

University since August 1991. He is a member of the Society for American Baseball Research and the Mathematical Association of America. He hates the Yankees.

Justice Roulette: Dubious Tests of Truth and Sanity in Aurora Massacre Case

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Abstract

Aurora, Colorado, Judge William Sylvester ruled authorities can use truth serum and polygraphy to determine if the July movie theater shooting suspect is genuinely insane. This article details the extensively documented and empirically identified shortcomings in each of the so-called “truth serums” most commonly used, and similarly looks at polygraphy’s poor accuracy rate in lie detection, reasons some investigators use it anyway, and why its results are generally inadmissible in court. A truth serum is not a truth serum; it lowers inhibitions. A lie detector is not a lie detector; it indicates stress patterns. In the end, looking at the inadequacy in methods of lie detection raises more questions about their usage in this court case than it answers, most notably one regarding the original point of it all: What does any of it have to do with showing beyond a reasonable doubt that a mass murderer is insane?

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Aurora, Colorado, Judge William Sylvester ruled that authorities may administer a so-called “truth serum” to the July movie theater shooting's defendant in order to determine whether or not he is genuinely insane, should he enter a plea of not guilty by reason of insanity. "It shall also be permissible to conduct a narcoanalytic interview of you with such drugs as are medically appropriate, and to subject you to polygraph examination," Sylvester wrote in his ruling (Franklin, 2013). The counsel for the defense moved unsuccessfully to oppose. A truth serum is not a truth serum. It lowers inhibitions. A lie detector is not a lie detector. It indicates stress patterns.

"It's an extraordinarily unusual procedure to use," Columbia University professor of psychiatry, Steven Hoge, told ABC (Ng, 2013). "The fact that they've linked it to the use of polygraph makes me concerned that they do believe that it is indeed a 'truth serum,' and there's no evidence to support that."

The judge’s order did not specify which chemical might be used as the supposed truth serum. The substances most commonly referred to, and contemporarily used, as truth serums are sodium amytal (amobarbital) and sodium pentothal (thiopental), barbiturates with disinhibiting effects. Both have suffered blows to their credibility for, among other things, fostering false memories (e.g., Shock, 1998). Reducing higher cortical functions could make an individual more truthful – hence the expression, “A drunk man tells no lies,” but that expression is not altogether accurate. Not only can a drunk person lie, that individual can spew forth heaping fantasies and inaccuracies. “There's no scientific evidence that Sodium amytal, or other

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supposed truth serums, increase the accuracy of memories,” Lilienfeld (2009) noted at PsychologyToday.com, adding that “there's good reason to believe that truth serums merely lower the threshold for reporting virtually all information, both true and false.”

This problem is no recent revelation. Macdonald warned back in 1955 that despite all the publicity over drugging suspects in order to obtain confessions, the methods were unreliable. “The term 'truth serum' suggests the existence of a drug with the remarkable property of eliciting the truth. The reputation enjoyed by truth serum is based on spectacular newspaper reports rather than on carefully documented case reports in professional medical or legal journals,” wrote Macdonald (p. 259). “It might be thought that no problems would arise from the use of drugs on persons who are, in fact, innocent. Unfortunately, persons under the influence of drugs are very suggestible and may confess to crimes which they have not committed.”

Polygraphy fares little better. The polygraph, which records physiological signs of stress like changes in heart rate, respiration, and perspiration, is something of an intimidation device. Despite some polygraph promoters' claims of 90-100% accuracy, laboratory tests show polygraph accuracy rates more consistently at about 60% (Vergano, 2002), little better than chance, with an error rate where false positives outnumber false negatives by as much as 2 to 1. In other words, experts who make errors are twice as likely to say innocent people are lying than to say the guilty are telling the truth (Kleinmuntz & Szucko, 1984). Physiological and emotional stress, especially when you're suspected of wrongdoing, does not prove you're lying (National Research Council, 2002; Saxe, Dougherty, & Cross, 1985); in fact, many inveterate liars spin lies more easily than they tell the truth, and psychopaths may feel unstressed telling either. The polygraph is a useful prop. It may deter wrongdoing by those who believe it works (Ben-Shakhar, 2008), and it can provide a polygrapher with a theatrical tool to help elicit admissions during *post*-polygraph interviews (Maschke & Scalabrini, 2005). For reasons such as these, polygraphs are generally not admissible as evidence in courts.

No method of lie detection is foolproof. In fact, its use may lull the users into overconfidence that they have unearthed the truth when, in fact, they have not. Ford (2006, p. 174) categorically states, “There are still no techniques that consistently meet the legal standard of scientific evidence and very few that scientists even consider acceptable. Detecting deception is still very much a ‘best-guess’ game.” How in the world can anyone gamble with such methods in such a high-stakes court case? Who would bet the legal status of a mass murderer on any procedure potentially as unpredictable as a roulette wheel?

And what does any of this have to do with proving sanity?

Author Notes

A version of this article originally appeared at PsychologyToday.com (Langley, 2013). The paragraph on polygraphy came from *Batman and Psychology: A Dark and Stormy Knight* (Langley, 2012, pp. 76-77). It is not by mistake that the author refrains from naming the Aurora mass murder suspect anywhere in this article.

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Biographical Sketch

Dr. Travis Langley, professor of psychology at Henderson State University, is the author of the book *Batman and Psychology: A Dark and Stormy Knight* (Wiley & Sons). He has written chapters for the book *Our Superheroes, Ourselves* (Oxford University Press) and several encyclopedias. PsychologyToday.com carries his online column, “Beyond Heroes and Villains.” He appears in documentaries such as *Legends of the Knight*, *Comic Book Literacy*, and *Necessary Evil: Super-Villains of DC Comics*. The Huffington Post, CNN.com, the *New York Times* (front page), and other news outlets have featured Dr. Langley and his work.

“[R]elations in the Unseen”:

Oracular Romanticism and “The Cry of the Children”

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ABSTRACT: In “The Cry of the Children,” Elizabeth Barrett (not yet Browning) anticipates by nearly fifteen years the oracular nature of her Romantic epic, *Aurora Leigh*, which begins with Aurora crediting her psycho-spiritual survival to her “relations in the Unseen” and ends with her describing the colors of the dawn to her soon-to-be husband whose physical blindness is connected to his newfound awareness—to his ability, finally, to hear. With its sharp distinctions between the natural world (in which young lambs, birds, fawns, and flowers thrive) and the unnatural environment of industrialization (in which young children weep), “The Cry of the Children” is a Romantic’s indictment of those guilty, via direct involvement or silent complicity, of the abuse of child laborers in early nineteenth-century England. Beginning with the question from *Medea* which serves as an epigraph, Barrett communicates not one message but two: The nation is guilty of the murder of its own children, and the sight of suffering alone cannot arrest the willfully blind or single-mindedly self-absorbed. What is needed is an oracle,