



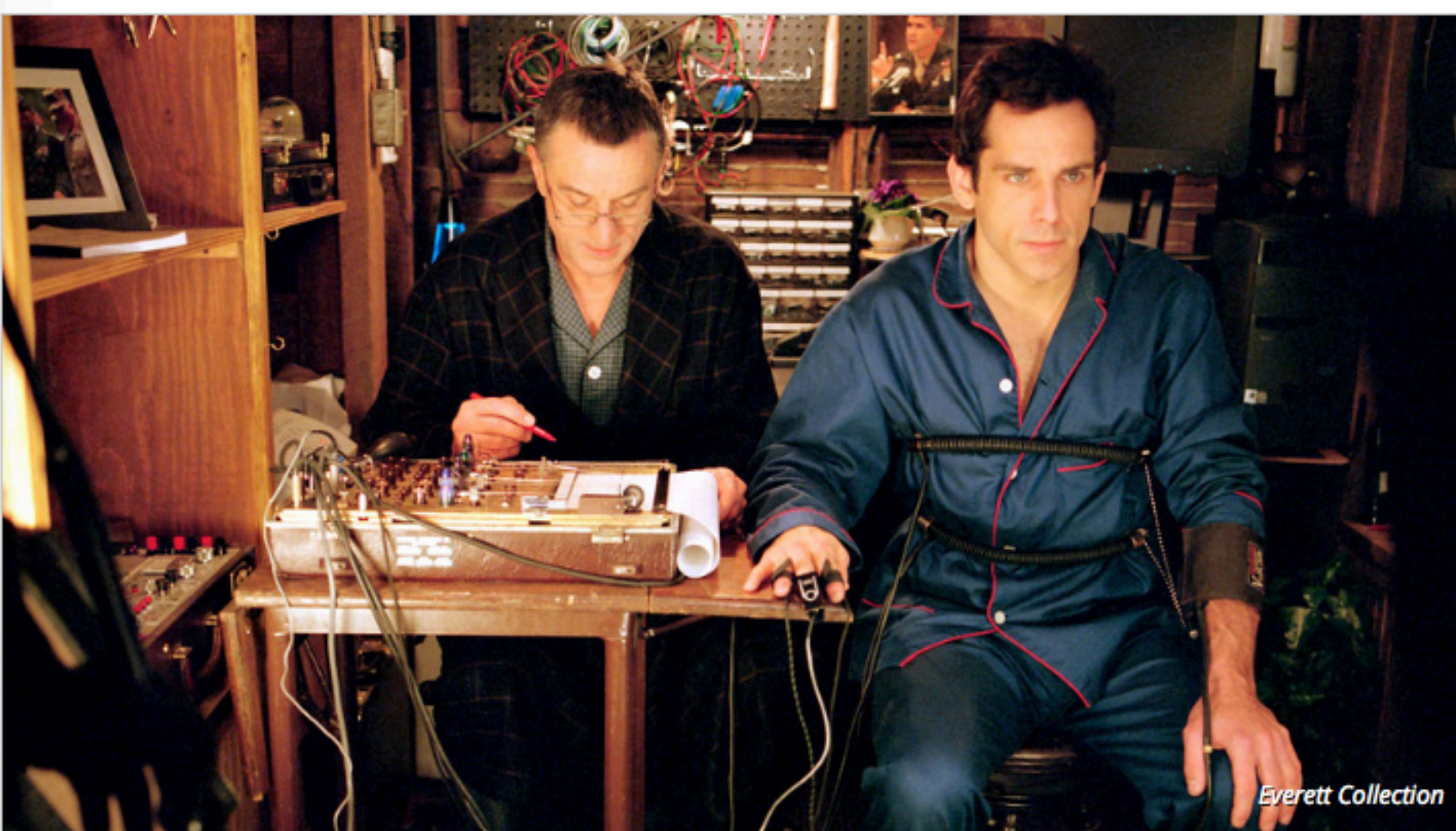
# Lie detectors for consumers are on the way to help detect ‘alternative facts’

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*In the era of fake news, few consumer-facing tools can accurately detect lies*



Robert De Niro and Ben Stiller in the 2000 comedy "Meet the Parents."

The phrase of the week is [“alternative facts”](#) — an explanation Donald Trump’s senior adviser Kellyanne Conway offered for inaccurate claims the president and White House press secretary Sean Spicer [made about the size](#) of the crowd at his inauguration. Crowds at a protest following Trump’s inauguration are said to have been bigger than the ceremony itself, although the protesters themselves may have been [prone to some overestimation](#).

On Monday, President Trump claimed that millions of illegal votes were cast in the election, another statement that has no factual basis. Amid a continuing debate over falsehoods — those spouted put forward by the president, the White House spokesman Sean Spicer, and even people you may know — Oxford Dictionaries named “post-truth” the word of the year in 2016. In an era of fake news and false statements, how can you tell if someone you’re talking to is telling the truth?

Renee Ellory, a deception and credibility expert who can understand human behavior and spot lies with above-average accuracy, said there is no one sure way, so she relies on a number of factors to identify liars. She was identified by a University of San Francisco study of more than 13,000 people as [one of only 31 people](#) able to pick up on micro-expressions to detect lies the majority of the time — a “wizard,” as the study called such people.

“Emotions, demeanor, and body language all can reveal deception,” she said. “To be accurate at the level that I am you have to take in many pieces of behavioral evidence coming in different patterns and ways.”

For non “wizards,” polygraph tests are the traditional way of trying to detect if someone is lying, according to Todd Mickelsen, chief executive of lie detection company Converus, which sells lie detection technology developed by polygraph experts that is based on tracking eye behavior. “It doesn’t lend itself well to consumer use because you’re having to hook someone up to all these sensors and ask them a series of questions and interpret the results,” he said. “It’s very intrusive and very human intensive.”

Polygraphs don’t literally detect lies, of course, but monitor physiological reactions to questions that may suggest somebody is not telling the truth, like increased heart rate, sweating and changes in breathing patterns. They are often used to screen employees for state and federal government -- for example [asking police](#) about past actions that would disqualify them on the job.

There are also questions about their validity. Many psychologists believe the results of the test are placebo-like -- test takers who are lying become nervous they’ll be found out and have their reactions detected. And there is [little evidence](#) proving these tests can accurately detect lies, according to the American Psychological Association.

But the technology to detect lies is being enhanced: brain patterns are thought to be very effective in telling when people are lying and new services are being developed with that technology. Some law enforcement has [switched to Voice Stress Technology for interrogation](#).

Converus is marketing a new lie detecting product called EyeDetect, which the company claims is 85% accurate, or 95% accurate when combined with other manners of lie detection. It is already being used by government officials in some Latin American countries for screening political candidates, Mickelsen said, and works by monitoring pupil dilation to detect deception. While most of these products are used only by law enforcement and governments only, Converus reports it is developing a more consumer-friendly product for lie detection in the coming months.

There are a number of products on the market that call themselves lie detectors, but they are almost all prohibitively expensive polygraph tests or joke apps. The top rated lie detector app in the iTunes store, “Truth and Lie Detector Scanner,” for example, carries a warning at the top that reads, “This app is intended for entertainment purposes and doesn’t provide true lie detecting or scanning functionality.” Similarly the top lie-detecting products on Amazon **AMZN, -0.39%** are toys or games, and even those that purport to be true lie detectors have low ratings for inefficacy. Consumers could offer to [shell out more than \\$1,000](#) for a full polygraph kit or hire a professional to conduct a test locally — but it isn’t a guarantee.

“There is so much complexity to deception and understanding human behavior that we haven’t gotten to a point where a machine can detect it,” Ellory said, adding she is not aware of any consumer technology that is sophisticated enough to handle the work she does.

Still, she added that it’s “only a matter of time” before machines develop the ability and emotional insight required to understand when people are lying. In the meantime, Ellory suggests using valid news sources and cross referencing assertions from people at all levels of government with a variety of trusted sources, like factcheck.org and Snopes.com.