

# The Polygraph Paradox

Lie detectors aren't perfect. But, convicted sex offenders concede, they may be good enough

By LAURIE P. COHEN

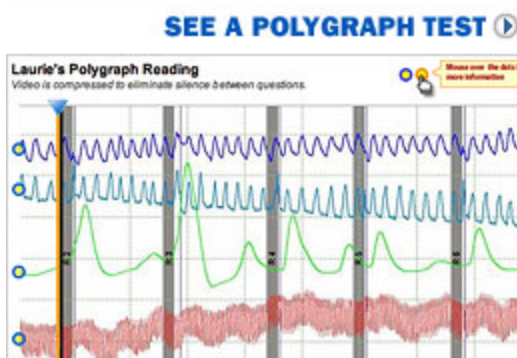
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*Klamath Falls, Ore.*

The lie detector won't die.

Polygraphy, the attempt to ferret out deception by monitoring changes in subjects' breathing, sweating or pulse, has long been derided as "voodoo science." Confessions made under polygraph aren't admitted as evidence in a vast majority of U.S. courts without the consent of the accused. The National Academy of Sciences says the technology isn't accurate enough to be used for employee security screening.

Yet polygraph use is at the highest level in two decades. Government agencies from local police departments to the CIA are increasingly using the technology for job interviews. In U.S. courts lately, judges have expanded the instances in which polygraph testing is mandated or admitted as evidence.



In law enforcement, this lie-detector paradox is clearly on display. Polygraphy is a centerpiece in an expanding range of parole and probation programs that are designed to dissuade sex offenders and other felons from committing more crimes.

The recent experience of convicted gay pedophile Paul Duncan shows the polygraph's contradictions and, its proponents argue, its promise. Last November, as part of a program in this southern Oregon town to monitor paroled sex offenders, Mr. Duncan sat in a small windowless room in a corrections center with polygraph sensors on his palm, chest, stomach and arm. Under the program, a parolee who fails the test, or admits to parole violations under the threat of a test, can be sent back to prison.

The machine's operator asked: "Have you had sexual contact with a minor during the last six months?"

Mr. Duncan said he hadn't. The polygrapher judged him to be lying. Mr. Duncan was sent to jail for 15 days.

In an interview after his release, the 33-year-old Mr. Duncan said reality had been more complicated. Mr. Duncan said he hadn't, in fact, had contact with a minor. But he admitted he had violated his parole in another way -- viewing online pornographic photos



**Paul Duncan**

of young males, an activity he says had sparked his past pedophilic episodes. Mr. Duncan says he believes that while the polygraph got the specifics wrong, it revealed a broader truth: His conscience was guilty.

"I didn't disclose my deviant fantasies -- and I deserved to fail," Mr. Duncan said of the test. "Don't believe anyone who tells you polygraph doesn't work."

Mr. Duncan's unusual endorsement is consistent with those provided by other paroled felons. In interviews with *The Wall Street Journal*, a dozen convicted sex offenders in Klamath Falls and Denver, Colo., said lie-detector sessions exposed their parole violations. More importantly, they say, the threat of upcoming tests serves as a deterrent to future crimes. Polygraph proponents argue that this is a benefit the ongoing polygraphy debate misses: The question shouldn't be whether the technology is always accurate, they say, but whether it is useful.

Polygraphs have long been used as a tool to keep sex offenders from relapsing, typically as part of maintenance programs that combine polygraphy with group therapy and parole-officer supervision. Today, a majority of jurisdictions use such programs for convicted sex offenders. Now, post-conviction polygraphy appears poised to spread: Probation officers have recently started deploying lie detectors in programs tailored to domestic-abuse and drunk-driving offenders, as well.

Last July, Klamath Falls expanded its sex-offender program to cover domestic-violence offenders. Two East Texas counties, Van Zandt and Wood, recently began monitoring drug and alcohol offenders with lie detectors, and polygraphy has also been used in monitoring drug and alcohol offenders in Dallas and Houston.

Eric Holden, a psychologist and Dallas polygraph examiner, says that as courts become familiar with how lie detectors are used with sex offenders, the tests will be increasingly applied to other offenders. Polygraph testing "will become a standard for supervising probationers of all kinds," says Mr. Holden, who was one of the first to use polygraphy with sex offenders in the early 1980s.

That tracks the lie detector's expanding use overall. The number of federal polygraph programs has grown 53% in the past decade, according to the Defense Academy of Credibility Assessment, which trains polygraph examiners for the government. There are roughly 5,000 polygraph examiners in the U.S., conducting some 1.6 million tests a year -- both up about 50% from a decade ago, estimates the industry's largest trade group, the American Polygraph Association. This year, APA membership reached its highest level since 1988, when Congress outlawed pre-employment lie-detector testing by most nongovernmental employers.

### **Unlicensed Operators**

Critics remain vocal. The idea behind polygraphy is that physiological changes often accompany lying. But subjects can fool the machine, detractors say. While subjects are

supposed to sit still to ensure an accurate reading, some may try to distort results by squeezing muscles in the buttocks, for example, or lightly biting the tongue. Precise polygraphy also depends on the ability of the machine's operator to formulate questions and analyze results; nearly half of U.S. states, including California, don't require examiners to be licensed.

Even with trained polygraphers, the technology fails to detect those telling lies, or wrongly implicates those telling the truth, about 10% of the time, according to field studies reviewed by the National Academy of Sciences. Such reliability levels are too low for many uses. In making employment decisions about thousands of people, for example, lie detectors could wrongly implicate hundreds of them, the academy wrote in a 2003 study. Polygraphy performs "well above chance, though well below perfection," the study concluded.

High-profile cases have spotlighted these imperfections. Polygraph testing failed to raise suspicions about Aldrich Ames, the former CIA agent who spied for the Soviets. The Federal Bureau of Investigations' interpretation of Los Alamos scientist Wen Ho Lee's exam results wrongly implicated him of being an agent for China.

Proponents say accuracy rates have improved. Increasingly, hand-scoring by examiners has been replaced by computerized algorithms that proponents say filter out human errors and biases. Examiners have also tried to counter polygraph-foiling techniques, employing, for example, what they call "butt pads" to detect muscle squeezing.

When it comes to dissuading released offenders from relapsing, polygraphy is superior to other methods, adherents say. It beats self-reporting -- simply asking parolees whether they've violated their parole terms -- a method previously employed by many jurisdictions that have switched over to post-conviction polygraphy.

## **Eighty Offenders**

In Klamath Falls, a town of 20,000 people and the seat of Oregon's mountainous Klamath County, some 80 convicted sex offenders are required to attend weekly therapy sessions and probation-officer meetings. They're also required to submit to lie-detector testing. Initially, they undergo an extensive screening of their sexual history, meant to provide a baseline of behaviors and flag activities that tend to provoke deviant behavior. Offenders also undergo so-called maintenance polygraphs at least every six months.

Klamath Falls's corrections office requires the offenders to pay \$200 for the sexual-history exam and \$150 apiece for maintenance tests. Some money is available for those who can't afford to pay.

Michael Collier, a convicted offender in Klamath Falls, says the polygraph pushed him to admit what he wouldn't otherwise have disclosed. Imprisoned in 1999 for sexually assaulting a young female cousin, Mr. Collier was released in 2006. Afterward, he submitted to the mandatory sexual-history exam.

Mr. Collier says he "failed miserably" twice. Because flunked polygraphs are regarded as noncompliance with treatment, a parole violation, Mr. Collier was ordered to serve 68 days in the county jail. After his release, he admitted he had withheld information during the tests: He had been drinking alcohol and had been in the home of a woman with young children, both parole violations. (Oregon grants offenders immunity from prosecution for these kinds of confessions.)

Mr. Collier's experience isn't unusual, according to a 2000 survey conducted by the Colorado Division of Criminal Justice for the National Institute of Justice. In a study of 180 convicted sex offenders in three states, its authors determined that the subjects confessed to more crimes, and a wider variety of offenses, under polygraph than they otherwise would have. Ten percent admitted to having male victims before they took a post-conviction polygraph exam. After the polygraph exam, 36% admitted to having male victims.

### **Hands-Off Behaviors**

The study also suggests that polygraphs can help reveal activities that could lead to relapse. In pre-polygraph questioning, 3% of offenders disclosed so-called hands-off behaviors -- including exhibitionism, voyeurism, placing obscene phone calls and viewing pornography on the Internet -- that for some offenders often precede assaults. Under the polygraph, more than 10 times as many offenders -- 35% -- disclosed hands-off offenses.

The report's lead author, Kim English, says that without the polygraph, therapists and probation officers might falsely conclude a group of offenders presented a relatively low risk to the community. "People will divulge victims and behaviors they would otherwise withhold," Ms. English says. "With polygraph, they know they're going to be found out."

Lawyers for sex offenders have argued that subjecting a suspect to such polygraph tests violates the U.S. Constitution's protection against self-incrimination. Dozens of federal and state courts, however, have ruled that post-conviction tests don't violate these Fifth Amendment rights. Polygraph testing "produces an incentive to tell the truth, and thereby advances the sentencing goals," the 2nd U.S. Circuit Court of Appeals in Manhattan said in a 2006 ruling.

### **The First Polygraph**

Polygraphy dates back almost a century. William Moulton Marston -- a Harvard psychologist and lawyer better known for creating the "Wonder Woman" cartoon character -- published a paper in 1917 that argued that deception could be detected by measuring systolic blood pressure. In the 1920s, John Larson, a police officer in Berkeley, Calif., adapted Mr. Marston's method to the interrogation of criminal suspects, building a device that measured blood pressure and breathing patterns. His colleague Leonarde Keeler updated the design, wringing confessions from criminals with a

mechanical box that also measured palm sweat and pulse rate. Mr. Keeler called it a polygraph, a device that records multiple measurements.

The basic idea has changed little. Polygraphs now typically consist of a set of probes that feed into a laptop computer and use scoring based on computerized algorithms. Four manufacturers in the U.S. and Canada offer polygraphs that cost roughly \$7,000 to \$11,000.

Entrepreneurs are racing to develop alternatives. Functional magnetic resonance imaging, also called brain fingerprinting, uses MRI technology to detect areas of the brain that are said to be activated when a subject lies. Brain fingerprinting is only now being tested, and is currently too expensive for widespread use: Machines cost \$3 million or more, with single tests costing about \$10,000 each. For now, old-school polygraphs remain the standard.

In Klamath Falls, testing is conducted by Robert Lundell, a former Oregon state trooper who left the force in 1980 to attend polygraph school. He started conducting post-conviction testing in 1982 in Oregon, one of the first states to deploy lie detectors this way.



**Robert Lundell**

Mr. Lundell, who owns a polygraphy business in nearby Medford, Ore., typically spends three days a week with convicted sex and violence offenders in Klamath Falls. He works in a small, unadorned room, designed to minimize distractions. During a typical session, he conducts a pre-polygraph interview that runs about an hour. Then comes a brief polygraph segment, lasting about 10 minutes. It incorporates a handful of control questions, to which the responses are obvious or known, plus five or fewer "yes" or "no" questions. Next is a post-polygraph interview, where subjects may come clean on questions they failed.

Calling his work "40% science and 60% art," Mr. Lundell says the key to polygraphy is asking the right questions. Specific and unambiguous inquiries about past behavior, he says, are best. "Have you been alone in a home with any minors since your last test," he says, is preferable to "Have you done anything wrong in the last six months."

Mr. Lundell says he shares the information he gleans with David Robinson, the psychotherapist who treats the Klamath Falls offenders. "Polygraph verifies the information I already have or thought," Dr. Robinson says.

### **'An Eye Opener'**

Subjects are typically skeptical of the tests at first, say Mr. Lundell and offenders. But Mr. Lundell says polygraphs eventually become a strong deterrent. Simply knowing they will be tested, Mr. Lundell says, makes offenders less likely to commit new crimes.



Jose Villanueva

Jose Villanueva believed he could beat the machine. First arrested at age 15 for stealing a car, Mr. Villanueva had spent five years in a juvenile facility in California before graduating to what he terms "a life of crime" and illegal drug use. The married father of two from Klamath Falls took his first polygraph in 2005, after he pleaded guilty to having sex with a 15-year-old girl.

When asked in his initial polygraph whether he was engaging in behavior that violated his probation, he says he didn't confess his continued theft and drug use. He failed. In a second test three months later, Mr. Villanueva confessed his past criminal activities and said he'd discontinued them. He passed. "It was an eye opener," says Mr. Villanueva, now 35 years old. "If I wouldn't have had to take polygraphs, I'd be in prison now. I had to stop doing all my criminal activity to pass them."

It is possible that polygraphy is effective in such cases in part because offenders believe the technology works. "The value of the polygraph in eliciting true admissions and confessions is largely a function of an examinee's belief that attempts to deceive will be detected and will have high costs," the National Academy of Sciences said in its 2003 report. "Such beliefs are not necessarily dependent on the validity of the test."

Sean Morrison, a 25-year-old convicted of raping a college classmate in 2000, was one of eight sex offenders interviewed during a therapy session in Denver. The others declined to be identified. Mr. Morrison says that while he has completed treatment and is no longer on probation, he volunteers to attend weekly therapy sessions and take two polygraph exams a year. "They keep me honest," he says.

Vince Garner, first convicted in 1990 of an offense against his three-year-old daughter, also credits the polygraph with keeping him out of trouble.

For his 43rd birthday last November, Mr. Garner received a gift box from a family member. In it, according to Mr. Garner and Klamath Falls law-enforcement officials familiar with his case, were a handgun and a bag of crystal meth.

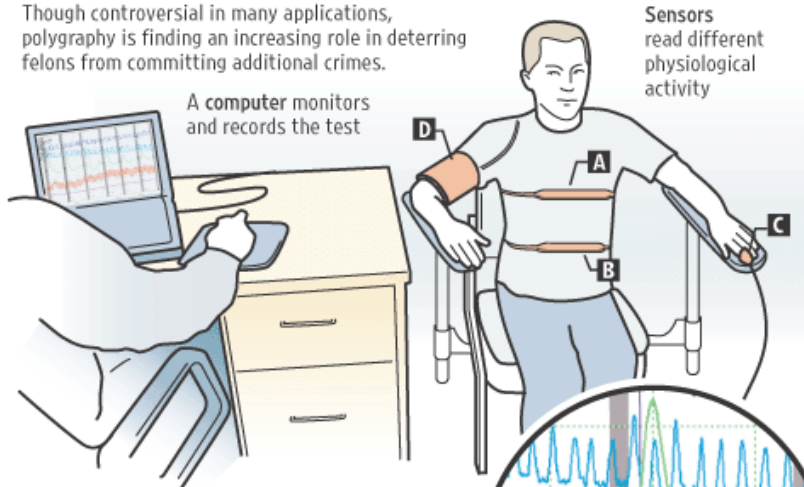
"I like handguns, so I picked it up and touched it," he says. Handling a gun was a parole violation. As he held the gun, Mr. Garner says, he realized he was scheduled for his twice-annual polygraph two days later. "I said, 'You've got to get this out of here,' " he recalls.

At the outset of his next exam, Mr. Garner told the Klamath Falls polygrapher, Mr. Lundell, what he'd done. "If you have even the smallest little detail you didn't tell, you're going to fail," says Mr. Garner, whose confession enabled him to pass that exam.

As it stands now, Mr. Garner says he will have to continue taking the tests until his probation ends in 2020. He adds: "I wouldn't keep taking polygraphs if I didn't have to."

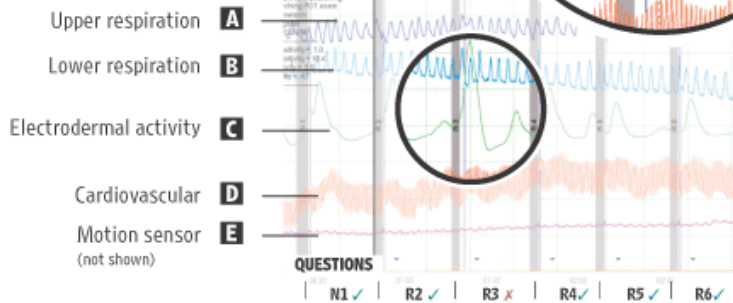
# Truth or Consequences

Though controversial in many applications, polygraphy is finding an increasing role in deterring felons from committing additional crimes.

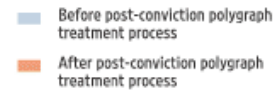


Questions that are relevant (R) to the case are mixed with neutral (N), or control, questions. Anomalies, like the green spike here, could indicate a lie. But anxiety may be mistaken for guilt. Results could also be skewed by, say, biting the tongue during control questions.

## Results



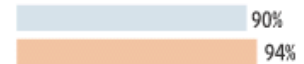
For many uses, critics say, lie-detector technology is too inaccurate. But used in treatment programs for convicted felons, it may act as a deterrent. A 180-person study by the Colorado Department of Public Safety found that sex offenders more readily admitted to crimes after taking a polygraph test.



### Had male victims



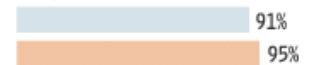
### Had female victims



### Had both male and female victims



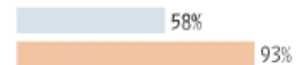
### Had juvenile victims



### Committed hands-off offense



### Have high risk behaviors



Sources: Polygraph examiner Raymond Nelson; Howstuffworks.com; Colorado Department of Public Safety (charts)