

## Polygraph Critique

**"Monitor on Psychology - The polygraph in doubt".** *American Psychological Association.* (July, 2004). Vol 35, No. 7. Print version: page 71.  
[www.apa.org/monitor/julaug04/polygraph.html](http://www.apa.org/monitor/julaug04/polygraph.html).

### Summary:

Psychologists have repeatedly told U.S. courts that polygraph tests-popularly thought to reveal a person's truthfulness through assessment of physiological states-are theoretically unsound and not valid in assessing honesty. Explains psychologist Leonard Saxe, PhD, a professor and polygraph researcher at Brandeis University, "*Because of the nature of deception, there is no good way to validate the test for making judgments about criminal behavior. There is no unique physiological reaction to deception.*" Recent formal documentation of this comes from a National Research Council (NRC) blue ribbon panel appointed a year ago to examine the scientific validity of the polygraph for national security. Many psychologists served on the panel, including Paul Ekman, PhD, a longtime researcher of deception detection (see main article). The panel's report to NRC found no evidence of polygraph validity. And theirs isn't the scientific report to cast doubt on the measure. In fact, due to such skepticism, the U.S. Supreme Court decided in a 1998 case involving military courts that a defendant did not have a right to introduce polygraph evidence. The Supreme Court decision cited scientific first judgments about the accuracy of the test. This decision, along with a 1988 law banning the use of polygraph tests of most employees, has led to a marked reduction in reliance on polygraph testing, notes Saxe. The ruling helped to dampen the tests' use in state and federal court, where the results are rarely accepted as evidence.

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**"The Polygraph and Lie Detection."** *United States National Research Council. Board on Behavioral, Cognitive, and Sensory Sciences and Education (BCSSE) and Committee on National Statistics (CNSTAT),* (2003). (Chapter 8: Conclusions and Recommendations, page 212-215) <http://news.bbc.co.uk/1/hi/magazine/8153539.stm>

**Source of Evidence:** The evidence for polygraph validity lies primarily in atheoretical, empirical studies showing associations between summary scores derived from polygraph measures and independent indicators of truth or deception, in short, in studies that estimate the accuracy of polygraph tests. Accuracy-the ability to distinguish deceptive from truthful individuals or responses-is an empirical property of a test procedure administered under specific conditions and with specific examinees. Consequently, it may vary with a number of factors, such as the population of examinees, characteristics of individual examinees or examiners, relationships established in the interview, testing methods, and the use of countermeasures. Despite efforts to create standardized polygraph testing procedures, each test with each individual has significant unique features.

**Realism of Evidence:** The research on polygraph accuracy fails in important ways to reflect critical aspects of field polygraph testing, even for specific-incident investigation. In the laboratory studies focused on specific incidents using mock crimes, the consequences associated with lying or being judged deceptive almost never mirror the seriousness of those in real-world settings in which the polygraph is used. Polygraph practitioners claim that such studies underestimate the accuracy of the polygraph for motivated examinees, but we have found neither a compelling theoretical rationale nor a clear base of empirical evidence to support this claim; in our judgment, these studies overestimate accuracy. Virtually all the observational field studies

of the polygraph have been focused on specific incidents and have been plagued by measurement biases that favor over-estimation of accuracy, such as examiner contamination, as well as biases created by the lack of a clear and independent measure of truth.

**Overestimation:** For the reasons cited, we believe that estimates of polygraph accuracy from existing research overestimate accuracy in actual practice, even for specific-incident investigations. The evidence is insufficient to allow a quantitative estimate of the size of the overestimate.

**Estimate of Accuracy:** Notwithstanding the limitations of the quality of the empirical research and the limited ability to generalize to real-world settings, we conclude that in populations of examinees such as those represented in the polygraph research literature, untrained in countermeasures, specific-incident polygraph tests for event-specific investigations can discriminate lying from truth telling at rates well above chance, though well below perfection.

Accuracy may be highly variable across situations. The evidence does not allow any precise quantitative estimate of polygraph accuracy or provide confidence that accuracy is stable across personality types, sociodemographic groups, psychological and medical conditions, examiner and examinee expectancies, or ways of administering the test and selecting questions. In particular, the evidence does not provide confidence that polygraph accuracy is robust against potential countermeasures. There is essentially no evidence on the incremental validity of polygraph testing, that is, its ability to add predictive value to that which can be achieved by other methods.

**Utility:** Polygraph examinations may have utility to the extent that they can elicit admissions and confessions, deter undesired activity, and instill public confidence. However, such utility is separate from polygraph validity. There is substantial anecdotal evidence that admissions and confessions occur in polygraph examinations, but no direct scientific evidence assessing the utility of the polygraph. Indirect evidence supports the idea that a technique will exhibit utility effects if examinees and the public believe that there is a high likelihood of a deceptive person being detected and that the costs of being judged deceptive are substantial. Any technique about which people hold such beliefs is likely to exhibit utility, whether or not it is valid. For example, there is no evidence to suggest that admissions and confessions occur more readily with the polygraph than with a bogus pipeline - an interrogation accompanying the use of an inert machine that the examinee believes to be a polygraph. In the long run, evidence that a technique lacks validity will surely undercut its utility.

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Meijer, EH; Verschuere, B; Merckelbach, HL; Crombez, G (2008 Oct-Nov). "Sex offender management using the polygraph: a critical review." *International journal of law and psychiatry* 31 (5): 423-9.

**Abstract:**

Reducing recidivism is a central goal in the treatment of sex offenders. In Europe, there is an increased interest in using the polygraph ("lie detector") as a tool in the treatment and risk assessment of convicted sex offenders. This interest originated from optimistic reports by American clinicians who argued that polygraph testing in the treatment of sex offenders is akin to urine analysis in the treatment of drug addiction. In this article, we critically examine the validity and utility of post-conviction sex offender polygraph testing. Our review shows that the available evidence for the claims about the clinical potential of polygraph tests is weak, if not

absent. We conclude that portraying post-conviction polygraph testing as analogous to urine analysis is inaccurate, misleading, and ultimately, risky.

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Rosky, JW (2012 Aug 22). "The (F)utility of Post-Conviction Polygraph Testing.". *Sexual abuse: a journal of research and treatment*.

**Abstract:**

The apparent utility of the polygraph to work both as a treatment and supervision aid and as a deterrent for future offending is cited as ample justification for its use. This article examines these claims to demonstrate that although post-conviction polygraph testing may have some utility by increasing disclosures of prior offending and, within specific cases, admissions of treatment and supervision violations, the limited evidence accumulated thus far does not adequately ascertain its accuracy nor support its efficacy or effectiveness as a deterrent. The article concludes with recommendations for creating a real evidentiary base beyond polygraph testing's apparent ability to elicit more information from offenders to evidence that can determine whether it is efficacious and effective in reducing criminality and deviance.

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William G. Iacono (2001). "Forensic "Lie Detection": Procedures Without Scientific Basis" (PDF). *Journal of Forensic Psychology Practice*.

**Abstract:**

This paper provides a critical overview of the scientific status of the control question test (CQT), the type of polygraph test most likely to be used in forensic settings. The CQT is based on an implausible set of assumptions that makes it biased against innocent individuals and easy for guilty persons to defeat using countermeasures. Due to serious methodological problems that characterize research on CQT validity, it is not possible to use the existing literature to provide a satisfactory error rate estimate. Scientists, including members of the Society for Psychophysiological Research and APA Fellows, hold negative views about the CQT. They do not believe that it is based on sound theory, that it has adequate psychometric properties, or that it should be used as evidence in court.

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Grubin, D., & Madsen, L. (2005). Lie detection and the polygraph: A historical review. *Journal of Forensic Psychiatry and Psychology*, 16(2), 357-369.

**Abstract:**

The search for a reliable means to detect deception has a long history. Because of the poor ability of most people, even professional lie catchers, to identify when someone is lying, a wide range of techniques have been developed to assist in lie detection. The link between physiological arousal and deception has been recognised for centuries, and in the nineteenth century scientists began to experiment with instruments that could measure this. The modern polygraph, which recorded changes in a number of physiological parameters, was developed in the early 1920s, with instruments designed to record changes in respiration, cardiovascular activity and sweat gland activity (forerunners to the modern polygraph) appearing in the 1930s. Since then the use of the polygraph as a lie detector has been associated with controversy, with advocates and opponents exchanging blows often based on partial facts and full opinions. This article reviews the development of polygraphy, focusing on its emergence in the United States and to some

extent in England, but also considers its role in newer applications, particularly sex offender treatment and supervision.

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Kokish, Ron, Levenson, Jill S., Blasingame, Gerry D., (Apr. 2005). Post-conviction sex offender polygraph examination: Client-reported perceptions of utility and accuracy. *Sexual Abuse: Journal of Research and Treatment*, Vol 17(2), pp. 211-221.

**Abstract:**

Post-conviction polygraph testing of adult sex offenders in treatment has been a somewhat controversial subject. This study (n = 95 participants who took 333 polygraph tests) explored how sexual offenders enrolled in outpatient treatment programs perceived their polygraph experience. Participants reported a relatively low incidence of false indications of both deception (22 of 333 tests) and truthfulness (11 of 333) tests, suggesting that clients agreed with examiners' opinions 90% of the time. The majority of clients reported that polygraph testing was a helpful part of treatment. Finally, about 5% of participants reported that they responded to allegedly inaccurate accusations of deception by admitting to things they had not done. The data offer encouragement for continued but cautious use of polygraphs by sex offender treatment programs.

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Kokish, Ron, (2003). The current role of post-conviction sex offender polygraph testing in sex offender treatment. *Journal of Child Sexual Abuse: Research, Treatment, & Program Innovations for Victims, Survivors, & Offenders*, Vol 12(3-4), 2003. Special issue: Identifying and Treating Sex Offenders: Current Approaches, Research, and Techniques. pp. 175-194.

**Abstract:**

**Polygraph testing** is becoming increasingly important in sex offender treatment. **Polygraph** advocates cite dramatic increases in historical disclosures that presumably allow more precise targeting of treatment interventions, earlier detection of risky behaviors that often lead to new offenses, and improved treatment and supervision compliance. Based on this, they believe the procedure supports desirable behavior that continues to various degrees after treatment and supervision end. Opponents cite ethical problems related to inaccurate results, unproven accuracy rates, and the risk that examinees may be coerced into making false admissions. To counter these criticisms, proponents have developed standards, best practices, and examiner training and certification programs intended to reduce error rates and address ethical issues. Opponents argue that these measures have not been tested and that empirically established error rates and best practices may not be possible for a variety of reasons. This article reviews the current situation, leaving readers to decide the wisdom and ethics of using **polygraph testing** in their own practices.