

Polygraph in Trade Secret Litigation: Overcoming Misconceptions and Paving the Way for Admissibility

by
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I. INTRODUCTION

Ponder for a moment what you know about polygraph. Polygraph is sometimes referred to as a “lie detector” test. You may have seen a polygraph exam on television or a movie, but most people have a very limited understanding of what a polygraph examination really is. In fact, most depictions of polygraph seen in popular culture are overwhelmingly misleading and inaccurate. Likewise, the legal community’s understanding of polygraph and how it can be utilized is scant, at best.

Courts have been divided for years over what role polygraph should play in litigation and have struggled with questions of admissibility. Confusion over whether a polygraph is admissible in court and whether employers are allowed to polygraph their employees often discourages the use of this science. However, polygraph can be a very useful investigative tool for attorneys involved in a variety of practice. This article focuses on the use of polygraph in one particular area that can benefit greatly from the use of this technology—trade secret litigation.

Trade secret litigation involves a theft or misappropriation of a company’s confidential trade secret. An employer may suspect a current or former employee of theft, but evidence may be thin. A polygraph examination may uncover the true culprit and help the company take action against him.¹ Conversely, a wrongly suspected employee may be able to demonstrate his innocence with a polygraph examination. It cannot be denied that “the truth is a mighty weapon to have on your side when you practice law.”² That being so, attorneys should explore the possibilities of using polygraph tech-

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1. James W. Bassett, *Can a Polygraph Test Help Your Client?*, *Mt. B.J.*, Oct. 2002, at 56, 57. (“There are many situations when your business client can ask an employee to take a polygraph test. These situations include instances when the employee had access to what was stolen and the employer has a basis for ‘reasonable suspicion’ to believe the employee is the one who stole it.”).

2. *Id.*

nology in their practice. Those who do will soon “uncover new and exciting opportunities to better serve their clients.”³

This article will explain polygraph, its background and present treatment in the courts, while advocating for the use of polygraph in instances of trade secret misappropriation. The basis for the use of polygraph in this fashion will be illustrated by a discussion of the Employee Polygraph Protection Act and an overview of trade secret laws. The article ends with a “practitioner’s guide” to getting polygraph evidence admitted in court to bolster the evidence of theft or the innocence of a suspect. Employers and attorneys should strongly consider utilizing polygraph as a means of investigating theft of trade secrets and as evidence in the resulting litigation.

II. WHAT IS POLYGRAPH AND HOW DOES IT WORK?

This section of the article will provide an overview of polygraph technology and theory. It is by no means exhaustive, but is sufficient to provide readers with enough background to understand the later discussion on evidentiary issues. Any attorney considering the use of polygraph must understand how it works, know what it measures and realize its benefits and limitations. A strong understanding of the technology will also allow an attorney to make educated decisions when choosing a polygraph examiner and preparing to use the results of the examination in a well-reasoned manner.

Polygraph technology relies on physiological responses that occur when a person is deceitful. Polygraph, which is a term derived from the Greek words “poly,” meaning “many,” and “grapho,” meaning “to write,” refers to the written record of the various physiological responses made during the examination.⁴ Despite common belief, the polygraph instrument itself is not a “lie detector” that rings a bell or flashes a warning when a lie is being told, but is merely an instrument used to record physiological phenomena.⁵ The physiological phenomena are recorded while the examinee answers a series of questions.⁶ The recordings are then analyzed by a polygraph examiner according to a technique designed to identify deception.⁷ In fact, a term more recently applied to the field is the “psychophysiological detection of deception” (“PDD”) and polygraph examiners are increasingly being called

3. *Id.*

4. AMINA MEMON, ALDERT VRIJ & RAY BULL, *PSYCHOLOGY AND LAW: TRUTHFULNESS, ACCURACY AND CREDIBILITY* 20 (2d ed. 2003).

5. JOHN E. REID & FRED E. INBAU, *TRUTH AND DECEPTION* 3 (2d ed. 1977).

6. Charles R. Honts, *Psychophysiological Detection of Deception*, *CURRENT DIRECTIONS IN PSYCHOL. SCI.*, June 1994, at 77, 77.

7. REID & INBAU, *supra* note 5, at 3.

“forensic psychophysiologicalists.”⁸ Either of these terms is much more descriptive of the process and skills involved in the process.

A. Measurement of Physiological Responses

A polygraph instrument measures certain physiological responses that occur while the examinee is being asked a set of questions regarding the target issue of the polygraph.⁹ Precursors to modern polygraph simply measured systolic blood pressure.¹⁰ Modern polygraph, on the other hand, typically consists of four different sources of input.¹¹ These include blood pressure, respiration measured at both the chest and abdomen, and galvanic skin response (GSR) units to detect palmar sweating and electrodermal activity.¹² Some polygraph examiners use a motion sensor pad, an optional measure designed to detect otherwise unobservable muscular activity that affects blood pressure.¹³

The polygraph instrument amplifies the signals from the various sensors attached to the examinee and uses analog or digital technology to record the data.¹⁴ “Because the original analog instruments recorded the data with several pens writing lines on a moving sheet of paper, the record of physiologi-

8. Andrew B. Dollins, Victor L. Cestaro, & Donald J. Pettit, *Efficacy of Repeated Psychophysiological Detection of Deception Testing*, 43 J. FORENSIC SCIS. 1016, 1016 (1998).
9. COMM. TO REVIEW THE SCIENTIFIC EVID. ON THE POLYGRAPH, NAT’L RESEARCH COUNCIL OF THE NAT’L ACADS., *THE POLYGRAPH AND LIE DETECTION* 16-17 (2003). See generally STAN ABRAMS, *THE COMPLETE POLYGRAPH HANDBOOK* (1989) (containing more information on the theory and administration of polygraphs).
10. REID & INBAU, *supra* note 5, at 2. William Marston developed a technique in 1915 using an ordinary sphygmomanometer to determine blood pressure during the course of a test which resulted in a discontinuous measure of blood pressure used to detect deception. *Id.* This was the technique used in the *Frye* case. See *infra*, Part III.A. For information on Marston’s technique, see WILLIAM M. MARSTON, *THE LIE DETECTOR TEST* (1938). See also REID & INBAU, *supra* note 5, at 1-3 (containing a general overview of the history of polygraph).
11. MEMON, VRIJ, & BULL, *supra* note 4, at 21.
12. OFFICE OF TECHNOLOGY ASSESSMENT, CONGRESS OF THE UNITED STATES, *SCIENTIFIC VALIDITY OF POLYGRAPH TESTING: A RESEARCH REVIEW AND EVALUATION* 11 (Nov. 1983). See also ALDERT VRIJ, *DETECTING LIES AND DECEIT: THE PSYCHOLOGY OF LYING AND THE IMPLICATIONS FOR PROFESSIONAL PRACTICE* 170 (2000).
13. REID & INBAU, *supra* note 5, at 4. An examiner using the motion sensor pad can “properly evaluate blood pressure changes resulting from muscular movements.” *Id.* at 5.
14. VRIJ, *supra* note 12, at 170; COMM. TO REVIEW THE SCIENTIFIC EVID. ON THE POLYGRAPH, *supra* note 9, at 13.

cal responses during the polygraph test is known as the polygraph chart.”¹⁵ The examinee’s blood pressure is still measured through the use of a sphygmomanometer, or blood pressure cuff, which is a continuous measure rather than the discontinuous method of yore.¹⁶ Respiration is measured through two separate pneumatic tubes that measure the depth and rate of breathing.¹⁷ One is attached around the upper chest to measure chest breathing, and the other is attached to the upper abdomen to measure deeper “belly” breathing.¹⁸ The galvanic skin response unit is attached to the fingertips of the hand to measure skin conductance or resistance and indicates variations in palmar sweating.¹⁹ The motion sensor pad is an optional device that is placed in the examinee’s chair and helps the polygraph examiner detect muscle activity in the lower extremities and sphincter.²⁰ Polygraph examiners understand that “blood pressure changes can be induced by certain types of unobservable muscular movements” and this common “countermeasure”²¹ may be detected

15. COMM. TO REVIEW THE SCIENTIFIC EVID. ON THE POLYGRAPH, *supra* note 9, at 13.
16. REID & INBAU, *supra* note 5 at 2. For a discussion of the discontinuous method, see *supra* text accompanying note 10.
17. Vrij, *supra* note 12, at 170.
18. *Id.*
19. OFFICE OF TECH. ASSESSMENT, *supra* note 12, at 11. See also COMM. TO REVIEW THE SCIENTIFIC EVID. ON THE POLYGRAPH, *supra* note 9, at 12-13.
20. REID & INBAU, *supra* note 5, at 4. An examiner using the motion sensor pad can “properly evaluate blood pressure changes resulting from muscular movements.” *Id.* at 5. See also Axciton Systems, Inc., <http://www.axciton.com/newprod.htm> (last visited Jan. 10, 2007).
21. Countermeasures are “anything that a subject does in a deliberate effort to defeat, distort or alter a polygraph test.” Charles R. Honts, Susan L. Amato & Anne K. Gordon, *Effects of Spontaneous Countermeasures Used Against the Comparison Question Test*, 30 *Polygraph* 1, 1 (2001). Countermeasures are attempted by examinees who are trying to influence the polygraph outcome. MEMON, VRIJ, & BULL, *supra* note 4, at 33. They may try to produce physiological responses in an attempt to mislead the examiner to conclude that they are telling the truth. *Id.* Countermeasures are generally aimed at increasing arousal while answering control questions. *Id.* For more information about the Control Question Technique, see *infra*, Part II.D.
Studies on the effectiveness of countermeasures yield varying results. See, e.g., MEMON, VRIJ, & BULL, *supra* note 4, at 33. Compare Honts, Amato & Gordon, *supra* note 21, at 1-9 (reporting that “the use of spontaneous countermeasures has no effect on the deception detection scores of guilty participants, but spontaneous countermeasures use significantly shifted innocent subjects’ numerical scores in the negative direction.”), with Charles R. Honts, David C. Raskin & John C. Kircher, *Mental and Physical Countermeasures Reduce the Accuracy of Polygraph Tests*, 79 *J. APPLIED PSYCHOL.* 252, 252-259 (1994) (reporting that “the results of the present study strongly suggest that control-

by recording the muscular activity.²²

Polygraph instruments historically have included several pens that wrote the tracings on paper as it rolled through the instrument.²³ This type of analog instrument can still be used today, but modern day polygraphs are increasingly conducted on a computerized polygraph instrument which records the physiological responses using a computer program and a computer algorithm is used to confirm the examiner's final decision in evaluating those responses.²⁴ The computerized polygraph instruments have "more sensitive sensors; more efficient transducers; improved means of digitizing and recording physiological data; digitizing analog data at increasingly high sample rates; and algorithms to evaluate physiological data in an unlimited fashion."²⁵ Computer polygraph instruments also help to increase the reliability of the polygraph because they are subject to less pen distortion and measurements cannot be interfered with by the examiner during the exam.²⁶ For example, analog machines could be subject to manipulation during the exam if the examiner tweaked a knob to change sensitivity of the measurement without manually marking it on the chart, resulting in a change on the chart which may appear to be a physiological change. However, computer polygraph instruments control the sensitivity of the measurements and any changes made in sensitivity are automatically marked on the chart for all to see.²⁷ This feature of computer polygraph instruments eliminates the potential criticism that polygraph examiners can manipulate the recording of physiological responses.

The above information describes how the physiological responses are measured, yet this does not yet describe how a lie is detected. It has been said that there is no such thing as a lie detector machine.²⁸ In fact, a polygraph instrument does nothing more than record physiological responses.²⁹ The question format and timing of the physiological changes that occur dur-

question polygraph tests may be defeated by guilty subjects trained in the use of physical or mental countermeasures").

22. REID & INBAU, *supra* note 5, at 5.

23. REID & INBAU, *supra* note 5, at 4-5.

24. COMM. TO REVIEW THE SCIENTIFIC EVID. ON THE POLYGRAPH, *supra* note 9, at 209. See also William J. Yankee, *The Current Status of Research in Forensic Psychophysiology and Its Application in the Psychophysiological Detection of Deception*, 40 J. FORENSIC SCI. 63, 63 (1995).

25. Yankee, *supra* note 24, at 63.

26. *Id.* at 64.

27. *Id.* at 63-64.

28. REID & INBAU, *supra* note 5, at 3.

29. VRIJ, *supra* note 12, at 170.

ing the exam form the basis of the examiner's opinion as to "deception indicated" ("DI") or "no deception indicated" ("NDI").³⁰

B. The Theory Behind Polygraph Testing

Polygraph testing is based on the premise that certain psychological responses, such as fear, produce certain physiological responses.³¹ It has been determined that fear of detection or fear of the consequences of lying creates an underlying psychological state that polygraph researchers have called arousal.³² Polygraph tests using comparison questions are designed to produce "deceptive responses and therefore to produce physiological responses that can be compared with responses to relevant questions to detect deception or truthfulness."³³ The deceptive response is, physiologically, a product of the sympathetic nervous system reaction to the emotional arousal created by the deception.³⁴ The emotional reaction to the deception kicks off a sympathetic nervous system reaction, followed by a parasympathetic nervous system reaction once the "threat" is over, both of which typically affect all of the physiological functions that the polygraph instrument measures.³⁵ Polygraph

30. Interview with Joseph L. McCarthy, Polygraph Examiner, Dalhousie Polygraph Services, Inc., in Dallas, Tex. (Mar. 9, 2006).

31. MEMON, VRIJ, & BULL, *supra* note 4, at 20; COMM. TO REVIEW THE SCIENTIFIC EVID. ON THE POLYGRAPH, *supra* note 9, at 71-72. Central to the theory behind polygraph is the broad underlying rationale "that fear or arousal is closely associated with deception." *Id.* at 72.

32. COMM. TO REVIEW THE SCIENTIFIC EVID. ON THE POLYGRAPH, *supra* note 9, at 72, 74; ABRAMS, *supra* note 9, at 33.

33. COMM. TO REVIEW THE SCIENTIFIC EVID. ON THE POLYGRAPH, *supra* note 9, at 71.

34. ABRAMS, *supra* note 9, at 33-34.

35. ABRAMS, *supra* note 9, at 33-35. Abrams fully describes the complex physiological responses that occur during a polygraph examination. *Id.* These physiological responses are crucial to understanding how the polygraph assists in the detection of deception. The following excerpt from the Abrams treatise describes the nervous system response to deception:

[E]motions will be aroused at the very instant in which the subject hears the question to which he or she is going to respond deceptively. Therefore, reaction might begin after the first few words of the question. The question creates the threat, and the threat in turn causes the emotional reaction that results in the SNS's [sympathetic nervous system's] becoming dominant. The individual's defensive system becomes activated, and physiologic changes will occur that aid the organism in coping with the threat. In order to improve grasping and locomotion, the subject's hands will perspire, which reduces the skin's resistance to electricity and results in an abrupt upward swing of the pen involved with electrodermal activity. Once again, it should be noted that other physiologic functions might be involved in this and the sweating response alone may not cause electro-

examiners are trained to identify this kind of nervous system response and to determine if the response is timely, significant, and consistent.³⁶

C. The Role of the Polygraph Examiner

The role of the polygraph examiner in developing and conducting the test, as well as evaluating the test outcomes, cannot be underestimated.³⁷ The polygraph instrument does not identify any particular “deceptive” pattern, so it is the role of the examiner to analyze the physiological responses in accordance with the polygraph technique.³⁸ There are generally three phases of a polygraph examination: the pre-test interview, the actual examination and the post-test or decision phase.³⁹

“The pre-test interview may last from 30 to 60 minutes.”⁴⁰ During this time, the polygraph examiner explains how the polygraph works, outlines the test procedure, interviews the examinee with attention toward formulating

dermal reactions. Changes in the cardiovascular system occur, including the constriction of the arterioles, which increase peripheral resistance and thereby raise blood pressure. A rise in the blood pressure tracings will take place. Secretion of norepinephrine causes the heart to contract more strongly, resulting in an increase in blood volume to the arteries in the muscles of the arm beneath the blood pressure cuff, which also plays a role in raising the cardio tracings. . . . [T]he immediate respiratory response appears to be a tightening up of the thorax so that deep breathing is less likely to occur, resulting a suppressed breathing pattern. Once the question has been answered and the threat is over, PNS [parasympathetic nervous system] dominance occurs in order to maintain homeostasis. Through the vagus nerve heart contractions are lessened, reducing blood pressure, and the arteries to the skeletal muscles contract, reducing the blood supply to the arm. The cardio tracings, therefore, drop and return to their previous level. In the sweat glands, the perspiration is apparently reabsorbed, returning the skin's resistance to electricity to its prior state. The electrodermal response returns to its previous base line, but the pen drops more gradually than it rose. . . . Finally, if the respiration were suppressed, there will likely be a series of deep breaths to make up for the reduced oxygen intake. The changes occur with SNS [sympathetic nervous system] and PNS [parasympathetic nervous system] dominance, allowing for a highly accurate interpretation of truth or deception.

Id.

36. Interview with Joseph L. McCarthy, *supra* note 30.

37. *VRII*, *supra* note 12, at 173.

38. *VRII*, *supra* note 12, at 170.

39. Eitan Elaad, *Detection of Deception: A Transactional Analysis Perspective*, 127 *J. PSYCHOL. INTERDISC. & APPLIED* 5, 5-6 (1993).

40. *Id.* at 6.

comparison questions⁴¹ and explains the questions to be asked so that it is clear that the examinee understands what each question is asking.⁴² The polygraph examiner must ensure that the examinee fully understands each question and has no misunderstanding in order to avoid an unwarranted physiological response.⁴³ The polygraph examiner's interview skills are crucial here because he must be able to formulate comparison questions that will elicit the desired response from the examinee without over-exciting the examinee.⁴⁴ The actual examination portion of the test is rather self-explanatory. The polygraph examiner asks the pre-reviewed questions while the polygraph instrument records the physiological responses.⁴⁵ The post-test phase consists of the scoring of the chart and includes any interrogation that may need to occur based on the results.⁴⁶ Here again, the polygraph examiner's skills are crucial in obtaining an admission or identifying any outside issues that may be affecting the test results.⁴⁷ Should any outside issue be identified by the examiner, it will be addressed and another set of tests may be run and analyzed.⁴⁸

D. Overview of Question Formats

Polygraph actually consists of several different question formats.⁴⁹ Disputes over the admissibility of polygraph results in litigation may be affected by the question format used by the examiner. The Control Question Tech-

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41. Comparison questions are also known as control questions. The importance of the comparison questions is explained in the overview of question formats. See discussion *infra* Part II.D.
 42. COMM. TO REVIEW THE SCIENTIFIC EVID. ON THE POLYGRAPH, *supra* note 9, at 16.
 43. *Id.* at 17.
 44. VRII, *supra* note 12, at 182. A good example of the contents of a pre-test interview is contained in the description of a polygraph research study conducted by research psychologists from the Department of Defense Polygraph Institute. Dollins, Cestaro & Pettit, *supra* note 8, at 1018.
 45. Elaad, *supra* note 39, at 6.
 46. COMM. TO REVIEW THE SCIENTIFIC EVID. ON THE POLYGRAPH, *supra* note 9, at 17.
 47. See *id.*
 48. See *id.*
 49. VRII, *supra* note 12, at 173; Steven W. Horowitz, John C. Kircher, Charles R. Honts & David C. Raskin, *The Role of Comparison Questions in Physiological Detection of Deception*, 34 PSYCHOPHYSIOLOGY 108, 108 (1997). (containing a detailed overview of the various question techniques and the evolution of their use).

nique (“CQT”) is the most widely used question format.⁵⁰ It uses comparison questions, relevant questions, and neutral questions.⁵¹ These types of questions may relate to the issue on which the examinee is being polygraphed, but do not refer to the specific issue itself and are “always general in nature, deliberately vague and cover long periods of time.”⁵² These questions are designed to evoke a probable lie in order for the polygraph examiner to have, on the chart, the physiological response of a deceptive answer.⁵³ The response to the comparison question is contrasted against the response to the relevant question,⁵⁴ which is a specific question on the target issue.⁵⁵ The comparison questions and relevant questions “may evoke different patterns of physiological responses in guilty and innocent suspects.”⁵⁶ Neutral questions, on the other hand, are not expected to create any arousal and may be used to see if the examinee is paying attention to the questions or as filler between questions to allow a significant physiological response to subside.⁵⁷

CQT is used widely in criminal investigations and “laboratory and field studies have generally shown that the CQT can be highly accurate in discriminating deceptive from truthful subjects.”⁵⁸ However, opponents of the test are highly vocal and argue that because so much of the test depends on the examiner’s ability to properly establish a comparison question, it is not standardized.⁵⁹ For this reason, some polygraph examiners may prefer a Guilty Knowledge Test (“GKT”) which is aimed to “examine whether examinees possess knowledge about a particular crime which they do not want to re-

50. Horowitz, Kircher, Honts, & Raskin, *supra* note 49, at 108. For a more in depth insight on the pretest interview and the basic rationale underlying the CQT format, see Elaad, *supra* note 39, at 5-15.

51. VRIJ, *supra* note 12, at 175.

52. *Id.* at 176.

53. *Id.* at 176-77.

54. *Id.* at 177.

55. *Id.* at 176.

56. *Id.* at 177. See also Eitan Elaad, *Is the Inference Rule of the “Control Question Polygraph” Plausible?*, 9 J. PSYCHOL., CRIME & L. 37, 37-47 (2003). The control question test (CQT), relies on the inference rule that a subject “will focus his or her concern on the questions that present the greatest threat of failing the test.” *Id.* at 38. For an innocent subject, this would be the control questions, and for a guilty subject, it would be the relevant questions. *Id.* A recent study verifies that the rationale behind this “inference rule” is sound. *Id.* at 45. The researchers also expressed a concern that critical views of the CQT tend to overestimate the CQT false positive error rate. *Id.* at 46.

57. VRIJ, *supra* note 12, at 176.

58. Horowitz, Kircher, Honts, & Raskin, *supra* note 49, at 108.

59. VRIJ, *supra* note 12, at 187.

veal.”⁶⁰ The GKT is often seen as based on more “scientifically sound psychological principles” than the CQT,⁶¹ but the number of cases in which GKT can be used is limited.⁶² It requires that the questions asked be details about the incident which are both specific and, would not be known to the innocent examinee.⁶³ The debate on the utility of CQT versus GKT is strong⁶⁴ and deciding which test to utilize is a choice the attorney and polygraph examiner may make together when determining how to proceed with a polygraph on a particular issue.

III. THE EVOLUTION OF POLYGRAPH ADMISSIBILITY: GOODBYE *Frye*, HELLO *Daubert*

The admissibility of polygraph evidence is governed by the rules of evidence – specifically the admissibility of expert scientific evidence under Rule 702.⁶⁵ Polygraph admissibility was once governed by a 1923 case which set the standard for admissibility of novel scientific evidence.⁶⁶ Over time, the rules governing the admissibility of novel scientific evidence have evolved.⁶⁷ Following the U.S. Supreme Court decision in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, courts have wrestled with the factor-based admissibility analysis and its application to polygraph evidence.⁶⁸ This section will provide an overview of the evolution of polygraph admissibility from its earliest times to the present.

A. *Frye v. United States*

In 1923, the *Frye* decision established the criteria for admissibility of novel scientific evidence with a “general acceptance” standard.⁶⁹ The technique that at issue in *Frye* was a precursor to modern polygraph which mea-

60. *Id.* The GKT requires the examiner to present several alternatives to the examinee, but only one of them will be actual known information regarding the crime. *Id.* at 187-88. The person who has “*guilty knowledge* will produce a heightened physiological response that will be detected by the polygraph.” *Id.*

61. *Id.* at 190.

62. *Id.* at 191.

63. *Id.* at 191.

64. Bryan Myers, *Polygraph Testimony and Juror Judgments: A Comparison of the Guilty Knowledge Test and the Control Question Test*, 27 J. APPLIED PSYCHOL. 1421, 1421-1437 (1997).

65. See *United States v. Posado*, 57 F.3d 428, 433 (5th Cir. 1995).

66. *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923).

67. *Posado*, 57 F.3d at 432-433.

68. See discussion *infra* Part III.G.

69. *Id.*

sured systolic blood pressure only.⁷⁰ The *Frye* opinion, as described by the Fifth Circuit in a later case, was “short and citation-free.”⁷¹ The court required that expert testimony be based on a technique that is “sufficiently established to have gained general acceptance in the particular in which it belongs.”⁷² In the court’s opinion, the “systolic blood pressure deception test ha[d] not yet gained such standing and scientific recognition among physiological and psychological authorities as would justify the courts admitting expert testimony deduced from the discovery, development and experiments thus far made.”⁷³

In an article discussing judicial recognition of the polygraph technique, John E. Reid, a leading polygraph scholar, agreed that the *Frye* court should have rejected the deception test evidence.⁷⁴ Mr. Reid explained that “the instrument used by Marston was crude and the method was cumbersome; it required inflating and deflating the blood pressure cuff before and after each question and also noting the systolic blood pressure recording before and after each question.”⁷⁵ Yet, as Mr. Reid noted in 1972, most courts continued to quote *Frye* as the basis for rejecting polygraph tests as evidence despite technological advances.⁷⁶

B. Polygraph Admissibility by Stipulation

In 1972, New Jersey began allowing polygraphs to be admitted upon stipulation of the parties in a criminal case based on the premise that “polygraph testing has sufficient probative value to warrant admission under [such] circumstances.”⁷⁷ Other states followed suit in allowing polygraph admissibility by stipulation.⁷⁸ In 1977, the Georgia Supreme Court set the rule that polygraph results are admissible upon express stipulation of the parties and the results “shall be admissible as evidence for the jury to attach to

70. *Id.* at 1013.

71. *Posado*, 57 F.3d at 432.

72. *Frye*, 293 F. at 1014.

73. *Id.*

74. John E. Reid, *Judicial Recognition of the Polygraph Technique*, 31 POLYGRAPH 33, 33 (2002).

75. *Id.*

76. *Id.* Some jurisdictions have rejected *Daubert* and still follow *Frye*. See *State v. Porter*, 241 Conn. 57, 77 n.22 (1997) (reporting that two states – New York and California—have “expressly rejected *Daubert* and retained *Frye*.”)

77. See *State v. McDavitt*, 297 A.2d 849, 854-55 (N.J. 1972) (discussing the fact that “such testing is now generally accepted by authorities in the field and is capable of producing highly probative evidence in a court of law when used properly by competent, experienced examiners.”).

78. *State v. Chambers*, 239 S.E.2d 324, 325 (Ga. 1977).

them whatever probative value they may find them to have.”⁷⁹ While allowing the polygraph evidence to be admitted, the court stressed that, upon request from either party, the judge should give a jury charge stating that:

the examiner’s opinions may only be used to indicate whether at the time of the polygraph examination the person examined believed that he was telling the whole truth; that the jury are not bound by the polygraph examiner’s conclusions and his (or her) testimony is not controlling on the issues and may even be entirely disregarded; and that it is for the jury to decide what weight should be given this evidence.⁸⁰

In discussing the usefulness of polygraph evidence, the court noted that “there is no tenable reason why qualified polygraphers should not be welcomed by courts confronting credibility questions; clearly, polygraphy appears to have something valuable to add to the administration of justice.”⁸¹ Therefore, in states where stipulation is allowed, the attorney wanting to have a polygraph admitted may have the option of doing so.⁸²

C. *United States v. Piccinonna*

In 1989, the Eleventh Circuit recognized the advances made in polygraph since *Frye*.⁸³ That court found in *United States v. Piccinonna* that, in the wake of new empirical evidence and scholarly opinion and “a lack of evidence that juries are unduly swayed by polygraph evidence”, the per se rule of excluding polygraph evidence was “no longer warranted.”⁸⁴ *Piccinonna* allows the admissibility of polygraph for limited purposes of impeachment or corroboration, and for broader purposes when stipulated by the

79. *Id.* The court acknowledged that there was doubt as to the complete reliability of polygraph tests, but stressed that “cross examination counsel may show any vagueness of the electronic indications or any subjectiveness of the examiner’s interpretations, as well as exploring conditions other than the subject’s untruthfulness which could have produced such responses.” *Id.*

80. *Id.* at 327. Others have suggested that “the judge should instruct the jury that they should consider the test results along with the other evidence, but that the opinion of the examiner as to whether the subject gave truthful or deceptive responses is not conclusive and should only be given whatever weight they think it deserves.” *Id.* at 326 (quoting Archie L. Harmon, Note, *The Role of the Polygraph in our Judicial System*, 20 S.C. L. REV. 804, 824 (1968)).

81. *Id.* at 325 (internal quotations omitted).

82. For more information on stipulation of polygraph evidence, see Joseph T. Bockrath, Annotation, *Admissibility of Lie Detector Test Taken Upon Stipulation That the Result Will Be Admissible in Evidence*, 53 A.L.R.3d 1005 (2005).

83. *United States v. Piccinonna*, 885 F.2d 1529, 1532 (11th Cir. 1989) (en banc).

84. *Id.* at 1535.

parties.⁸⁵ The court recognized that “any rule that impedes the discovery of truth in a court of law impedes as well the doing of justice.”⁸⁶ Thus, the court held that polygraph evidence might be admitted at trial when both parties stipulated in advance as to the test’s circumstances and as to the scope of its admissibility.⁸⁷ The court also held that polygraph evidence could be used to impeach or corroborate the testimony of a witness at trial.⁸⁸ The Eleventh Circuit further determined that the “trial court may exclude polygraph expert testimony because 1) the polygraph examiner’s qualifications are unacceptable; 2) the test procedure was unfairly prejudicial or the test was poorly administered; or 3) the questions were irrelevant or improper.”⁸⁹ This decision marked a broadening of the admissibility of polygraph evidence beyond just stipulation.

D. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*

When the Federal Rules of Evidence were drafted, Rule 702 left the question of how expert evidence was to be evaluated a little hazy.⁹⁰ It was not clear to courts whether *Frye* was still valid.⁹¹ Some courts continued to use *Frye* and others wondered about *Frye*’s validity.⁹² The Supreme Court resolved the issue in *Daubert v. Merrell Dow Pharmaceuticals* and established a new standard under which polygraph’s admissibility must be examined based on several factors.⁹³

When the Supreme Court decided *Daubert*, the *Frye* test was “the dominant standard for determining admissibility of novel scientific evidence at trial.”⁹⁴ Under *Frye*, an expert opinion based on scientific technique was not admissible unless the technique was “generally accepted” in the relevant community.⁹⁵ However, Rule 702 of the Federal Rules of Evidence spoke only about scientific evidence and did not mention the “general acceptance” test.⁹⁶ The Supreme Court held in *Daubert* that the Federal Rules displaced

85. *Id.* at 1535-36.

86. *Id.* at 1535 (quoting *Hawkins v. United States*, 358 U.S. 74, 81 (1958) (J. Stewart, concurring)).

87. *Id.* at 1535-36.

88. *Id.*

89. *Id.* at 1537.

90. *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 587 n.5 (1993).

91. *Id.*

92. *Id.*

93. *Id.* at 589-593.

94. *Id.* at 585.

95. *Id.* at 589.

96. FED. R. EVID. 702. Rule 702 provides, “if scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to

the *Frye* test and provided a non-exhaustive list of factors that should bear on the admissibility of scientific evidence.⁹⁷

The Supreme Court in *Daubert* outlined the following factors that should weigh on the inquiry in determining admissibility of scientific evidence:

1. Can the technique be tested (in other words, is there scientific methodology)?⁹⁸
2. Has the theory or technique been subjected to peer review and publication?⁹⁹
3. What is the known or potential rate of error in the methodology or technique and is there the existence and maintenance of standards controlling the technique's operation?¹⁰⁰
4. What is the degree of acceptance in the relevant scientific community?¹⁰¹

This list of factors is not exhaustive—the courts can add other factors as long as they help answer the question of whether the evidence is 1) scientific and 2) will assist the trier of fact in understanding the evidence or other facts in issue.¹⁰² Thus, the Court provided a new framework in which to analyze the admissibility of polygraph evidence.

E. *United States v. Galbreth*

United States v. Galbreth is a great example of how courts apply the less rigid *Daubert* factors.¹⁰³ The *Galbreth* court used the *Daubert* factors in a hearing to determine the admissibility of polygraph evidence.¹⁰⁴ The court found that the polygraph evidence was admissible, but cautioned that because the inquiry is case specific, polygraph evidence is not *per se* admissible.¹⁰⁵

The *Galbreth* court engaged in a systematic examination of the *Daubert* factors. The court found that the polygraph expert, Dr. Raskin, had flawless credentials, including an education in psychophysiology and a long career

determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise.” *Id.*

97. See *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 589-93 (1993).

98. *Id.* at 593.

99. *Id.*

100. *Id.* at 594.

101. *Id.*

102. *Id.* at 592-593.

103. *United States v. Galbreth*, 908 F. Supp. 877, 879 (D.C.N.M. 1995).

104. *Id.* at 878.

105. *Id.* at 896.

with voluminous publications in the field of polygraph.¹⁰⁶ Through his testimony, they determined that “even opponents of the polygraph technique readily concede that a quality polygraph machine can accurately measure and record [physiological] responses.”¹⁰⁷ The court’s confidence in the accuracy of the polygraph was raised because Dr. Honts, another highly qualified polygraph examiner who independently reviewed and scored the polygraph charts, arrived at a similar score as Dr. Raskin.¹⁰⁸ Additionally, the “polygraph exam was taped and a copy of the tape was provided” to opposing counsel.¹⁰⁹ Regarding the potentially prejudicial value of the evidence, the court found that there was little danger in the jury cloaking the technique in “an aura of infallibility” because Dr. Raskin would testify that the technique is not infallible and had already testified to the court that there is little empirical basis to believe juries are overwhelmed by polygraph evidence.¹¹⁰ All of these factors were significant to the court’s decision to admit the polygraph evidence.

F. *United States v. Posado*

One of the most promising cases for polygraph admissibility was decided in the Fifth Circuit. In *United States v. Posado*, the lower court judge refused to consider the polygraph testimony, but acknowledged that polygraph “does have some valid use in determining whether people are likely to be truthful or likely not to be truthful” and left it up to the appellate courts to resolve the policy issues this raised.¹¹¹ The Fifth Circuit determined that the rationale underlying their previously existing *per se* exclusion rule for polygraph evidence did not survive the *Daubert* decision and remanded the case to the district court to determine admissibility of the evidence in light of the *Daubert* decision.¹¹² The court realized many recent cases that exclude polygraph evidence cite *Frye* in finding the polygraph evidence unreliable despite the differences in the technologies.¹¹³ The Fifth Circuit acknowledged that there may have been sufficient technological advance in the seventy years since *Frye* but it did not have enough evidence in the record to examine whether polygraph would constitute the kind of scientific evidence envisioned by Rule 702.¹¹⁴

106. *Id.* at 883.

107. *Id.*

108. *Id.* at 894.

109. *Id.*

110. *Id.* at 895.

111. *United States v. Posado*, 57 F.3d 428, 431 (5th Cir. 1995).

112. *Id.* at 429.

113. *Id.* at 432.

114. *Id.* at 433-34.

In applying the *Daubert* factors, the *Posado* court noted that evidentiary reliability requires that the knowledge offered be “more than speculative belief or unsupported speculation.”¹¹⁵ This does not set the standard at certainty, but the knowledge must be based on “good grounds.”¹¹⁶ Scientific knowledge must also be valid.¹¹⁷ Validity means the principle supports what it purports to show and can be determined by “whether the theory or technique can be tested and whether it has been subjected to peer review or publication.”¹¹⁸

Even if a court admits the polygraph as scientific evidence under Rule 702, it must survive Rule 403, which allows exclusion of evidence when its prejudicial effect will outweigh its probative value.¹¹⁹ The court in *Posado* noted several factors that “may operate to counterbalance the potential prejudicial effect” such as contacting the opposing side prior to conducting the test and giving them an opportunity to participate, offering to stipulate to limited uses for the evidence, and offering the evidence before a judge rather than at a trial before a jury.¹²⁰ Additionally, if the case involves conflicting stories where the evidence would be a “tie-breaker” and there are further inconsistencies needing clarification in order to get a complete version of events, these factors would boost the probative value of the polygraph evidence.¹²¹ A court should take these factors into consideration when balancing the prejudicial effect against the probative value in its Rule 403 analysis.

G. Present Status of Polygraph Admissibility

There has been much confusion about polygraph admissibility since the *Daubert* decision.¹²² As the following discussion will demonstrate, courts across the country are split on polygraph admissibility. Courts express varying viewpoints on prejudicial effect, weight of consideration by the jury, presumptions of inadmissibility, and state rules regarding polygraph admissibility.¹²³ Some states continue to exclude polygraph almost without

115. *Id.*

116. *Id.*

117. *Id.*

118. *Id.*

119. *Id.* at 435; FED. R. EVID. 403.

120. *Posado*, 57 F.3d at 435.

121. *Id.* at 435-36.

122. See generally Leonard Saxe & Gershon Ben-Shakhar, *Admissibility of Polygraph Tests: The Application of Scientific Standards Post-Daubert*, 5 PSYCHOL. PUB. POL'Y & L. 203, 203-23 (1999).

123. *United States v. Scheffer*, 523 U.S. 303, 310-11, 318 (1999) (upholding a military rule of evidence dictating a *per se* exclusion of polygraph evidence in military court-martial proceedings). The Supreme Court recognized that there “is disagreement among state and federal courts concerning both the admissi-

fail while other states have accepted polygraph as valid evidence.¹²⁴ New Mexico, for example, routinely allows polygraph evidence into court.¹²⁵ However, despite progress in technology, the *Frye* opinion continues to haunt polygraph's chances at admissibility in some courts.¹²⁶ Thus, the road to admissibility continues to be an uphill battle in many jurisdictions, but a strong showing under the *Daubert* analysis may result in a polygraph being admitted into evidence.

IV. POLYGRAPH TECHNOLOGY AND EVIDENTIARY RELIABILITY: APPLYING THE RULES OF ADMISSIBILITY TO CURRENT POLYGRAPH TECHNOLOGY

This section will discuss the scientific evidence concerning polygraph, scientific research on polygraph, and the advances in technology that collectively effect a court's analysis when determining the admissibility of polygraph evidence. When surveying opinions on polygraph admissibility, it is noticeable that many decisions regarding admissibility are based on outdated and biased research and quote statistics that may be over 20 years old and thus, do not reflect the current state of the art. In *Posado*, the Fifth Circuit expressed a belief "that tremendous advances have been made in the poly-

bility and the reliability of polygraph evidence." *Id.* While "some Federal Courts of Appeals have abandoned the *per se* rule excluding polygraph evidence, leaving its admission or exclusion to the discretion of district courts under *Daubert*, at least one Federal Circuit has recently reaffirmed its *per se* ban, and another recently noted that it has 'not decided whether polygraph has reached a sufficient state of reliability to be admissible.'" *Id.* (citations omitted). The Court reported that "most States maintain *per se* rules excluding polygraph evidence." *Id.* See also Robin D. Barovick, Comment, *Between a Rock and a Hard Place: Polygraph Prejudice Persists After Scheffer*, 47 BUFF. L. REV. 1533 (1999).

124. See *State v. Domicz*, 873 A.2d 630, 656, 657 (N.J. Super. App. Div. 2005), *rev'd on other grounds by* 907 A.2d 395 (N.J. 2006) (recognizing that "polygraph testing has some probative value" and holding that "polygraph evidence may be admitted at a suppression hearing, even in the absence of the consent of the State, when credibility is an issue"); see also *United States v. Cordoba*, 104 F.3d 225, 230 (9th Cir. 1997) (holding that an unstipulated polygraph is not *per se* excluded).
125. See *State v. Sanders*, 872 P.2d 870, 877 (N.M. 1994) ("In New Mexico, the trial court has discretion to admit results of polygraph tests into evidence if certain conditions, designed to ensure the accuracy and reliability of the test results, are met."); see also David G. Savage, *Let Trial Judges Decide: High Court Rejects a Per Se Rule on Polygraph Evidence*, 84 A.B.A. J. 52 (June 1998).
126. See generally Hon. James P. Flannery, Kara Howe & Blanca Dominguez, *Frye, Daubert, Donaldson and Junk Science: The Admissibility of Novel Scientific Evidence in Illinois*, 18 CHI.B. ASS'N REC. 30 (May 2004).

graph instrumentation and technique in the years since *Frye*.”¹²⁷ If that is true, it is imperative that any admissibility analysis be performed in light of the current technology and not based on outdated research and legal precedent.

A. Analysis Under the *Daubert* Factors

The primary admissibility analysis is performed under the factors outlined in *Daubert*, derived from Rule 702 of the Federal Rules of Evidence.¹²⁸ The first prong of the analysis lies in the factors, which help the court decide if the evidence meets the standard of “evidentiary reliability” so as to qualify as scientific evidence.¹²⁹ The Supreme Court in *Daubert* carefully noted that it is not referring to scientific reliability as defined by scientists, but to trustworthiness.¹³⁰ The Court directs that “in a case involving scientific evidence, *evidentiary reliability* will be based upon *scientific validity*.”¹³¹ While acknowledging that the differences between scientific reliability and scientific validity may be “no more than a hen’s kick,”¹³² the Court clearly refers to the concept of validity.¹³³ The second prong of the analysis under the rule requires a determination of whether the evidence will “assist the trier of fact to understand the evidence or to determine a fact in issue.”¹³⁴ This is often seen by courts as an issue of relevance.¹³⁵

An excellent example of polygraph analysis under the *Daubert* factors, in the form of a court order, was published in the American Polygraph Association’s Journal, *Polygraph*.¹³⁶ In *United States v. Davila*, the United States District Court for the Eastern District of Washington engaged in a step-by-step analysis of the polygraph evidence before them and found that it was

127. *United States v. Posado*, 57 F.3d 428, 434 (5th Cir. 1995).

128. *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 589 (1993).

129. *Id.* at 590.

130. *Id.* at 590 n.9.

131. *Id.* (emphasis in original).

132. *Id.* (citing James E. Starrs, *Frye v. United States Restructured and Revitalized: A Proposal to Amend Federal Evidence Rule 702*, 26 JURIMETRICS J. 249, 256 (1986)).

133. *Id.*

134. *Id.* at 591.

135. *Id.*

136. *United State District Court, Eastern District of Washington United States of America, Plaintiff V. Rafael Davilla, and Deborah Cummings, Nos. Cr-03-021-Rhw, Cr-03-022-Rhw, Order Denying the Government’s Motion in Limine in Opposition to the Admission of Polygraph Evidence*, 34 POLYGRAPH 247, 247-56 (2005) [hereinafter, *United States v. Davila*].

admissible.¹³⁷ This case can be compared with another in-depth analysis of polygraph evidence by the trial court in *United States v. Cordoba*, where the polygraph evidence was found to be inadmissible.¹³⁸ Both courts engaged in a step-by-step analysis similar to the method outlined and illustrated below.

1. Whether the Scientific Method Is Capable of Being Tested

Courts usually concede that polygraph is capable of being tested.¹³⁹ In 1998, a research study headed by two research psychologists from the Department of Defense Polygraph Institute, determined the consistency of an examinee's physiological responses over repeated polygraph examinations.¹⁴⁰ The results suggested that during repeated administration of the "physiological detection of deception" tests, "the average physiological reactivity of deceptive subjects changes during deception while that of nondeceptive subjects does not."¹⁴¹ This study suggests that the polygraph instrument is capable of differentiating deceptive from nondeceptive subjects, even after repeated tests. The results demonstrate that polygraph is able to do what it purports to do – identify deceptive responses from nondeceptive responses based on consistent physiological response. Based on such a testing of polygraph, this factor weighs in favor of admissibility.

2. Whether the Scientific Theory Has Been the Subject of Peer Review and Publication

This factor under the *Daubert* analysis is rarely debated due to the volume of published and peer edited works on polygraph.¹⁴² In *Posado*, the Fifth Circuit noted that "polygraph technique has been and continues to be subjected to extensive study and publication."¹⁴³ In 1997, the American Pol-

137. *Id.*

138. *United States v. Cordoba*, 991 F. Supp. 1199, 1201-1208 (C.D. Cal. 1998).

139. *See id.* at 1202 ("The premise underlying polygraph has been tested extensively in both laboratory and field settings."); *United States v. Davila*, *supra* note 124, at 253 ("It is easy for the court to conclude that the subject of polygraph examinations is capable of being tested."). *But see* *United States v. Orians*, 9 F. Supp. 2d 1168, 1171 (D. Ariz. 1998) (focusing on accuracy and reliability issues in the "testing" analysis, rather than the basic capability to be test, in holding the factor favors the exclusion of the polygraph evidence).

140. Dollins, Cestaro & Pettit, *supra* note 8, at 1016.

141. *Id.* at 1021.

142. *United States v. Posado*, 57 F.3d 428, 434 (5th Cir. 1995); *United States v. Pitner*, 969 F. Supp. 1246, 1250 (W.D. Wash. 1997); *United States v. Crumby*, 895 F. Supp. 1354, 1359 (D. Ariz. 1995). *See, e.g.*, David Gallai, *Polygraph Evidence in Federal Courts: Should it be Admissible?*, 36 AM. CRIM. L. REV. 87, 96 (1999).

143. *Posado*, 57 F.3d at 434. *See, e.g.*, Klaus Fiedler, Jeannette Schmid & Teresa Stahl, *What is the Current Truth About Polygraph Lie Detection?*, 24 BASIC &

graph Association published a “compendium of research studies on the validity and reliability of polygraph examinations conducted since 1980.”¹⁴⁴ Additionally, the district court in *United States v. Cordoba* acknowledged that “studies on the polygraph have appeared in journals such as: *The Journal of Applied Psychology*, *The Journal of General Psychology*, *Psychophysiology*, *The Journal of Police Science and Administration*, . . . and *Law and Human Behavior*, to name a few.”¹⁴⁵ The peer review and publication on polygraph has indeed been extensive and the factor is rarely debated.¹⁴⁶

3. Whether the Method Has a Known Rate or Potential Rate of Error

Research suggests that “the accuracy and validity of the modern polygraph are far better than the news media report.”¹⁴⁷ The Fifth Circuit’s decision in *Posado* stated that “[c]urrent research indicates that, when given under controlled conditions, the polygraph technique accurately predicts truth or deception between seventy and ninety percent of the time,”¹⁴⁸ and “[e]ven the most ardent polygraph detractors cite accuracy rates of 70 percent.”¹⁴⁹ The court also noted that any “[r]emaining controversy about test accuracy is almost unanimously attributed to variations in the integrity of the testing environment and the qualifications of the examiner.”¹⁵⁰ Still, variations in testing environment and examiner qualifications are not detrimental to polygraph’s admissibility, because “[s]uch variations also exist in many of the disciplines and for much of the scientific evidence we routinely find admissible under rule 702.”¹⁵¹ Furthermore, the accuracy and validity of

APPLIED SOC. PSYCHOL. 313 (2002). Compare Stan Abrams, *Polygraph Validity in the New Millennium*, 29 POLYGRAPH 344 (2000), with Stanley Abrams, *Polygraph Validity and Reliability: A Review*, 18 J. FORENSIC SCIS. 313 (1973).

144. Bassett, *supra* note 1, at 56.

145. *United States v. Cordoba*, 991 F. Supp. 1199, 1203 n.10 (C.D. Cal. 1998).

146. See *Posado*, 57 F.3d at 434.

147. Bassett, *supra* note 1, at 56. See, e.g., Charles R. Honts, *Criterion Development and Validity of the CQT in Field Application*, 123 J. GEN. PSYCHOL. 309, 318, 320-21 (1996) (field study of the control question test found interrater correlation to be .90, “indicating excellent reliability for the numerical scoring system” and “[e]xcluding inconclusive outcomes, 96% of the original examiners’ decisions were correct,” suggesting that the technique is “very accurate in discriminating between truth tellers and deceivers in field settings.”).

148. *Posado*, 57 F.3d at 434.

149. *Id.* at 434 n.7.

150. *Id.* at 434.

151. *Id.*

polygraphs are also continuously improving through the refinement of test techniques and standards in polygraph examination and scoring.¹⁵²

Computerized scoring of polygraph data has the “potential to reduce bias in the reading of charts and eliminate problems of imperfect inter-rate variability that exists with human scoring.”¹⁵³ In 2003, the Committee to Review the Scientific Evidence on the Polygraph concluded, based on their analysis of several hundred actual polygraphs, that “it is easy to develop algorithms that appear to achieve perfect separation of deceptive and nondeceptive individuals by using a large number of features or classifying variables selected by discriminant analysis, logistic regression, or a more complex data-mining technique.”¹⁵⁴ A 1997 study published in the *Journal of Forensic Sciences* found that a computerized scoring system based on data collected using a variation of the control question test removed nearly all of the variations in chart interpretation.¹⁵⁵ Therefore, not only does the computer polygraph instrument make the measurement of physiological data more accurate, but it also provides a more precise method for assisting polygraph examiners in scoring the test.

The court in *Posado* realized that “there is good indication that polygraph technique and the requirements for professional polygraphists are becoming increasingly standardized.”¹⁵⁶ This can be seen in the research and other efforts made by polygraph examiners to increase reliability and accuracy. For example, a method called *rank order scoring* “entails the assignment of ordinal values to responses based on magnitude or intensity of the responses.”¹⁵⁷ Advocates claim that rank order scoring minimizes subjectivity in scoring polygraph charts and suggest that this method should also be “more familiar and acceptable to behavioral scientists, and should improve inter-scorer agreement.”¹⁵⁸ Widespread use of this and other methods will help extract subjectivity from the polygraph examiner’s decision-making process.

152. *Id.*

153. COMM. TO REVIEW THE SCIENTIFIC EVID. ON THE POLYGRAPH, *supra* note 9, at 298 (Appendix F: Computerized Scoring of Polygraph Data).

154. *Id.* at 299.

155. Dale E. Olsen, John C. Harris, Michael H. Capps & Norman Ansley, *Computerized Polygraph Scoring System*, 42 J. FORENSIC SCIS. 61, 61 (1997).

156. *Posado*, 57 F.3d at 434.

157. Donald J. Krapohl, Donnie W. Dutton & Andrew H. Ryan, *The Rank Order Scoring System: Replication and Extension with Field Data*, 30 POLYGRAPH 172, 173 (2001).

158. *Id.*

4. The General Acceptance of the Method Within the Relevant Scientific Community

General acceptance is one of the more challenging factors in the field of polygraph due to a general misunderstanding of the technique, negative public opinion, and vocal disagreement within the field. But in analyzing this factor, it is important to remember that one hundred percent acceptance is not required because experts will disagree. One of the challenges in displaying general acceptance is this strong disagreement within the field itself.¹⁵⁹ Yet, the polygraph is widely used by government agencies and employers and accepted as a powerful investigative tool.¹⁶⁰ In a study undertaken by the Society for Psychophysiological Research, a poll of their members showed that two thirds considered polygraph “a useful diagnostic tool when considered with other available information.”¹⁶¹ The study also concluded that eighty-three percent of respondents who identified themselves as “highly informed about the polygraph literature” thought that polygraph tests were “a useful diagnostic tool.”¹⁶²

5. Overcoming the Potential for Prejudicial Effect

One of the biggest hurdles that attorneys encounter in the admissibility of polygraph is Federal Rule of Evidence 403.¹⁶³ Rule 403 provides that evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury.¹⁶⁴ For example, the Eighth Circuit in *Williams* held that Rule 403 may exclude polygraph evidence even when the same evidence passes the scrutiny of the *Daubert* factors.¹⁶⁵ An article in the *Journal of Applied Social Psychology* suggests that this reasoning is groundless.¹⁶⁶ This 2003 study examined whether there was any truth to the assumption many courts make that polygraph evidence is too prejudicial to be admitted because it will be overly probative in the minds of jurors.¹⁶⁷ This fear that jurors will not be able to correctly balance the weight of the polygraph is echoed in the opin-

159. See discussion *infra* Part VII.A.2.

160. *Posado*, 57 F.3d at 434.

161. Charles R. Honts & Bruce D. Quick, *The Polygraph in 1995: Progress in Science and the Law*, 71 N.D. L. REV. 987, 1016 (1995).

162. *Id.*

163. FED. R. EVID. 403. See also *United States v. Williams*, 95 F.3d 723, 729 (8th Cir. 1996).

164. FED. R. EVID. 403.

165. *Williams*, 95 F.3d at 729.

166. Bryan Myers, Angela Rosol & Eric Boelter, *Polygraph Evidence and Juror Judgments: The Effects of Corroborating Evidence*, 33 J. APPLIED SOC. PSYCHOL. 948, 950 (2003).

167. *Id.* at 948.

ions of those who indicate that polygraph testimony “may usurp the role of the jury as a determinant of witness credibility.”¹⁶⁸ This rationale for excluding polygraph evidence was expressed as early as 1933, yet this issue has received less attention by researchers than other polygraph concerns.¹⁶⁹

The 2003 study also examined whether “polygraph testimony is judged as more influential when presented alone than when presented along with corroborating evidence.”¹⁷⁰ The research protocol consisted of a mock trial where the research participants acted as jurors in as realistic a situation as possible.¹⁷¹ The participants came to a verdict and rated how influential various testimony was on that verdict.¹⁷² In the mock jury study, researchers found that jurors did not put much weight on polygraph evidence when it was contradicted by other evidence.¹⁷³ But when the polygraph evidence was corroborated by other evidence, the polygraph had slightly more influence on the jurors.¹⁷⁴ This study suggests that jurors are not overly dependent on the polygraph evidence and are able to weigh the polygraph evidence appropriately in light of other evidence presented.¹⁷⁵ Researchers found that the “results cast considerable doubt on the notion that jurors suspend critical judgment when presented with expert testimony, even when it is of a technical nature.”¹⁷⁶ The researchers concluded that “the findings here not only support research suggesting that jurors are not awed by polygraph evidence, but are consistent with a body of research amassed over the past quarter century that refutes the notion that jurors give undue deference to experts.”¹⁷⁷ Because jurors do not necessarily favor polygraph evidence, the exclusion of polygraph evidence under 403 based solely on these grounds is unwarranted.¹⁷⁸

168. *Id.* at 949.

169. *Id.* at 948-49.

170. *Id.* at 952.

171. *Id.* at 955.

172. *Id.*

173. *Id.*

174. *Id.*

175. *See id.*

176. *Id.* at 959.

177. *Id.*

178. *But see* United States v. Williams, 95 F.3d 723, 730 (8th Cir. 1996) (where polygraph evidence was excluded under Rule 403 because the test questions were not really on point and thus were not highly probative).

B. Polygraph Evidence is Comparable to Other Forms of Routinely Admitted Expert Evidence

Leading authorities in the field of evidence urge that “polygraph examination should not be held to any greater degree of accuracy than any other scientific endeavor relating to the examination of a human being.”¹⁷⁹ Courts cannot hold polygraph to a standard of perfection because “perfection in test results is not a prerequisite to the admissibility of evidence obtainable by use of scientific instruments or techniques.”¹⁸⁰ Also, arguments that the disagreement within the field of polygraph precludes its admissibility are without merit since experts in other fields such as firearms identification, hair and fabric comparisons, handwriting analysis, and medical and psychiatric testimony often testify in substantial disagreement.¹⁸¹ Despite any professional difference of opinion, polygraph evidence can still assist a court or jury in its decision-making in the same way that expert testimony in other disciplines is helpful regardless of shortcomings.¹⁸²

Studies comparing the accuracy of polygraph to other common forms of forensic evidence show that polygraph accuracy is similar or superior to other forms of commonly admissible forensic evidence.¹⁸³ Charles W. Daniels, a New Mexico attorney who describes himself as a proponent but not a “blind advocate” of polygraph, found that polygraph evidence reliability compares favorably with other types of evidence.¹⁸⁴ In his opinion, polygraph is “certainly as good as a handwriting sample, and it is far better than eyewitness identification of strangers, which is notorious unreliable evidence.”¹⁸⁵

179. Reid, *supra* note 67, at 35. (citing WIGMORE, EVIDENCE, 990 (3d ed. 1940)) (this article is reprinted from the March 1972 issue of POLYGRAPH).

180. *Id.*

181. *Id.*

182. See Gary D. Light & John R. Schwartz, *The Relative Utility of the Forensic Disciplines*, 28 POLYGRAPH 240, 240-249 (1999).

183. See J. Widacki & F. Horvath, *An Experimental Investigation of the Relative Validity and Utility of the Polygraph Technique and Three Other Common Methods of Criminal Identification*, 23 J. FORENSIC SCIS. 596, 600 (1978) (comparing polygraph to fingerprint, handwriting, and eyewitness identification methods, and finding that “in comparison to certain other common methods the polygraph technique is a unique and relatively valid method of criminal investigation and identification”).

184. Savage, *supra* note 125, at 52.

185. *Id.* See, e.g., *United States v. Jones*, 107 F.3d 1147, 1160-61 (6th Cir. 1997) (holding handwriting expert’s testimony admissible).

C. *Daubert* is Being Applied Too Stringently and Contravenes the Supreme Court's Intent

Courts have produced mixed results when evaluating polygraph examinations under the *Daubert* standard, and some decisions seem to call for a ban on polygraph evidence. Since the courts utilize a *Daubert* analysis on a case-by-case basis, the exclusion of any single polygraph does not indicate the need for exclusion of all polygraph evidence.¹⁸⁶ The blanket statement, "polygraph is inadmissible," is inaccurate because it unreasonably assumes that all polygraph examinations contain identical indicia of reliability. This assumption is inherently flawed because any evaluation technique which involves human interaction and the skills of professionals administering the technique is subject to some degree of variability. Polygraph examiners have different levels of expertise and experience, the test construction may have a flaw unique to the individual case, and the evidence presented in a particular case may not have met the judge's criteria. But this does not mean that all hope is lost for admission of polygraph as a whole.

Rather than rejecting the evidence indiscriminately, courts that have ruled on polygraph admissibility with a thorough and thoughtful analysis seem to be looking for greater uniformity and a higher level of expertise to be presented before them, rather than rejecting the evidence indiscriminately.¹⁸⁷ Attorneys who wish to have polygraph evidence admitted on their client's behalf should work together with the polygraph examiner to ensure the court's standards are met and that the evidence presented in any hearing on polygraph admissibility is comprehensive. Suggestions on how to do this will be discussed in more depth in the "Practitioner's Guide" section near the end of this article.

V. EMPLOYEE POLYGRAPH PROTECTION ACT: WHERE DO TRADE SECRETS FIT IN?

In response to concerns over the validity of polygraphs used solely for screening, Congress passed legislation to protect employees from mandatory polygraph screening at the whim of their employers.¹⁸⁸ The Employee Polygraph Protection Act of 1988 protects employees from being required to take a polygraph in many situations.¹⁸⁹ Based on its own review of polygraph

186. *Daubert v. Merrell Dow Pharm., Inc.* 509 U.S. 579, 591 (1993).

187. *See United States v. Williams*, 95 F.3d 723, 728 (8th Cir. 1996). (noting that the polygraph examiner "did not pretend to any expertise about the reliability of polygraph testing" led the Court to find "that the evidence presented this morning has failed to demonstrate that [the examiner] qualified by training and experience as an expert in the field of polygraphy, in terms . . . of being able to discuss the field in general, its theory and its reliability").

188. COMM. TO REVIEW THE SCIENTIFIC EVID. ON THE POLYGRAPH, *supra* note 9, at 12.

189. *See* 29 U.S.C. §§ 2001-2009 (2006).

research, Congress recognized that polygraphs over specific incidents were vastly different from screening polygraphs.¹⁹⁰ The Act specifically allows employers to polygraph employees suspected of theft or misappropriation under certain circumstances.¹⁹¹ If there is reasonable suspicion that an employee is misappropriating trade secrets, then employers can polygraph the employee.¹⁹² Yet few employers know they can do this.¹⁹³

This section will provide a thorough understanding of how the law allows polygraphs of employees suspected of trade secret misappropriation. Discussion of the Employee Polygraph Protection Act will be followed by a showing that the language of trade secret law clearly falls within one of the exceptions that allows employers to polygraph their employees.

A. The Employee Polygraph Protection Act of 1988

Congress enacted the Employee Polygraph Protection Act of 1988 (the “EPPA”) because of concerns over the use of polygraph as a screening device for employers in the hiring process.¹⁹⁴ Rather than granting employers “special protections and privileges that would not exist in the absence of the legislation”, the EPPA is a “prohibitive statutory scheme” that makes polygraph exams under certain situations unlawful while carving out exceptions to the general prohibition.¹⁹⁵ The EPPA sets forth “broad prohibitions on the use of polygraph examinations by employers” in 29 U.S.C. § 2002.¹⁹⁶ The exceptions to this prohibition are found in 29 U.S.C. § 2006 and include an exception for an ongoing investigation.¹⁹⁷ This exception permits employers to request the employee to take a polygraph examination if:

- (1) the test is administered in connection with an ongoing investigation involving economic loss or injury to the employee’s business such as theft, embezzlement, misappropriation, or an act of unlawful industrial espionage or sabotage;
- (2) the employee had access to the property that is the subject of the investigation;

190. OFFICE OF TECHNOLOGY ASSESSMENT, *supra* note 12, at 95-96, 102.

191. *See* 29 U.S.C. § 2006 (2006).

192. *See id.*

193. Basset, *supra* note 1, at 57 (“Some people think that the Employee Polygraph Protection Act of 1988 closed the door completely on testing employees in the private sector. Not so!”).

194. *Id.*

195. *Hossani v. W. Mo. Med. Ctr.* 140 F.3d 1140, 1143 (8th Cir. 1998).

196. *Id.*

197. *Watson v. Drummond Co.*, 436 F.3d 1310, 1314 (11th Cir. 2006).

- (3) the employer has a reasonable suspicion that the employee was involved in the incident or activity under investigation; and
- (4) the employer executes a statement, provided to the examinee before the test [that describes with specificity the examinee's alleged misconduct].¹⁹⁸

Thus, the EPPA provides employers with a method to investigate acts which have caused them injury or damage by requesting employees to submit to a polygraph. This allows employers to retain the right to use the powerful investigative tool of polygraph to pinpoint the person responsible for the loss.

B. The Uniform Trade Secrets Act

Trade secret law protects any information “used in one’s business” that provides its owner “an opportunity to obtain an advantage over competitors who do not know or use it,” if that information is in fact a secret.¹⁹⁹ Each state has its own laws to protect trade secrets in one form or another, but a majority of states has now enacted a model state statute called the Uniform Trade Secrets Act (the “UTSA”).²⁰⁰ Provided there is no direct conflict, courts often use the Restatement of Torts (1939) in interpreting the laws and clarifying trade secret concepts, since courts in most states adopted it prior to the promulgation of the UTSA.²⁰¹

The owner of a trade secret may recover damages for a misappropriation of the trade secret.²⁰² While the definition of “misappropriation” in the UTSA is lengthy, it can be simply stated as an “acquisition of a trade secret of another by a person who knows or has reason to know that the trade secret was acquired by improper means.”²⁰³ “Improper means” is further defined as including “theft, bribery, misrepresentation, breach or inducement of a breach of a duty to maintain secrecy, or espionage through electronic or other means.”²⁰⁴ As the authors of a widely used intellectual property textbook

198. *Id.* at 1314-15 (citing 29 U.S.C. § 2006(d)).

199. ROBERT P. MERGES, PETER S. MENELL & MARK A. LEMLEY, *INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE* 29 (3d ed. 2002) (quoting RESTATEMENT OF TORTS §757 cmt. b (1939)).

200. *Id.* at 29-30.

201. *Id.* See also *Metallurgical Indus., Inc., v. Fourtek, Inc.*, 790 F.2d 1195, 1201, 1204 (5th Cir. 1986); *Chi. Lock Co. v. Fanberg*, 676 F.2d 400, 404 (9th Cir. 1982). Each of these cases refers to the Restatement of Torts to further define and interpret trade secret law.

202. UNIF. TRADE SECRETS ACT § 3 (amended 1985), 14 U.L.A. 633 (1995).

203. § 1(2)(i).

204. § 1(1).

explain, “use or disclosure is wrong, in the eyes of trade secret law, when the information is acquired through deception, skullduggery, or outright theft.”²⁰⁵

A comparison of the statutory language reveals with clarity that an ongoing investigation of trade secret misappropriation falls squarely within the exceptions of the EPPA. The language of the EPPA statute, which outlines acts in 29 U.S.C. § 2006(d)(1), such as “theft, embezzlement, misappropriation, or an act of unlawful industrial espionage or sabotage,” are quite familiar next to UTSA’s list of “improper means.”²⁰⁶ In fact, the lists are nearly identical. Therefore, it is clear that an employer who wishes to perform an investigation of trade secret misappropriation can request employees to submit to a polygraph, provided that the employer complies with the further requirements of § 2006(d)(2) – (4).²⁰⁷

VI. POLYGRAPH AND TRADE SECRETS: ADVOCATING FOR MORE WIDESPREAD USE

Based on the above analysis, it is evident that employers are free to use polygraphs to investigate trade secret misappropriation, subject to the requirements of § 2006(d).²⁰⁸ Interestingly, a national review of case law reveals few, if any, cases that mention polygraphs at all in conjunction with the theft of trade secrets. An article in the *Journal of Proprietary Rights* recently outlined the “Top Ten Reasons” why employers lose trade secret cases.²⁰⁹ The author of the article acknowledges that “protection of intellectual capital is one of the most critical issues facing businesses,” but points out that “employers that confront the actual or suspected loss of proprietary information fail because they either do not have or do not follow a plan to prevent and address the problem.”²¹⁰

One of the top reasons cited is “inadequate investigation of potential misappropriation.”²¹¹ The author urges employers to take prompt action when they suspect theft and have an investigation team in place.²¹² An outside investigator may provide extremely useful information, but “it is essential that they be reputable.”²¹³ One of the main goals of the investigation

205. MERGES, MENELL & LEMLEY, *supra* note 199, at 31.

206. Compare 29 U.S.C. § 2006(d)(1) (2000), with UNIF. TRADE SECRETS ACT § 1(1).

207. See 29 U.S.C. § 2006(d)(2) – (4).

208. § 2006(d).

209. Marguerite S. Walsh, *The Top Ten Reasons Employers Lose Trade Secret Cases – and How to Prevent Them*, J. PROPRIETARY RTS., Oct. 2003, at 1.

210. *Id.*

211. *Id.* at 2.

212. *Id.* at 2-3.

213. *Id.* at 3.

should be “convinc[ing] a judge that injunctive relief is needed; explaining how [the company] has been hurt; and driving towards trial.”²¹⁴ A company that uncovers trade secret misappropriation would be wise to use a polygraph examiner as an outside investigator to aid in the investigation once there is reasonable suspicion that the employee was involved in the incident. Once the evidence that a particular employee was involved is corroborated by the polygraph outcome, it would be strong evidence to produce in court.

Conversely, an innocent employee or former employee accused of a violation of trade secret law may utilize a polygraph exam to help clear his or her name. This pre-trial use of polygraph is common. If the employee is certain he is innocent, then he can offer to take a polygraph. This helps both parties. An employer may be relieved to receive results showing that a trusted employee is not involved in the theft of a trade secret, and the employee can clear his name. The employer is able to shift the focus of the investigation to another party and the employee avoids costly litigation by proving his innocence.

It is possible that employers shy away from using polygraphs because of the perception that polygraphing employees is harshly forbidden. However, past congressional research and the plain language of the statute clearly show that the focus of the law’s prohibition were *screening* polygraphs.²¹⁵ Congress specifically delineates areas where no prohibition exists.²¹⁶ The law provides that certain criteria must be met in order to fall under this exception, however, and this led to the APA’s recommendation of procedures that should be followed in EPPA polygraphs.²¹⁷ The Secretary of Labor can assess a fine of up to \$10,000 for each violation of the law, so it is imperative that employers follow the recommendations and counsel of their attorneys to determine how to proceed with an EPPA polygraph.²¹⁸ While the possibility of a stiff fine may be a deterrent, employers who have a situation that clearly falls within the exception stand to benefit from utilizing the polygraph in

214. *Id.* at 2.

215. 29 U.S.C. §§ 2001-2009 (2000); OFFICE OF TECHNOLOGY ASSESSMENT, *supra* note 12, at 102.

216. § 2006.

217. American Polygraph Association, The Employee Polygraph Protection Act, <http://www.polygraph.org/eppa.htm> (last visited Jan. 10, 2007). The APA website offers guidance for both employers and polygraph examiners on how to proceed with a polygraph under the constraints of the EPPA. *Id.* The website includes a checklist for both the employer and the polygraph examiner that will help ensure all requirements of the EPPA are followed. *Id.* There is also a related EPPA link for Compliance Assistance through the Department of Labor at <http://www.dol.gov/dol/compliance/comp-eppa.htm>. *Id.*

218. Gary S. Mogel, *Violation of Employee Lie Detector Statutes*, 18 AM. JUR. PROOF OF FACTS 3D 627, 641 (2005). This entire topic is a good source of information to ensure employers are fully informed about possible violations and how to avoid violating the EPAA laws.

both their investigation and subsequent litigation against an employee who has misappropriated valuable trade secrets.

In a case where the attorney anticipates that polygraph evidence could be used in a subsequent litigation against the employee, it is critical that all of the factors that weigh in favor of admissibility are considered. It should be noted that “the rules with respect to the admissibility of polygraph evidence in a criminal case have generally been followed in civil cases.”²¹⁹ Thus, the judicial opinions discussed in this article apply equally in the criminal and civil realm with regard to polygraph. Whether the litigation will be brought as a civil case under state trade secret laws or as a criminal case under the Economic Espionage Act, the admissibility requirements will be similar.

VII. PRACTITIONER’S GUIDE TO ADMISSIBILITY OF POLYGRAPH EVIDENCE

Based on the cases analyzing polygraphs under the *Daubert* standard, certain rules begin to emerge that are important in determining the admissibility of polygraph evidence.²²⁰ By analyzing what courts have focused on in finding a polygraph inadmissible or admissible, it is possible to prepare a list of procedures that a party seeking to have a polygraph admitted can follow to overcome the weaknesses and build upon the strengths identified by courts. Early attention to factors that have been a roadblock to admissibility in the past should increase the chance of admissibility. The roadblocks include those that can be addressed by the polygraph field in general and those that can be addressed by attorneys preparing to utilize polygraph evidence on behalf of their client.

A. What the Polygraph Field Can Do to Help Itself

Practitioners in the field have much to do to facilitate the widespread acceptance of polygraphs in courts. The road to admissibility, however, is one that attorneys and polygraph examiners must navigate together. Yet, there is a catch-22 inherent in the present situation. On the one hand, courts want to see a higher standard of examination including more accuracy and better reliability. On the other hand, they seem to rely on decades-old precedent and excessively strict standards in finding polygraphs inadmissible. With so many negative opinions of polygraph being asserted and judicial

219. Charles M. Sevilla, *Reliability of Polygraph Examination*, 14 AM. JUR. PROOF OF FACTS 2D 1, 23-24 (2005).

220. It is important to note that the controversy over admitting polygraph evidence revolves mainly around the admissibility of the results of the examination itself. The admissibility of voluntary admissions made to the polygraph examiner, such as in the form of a written admission or statement, would generally be admissible. *United States v. Black*, 78 F.3d 1, 7 (1st Cir. 1996) (noting that the admissions were made during a voluntary polygraph examination and the examinee had signed a waiver of his right against self-incrimination).

opinions excluding polygraph based on dated research, it seems that the polygraph field has lost some of its motivation to become standardized and adopt court-favored characteristics for polygraph admissibility. Despite the uphill battle, the polygraph field must work toward higher standards in order to gain the elusive goal of widespread admissibility. Although the stage is set, it seems to lack the right people to show the courts that the mistakes of prior polygraph examiners are not being repeated.

1. Increase Education and Training Requirements

The education and training of polygraph examiners is a critical factor. It is important that schools begin to recruit highly qualified applicants with skills relevant to polygraph. One area that needs attention is the recruitment of applicants with Bachelor's degrees (or higher) in the areas of psychology and physiology can address the criticism concerning the lack of depth of education for most polygraph examiners. The "forensic psychophysicologist" must have an in-depth understanding of psychology and physiology as it relates to an individual's reaction to deception and stress. While the majority of examiners receive this training in polygraph school, the profession will benefit from more applicants with Bachelor's degrees and background to carry out polygraph research. This will also bring more highly-educated examiners to the field and increase the number of potential researchers capable of engaging in scientific studies on polygraph testing.

Similarly, because "polygraph testing combines interrogation with physiological measurements obtained using the polygraph"²²¹ and the result is "a joint product of an interview or interrogation technique and a psychophysiological measurement or testing technique,"²²² the importance of applicants with a background in interrogation cannot be underestimated. Polygraph schools should seek out applicants with excellent interview and interrogation skills. As in many fields, excellence in these skills is often a natural gift and the polygraph field would benefit from the focused recruitment of highly skilled interrogators who also have the ability to grasp the scientific aspects of polygraph.

Polygraph schools must ensure that polygraph education is more standardized and of a high quality. The Department of Defense Polygraph Institute ("DODPI") is generally regarded as one of the best schools in the United States.²²³ Schools across the nation must strive to emulate the curriculum and teaching techniques used by the DODPI instructors so that their students

221. COMM. TO REVIEW THE SCIENTIFIC EVID. ON THE POLYGRAPH, *supra* note 9, at 12.

222. *Id.* at 16.

223. *United States v. Scheffer*, 523 U.S. 303, 324 (1999) ("The military maintains 'very stringent standards for polygraph examiners' and has established its own Polygraph Institute, which is 'generally considered to be the best training facility for polygraph examiners in the United States.'" (quoting Honts & Perry,

can attain a level of respect on par with graduates of DODPI. This includes ensuring that the school is accredited by the APA and maintains the high quality standards that the APA requires of its accredited schools.²²⁴

As education in most professional fields is ongoing, the field of polygraph should be no different. Polygraph examiners must take it upon themselves to maintain an understanding of recent polygraph research and writing. Even though states may not require continuing education, polygraphs will never gain widespread admissibility in courts if the expert polygraph examiners cannot demonstrate an understanding of the current research. Thus, while each examiner can take personal responsibility for his or her own ongoing education, it is important that continuing education requirements be added to state licensing requirements as well.

2. Focus Less on Polarizing Behavior and More on Scientific Research

The polygraph field has experienced a great deal of polarity and in-fighting. While those in the field may have begun their crusades with good intentions, the resulting clashes have only marred the name of polygraphs by public displays of childish tit-for-tat and unprofessional disputes between polygraph researchers.²²⁵ The field must unite and work together to resolve professional disputes and differences of opinion. Thus, unbiased²²⁶ scientific

Polygraph Admissibility: Changes and Challenges 16 LAW & HUM. BEHAV. 357, 359 n.1 (1992)).

224. See discussion *infra* notes 229-30.

225. MEMON, VRIJ, & BULL, *supra* note 4, at 21. The “lively debate” in the field of polygraph is “notable.” *Id.* The leading researchers who are engaged in the heated debate have been David Raskin and David Lykken, who have “engaged for several decades in prolonged controversy over the reliability and validity of various polygraph tests.” *Id.* The polarization continues with researchers such as Furedy, Iacono, and Honts taking over the dispute. *Id.* See, e.g., Stan Abrams, *Statistics and Other Lies*, 30 POLYGRAPH 29, 29-36 (2001). Researchers from outside the field of polygraph encounter great difficulty in conducting a review of the scientific polygraph research because of the “heated disagreement between the foremost researchers in the field.” Melvin G. Goldzband, *The Polygraph and Psychiatrists*, 35 J. FORENSIC SCIS. 391, 394 (1990). The author of the article, who is reviewing the scientific validity of polygraph in a peer-reviewed journal, notes “not only the data provided by one group are questioned by the others—even the overall research methodology is severely criticized by the others.” *Id.* This in-fighting among researchers has resulted in “really no repeatable, respected, agreed-upon data substantiating claims of reliability of the polygraph.” *Id.*

226. One of the criticisms of current polygraph research by those outside the field of polygraph revolves around the implication that research undertaken by those with a “vested” interest will be biased. Opponents in the field of psychology have been particularly vocal. Interestingly, a professor of psychiatry who wrote an article suggesting that “any effectiveness of the technique may be, in

research can become a priority, replacing vitriolic arguments between those with opposing opinions. Well-constructed and neutral scientific research studies better demonstrate your position than finger-pointing and fault-finding.

3. Advocate for Licensing Laws in All States

Not all states require licensing of polygraph examiners.²²⁷ This is something that polygraph examiners must strive to change. Courts may not look as highly upon an unlicensed and unregulated profession. While a polygraph examiner who practices in a state that does not require licensing can follow the guidelines set out by the APA, this is still not a mandatory regulation. For those examiners who are in such states, it is important to maintain high standards, document all techniques, and follow the APA guidelines in all areas. If such a polygraph is to be offered as evidence in court, it may be advisable to have an experienced, licensed polygraph examiner from another state review the exam and testify to its conformance with procedures in the licensing state. This may help bolster the credibility of an unlicensed polygraph examiner. However, in this author's opinion, the long-term solution is for all states to require that polygraph examiners be licensed and regulated.

B. The Attorney's Self-Help Guide to Polygraph Admissibility

A major factor affecting the ability to use the polygraph as evidence is the examiner's "ability, experience, education and integrity."²²⁸ Thus, when choosing a polygraph examiner to perform the polygraph, it is important to note his or her background, education, and experience. The polygraph examiner should certainly have attended a school accredited by the American Polygraph Association ("APA").²²⁹ The APA's statement regarding the accreditation program of polygraph schools states:

the main, due to the suggestibility of the examinees and the coercive mystique of the instrument" also noted in the same article the "*professional concern . . . that U.S. businesses (and government) has invested in a technology which impinges on the mental health sciences.*" Goldzband *supra* note 225, at 391-92. It is ironic that the field that criticized polygraph for having a vested interest in the research also has a vested interest due to the fact that polygraph is infringing on the traditional mental health sciences. It seems possible that many psychologists feel threatened by the field of polygraph and this colors their opinion of it.

227. American Polygraph Association, State Licensing Boards, <http://www.polygraph.org/statelicensing.htm> (last visited Jan. 10, 2007).

228. REID & INBAU, *supra* note 5, at 4.

229. A list of the accredited polygraph schools can be found on the APA website. American Polygraph Association, Accredited Polygraph Schools, <http://www.polygraph.org/schools.htm> (last visited Jan. 10, 2007).

The APA maintains and administers a demanding program of accrediting certain schools who provide basic and continuing education in the field of polygraph. This program is strict and establishes demanding standards for students. These schools joined some years ago in agreeing to the application of certain standards and their commitment to excellence in training remains uncompromised. Regular inspections ensure that these established standards are never compromised.

The polygraph examiner should also be a member in good standing of the American Polygraph Association²³⁰ and follow the standards of practice promulgated by the APA.²³¹ Using a polygraph examiner who is a member in good standing with the APA and follows its guidelines helps ensure a quality examination with a greater chance of admissibility. Before offering the testimony of the polygraph expert, the attorney should be sure that the witness is prepared to testify to his or her “educational background, academic positions, and membership or participation in professional organizations.”²³²

It would be wise to inquire among the professional community about a polygraph expert’s reputation for integrity. Contact any state licensing board or polygraph association and the American Polygraph Association in order to inquire about an examiner’s status.²³³ As of 1986, there were reports that “at

230. The APA seeks to maintain consistent standards for polygraph examiners nationwide. American Polygraph Association, APA Mission and Goals, <http://www.polygraph.org/mission.htm> (last visited Jan. 10, 2007).

Mission: Established in 1966, the American Polygraph Association (APA) consists of over 2500 members dedicated to providing a valid and reliable means to verify the truth and establish the highest standards of moral, ethical, and professional conduct in the polygraph field. The American Polygraph Association continues to be the leading polygraph professional association, establishing standards of ethical practices, techniques, instrumentation, research, and advanced training and continuing educational programs.

Id.

231. The APA has Standards of Practice which its members are expected to adhere to in the interest of accuracy and consistency in the field of polygraph. American Polygraph Association, Standards of Practice (July 10, 1999), <http://www.polygraph.org/standards.htm>.

232. John E. Theuman, Annotation, *Admissibility in Federal Criminal Case of Results of Polygraph (Lie Detector) Test – Post-Daubert Cases*, 140 A.L.R. FED. 525, § 2[b] (2005).

233. American Polygraph Association, *supra* note 218; American Polygraph Association, Contact the APA, <http://www.polygraph.org/contact.htm> (last visited Jan. 10, 2007).

least 30 states require licenses or regulate polygraphists.”²³⁴ Courts that have ruled on polygraph admissibility will likely prefer to see that the polygraph examiner is licensed and regulated by the state in which he practices. For those states that do not require licensing, this may be a big hurdle to admissibility. In that case, it is important that the examiner is an APA member and subject to some kind of governance. Taking these steps will help ensure the polygraph examiner you choose will meet the high standards that courts have set.

Another important step is to confirm that the polygraph examiner has a good understanding of polygraph theory and is up to date on recent validity and reliability research.²³⁵ Remember that the polygraph examiner is being presented as an expert in the field of polygraph. If he cannot answer questions regarding current research in the field of polygraph or sufficiently justify his designation as an expert, the examiner’s “expert” opinion based on the polygraph results will not be admitted. On the other hand, “caution the witness not to make any exaggerated claims regarding the technique’s capabilities or reliability, but rather to be candid about the technique’s limitations.”²³⁶

Any attorney who is preparing to present a polygraph for admissibility should additionally examine the APA website’s list of frequently asked questions and consult the quick reference guide to the law.²³⁷ These resources

234. *United States v. Posado*, 57 F.3d 428, 434 n.9 (5th Cir. 1995) (citing David C. Raskin, *The Polygraph in 1986: Scientific, Professional and Legal Issues Surrounding Application and Acceptance of Polygraph Evidence*, 1986 UTAH L.REV. 29, 68).
235. *See Franklin v. Franklin*, 928 So. 2d 90, 93-4 (La. Ct. App. 2005) (where the polygraph examiner was “unable to give any specifics of the studies . . . the names of the studies, where published or how conducted. . . [and] was not aware of any outside scientific studies validating single issue polygraphs.”).
236. Theumann, *supra* note 232, at § 2[b]. *Compare* *United States v. Orians*, 9 F. Supp. 2d 1168, 1172 (D. Az. 1998) (polygraph inadmissible where “Raskin’s demeanor during the evidentiary hearing made it clear that he was not an impartial witness”), *and* *U.S. v. Cordoba*, 991 F. Supp. 1199, 1207 (C.D. Cal. 1998) (polygraph inadmissible where “despite numerous serious shortcomings in the administration of Defendant’s test, Dr. Raskin found it to be completely acceptable under industry standards. . . [and] if pro-polygraph’s best expert declines to find any fault with an obviously faulty examination, that is strong evidence that there is insufficient controlling standards”), *with* *United States v. Davila*, *supra* note 136, at 252 (polygraph admissible where the polygraph expert “acknowledged that it is difficult to test whether a polygraph examination accurately detects deception”), *and* *Evans v. DeRidder Municipal Fire*, 815 So. 2d 61, 68 (La. 2002) (polygraph admissible where the polygraphist “admitted that the polygraph was not 100% accurate and was cross-examined vigorously on the possible inaccuracies of the polygraph”).
237. American Polygraph Association, *Frequently Asked Questions About Polygraph*, <http://www.polygraph.org/faq.htm> (last visited Jan. 10, 2007). *See also*

will help boost your knowledge of polygraphs and reveal applicable issues that need to be taken into consideration based on your state's laws regarding polygraph. By being more informed on polygraphs in general, an attorney is more prepared to question the expert and compose the most persuasive arguments for admissibility of the polygraph evidence. Of course, following the arguments laid out in Section IV above will be key to show the court that the roadblocks to admissibility have been addressed and overcome.

VIII. CONCLUSION

Polygraph is a technology that has been evolving since the early 1900s. For nearly 100 years, the technology has advanced, new techniques have emerged, and reliability and accuracy have increased. Polygraphs should be used more extensively in trade secrets law, whether the case eventually gets litigated or not. Using it in the investigative capacity allowed as an exception under the EPPA will aid in determining who is responsible for the theft of trade secrets. This quick and powerful tool will help the employer prevent that person from engaging in further misappropriation, while also providing the evidence to assist in pursuing a legal remedy. Following the suggestions gathered from the analysis of case law will increase the chance of admissibility.

Once the challenges to having polygraph evidence admitted are overcome, the use of polygraphs in trade secret misappropriation may become more widespread. The EPPA has opened the door for employer use of polygraphs in instances of theft and misappropriation. The exceptions of EPPA, coupled with the language of the UTSA, indicate that there is a clear exception for employers to polygraph employees suspected of trade secret misappropriation. This novel application of polygraphs to trade secrets litigation is justified in the plain language of the laws governing polygraph and trade secrets. The need exists for this technology to be applied in the area of trade secrets and the time is ripe to spur the acceptance of polygraph forward. While admissibility of the polygraph evidence is currently a challenge, the factors to increase admissibility and improve the polygraph field are outlined in this article. The future of polygraph application in trade secrets lacks only the right team of employer, attorney and polygraph examiner with the initiative to take the first step and pave the way to admissibility.

AMERICAN POLYGRAPH ASSOCIATION, *POLYGRAPH: QUICK REFERENCE GUIDE TO THE LAW* (17th ed. 2002), <http://www.polygraph.org/intro.htm> (listing relevant laws for state and Federal jurisdictions and summaries of cases in those jurisdictions which affect polygraph).