life expressions are inherently ambiguous. Of course, this is true for body gestures, too. [But] we rarely experience the ambiguity, because we rapidly integrate multiple cues in the context of the specific situation.”



Psychologists also point out that a given expression or gesture can mean significantly different things coming from different people, or even just in varying situations.

Take the crossing of the arms, for example.

The common wisdom holds that a person who does this is standoffish, blocking out others. But just check out any bouncer. Crossed arms are a way to signal power, Navarro says. Cops do it. So does Superman. “As with many primate behaviors that make us look larger, this does communicate that there are issues here and I am big enough to handle them,” Navarro writes at *Psychology Today*.

But crossed arms can also signal insecurity, fear or frustration, among many other things. The “self hug,” as Navarro calls it, can simply be a way to comfort ourselves, whether in a crowd or while waiting for something. Or just because it’s cold. Or it can be a form of stress release (in fact, people will sometimes massage their own arms while in this position, he notes).

This is exactly why trying to read people is fraught with challenges.

“Don’t take one body-language cue and decide you ‘know’ what another person is trying to communicate,” Wood writes in one of her books, *Success Signals*. “You must read the whole person.”

Nonverbal cues typically come in clusters, she explains, “a group of movements, postures, and gestures that should have roughly the same meaning or add up to the same meaning.” Think of a single cue as a word in a sentence, she suggests. As powerful as the word “love” is, you would not know the meaning of a sentence just by reading that one word. And here’s where Wood offers some advice: If you want to be well understood, make sure your gestures are congruent.

“If you say ‘I really love you,’ but you’re turned away and your eyes are on the TV screen, you are incongruent,” she writes.

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What caused humans to be so uniquely and supremely expressive in such complex, often inexplicable ways?

To start with, our species has incredibly expressive eyes and eyebrows compared to other animals. That part of the human face is not the only key to much of our nonverbal communication, it may have evolved for that purpose and helped us become who we are, according to a review of studies published earlier this year in the journal *Nature Ecology and Evolution*.

The human face is shorter and less bulky than those of our ancient ancestors. With smoother modern foreheads and wiggly eyebrows, the thinking goes, early humans could get beyond exhibiting the crudest of emotions, like anger, and begin to express more social-oriented emotions like sympathy and the recognition of others.

“We can now use our faces to signal more than 20 different categories of emotion via the contraction or relaxation of muscles,” said study team member Paul O’Higgins, professor of anatomy at the University of York. “It’s unlikely that our early human ancestors had the same facial dexterity as the overall shape of the face and the positions of the muscles were different.”

These changes along with other evolutionary shifts allowed “more opportunities for gesture and nonverbal communication — vital skills for establishing the large social networks which are believed to have helped *Homo sapiens* to survive,” O’Higgins and his colleagues write.

Humans also evolved to have a far greater variety of facial expressions than most other animals. While other creatures rely on sounds or butt sniffing to recognize one another, for us, the eyes generally have it.

“Humans are phenomenally good at recognizing faces; there is a part of the brain specialized for that,” explains Michael Sheehan, a researcher at UC Berkeley’s Museum of Vertebrate Zoology. In a 2014 study published in the journal *Nature Communications*, Sheehan and his colleagues explain how the evolution of our visual skills was likely tied to the evolving social interaction that made us human.

“Our study now shows that humans have been selected to be unique and easily recognizable,” Sheehan says. It is clearly beneficial for me to recognize others, but also

beneficial for me to be recognizable. Otherwise, we would all look more similar.”

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Research even suggests human body language has meaning that extends beyond our species.

When horses looked at pictures of angry human faces, their heart rates rose, according to a 2016 study in the journal *Biology Letters*. A horse would also turn its head to look at the photos with its left eye, a sign it feels threatened. Signals from the left eye are processed in the right hemisphere of the brain, specialized for dealing with threats, explains University of Sussex researcher Amy Smith, co-author of the study.

“It shows that horses have the ability to read emotions across the species barrier,” Smith says. “We have known for a long time that horses are a socially sophisticated species, but this is the first time we have seen that they can distinguish between positive and negative human facial expressions.”

In a 2017 study published in *Animal Cognition*, Smith and other researchers found horses were more likely to approach a trainer who was in a submissive position than one in a dominant position.





Horses found the person on the right more approachable. Image: University of Sussex

“Evolutionarily speaking, animals — including humans — tend to use larger postures to indicate dominance or threat, and smaller postures to indicate submissiveness,” said Leanne Proops, a co-author of the study from the University of Portsmouth. “Horses may, therefore, have an instinctual understanding of larger vs. smaller postures.”

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Perhaps you’re not too concerned about what other mammals think about you. But having a little horse sense about how body language might be interpreted can give you a leg up in the office or in other social situations.

Recent research indicates that a firm handshake, eye contact and an expansive posture — arms and legs out — project confidence, whether you actually have it or not. Peter Belmi, a University of Virginia researcher who studies the benefits of unjustified confidence, offers this advice for boosting perceived confidence: “When you speak, take your time. Be calm and relaxed. Use a factual vocal tone. Avoid hedging. Dress well. Use your body to take up space.”

In a phone interview, Wood, the author, offered these tips to help anyone project confidence, competence, and emotional engagement when meeting someone new or having any important conversation:

Show your heart. Physically turn it toward the person you’re speaking with. “It makes you look brave... confident and connected,” she says.

Watch your feet. “The feet are the most honest part of the body. If you’re not confident, you tend to turn them away, toward the exit.”

Wood’s number one suggestion is a modern one: Put your phone away. If it’s out, you can’t help but look at it, providing a distraction that reduces the human connection and erodes the other person’s confidence in you. Moving the phone out of sight “will have a profound impact,” she says.