Deception detection: psychologists try to learn how to spot a liar

Carrie Lock

"Is he lying?" Odds are, you'll never know. Although people have been communicating with one another for tens of thousands of years, more than 3 decades of psychological research have found that most individuals are abysmally poor lie detectors. In the only worldwide study of its kind, scientists asked more than 2,000 people from nearly 60 countries, "How can you tell when people are lying?" From Botswana to Belgium, the number-one answer was the same: Liars avert their gaze.

"This is ... the most prevalent stereotype about deception in the world," says Charles Bond of Texas Christian University in Fort Worth, who led the research project. And yet gaze aversion, like other commonly held stereotypes about liars, isn't correlated with lying at all, studies have shown. Liars don't shift around or touch their noses or clear their throats any more than truth tellers do.

For decades, psychologists have done laboratory experiments in an attempt to describe differences between the behavior of liars and of people telling the truth. Some researchers, however, are now moving away from those controlled conditions and are inching closer to understanding liars in the real world. The researchers are examining whether several behaviors that have emerged as deception signals in lab tests are associated with real-life, high-stake lies. The psychologists are also testing how well professional sleuths, such as police and judges, can detect deceptions.

One thing, however, is certain: There is no unique telltale signal for a fib. Pinocchio's nose just doesn't exist, and that makes liars difficult to spot.

LAB LIES By studying large groups of participants, researchers have identified certain general behaviors that liars are more likely to exhibit than are people telling the truth. Fibbers tend to move their arms, hands, and fingers less and blink less than people telling the truth do, and liars' voices can become more tense or high-pitched. The extra effort needed to remember what they've already said and to keep their stories consistent may cause liars to restrain their movements and fill their speech with pauses. People shading the truth tend to make fewer speech errors than truth tellers do, and they rarely backtrack to fill in forgotten or incorrect details.

"Their stories are too good to be true," says Bella DePaulo of the University of California, Santa Barbara, who has written several reviews of the field of deception research.

Liars may also feel fear and guilt or delight at fooling people. Such emotions can trigger a change in facial expression so brief that most observers never notice. Paul Ekman, a retired psychologist from the University of California, San Francisco, terms these split-second phenomena "microexpressions." He says these emotional clues are as important as gestures, voice, and speech patterns in uncovering deceitfulness.

But not all liars display these signals, and one can't conclude people are lying because they don't move their arms or pause while telling their stories. These could be natural behaviors for them, not signs of lying. "They are statistically reliable indicators of deception," says Timothy Levine of Michigan State University in East Lansing, but that doesn't mean they're helpful in one-on-one encounters.

People don't seem to be very good at spotting deception signals. On average, over hundreds of laboratory studies, participants distinguish correctly between truths and lies only about 55 percent of the time. This success rate holds for groups as diverse as students and police officers. "Human accuracy is really just barely better than chance," says DePaulo.

Some researchers think, however, that the design of the laboratory studies is responsible for the poor rates of lie detection. "People are very good liars when nothing is at stake," says Aldert Vrij of the University of Portsmouth in England. "But a lab setting is not real life."

In most experiments, researchers tell the subjects whether or not to lie, and the lies have no effect on their lives. There's no significant reward for a liar who's believed or punishment for a judge who's duped. "There is definitely a lack of real-life stuff in this field of research" says Vrij.

TRUE LIARS Vrij has been looking at lies told not by participants in an experiment but by actual suspects in police-interrogation rooms. A major difficulty in using real-life lies is that the researchers themselves often don't know the truth. To overcome that obstacle, Vrij obtained police-recorded videotapes in which 16 suspects in the United Kingdom, charged with offenses such as arson and murder, told both lies and truths about their alleged involvement in the crimes. The police used forensic evidence, witness accounts, and the suspects' eventual confessions to determine the actual events.

Before learning the police conclusions, Vrij's team analyzed the videotapes for signs of the suspects nonverbal reactions to questioning, such as gaze aversion, blinking, and hand-and-arm movements. They also looked at verbal cues, such as pauses in speech and speech disturbances, including "ahs," stutters, and incomplete sentences.

The differences between lying and truth telling were largely individual: Some suspects looked away more while lying than while telling the truth, and others increased their degree of eye contact, for example. The only general difference Vrij found between liars and truth tellers is that the liars blinked less frequently and paused longer while speaking.

In contrast to participants in the lab studies, the crime suspects didn't show any overall increase in speech disturbances or decrease in hand-and-arm movements. Because of the intense nature of a police interrogation, stressed truth tellers may display the same behaviors as liars do, Vrij speculates.

He is currently exploring lie detection from the side of the interviewer rather than the suspect. He showed 99 police officers tapes of real-life lies and truths and found that the officers were, at 65 percent accuracy, slightly better than lab-study participants at discerning the difference. But police are "still far away from perfect," Vrij points out.

He attributes the police officers slightly better performance primarily to the nature of the lies they hear during an interrogation. "More is at stake, and that gives the lies away more," he says.

Most recently, Vrij has tested whether the police officers' accuracy rates are consistent in multiple tests. In this study, 35 police officers took four tests derived from interviews of either liars or truth tellers, and 70 percent of the professionals' calls were correct.

Although the officers again outperformed participants in lab studies, no individual officer stood out. "Our early findings indicate that none was consistently good or consistently bad," Vrij says. "Nobody is 80 percent overall."

WIZARDS OF DETECTION Other researchers, however, present evidence that highly skilled human lie detectors do exist. The scientists have been trying to identify such people and figure out how they recognize lies.

In a now-famous study from more than a decade ago, about 500 Secret Service agents, federal polygraphers, and judges watched 10 1-minute video clips of female nurses describing the pleasant nature films they were supposedly watching as they spoke. Half the women were instead watching what Ekman calls "terribly gruesome" medical films. The legal-system professionals were asked to determine the truth by reading the women's faces, speech, and voices.

Ekman and his coauthor Maureen O'Sullivan of the University of San Francisco motivated the women to lie by telling them that because nurses shouldn't be bothered by gory images, their believability related to their future career success.

Most of the observers uncovered lies at only about the level of chance. One group, however, outperformed the others. The Secret Service group had a better-than-chance distribution, with nearly one-third of the agents getting 8 out of 10 determinations correct, the San Francisco psychologists reported in 1991.

O'Sullivan now says that her further studies of federal agents, forensic psychologists, and other groups of professionals indicate that a very small percentage of people are extremely good at spotting a phony. "We always found one or two people who were very good," she says.

Over the past decade, she has given a series of tests to more than 13,000 people from all walks of life, including therapists, police officers, law students, artists, and dispute mediators. In the first test, college students either lie or tell the truth about a strongly held opinion, such as their views on abortion or the death penalty. The researchers motivate the students by instituting a system of rewards and punishments, although for ethical reasons, the study participants know that they can withdraw at any time.

The subjects are told that if they are judged to be lying, even if they're not, they'll be locked in a dark room about the size of a telephone booth for 2 hours and subjected to intermittent blasts of noise. "We actually didn't do that, but that was the threat," says O'Sullivan.

If a student is believed, he or she earns $50 to $100. These rewards and punishments, Ekman says, "cross a certain threshold so that you generate similar behavior and emotional clues" in the experiment and in real life.

Observers who judge the students' opinions correctly 90 percent of the time or better move on to two more tests. The motivation for the students to lie remains the same.

In the first of these tests, students describe their participation in a mock crime scenario. The second test again uses nurses lying or not lying about watching nature films. Human lie detectors who get 80 percent correct on both the additional tests are "ultimate wizards" of lie detection, says O'Sullivan.

She has identified only 15 people as ultimate wizards, about 0.1 percent of the people who have taken the series of tests. "People who are extraordinarily good are extraordinarily good, no matter what the lie is," says Ekman. Another 16 people are "penultimate wizards," getting 80 percent on either the mock-crime test or the nature-film test, but not on both.

O'Sullivan has asked the wizards

questions about their lie-detection processes. "All of them pay attention to nonverbal cues and the nuances of word usages and apply them differently to different people," she says. "They could tell you eight things about someone after watching a 2-second tape. It's scary, the things these people notice," she says.

O'Sullivan compares these skillful observers to Agatha Christies fictional Miss Marple, who could instantly judge the veracity of someone by comparing him or her to people she'd already encountered.

Bond, however, doubts that O'Sullivan's experiments can be successfully applied to real-life liars. The system of rewards and punishment doesn't make the laboratory environment similar to a police-interrogation room. "A dark room and noise is not comparable to the threat of lethal injection," Bond says.

He also suggests that the supposed lie-detection wizards are just people who happen by chance to do well on all three of O'Sullivan's tests. O'Sullivan, however says that's unlikely.

Bond and DePaulo recently reviewed 217 studies going back 60 years that together include tens of thousands of subjects. The analysis found no evidence of significant differences between people in their ability to detect lies in various scenarios, Bond says.

Ekman and O'Sullivan speculate that if they could only study enough people, they might learn specific techniques that good lie detectors use. Then, it might be possible to deconstruct their skill and teach it to others, such as police officers, the researchers say.

Vrij, for instance, reports in the April Applied Cognitive Psychology that he has increased people's accuracy by a few percent by teaching them to make quick assessments of behaviors

such as the frequency of hand movements. However, Levine speculates that even a bogus program can succeed by simply getting people to pay attention.

"Training may increase your hit rate a little bit in the long run, but you're still missing a lot," Levine says.

But because witnesses, hard facts, and physical evidence are often scarce, Ekman says, "it's worth training people to be as accurate as they can be."

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