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Polygraphs: 'Witchcraft' Or 'Effective Tool'?

Spy Case Refuels Debate Over Tests' Validity

By Ruth Marcus
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To its detractors, such as the late Sen. Sam Ervin, the lie detector test smacks of "20th century witchcraft." To its supporters, such as William Kotapish, director of security for the CIA, the polygraph is "the single most effective tool available" to ferret out spies.

The polygraph's ability to determine an individual's veracity by measuring changes in pulse, blood pressure and perspiration has been a matter of controversy almost since the forerunner of the modern device was invented about 60 years ago.

But with the arrest of four Navy men on espionage charges, the issue of using lie detectors to uncover spies and potential spies has come to the forefront of debate about what should be done to stem the loss of defense secrets.

The House of Representatives voted overwhelmingly Wednesday to grant the Pentagon broad power to subject to lie detector tests more than 4 million military and civilian employes cleared to see classified information. Under the measure, passed 333 to 71 as an amendment to the Defense Department authorization bill, polygraphs would be required of those seeking clearance to see the most sensitive information.

A similar measure, backed by Majority Leader Robert J. Dole (R-Kan.), is pending in the Senate.

Polygraph proponents applauded the House vote. "If a person is a spy, and if he's being asked on the polygraph, 'Have you ever spied?' he's going to react to it on the polygraph, and the chances of his being detected are very good," said Gordon Barland, a Utah polygraph expert.

According to the American Polygraph Association, the test is accurate more than 90 percent of the time in cases where trained examiners are able to reach a conclusion about a person's truthfulness.

Backers of polygraphs also maintain that the threat of being subjected to a test would deter workers who might otherwise be tempted to spy. The author of the House amendment, Rep. C.W. Bill Young (R-Fla.), cited testimony last month by convicted Soviet spy Chrisopher Boyce, who told a Senate committee that if he had thought he might be required to take a polygraph test, "I would never have considered an act of espionage."

But critics of lie detector tests describe the devices as unreliable in general and particularly unsuitable in screening rather than in investigating specific crimes or incidents. Increased use of the tests for determining clearances, they warn, would finger innocent people as security risks while failing to unmask real spies trained to outwit the tests.

"The polygraph can detect lies just as well as Laetrile can cure cancer," said Dr. John F. Beary III, associate dean at the Georgetown University School of Medicine and former principal deputy assistant secretary of defense for health affairs. "The soldier or sailor now has his career determined by a device with the accuracy of a roulette wheel."

Beary cited a 1983 study by the congressional Office of Technology Assessment that concluded, "While there is some evidence for the validity of polygraph testing as an adjunct to criminal investigations, there is very little research or scientific evidence to establish polygraph tests' validity in screening situations. The scientific evidence is clear—that a polygraph test cannot reliably and in any valid way determine whether somebody is lying."

"I'm as concerned as any other citizen about spies and preventing people in the armed forces from selling information to foreign governments, but the polygraph is not a device that is going to enable us to determine who's doing these things," said the author of the report, Boston University psychology professor Leonard Saxe.

A principal concern among critics of lie detector tests is the threat of "false positive" readings—finding deception by a person who actually is telling the truth—that would brand honest employes as security risks.

"Truthful people are going to be victimized," said David Lykken, a polygraph expert at the University of Minnesota. He said studies show that innocent people have a 40 to 50 percent chance of being classified as deceptive. "A lot of innocent people, and especially conscientious people who are not accustomed to having their word questioned are going to fail a polygraph test," he said.

"Certainly false positives can occur," said Frank Horvath, director of the American Polygraph Association Research Center at Michigan State University. However, he said, such results "do not present a serious problem [because] most employers do not make a decision solely on the basis of a polygraph test outcome. They use that to correlate with other information about an applicant."

Critics also warn that actual spies trained to outsmart polygraphs might evade detection. Subjects can throw examiners off the track of their lies by biting their tongues or stepping on a tack hidden in their shoes when answering "control" questions, critics said.

"It can be beaten and the KGB knows how to beat the polygraph," Lykken said. "When the examiners say you can easily detect [evasive measures] from the charts they are thinking about uninformed criminal suspects who don't know how to do it and try to beat the test on the spur of the moment by coughing or squirming."

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But Lynn P. Marcy, chairman of the American Polygraph Association and a former Air Force security investigator, said that examiners were able to discern even more sophisticated attempts to fool them. "To a skilled polygraph examiner, the type of reaction that occurs from pain is entirely different than the typical type of reaction cause by fear of detection or the stress of telling a lie," he said. "We have developed anti-countermeasure techniques to help us sort out those kinds of attempts."