

Police Use of Voice Stress Analysis Generates Controversy

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Police departments across the country are buying the controversial Computer Voice Stress Analyzer, which its manufacturer claims can tell when a person is lying merely by the sound of his voice. When a suspect speaks, a computer program "listens" for minute vocal shifts that, in theory, indicate stress.

The technology's critics, citing government and university research, say the CVSA is little more than an electronic Ouija board with accuracy rates to match. At best, they say, voice stress analysis scares suspects into confessions; at worst, it can incriminate the innocent. CVSA results aren't admissible in most courts, under the same Supreme Court decisions that generally bar polygraph evidence.

Even so, police officers love it. Cheaper and faster than the polygraph, the CVSA can be operated with a few days' training and without the need to "wire up" a suspect. It can also be used in the field, covertly, and on tape recordings, according to the National Institute for Truth Verification of West Palm Beach, Fla., its manufacturer.

Between 1999 and 2000, NITV added 100 new customers. So far in 2001, NITV officials say nearly 300 police departments have bought at least one CVSA. Some have bought several, and nearly all "have put their polygraph on the shelf," said David Hughes, a retired police captain and executive director of the company.

Originating from a Cold War military project, voice stress analysis was first commercialized in the early 1970s.

NITV, founded in 1986, has a virtual lock on the law-enforcement market, according to both the company and its critics. It has sold its \$10,000 CVSA to more than 1,100 police departments and trained more than 4,200 CVSA operators at about \$1,300 each, Hughes said.

The company's Web site is replete with testimonials and success stories. One Alabama police department is said to have solved a murder case 14 years cold by re-interviewing the main suspect with the CVSA. The suspect had previously taken four polygraphs given by three different examiners, all inconclusive. Confronted with three failed voice stress tests, he broke down and confessed.

Researchers counter that nothing in 30 years of studies proves that voice stress analysis works, either generally or in the specific case of the CVSA.

"Voice stress analysis is a fraud. It has zero validity," said David T. Lykken, a psychology professor emeritus at the University of Minnesota in Minneapolis and author of the book "A Tremor in the Blood: Uses and Abuses of the Lie Detector."

A 1996 Department of Defense Polygraph Institute study of the CVSA found that the

device performs no better than chance in detecting deception. In other words, guessing or flipping a coin would be as accurate as the test. Based on this study, the Department of Defense, the Central Intelligence Agency and the Federal Bureau of Investigation do not use voice stress tests.

Vincent Sedgwick says he was arrested in a rape case because of the test. In 1996, the Henderson, Nev., man had never heard of a voice stress lie detector. But, eager to clear himself of suspicion, he took the test, and failed.

"When we're done with the machine, (the examiner) tells me it looks like I'm lying," Sedgwick said. "I was shocked. I had 100 percent faith it would clear me. It didn't dawn on me until later that this thing is a sham."

Henderson police said in court filings that the arrest was based on evidence other than the CVSA results. Sedgwick was accused of being a lookout while a rape took place, but a judge threw out the charge for lack of evidence. But the 35-year-old juvenile probation officer remains shaken by the experience.

Terry Bowler, the department's public information officer, said that Henderson police no longer use the CVSA -- a development he chalked up primarily to cost-cutting, but which he acknowledged was colored by the experience with Sedgwick.

"What people need to understand is that it's a dangerous device," said Ian Christopherson, a Las Vegas attorney who defended Sedgwick and who later filed an unsuccessful civil rights suit on Sedgwick's behalf.

Christopherson cited a 1998 case in Escondido, Calif., in which police used the CVSA to elicit confessions from Michael Crowe, then 14, and two teena-age friends in the stabbing murder of Crowe's 12-year-old sister, Stephanie.

On the eve of the teens' trial, the charges were dropped. The victim's blood was found spattered on the clothing of Richard Tuite, a transient who had been pounding on neighborhood doors the night of the murder.

In a 1999 civil rights suit against San Diego County, prosecutors and detectives, and NITV, the boys' families said the CVSA not only had focused the investigation on the teens and away from Tuite, but had played a central role in extracting confessions that proved to be false.

Tuite has never been charged, said Denise Vedder, public affairs officer for the San Diego County district attorney. The civil suit is on hold pending the outcome of the murder investigation, according to court documents.

Bill Endler, a retired police chief and director of international operations for NITV, declined to comment on the Crowe case.

NITV's marketing materials claim a 98 percent accuracy rate for the CVSA, but company officials acknowledge that the figure is based on anecdotes from satisfied customers and not independent research.

Hughes dismissed anti-CVSA research as "parlor games" engineered by polygraphists who are losing jobs to the voice stress test. The studies don't work, he said, because research subjects aren't in jeopardy of losing their freedom or their lives. Such jeopardy, he said, is the key.

But critics say the device doesn't detect lies in the field, either.

Polygraphs already use at least three different measures of stress. "If voice worked, we could just add that measure into the mix," said Frank Horvath, past president of the American Polygraph Association and a professor in the School of Criminal Justice at Michigan State University, who has researched voice stress analysis for three decades.

Instead, "detectives are using (voice stress tests) in policing as a ploy to get people to confess," Horvath said.

Lykken agreed, pointing out that police for years have coaxed confessions from suspects with Lykken agreed, pointing out that police for years have coaxed confessions from suspects with fake lie detectors, even pressing photocopying machines and police radios into service in the ploy. The CVSA is just one more ruse, he said.

"That's just ludicrous," Hughes replied. Police "can extract a confession without buying a \$10,000 device."

Police interviewed agreed that getting confessions is the CVSA's main appeal. "There are a lot of confessions that happen before we start the test. Sometimes we never have to even open it. It's very nice, very nice," said CVSA operator Detective Sgt. Stephen Odom of the Berkeley (Calif.) Police Department's Youth Services Detail.

CVSA operators are taught to persuade suspects that the test is accurate. As Odom put it: "What matters isn't reality, but that person's perception of reality."

Critics, however, worry that police, not just suspects, begin to believe in the device. "A cop who has gotten 20 bona fide confessions on this thing is going to start to believe it is 100 percent accurate," said Christopherson, Sedgwick's lawyer.

NITV says the CVSA works by detecting and charting an inaudible "microtremor" in the voice. Truthful statements produce a peaked pattern, while stress, or lies, produce a flattened top. A 1981 study published in the Journal of Forensic Sciences, however, could not detect voice microtremors, much less correlate them with stress or lying.

"What people are looking for is an easy solution," said Darren Haddad, an electronics engineer who studies voice stress analysis for the Air Force Research Lab Information Directorate in Rome, N.Y., which researches and acquires technology for the Air Force.

Haddad, in a 2000 study, found that two commercial analyzers were accurate in detecting stress, but couldn't differentiate between stress caused by anger, fear, lying or just needing a bathroom break.

According to the lab, NITV declined to join that test, which was conducted with the National Institute of Justice, the research and development branch of the U.S. Department of Justice. NITV also blocked the lab's efforts to obtain the CVSA through a local police department, Haddad said.

Hughes said the company was wary of researchers after the 1996 Defense Department study. The CVSA failed in that study, he said, because the company's recommendations for testing were ignored.

Haddad's most recent study found that volume pitch, and several other voice characteristics can indicate overall stress, and that the greater the number of voice measures used, the more accurately stress was detected.

Horvath, Haddad and others acknowledge that there may some day be a reliable way to screen people's voices for stress caused by lying. But so far, they have not found it.

Meanwhile, the CVSA continues to sell to police departments across the country -- mostly by word of mouth, said Hughes.

"One sells two and two sells four and so on," he said. "Our business has grown exponentially."