

The Federal Lawyer in Cyberia

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Truth Detection Via Polygraphs and fMRIs

I am not infallible, but I am going to tell you the truth, as I know it. They work pretty darn well, but they are not infallible either—lie detectors, that is.

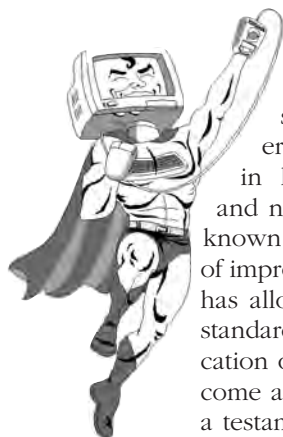
To Polygraph or Not to Polygraph; That Is the Question

I have used lie detectors on a number of occasions in my civil practice. Sometimes I have broken cases open with them, getting the kind of reversal of an alibi to which one is accustomed only when watching old “Perry Mason” episodes on television. I’ve had several witnesses come out of the room where a polygraph test had just been given and flat out “confess” that they’d been lying to me, even before I got the “verdict” from the polygrapher. I had one case in which the subject “confessed” as the polygrapher began attaching the sensors to his body.

On the other hand, sometimes I am sure (based on the “gut test”) that the subject is telling the truth when my polygraph expert assures me that the person is lying. My witness continues to assert that the story is true, and sometimes I continue to believe him or her, trusting my gut more than the machine.

If you hire a polygrapher, hire a good one. As a former assistant U.S. attorney, I generally will not hire anyone who is not an ex-FBI agent.

If you want to believe your polygrapher’s results, check out www.polygraph.org, the Web site for the American Polygraph Association. The message from the organization’s president says:



The American Polygraph Association (APA) was organized in 1966 as a coalition of polygraph professionals, researchers, and instrumentation developers. APA members share a mutual interest in helping protect citizens, communities, and nations by using the most valid methods known for credibility assessment. A steady pace of improvements in techniques and technologies has allowed the polygraph to remain the gold standard among the methods available for verification of truthfulness. While other technologies come and go, the longevity of the polygraph is a testament to its power to uncover those who would deceive. Thirty years of scientific research has confirmed that there is no other approach to credibility assessment that competes with the polygraph for validity, flexibility, and reliability.

On the other hand, if you are a skeptic, visit www.antipolygraph.org, where it states the following:

The simplistic methodology used in polygraph testing has no grounding in the scientific method: it is no more scientific than astrology or tarot cards. Government agencies value it because people who don’t realize it’s a fraud sometimes make damaging admissions. But as a result of reliance on this voodoo science, the truthful are often falsely branded as liars while the deceptive pass through.

Perversely, the “test” is inherently biased against the truthful, because the more honestly one answers the “control” questions, and as a consequence feels less stress when answering them, the more likely one is to fail. Conversely, liars can beat the test by covertly augmenting their physiological reactions to the “control” questions. This can be done, for example, by doing mental arithmetic, thinking exciting thoughts, altering one’s breathing pattern, or simply biting the side of the tongue. Truthful persons can also use these techniques to protect themselves against the risk of a false positive outcome. Although polygraphers frequently claim they can detect such countermeasures, no polygrapher has ever demonstrated any ability to do so, and peer-reviewed research suggests that they can’t.

The Battle Rages: Science or Alchemy?

There’s a common belief that federal courts do not admit polygraph results in trials—ever. That is, well, not true. Actually, these days, admissibility varies by jurisdiction. No matter when or where polygraph results are permissible, they are always subject to the sound discretion of the trial judge. Neither the U.S. Code nor the Federal Rules of Evidence contain a specific provision addressing the admissibility of the results of polygraph examinations.

Evidence is most commonly admitted during a trial when both sides have agreed to its admissibility before the examination is given, under terms of a stipulation. And, according to the online source, Wikipedia, in 2007, polygraph results were admitted by stipulation in courts in 19 states. Some jurisdictions—both state and federal—have absolute bans on the admissibility of polygraph results. Even the suggestion, in the presence of a jury, that a polygraph examination has occurred can cause a mistrial in those jurisdictions.

Meanwhile, the U.S. Supreme Court has yet to weigh in fully on the issue of the admissibility of polygraph results. The Court has said, in passing, that polygraph examinations raise the issue of Fifth Amendment protection when used in a criminal context. *Schmerber v. California*, 384 U.S. 757 (1966). The Court has held in a criminal case that a *Miranda* warning before a polygraph examination was sufficient to allow admissibility of a confession that followed such an examination. *Wyrick v. Fields*, 459 U.S. 42, 47–48 (1982).

Of course, as any trial lawyer knows, everything about expert testimony changed in 1993, when the Supreme Court removed the restrictive requirements imposed by the 1923 *Frye* decision on scientific evidence and said that Federal Rule of Evidence 702 requirements were a sufficient protection if properly applied. *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993). *Daubert* did not involve lie detection per se as an issue, but the ruling had a profound effect on the admissibility of polygraph results as evidence in some sectors of the judicial world.

In this post-*Daubert* world, some circuits have developed specific rules for admissibility; for example, the Eleventh Circuit has specified what must be done for polygraph results to be admitted over objection or under stipulation.

Be sure you know what rules of the road will apply in your case before you proceed. If you are contemplating administering a polygraph test on a client's employee, there may be stringent restrictions on its use under state laws relating to privacy. There may even be sanctions for attempting to administer the test. Be sure you don't run afoul of these rules either.

Is an fMRI a Better Choice?

We've all heard of MRIs—magnetic resonance imaging tests—that help diagnosticians in their work. Now a form of MRI called a “functional MRI” is being touted to lawyers as embodying the “next generation” of lie detection technology.

A polygraph measures the secondary effects of lying. An fMRI looks directly at the brain as it functions in real time. The theory is that different parts of the brain control different functions. One part is more active when you're telling the truth. Another is more active when you're lying. As explained by Margaret Talbot, writing in the July 12, 2007, issue of *The New Yorker* magazine,

Unlike MRIs, which capture a static image, an fMRI makes a series of scans that show changes in the flow of oxygenated blood preceding neural events. The brain needs oxygen to perform mental tasks, so a rise in the level of oxygenated blood in one part of the brain can indicate cognitive activity there. (Blood has different magnetic properties when it is oxygenated, which is why it is helpful to have a machine that is essentially a big magnet.) Brain-scan lie detection is

predicated on the idea that lying requires more cognitive effort, and therefore more oxygenated blood, than truth-telling.

Ms. Talbot's article comes down on the side of skepticism and takes a wait-and-see attitude.

Meanwhile, two companies, No Lie MRI and Cephos, are not in a wait-and-see mode. They are racing to refine fMRI lie detection technology so that it eventually can be admitted in court and commercially marketed.

The Cephos Corporation's site (www.cephoscorp.com) states the following:

Cephos is the world leader in brain imaging deception research and is the only company to have published results in scientific journals. Our work has received national acclaim in the *New York Times*, *The New Yorker*, *Wired Magazine*, *Business Week*, *Time*, the Discovery Channel show “Mythbusters,” the “ABC Evening News” and the Associated Press. Moreover, scientific and legal scholars have invited Cephos to present to the Committee on Science, Technology and Law at the National Academies of Science, to state judges at the National Judicial College and to Federal judges at the Sandra Day O'Connor Federal Courthouse.

Meanwhile, the No Lie site (www.noliemri.com) provides the following statement:

No Lie MRI, Inc. provides unbiased methods for the detection of deception and other information stored in the brain. The technology used by No Lie MRI represents the first and only direct measure of truth verification and lie detection in human history! No Lie MRI uses techniques that ... [b]ypass conscious cognitive processing ... [and] [m]easure the activity of the central nervous system (brain and spinal cord) rather than the peripheral nervous system (as polygraph testing does).

Conclusion

We may be headed toward a “brave new world,” where the truth-finding function of juries is forever altered. The bioethical and legal concerns raised by all forms of lie detection raise multiple issues that go far beyond the scope that a brief column like this one can hope to cover. Stay tuned. Cyberia is a very interesting place, isn't it? **TFL**

Michael J. Tonsing practices law in San Francisco. He is a member of the FBA editorial board and has served on the Executive Committee of Law Practice Management and Technology Section of the State Bar of California. He also mentors less-experienced litigators by serving as a “second chair” to their trials (www.Your-Second-Chair.com). He can be reached at mtonsing@lawyer.com.