THE TRUTH THE WHOLE TRUTH AND NOTHING BUT

THIS STORY ON THE LONG AND COLORFUL HISTORY OF THE POLYGRAPH—AND OUR NERVE-RACKING, HEART-POUNDING, SWEAT-INDUCING EXPERIENCES WITH IT—IS WORTH YOUR TIME. WE SWEAR.

BY ADRIENNE FRANK AND MIKE UNGER

Before we even set foot in Forensic Polygraph Services Inc., Neil Myres promised to treat us like any other client. So when he retrieved us from the waiting room of his office, tucked into the first floor of a squat, brown brick building about 20 miles west of Detroit, there were no pleasantries.

Myres, who looks the part of a former cop because he is one, was all business. "Mr. Unger, please follow me." And two hours later: "Ms. Frank, come on back."

We were there to test Myres's assertion that, on the whole, we would have the same experience with polygraph. Not possible, we thought. One of us is relaxed, not easily rattled. The other is more skeptical—curious, but cautious. And one of us—not saying who—claimed to be a smidge more honest when Myres, a School of International Service alumnus, asked us to rank ourselves on a scale from 1 to 10.

Despite our differences, any apprehension each of us had about the test, and the answers we gave, Myres was right. Our experiences were nearly identical.

Because we told the truth.

In October 2014, attorney Michael Aleo's client walked into William Wesche's office in Suffield, Connecticut. Aleo, WCL/JD '06, did not send him there without trepidation. Wesche is a polygrapher, and as Aleo knew, lie detectors—as they're often called in pop culture—can be risky business. He had advised his client, a swim coach in Massachusetts accused of sexually assaulting a 13-year-old athlete, against taking the test, but the man was insistent.

A number of factors helped assuage Aleo's misgivings. First, since he had hired the polygrapher, the results were protected by attorney-client privilege. If they weren't favorable to the defense, presumably the report would never see the light of day. Also, no charges had yet been filed against the suspect. Aleo was preparing not for a trial in a court of law, but for a nongovernmental administrative hearing conducted by a national licensure organization that was seeking to strip the coach of his credentials.

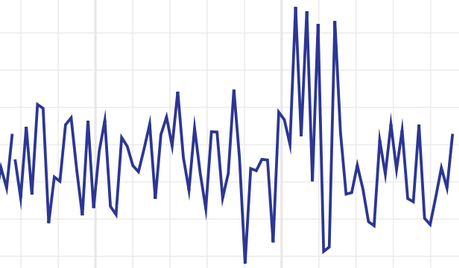
Still, the risks were substantial.

"Polygraphs are dangerous," Aleo said. "They can come back as false negative—or true negative—and then that information exists. The client might disclose it to a friend, or at a deposition. I had never actually had a client do one before."

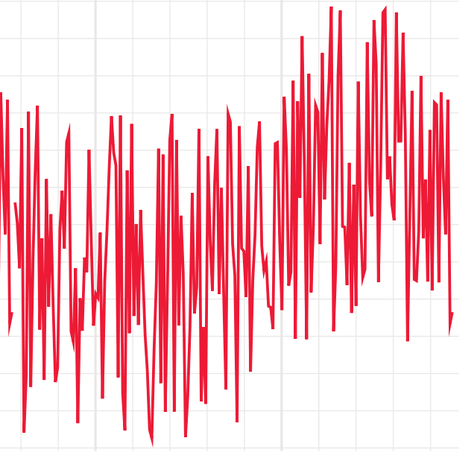
As the coach was hooked up to equipment that measures an array of physiological reactions, he undoubtedly was nervous. Polygraph is an intrinsically intrusive process that elicits anxiety, apprehension, and unease even if you have nothing to hide.

And it's worse if you do.

Since its invention roughly a century ago, polygraph has been a lightning rod of controversy, alternately hailed as a critical law enforcement and even national security tool while simultaneously derided as junk science. As famed defense attorney F. Lee Bailey, who credits his first big break to his knowledge of "The Box," put it in the forward to the book *The Lie Detector Man*, "In some ways the polygraph technique exercises a pervasive influence over legal matters, and in other respects it is branded a bastard child."



"WHATEVER SUCCESS I'VE HAD I ATTRIBUTE IN PART TO THE FACT THAT I DON'T SIT IN JUDGMENT. IT'S NOT MY PLACE. I HAVE JUST AS MANY REGRETS, FAILURES, WRONGS, AND SINS AS THE NEXT GUY."
–NEIL MYRES



So where does the truth lie? The search for it is one of life's most elusive pursuits. But in his case, Aleo thinks he found it. His client steadfastly maintained his innocence, and the results of his polygraph showed that, according to the examiner, he was 99 percent likely to be telling the truth. When Aleo submitted the test to the national licensure organization, which had revealed little about the evidence it had amassed, its reaction was swift.

"They produced a whole lot of stuff, including investigatory notes, that I had never seen before," he said. "Based on those notes, we were able to identify witnesses who contradicted things [the alleged victim] said. Had we not done the polygraph I don't think we would have gotten that."

The board ruled in Aleo's client's favor.

"Am I going to tell you that polygraph's all things to all people at all times about all issues?" said Myres, president of the Michigan Association of Polygraph Examiners. "No. It's not a magic eight ball, it's not an Ouija board, it's not black magic voodoo science, it's straight-up forensic psycho-physiological detection of deception, which is a whole lot of long words, but in a nutshell it's personal knowledge."

We don't know exactly when humans uttered their first words. The origin of speech is hotly debated among scientists, with estimates ranging wildly from 2 million to 50,000 years ago.

No matter the exact date, one thing's for certain: lying wasn't far behind. Call it bluffing, bullshitting, exaggerating, fabricating, fibbing, hyperbolizing—or citing an alternative fact. The one truth about lies is that, whether a whopper or a white lie, we all tell them. "Deception is one of the last bastions of sovereignty," Myres said.

But for as long as we've been lying, we've also been trying to tease out the truth.

In 1000 BC, the Chinese ordered accused liars to fill their mouths with a handful of dry rice. If it was still dry when they spit it out, they were guilty of fraud (the logic being that fear and anxiety are accompanied by decreased salivation). During the Middle Ages, the accused placed their hands in a cauldron of boiling water; if their skin was unscathed, they were deemed truthful.

It wasn't until the late nineteenth century that a string of Italian criminologists began looking to physiology—not fortuity—to detect deception. Chief among them was Cesare Lombroso, who developed a "glove" that measured changes in the subject's blood pressure, which were recorded on a chart. Although Lombroso was onto something, he gave up his research to focus on his theory of anthropological criminality, which contends that "born criminals" possess ape-like physical defects such as oversized ears and long arms.

A man named William Moulton Marston, whose own story took many twists and turns, including a stint at AU, picked up where Lombroso left off. A Harvard-trained psychologist and lawyer, Marston was commissioned by the US government to develop a method for questioning German prisoners during World War I. Although his systolic blood pressure test was only a slight improvement on Lombroso's glove, it would become the predecessor to the modern polygraph.

Marston landed a professorship at AU in 1922, teaching psycho-physiology and legal psychology. Fascinated by the theory that women are the more honest sex, he and his wife, Elizabeth, conducted a series of experiments in Hurst Hall that indicated men were less reliable jurors. "They were more careful, more conscientious, and gave much more impartial consideration to all the testimony than did the male jurors," he wrote.

His tenure at AU was brief. In 1923, Marston was fired after being arrested for fraud, although charges were later dropped. Like his time at AU, his appointments at Tufts, NYU, and Columbia never seemed to last more than a year. It's thought that his scandalous family life tarnished his reputation in academic circles. (Marston lived with both his wife and his mistress, Olive Byrne, Margaret Sanger's niece and a *Family Circle* columnist.)

Although the universities stopped calling, Marston was in demand as an expert witness. Ironically, the biggest case of his career was the one in which he was barred from testifying.

On November 25, 1920, James Frye shot and killed wealthy physician Robert Brown in the doctor's Washington, DC, home where he'd gathered with friends to celebrate Howard University's football victory. Seven months after the murder, when Frye was arrested on an unrelated robbery charge, he confessed to the killing. Shortly thereafter he withdrew his confession on the advice of his attorney, Richard Mattingly, a salesman by day and AU grad student by night. Marston was brought in to administer a polygraph; as he writes in his 1938 book, *The Lie Detector Test*: "No one could have been more surprised than myself to find that Frye's final story of innocence was entirely truthful!"

But weeks later, during Frye's trial, the judge prohibited Marston from testifying on the grounds that scientific lie detection was not reliable. Without Mattingly's star witness, Frye took the stand in his own defense—a major miscalculation. He was found guilty of second-degree murder and served 18 years at the Lorton Reformatory in Virginia.

Ultimately *Frye v. United States* (1923) was a huge setback for the lie detector's scientific legitimacy—a problem that continues to plague the polygraph nearly a century later.

Marston might've declared himself the "father of the polygraph," but it was only after August Vollmer adopted it as his pet project that it morphed into the technology used in police stations and government offices across the country today.

Despite dropping out of school in the sixth grade, Vollmer became one of the most influential figures in American policing. As chief of California's Berkeley Police Department he professionalized the force, recruiting college grads and requiring IQ tests. He was the first to put cops on bikes, in squad cars, and to equip those vehicles with a brand new technology: two-way radios. Vollmer also ushered in the era of forensic science.

As the roaring '20s exploded with organized crime, bootlegging, and police corruption, Vollmer believed science—not brute force—was the most effective tool in an officer's arsenal. Although it was bulky and prone to breakdowns, he saw potential in Marston's machine and enlisted one of his top cops, John Larson, to tweak it.

Larson, the first police officer in the country with a doctorate, debuted the second iteration of the polygraph—the cardio-pneumo psychogram—in 1921. That same year, he used the improved instrument, which monitored the subject's respiration, pulse, and skin conductivity, to help prove a man named William Hightower guilty of murdering a priest. The story made front-page news in the *San Francisco Call and Post*; under the headline "Psychological Test in Jail at Midnight Bares Hidden Mind," reporters regaled the contraption they dubbed "the lie detector." (Larson loathed the splashy moniker, as do professional polygraphers today.)

In 1923, Vollmer's protégé took on a pupil of his own. Leonarde Keeler was a psychology student, amateur magician, entrepreneur (he ran a snake "milking" farm, selling the venom for anti-bite serums), and Larson's foil. In his book *The Lie Detectors*, Northwestern University history professor Ken Alder calls Keeler and Larson "Vollmer's delinquent sons," each competing to control the future of the polygraph. It was a battle Keeler would ultimately win.

When Vollmer set eyes on Keeler's third-generation instrument, now called an emotograph, he said it looked like "a crazy conglomerate of wires, tubes, and old tomato cans." The machine was destroyed in a fire at Keeler's house in 1924; when it rose from the ashes, he renamed it the polygraph.

Keeler would patent the hardware, thereby controlling who could buy the polygraph (the FBI, which used it for criminal investigations and job screenings, was among his first customers) and casting himself as the primary expert witness in some of the country's most notorious cases. People often called Keeler—who showcased the machine at the 1933 Chicago World's Fair— the inventor of the polygraph, a mistake he never corrected. Incidentally, his adversary, Larson, opted for med school and slipped into a quiet life in Illinois, while Marston moved from criminal justice to the Justice League. Under the pseudonym Charles Moulton, he created Wonder Woman, who debuted in *All Star Comics No. 8* in December 1941.

Her weapon of choice? The golden lasso of truth.

In February 1935, Keeler and his polygraph finally got their day in court in the attempted murder trial of Tony Grignano and Cecil Loniello in Portage, Wisconsin. After administering a polygraph to both men, Keeler determined they were guilty. Pressed on the polygraph's accuracy, he pegged it at 75 percent.

After Grignano and Loniello were convicted, Keeler's confidence swelled. "[This] means that the findings of the lie detector are as acceptable in court as fingerprint testimony."

Not quite.

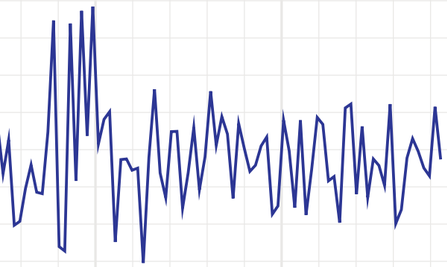
Eighty-two years after Keeler took the stand in the Badger State, polygraph evidence is banned in approximately 30 states according to Elizabeth Lippy, assistant director of the Stephen S. Weinstein Trial Advocacy Program at AU's Washington College of Law. Other states potentially allow polygraph evidence by stipulation if both the prosecution and the defense agree, and a few states allow it outright. New Mexico is the most liberal.

Why the skepticism? Fingerprint evidence is indisputable. It's hard science. The polygraph, of which there are two kinds—specific-issue, used in criminal investigations, and screening, typically multi-issue examinations used to vet law enforcement personnel and the intelligence community—is both an art and a science. The instrument doesn't measure lies; it measures changes in blood pressure, pulse, respiration and skin conductivity. Before Myres hooked each of us up he guaranteed us four things: respect, honesty, professionalism, and an accurate assessment. If an examiner doesn't deliver on those promises, or if he doesn't ask effective questions and properly interpret the physiological responses to the answers, that impacts the bottom line—reliability.

Manipulating polygraph results has been the subject of barroom banter—and now is a cottage online industry—for years. Google "how to beat a lie detector" and you'll get more than 1.5 million hits. Among the results is a nugget about Russell Tice, a former National Security Agency whistleblower who exposed the government's warrantless wiretapping of US citizens after 9/11. "Think of a warm summer night . . . or drinking a beer, whatever calms you. You're throwing them off," said Tice, who took more than a dozen polygraphs, according to *US News and World Report*. "The needle might nip a little [because you're lying], but not off the charts."

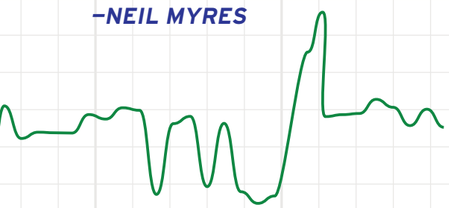
Even polygraph's strongest advocates concede it's not foolproof. Convicted KGB mole Aldrich Ames famously beat two polygraphs, as did Gary Ridgway, known as the Green River Killer.

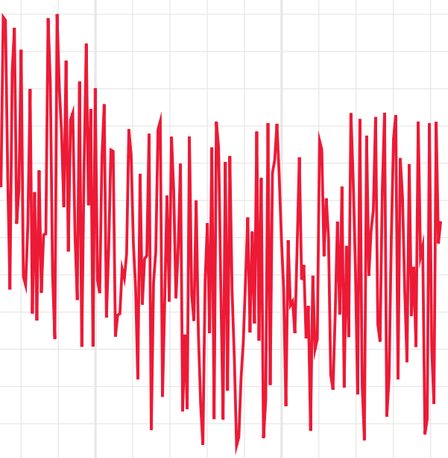
"There are anomalies. The only thing that is 100 percent is death, everything else is gray," Myres said. "[But] if I crack your knee with a rubber mallet you're going to get a reflex. I could tell you to keep it still and I'll give you a million bucks, but you're not keeping it still. That's physiological. Our central nervous system is split in half. We control the side that includes our words, so if we choose, we can be deceptive. But we can't control the autonomic side. Polygraphs are a blending of what you know and what you can't control."



"I DON'T CARE WHAT YOU'VE TOLD YOUR NEIGHBORS, YOUR PARENTS, YOUR SPOUSE, YOUR LAWYER, YOUR PRIEST, YOUR RABBI. FOR YOU TO HAVE SUCCESS TODAY, YOU HAVE TO BE 100 PERCENT HONEST. NOT 99.99 TO THE NTH DEGREE, BUT 100."

–NEIL MYRES





In a 2015 interview with NPR, Raymond Nelson, then president of the American Polygraph Association, said the test is more than 80 percent accurate. However, the National Academies of Sciences, Engineering, and Medicine's most recent study on polygraph opined that the federal government should stop relying on it for screening prospective or current employees to identify spies or other national security risks because the test results are unreliable. (That's advice the feds have not heeded: according to a 2013 McClatchy report, the government polygraphs about 70,000 people a year.)

The US Supreme Court grappled with the issue of polygraph admissibility in *United States v. Scheffer* (1998). A military court declared the exclusion of polygraph evidence a violation of the Sixth Amendment right to mount a defense. But the high court disagreed, stating, "A fundamental premise of our criminal justice system is that 'the jury is the lie detector.'" The use of a polygraph, they said, "is no more accurate than a coin flip."

Eighty-percent accurate or a 50-50 chance—which is it? We wanted to find out for ourselves.

The windowless room in which Myres conducts polygraphs is about the size of a suburban McMansion's master suite walk-in closet. The top half of the walls are painted burgundy, the bottom beige. Five recessed lights emit a harsh glow. Save for a large wooden desk and the chairs in which Myres and his subject sit, there is no other furniture.

Despite what you might've seen on *Homeland* or *The Americans*, polygraphers don't just dive into the actual exam. Pre-test queries about weight, criminal history, and drug use help examiners determine the subject's physical and mental fitness and enable them to gather details to persuade them to be forthcoming when the questions *really* get tough.

In order to replicate as authentic an experience as possible, Myres gave us each a specific-issue polygraph test separately. He had previously sent us scenarios: one of us was accused of rape and murder; the other, assault and battery of a police officer and possession of cocaine.

When he asked "As you sit in this chair right here, right now, who's the most important person in your life?" he wanted a name—a child, a partner, a parent, a friend—that he could evoke if he sensed hesitancy at any point throughout the exam. "Surely you taught your son to tell the truth," he might've said if we balked at a question. Or, "What if your mother was sitting here right now?"

His tone was neither sympathetic nor accusatory; rather, it was overridingly businesslike. He started his private polygraph firm in 2006, though he administered tests before that during his time with the Dearborn Police Department. Today he conducts exams primarily for defense attorneys seeking a confidential vetting of their client.

The environment itself, although far from warm, isn't intimidating; there's no sign of the bulky mechanical paper and ink machines most of us picture when we think of a polygraph machine. The Lafayette Instrument LX5000 is a computerized system that resembles a common router. His work station looks as unremarkable as an accountant's.

What came next might be surprising: as is standard practice, he gave us the questions before the test.

"Lying is deliberate," he explained. "It's not the same as just being wrong. The reason we're going to review everything is because I want you to know what you've got to lie about, or what you don't have to lie about."

While each of us knows the worst crime we've committed is speeding (okay, that might be a little white lie), the thought of an instrument entering the most safeguarded part of a human being—our minds—is unnerving, to say the least. What if jitters trigger a false positive? What if the equipment malfunctions? What if the examiner interprets the results wrong, or worse, just has it out for us?

Such feelings are normal, Myres assured us, and irrelevant to the test. Be that as it may, pulses quickened as he fit two metal chains snugly around the upper chest and the stomach, which monitor both abdominal and thoracic respiration. Next, a blood pressure cuff was Velcroed to the biceps. Though Myres only applied about a quarter of the pressure a doctor does, by the end of the test it felt far more uncomfortable because it was on for much longer. Black plastic monitors, which measure the heart rate and electrodermal activity (sweat), were attached to the ring, middle, and pointer fingers of the left hand.

As Myres hooked us up, he asked how we were feeling. Even though it was just a magazine story and not our freedom that hung in the balance, we both admitted that we were nervous. Anything but may have raised a red flag, he said.

Feet flat on the floor, eyes straight ahead, breathe normally, Myres instructed.

"We're going to do this several times" he said. "Each time will be three or four minutes long. The first time I just want you getting used to hearing how I'm going to ask you the questions, and to hearing yourself answer the questions."

And with that, each of our first—and hopefully last—polygraphs began.

"Is this the month of December?"

"Regarding your actions on the night of your arrest, do you intend to answer each question truthfully?"

"Not connected with this case, have you ever committed a crime and gotten away with it?"

Between each of the questions, Myres paused for about 25 seconds—which seemed like an eternity—to assess the physiological responses to them. Although in the back of each of our minds we knew this wasn't real, we both felt compelled by him, and by our Most Important People, to share the good, the bad, and the ugly. Answering the questions honestly was a nerve-racking exercise. The room wasn't hot, but one of us sweated so incessantly the finger monitors had to be removed and wiped clean. The other fidgeted so much the movements were recorded by sensors in the padded examination chair.

After running through the slate of 10 questions the first time, Myres conducted a little exercise. He asked each of us to choose a number between one and seven (coincidentally, we both picked four), then instructed us to lie when he asked about it.

"Is one your number?"

"Is two your number?"

"Is three your number?"

In the seconds before he arrived at the question that would elicit a lie, each of us could feel subtle changes in our bodies. Despite the fact that we knew this fib was insignificant, stomachs fluttered and mouths dried. Neither of our minds could stop racing.

Later, when Myres reviewed the results of our tests with us in his conference room while sipping a glass of wine and listening to jazz (a decidedly more relaxed atmosphere), we were struck by the results. Polygraph charts look like rolling hills of squiggly red and blue, but in the middle of each of ours, the lines suddenly shot up like jagged mountains. This was the moment just *before* we each lied about our number; the mere anticipation of lying had given us away.

Even though Myres's questions and our answers were of no consequence, the experience was isolating and draining. After 90 minutes in his office, each of us was quite ready to leave the room. We couldn't help but wonder: What if we *were* facing prison time or the prospect of never holding our Most Important People again? What if those 10 questions determined the course of the rest of our lives?

For Floyd Dent they did.

On January 28, 2015, Dent was pulled over in the Detroit suburb of Inkster. Officers claimed that the retired autoworker, then 57, jumped out of his car and threatened to kill them. Police put Dent in a chokehold, delivered 16 punches to his head, and Tasered him three times; they also claimed to have found crack cocaine in his vehicle. Dashcam footage confirmed that police tussled with Dent, but the officers' mics were turned off so there was no recording of the alleged threat. The details of Dent's arrest, for which he faced up to 10 years behind bars, mirrored one of the scenarios Myres assigned to us.

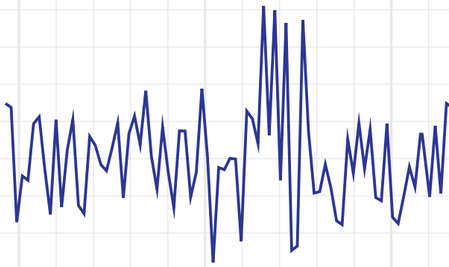
Dent admitted to running a traffic signal—the violation that initiated the stop—but denied the other charges against him: assault and battery of a police officer and possession of cocaine. His lawyer enlisted Myres's services to prove it.

On two occasions Dent sat in the same chair each of us did, stared at the same burgundy and beige walls, and answered many of the same questions about the crimes of which he was accused. His answer to each one was the same: no.

Dent aced the polygraph.

"Black man beaten by Mich. Police . . . Passes Lie Detector Test," NBC.com proclaimed in March 2015. Dent prevailed in the court of public opinion; based on the video footage, a judge dropped all charges and he was awarded $1.4 million in damages from the city of Inkster. "I want people to remember me as an honest person—a person who told the truth," he said.

Sometimes, it seems, the truth can set you free.



"I THINK BOTH OF US WOULD CONCEDE THAT I PROBABLY KNOW MORE ABOUT YOU THAN MOST STRANGERS AFTER 15 MINUTES BECAUSE I GOT TO ASK YOU ALL THESE QUESTIONS."

–NEIL MYRES