DETAIL OF LIE DETECTOR GRAPH, 1957; WASHINGTON POST FILE PHOTO

To Tell the Truth

The Feds Rely Too Heavily on Polygraphs

By Jeff Stein

A few years ago, not long after reports surfaced that Aldrich Ames had passed a CIA lie detector test while spying for the Russians, an FBI agent told a conference of polygraph experts that he'd taught his 10-year-old son how to beat the exam.

"It's easy," Drew C. Richardson, a supervisory agent with a PhD in physiology, told the gathering. All his son had to do was to bite his tongue or curl his toes while responding to "control questions" such as "I'm a boy," or "I live in Virginia." That would raise his pulse to a level that would mimic the lie he would tell later on. The examiner, Richardson argued, couldn't tell the two apart.

Richardson's story has become legend among polygraphers—and he is no longer assigned to the FBI unit. But he isn't the only expert to make the case that polygraphs can let the guilty go free—and convict the innocent. Even its most ardent defenders admit that the polygraph, an often effective tool for interrogating criminal suspects, is no better than guesswork when it comes to

Jeff Stein, a former Army Intelligence case officer, writes frequently about government security.

The Feds Rely Too Heavily On Lie Detectors

LIE DETECTORS, From C1

weeding out the liars, or the potential spies, in a large pool of people.

Yet the government is increasingly using polygraph tests for just these purposes: screening applicants for many types of jobs and fishing for traitors among current employees. Although precise numbers aren't available, federal agencies as different as the CIA and the Department of Transportation screen in total at least 15,000 people yearly. The Defense Department alone conducted 12,419 non-criminal lie detector tests of employees and applicants last year. For the first time, the FBI "fluttered" every one of the 8,014 people it hired from mid-1994 to present—plus unknown thousands it did not hire. Same for the CIA and the Secret Service, which refused to release any figures. The practice is also becoming more prevalent among state and local agencies—and not just for law enforcement jobs.

The questions cover drug and alcohol use, personal finances, foreign travel, possible criminal violations and general background. Given that polygraph experts acknowledge an inaccuracy rate of at least 10 percent and possibly more than 20 percent for these kinds of tests, that means that for the federal government alone, perhaps 3,000 people a year are being unfairly washed out and left with the stigma of misconduct.

It was such failures that caused Ronald Reagan to sign legislation in 1988 that prohibited private industry from using polygraphs to screen job applicants. But an exception was made for the government.

Ironically, many of those flunking are exactly the people you'd think should be hired. According to David Lykken, a University of Minnesota psychologist and prominent critic of polygraphs, those most likely to "fail" are "the most innocent, those who have a strong conscience, and who respond strongly to any accusations or suspicions of wrongdoing." Nervous responses—even truthful ones—send the machine's quivering pens flying over the paper, which credulous examiners count as "an attempt at deception."

Most critics agree that the problem with polygraphs often rests with the operators, who are sometimes incompetent and often inconsistent. The various kinds and methods of tests make polygraphing an art, not a science—and ill-suited to fishing expeditions.

Take, for example, the case of Elizabeth M., a 30-year-old corporate attorney with Citibank in San Francisco. In 1994, after graduating from law school, she applied for a job with the FBI—not surprising for someone whose father was the local police chief and whose uncle headed the California Highway Patrol.

Elizabeth's father often came home with sad tales of how drugs had destroyed families and bred crime, so she grew up with a revulsion toward drugs of any kind, including marijuana. If she saw someone light up a joint at a party, she told me, she'd leave.

When it came time to take the FBI polygraph, she "thought it would be cake." But the test started badly. At first the examiner said the machine showed that enemy spies had recruited her to infiltrate the FBI. That was absurd, she told him. After a while, he dropped the suggestion "because he said I didn't seem like a spy to him."

When the subject of possible drug use came up, however, things got worse: The examiner insisted Elizabeth was lying. For hours she denied it, and for hours he disputed her. Finally, she broke into sobs, pleading that she had nothing to hide—the machine had to be wrong. "I'm Miss Goody Two Shoes!" she said. "Ask anybody!" The examiner, however, told her that she had "a dark cancer in her heart, and he was the doctor who was there to cut it out."

She flunked.

"It was a nightmare," she recalled. "It was a big shift in my life. I had always seen government service as, you know, a noble calling. But that made it all dirty."

Later, she applied to the CIA and passed its more thorough two-day exam. But by then Elizabeth had decided not to work for the government.

Elizabeth's case is no exception. I know of numerous stories like hers: the Drug Enforcement Agency analyst who flunked the FBI polygraph on drug use, despite passing regular urine tests; the former state chairman for the Ross Perot campaign accused by an FBI polygrapher of rampant drug abuse; the Army intelligence officer whom a Pentagon polygrapher accused of being in contact with Russian agents. Several senior Reagan administration officials were accused of leaking secrets to the media after "flunking" their polygraphs. They were cleared only when reporters stepped forward to swear that it wasn't so.

In some cases, the victims have had to make preemptive strikes. Before his retest, the Army officer placed a desperate call to Lykken, who told him how to alter his pulse rate. After he passed, the officer told Lykken: "The hardest thing was keeping a straight face."

"Polygraphs are little more accurate than flipping a coin," scoffs Lykken, author of an influential text, "Tremors in the Blood: The Uses and Abuses of the Lie Detector."

"The use of the polygraph to look at someone's general honesty is garbage," echoes John Furedy, a psychologist at the University of Toronto. "It's a fine instrument for interrogation if you already have strong evidence of someone's guilt," but as a trap to snare moles from a random pool of employees, or to "prove" a job applicant is lying about drugs, it is "astrology, magic or wishful thinking."

"The CIA, which has been using extensive polygraphs on employes and applicants for years, has been repeatedly penetrated," noted Larry Farwell, a former CIA security consultant now on the faculty of Harvard Medical School.

Even some of those who defend lie detectors also concede the problems created by human error. "You are right to tell the public that the techniques are not being used properly," Charles Honts, a former Pentagon

polygraph expert said. "That is the story. Not that the techniques are invalid. This is a malpractice story, not a snake oil story."

Honts singled out FBI polygraphers as examples of how not to conduct the test. He compares them to agents in the crime lab who were recently suspended for slanting reports and contaminating evidence. "I am not a fan of the FBI polygraph [screening] program," Honts said. "It is one of the worst in the U.S. government."

The temple of polygraphy is the Department of Defense Polygraph Institute (DoDPI) at Fort McClellan, Ala., which trains hundreds of examiners for the Pentagon, Secret Service, National Security Agency and FBI annually. It also works closely with the CIA.

I asked its recently retired director, Bill Yankee, whether the polygraph was "90 percent accurate," as its proponents commonly claim.

"First of all, that's a stupid question," Yankee said. "There's no such thing as the validity of the polygraph. The polygraph is an instrument that records physiological activity, and if it's properly calibrated, it will 100 percent accurately record the data that it's designed to collect—pulse and perspiration rates. The question is, how valid is the test?"

One staple of FBI polygraphy has been the "control question" test, which measures the difference between a control question ("Have you ever done anything you're ashamed of?") and a relevant question ("Have you ever smoked marijuana?"). If the relevant question elicits more of a response, then the subject is said to have "attempted deception." But according to its critics, the test measures nothing more than general anxiety, the sources of which can only be guessed at.

The FBI has also used the even less-reliable "relevant/irrelevant" test. Subjects are asked a string of questions on stressful subjects with only brief respites of "irrelevant" questions. "The RI is not a valid test," says Honts, adding that his research has shown it to be 80 percent inaccurate. "I have no doubt that they are falsely accusing large numbers of people in their screening program," he says.

Some put slightly more credence in the "directed lie" test developed by Sheila Reed when she was a researcher at DoDPI. That test requires a subject to state an obvious lie—"I have sex with my brother every day"—on the premise that any lie produces indications of stress, which gives examiners a better "base" from which to measure a subject's later, deliberate attempt at deception.

But the directed lie test does not necessarily separate "the anxious innocent from the anxious guilty," says Lykken. "Perhaps you're anxious because you're guilty, or perhaps you're anxious because you're anxious about the topic." Either way, he says, the charts come out hopelessly muddy—except to examiners who believe they've "found something."

And that's the fatal flaw of all lie detector tests, argues Reed, who says the Pentagon institute is run by an "old-boy network" of military detectives and private investigators who care little about the science behind the tests. In 1995, Reed was stripped of her security clearance, interrogated by Army detectives and relieved of her responsibilities after questioning the teaching methods at DoDPI.

"I made the statement that I thought the whole security screening program should be shut down," Reed told me. "It was impossible to convince the instructors to follow the exact procedures. Every time a class came in to be trained, I am sure each instructor added his own interpretation to the process and once examiners went back to the field, they all included their own little pet approaches."

Reed recommended that "if they were going to do this screening at all, they should shut down all the [screening programs], do more research, then train qualified people who have no ingrained bad habits and prejudices, and who understand psychology and psychometric testing."

Not likely. Millions of dollars ride on the use of polygraphs for security screening, no matter how flawed they may be. Lie detectors, after all, are a cheap alternative to sending thousands of agents on shoe-leather background investigations. Its proponents offer a circular logic to defend the practice. As Yankee said, "You should talk to the people who've passed it."

Former Sen. Dennis DeConcini did just that. In 1995, while heading the Senate Intelligence Committee, he visited Aldrich Ames in prison and asked how he did it. "Well," Ames replied, "it's easy."

Those who fail aren't so jovial. Lykken responded to the stories of some recent job applicants who failed the test by writing to FBI Director Louis Freeh.

"It is not only scandalous what you're doing to the dreams and aspirations of these young people, but the kinds of people that are failing are the kinds of people I'd like to see working for your agency," Lykken wrote.

"They are people of conscience, straight arrows," he said. But because they get nervous when they are accused of improbable behavior, "they are the kind of people who are particularly vulnerable to this screening."

The FBI hasn't responded.

IN SEARCH OF TRUTH

A modern polygraph collects physiological data about a person's respiratory, sweat gland and cardiovascular activity. Here are some highlights of its development:

1900s The first polygraph was a modified medical device that measured pulse and blood pressure. Psychologist William Moulton Marston, pictured at right, believed that lies could be detected by noticeable changes in those areas.

1920s American psychologist John Larson developed a continuous recording interrogation polygraph, and used a series of "relevant/irrelevant" questions to try to detect lies. Graphs of blood pressure readings were used in minor civil and criminal cases.

1930s Polygraph, at right, invented by Leonarde Keeler at Northwestern University, provided the first results to be considered as evidence by a jury.

1940s Lawyer John Reid, pictured at right, developed the "control question," a standard against which examiners can measure a subject's response to relevant questions, along with the "guilt complex question." He saw the appraisal of behavior symptoms as essential to the proper scoring of a polygraph exam. (Such appraisals were widely disputed.)

1950s Keeler and former Berkeley Police Department detective C.D. Lee manufactured a portable polygraph. In 1958, Pope Pius XII condemned lie detectors, saying they intrude into man's interior domain.

1960s The first expansion from the forensic lab to the work place. Association of polygraphers established qualifications and standards for examiners (1966).

1970s U.S. Army stepped up its research into lie detection. Former Army officers Allan Bell and Charles McQuiston (of Dektor Counterintelligence and Security) manufactured their psychological stress evaluator, pictured at right, a machine that detected a low-frequency tremble in the voice thought to be related to emotional upheaval or stress. (The machine was to be used in conjunction with a lie detector.) Some 2 million private-sector employees submitted to testing.

Polygraph schools opened around the country.

Mid-1970s to mid-1980s In private industry, polygraphs or voice analyzers were mainly used for testing the honesty of workers. More scientifically credited polygraphers served as expert witnesses in courts of law. Victims of inaccurate testing sparked protest.

1980s The Congressional Office of Technology Assessment commissioned a study of polygraph accuracy. The Employee Polygraph Protection Act was passed (1988), prohibiting most private-sector employers from requiring or suggesting that prospective employees submit to testing. The private business of testing criminal defendants grew.

1990s The lie detector is used in criminal investigation and security applications in Canada, Israel, Japan, South Korea, Mexico, Pakistan, the Philippines, Taiwan and Thailand. In the United States, 20 states and the District of Columbia have laws designed to regulate employer polygraph testing; no state prohibits testing in all settings. Polygraph results are admissible in some federal circuit and state courts. Many appeals, based on the exclusion of polygraph evidence at trial, are now under review by appellate courts. The Supreme Court has yet to rule on the issue of admissibility.

Sources: Famous First Facts, World Book, American Polygraph Association, Discover magazine

PHOTO CREDITS, CLOCKWISE FROM TOP: MARSTON AND DEKTOR EVALUATOR PHOTOS, WASHINGTON POST FILE; REID PHOTO, ASSOCIATED PRESS; KEELER POLYGRAPH WASHINGTON POST FILE