

DILEMMAS OF POLYGRAPH STIPULATIONS

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I. INTRODUCTION

The polygraph or "lie detector" is designed to detect falsehoods,¹ but its reliability and hence its value to the judiciary are matters of continuous dispute.² Indeed, most courts refuse to admit polygraph results into evidence,³ citing as support a general lack of acceptance of the technique by the scientific community.⁴ Judicial reluctance to admit polygraph evidence is only partly the result of the technical deficiencies of the instrument. Widespread underqualification of polygraph examiners, who play a significant role in administering the test and evaluating the results, also has contributed to the judiciary's unwillingness to admit such evidence.

Regardless of the deficiencies of the technique, there appears to be an emerging trend toward favoring the admissibility of polygraph testimony when the parties so stipulate.⁵ This writing questions the wisdom of and recommends caution in admitting such testimony by stipulation. In order to present the stipulation process in this light, the article will review current standards for admissibility of scientific evidence, Part II; describe the method of administering the polygraph

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¹ See *infra* notes 28-42 and accompanying text.

² See *United States v. Alexander*, 526 F.2d 161, 170 (8th Cir. 1975) (polygraph results inadmissible as evidence since not presently accepted by scientific community nor shown to be sufficiently reliable), *cert. denied*, 426 U.S. 923 (1976); *United States v. Wilson*, 361 F. Supp. 510, 514 (D. Md. 1973) (analytical difficulties of polygraph technique mandate exclusion of evidence resulting therefrom); Abbell, *Polygraph Evidence: The Case Against Admissibility in Federal Criminal Trials*, 15 AM. CRIM. L. REV. 29, 30 (1977) (technical and legal resources require policy of exclusion of polygraph results in federal criminal trials be continued). *But see* Abrams, *Polygraphy Today*, 3 NAT'L J. CRIM. DEF. 85, 105 (1977) (polygraph results should be admitted into evidence when test is administered by qualified examiner); Pemberton, *Polygraph: Modern Rules and Videotape Technology to Promote the "Search For Truth" in Criminal Trials*, 7 NAT'L J. CRIM. DEF. 35 (1981) (advocating use of polygraph procedure in federal courts where coherent standards for admissibility are established).

³ See, e.g., *United States v. Alexander*, 526 F.2d 161, 166 (8th Cir. 1975), *cert. denied*, 426 U.S. 923 (1976); *United States v. Russo*, 527 F.2d 1051, 1059 (10th Cir. 1975), *cert. denied*, 426 U.S. 906 (1976); *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923); *State v. Saia*, 172 Conn. 37, 41-42, 372 A.2d 144, 147 (1976); *Kaminski v. State*, 63 So. 2d 339, 340-41 (Fla. 1953); *Stack v. State*, 234 Ga. 19, 21-22, 214 S.E.2d 514, 517-18 (1975).

⁴ See *infra* notes 6-14 and accompanying text.

⁵ See *infra* notes 69-111 and accompanying text for a discussion of the stipulation process.

test, Part III; illustrate the severe limitations of the technique, Part IV; and specifically address the problems associated with the stipulation process, Part V. It also will present the constitutional issues which have arisen with respect to the admissibility of the test results, Parts VI and VII; and finally, will offer a number of legislative suggestions for ensuring the proper use of stipulated polygraph results, Part VIII.

II. STANDARDS FOR ADMISSIBILITY

The development of standards for the admissibility of polygraph evidence began in 1923 with the decision in *Frye v. United States*,⁶ in which a per se exclusion was ordered. In *Frye*, the defendant offered testimony of an expert who conducted a deception test.⁷ The court noted the novelty of the admissibility question before it and, applying the general standard utilized for admission of scientific evidence,⁸ required the proponents of such evidence to demonstrate "general acceptance in the particular field in which it belongs."⁹ Since physiological and psychological authorities disapproved of the proffered test, the court forbade its use at trial.¹⁰

The "general acceptance" test functions as a documentation procedure. Instead of authorizing a detailed presentation appraising the equipment's theoretical and practical sufficiency, it assesses the level of approval in the scientific community. This standard, however, has certain limitations. Acceptance levels among experts vary,¹¹ and courts may find it difficult to determine which single individual fully represents the field's opinion. In *Frye*, for instance, the evidence was rejected on the basis of the testimony of physiological and psychological authorities.¹² A different conclusion more likely would have been drawn if polygraph experts had been utilized.¹³

⁶ 293 F. 1013 (D.C. Cir. 1923).

⁷ *Id.* at 1014. The test in *Frye* measured systolic blood pressure. *Id.* at 1013. The theory asserted was that the test accurately demonstrated the change in emotions associated with an attempt at concealment of the truth, and accordingly, that the results proved the defendant's innocence. *Id.* at 1013-14. Today's polygraph is more complex. It measures blood pressure, skin resistance, muscle movements, pulse, and breathing. See J. REID & F. INBAU, TRUTH AND DECEPTION: THE POLYGRAPH ("LIE DETECTOR") TECHNIQUE 5 (2d ed. 1977); see *supra* notes 29-30 and accompanying text.

⁸ *Frye*, 293 F. at 1014.

⁹ *Id.*

¹⁰ *Id.*

¹¹ See *infra* notes 43-45 and accompanying text.

¹² *Frye*, 293 F. at 1014.

¹³ See *United States v. Zeiger*, 350 F. Supp. 685, 690-91 (D.D.C.) (acknowledging benefit from inquiring among polygraph experts for verification of reliability), *rev'd per curiam*, 475 F.2d 1280 (D.C. Cir. 1972); see also Levitt, *Evaluation of the "Lie Detector"*, 40 IOWA L. REV. 440, 457 (1955) (suggesting psychologists or psychiatrists are usually unfit to evaluate polygraph).

Regrettably, courts often focus on general acceptance rather than on the accuracy of the technology. When a court is reasonably assured a procedure is accepted by the particular field to which it belongs, an adequate foundation may be formed for admission by judicial notice under the assumption that the validity of the procedure is verified by its legitimacy in the field.¹⁴ It is ill-conceived, however, to bar conclusions of qualified experts whose opinions differ from those held by the larger community. General acceptance should act as a standard for judicial notice, but it is a mistake to employ it to bar relevant challenges to the field's opinion.

A more reasoned approach measures the polygraph by its relevancy. Professor McCormick suggests that "[g]eneral scientific acceptance' is a proper condition for taking judicial notice of scientific facts, but not a criterion for admissibility of scientific evidence."¹⁵ Under the McCormick approach, expert testimony may be admitted on either of two bases: by judicial notice when a legitimate field supports the conclusions as facts, or by any relevant opinion proffered by a qualified expert, even when unsupported by the larger community. Unless the testimony is excludable for other reasons, such as undue prejudice, confusion, or unwarranted consumption of judicial time,¹⁶ its admissibility is not governed solely by the viewpoint of the particular field to which it belongs.¹⁷ This standard protects the philosophical concern for accuracy by permitting challenges to any imprecise assumptions in the scientific community.

The federal rules of evidence may be viewed as supporting McCormick's outlook. The rules permit judicial notice of any fact "capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned."¹⁸ Essentially, general recognition by respected scientific sources is sufficient to admit

¹⁴ As the *Frye* standard assumes accuracy from field opinion, the Federal Rules of Evidence allow judicial notice when the issue is generally known or verified by traditionally accepted sources. FED. R. EVID. 201 (b) ("A judicially noticed fact must be one not subject to reasonable dispute in that it is either (1) generally known . . . or (2) capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned"). But see *State v. Williams*, 388 A.2d 500, 504 (Me. 1978) (authorizing admission of newly developed scientific principles even though general acceptance was absent).

¹⁵ C. MCCORMICK, HANDBOOK ON THE LAW OF EVIDENCE § 203, at 491 (2d ed. 1972). Some courts appear to be moving away from the *Frye* standard and closer to the McCormick standard. See, e.g., *Commonwealth v. A Juvenile*, 365 Mass. 421, 424-33, 313 N.E.2d 120, 123-28 (1974) (creating exception to general acceptance test where safeguards to reduce potential for abuse were shown); see also *United States v. Ridling*, 350 F. Supp. 90 (E.D. Mich. 1972).

¹⁶ See FED. R. EVID. 403.

¹⁷ C. MCCORMICK, *supra* note 15, § 203, at 491.

¹⁸ FED. R. EVID. 201 (b).

into evidence any technological process.¹⁹ Where such recognition exists, the only remaining issue is whether the instrument, under the particular facts, was maintained and operated properly by a qualified witness. The technological device may thus be introduced by judicial notice as a scientific fact.

Prior to a judge rendering a preliminary decision approving an expert's qualifications,²⁰ the federal rules require that the proponent of the testimony make a showing of the following two elements: 1) that the expert has scientific, technical, or other specialized knowledge in the subject area and 2) that the testimony is of such a nature as to assist the trier of fact.²¹ In cases in which polygraph evidence is to be introduced, these requirements mandate a review of the operator's ability²² and the validity of the test's underlying theory.²³ Should either be found unacceptable, the testimony is excludable. If, however, the theory of the test and the operator's qualifications are accepted by the court, the only issue requiring resolution is whether the proffered evidence renders any material fact more or less probable.²⁴ If this is established successfully, the testimony may be admitted provided its probative value is not outweighed substantially by undue prejudicial effects or needless delay.²⁵ Thus, the federal rules, like McCormick, view admissibility of scientific evidence in terms of judicial notice and relevance.

Under both the *Frye* and McCormick approaches, admissibility is based upon the legitimacy of the procedure. *Frye* utilizes the scientific community's opinion as the basis for presumed accuracy while McCormick effectively analyzes the machine's abilities in order to determine if it is sufficiently reliable to be relevant at trial.

Finally, admissibility also may be based on stipulation by the parties.²⁶ When both sides agree to the admission of polygraph results,

¹⁹ See, e.g., *Cortese v. Cortese*, 10 N.J. Super. 152, 76 A.2d 717 (App. Div. 1950). In *Cortese*, then New Jersey Supreme Court Justice Brennan, allowed judicial notice of a blood grouping test because there existed "general recognition of the accuracy and value of the tests when properly performed by persons skilled in giving them." *Id.* at 157, 76 A.2d at 720.

²⁰ See FED. R. EVID. 104(a) (preliminary questions concerning qualifications of witness are to be determined by court).

²¹ FED. R. EVID. 702. Even when the polygraph operator possesses specialized knowledge, it is this author's position that the testimony cannot assist the trier of fact since reliability cannot be established. See *supra* notes 43-68 and accompanying text.

²² See *infra* notes 54-68 and accompanying text.

²³ See *infra* note 46 and accompanying text.

²⁴ FED. R. EVID. 401, 402.

²⁵ FED. R. EVID. 403. For a discussion of Rule 403 as applied to polygraphs, see Abbell, *supra* note 2, at 50-54.

²⁶ See *infra* notes 69-111 and accompanying text.

courts tend to acquiesce even though absent the stipulation the identical results would be inadmissible as unreliable.²⁷ It is important to note that unlike *Frye* and *McCormick*, stipulation employs no accuracy criteria. It is based on the ability of the parties to agree, not the correctness of the results. To understand the problems inherent in this use of the stipulation process, the polygraph examination and its numerous deficiencies must be examined in detail.

III. THE POLYGRAPH²⁸

The polygraph charts physiological changes in blood pressure, skin resistance, respiration patterns, and muscular movements.²⁹ Each of these variables acts as a manifestation of emotion. Taken together, they demonstrate the subject's tension level. Fluctuations are monitored with the assistance of various apparatus including: inflatable pressure cuffs on the upper arm gauging blood pressure; electrodes affixed to the fingertips measuring skin resistance; a pneumograph tube tightly encircling the chest observing respiration patterns; and devices in the chair determining body movements.³⁰ Falsification of a response to an inquiry evokes a psychological reaction which is observable in these physiological changes and charted by the polygraph unit.

The actual testing procedure exploits the heightened tension associated with the utterance of a falsehood. Initially, the subject might be placed in a reception room with literature particularizing the infallibility of the technique.³¹ Thereafter, the examiner will interview the subject and at this time describe the testing procedure in

²⁷ E.g., *United States v. Oliver*, 525 F.2d 731, 736 (8th Cir. 1975), *cert. denied*, 424 U.S. 973 (1976); *Corbett v. State*, 94 Nev. 643, 646-47, 584 P.2d 704, 706-07 (1978); *see infra* notes 69-111 and accompanying text.

²⁸ The polygraph is a relatively sophisticated device and is subject to variation with respect to methods of administration and selection of instrumentation. An extensive discussion of all of these variables is beyond the scope of this article. For a more detailed discussion of the polygraph technique see J. REID & F. INBAU, *supra* note 7; Abrams, *supra* note 2; Axelrod, *The Use of Lie Detectors by Criminal Defense Attorneys*, 3 NAT'L J. CRIM. DEF. 107, 109-36 (1977); Levitt, *supra* note 13; Pemberton, *supra* note 2, at 49-57; Skolnick, *Scientific Theory and Scientific Evidence: An Analysis of Lie-Detection*, 70 YALE L.J. 694 (1961); *see also* OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONGRESS, SCIENTIFIC VALIDITY OF POLYGRAPH TESTING: A RESEARCH REVIEW AND EVALUATION—A TECHNICAL MEMORANDUM, OTA-TM-H-15 (1983) [hereinafter cited as OTA STUDY].

²⁹ J. REID & F. INBAU, *supra* note 7, at 5-6. For a discussion of the historical development of the polygraph see *id.* at 2-5; Abrams, *supra* note 2, at 85-88.

³⁰ J. REID & F. INBAU, *supra* note 7, at 5.

³¹ Pemberton, *supra* note 2, at 54. The reactions of the subject to the literature may aid the examiner in forming an initial impression.

detail.³² The dependability of the machine is stressed in order to discourage any attempts at subterfuge. Questions are formulated and their format is explained. The latter course of action is intended to avoid any discrepancies resulting from surprise or misconception.³³

Following the interview the apparatus are attached, and a series of questions is asked.³⁴ The questions include neutral inquiries such as "Are you male or female?" and control questions³⁵ such as "Have you ever committed a crime?" The posing of the control questions normally produces uneasiness because of its mildly accusatory nature. Monitoring the responses to the control questions establishes a baseline level³⁶ which serves as a comparison point for the relevant inquiries—the actual accusations of illegality.³⁷ In order to develop an adequate contrast between the relevant and the control questions, the examiner must stimulate emotion. The card test³⁸ or "stim test"³⁹ is utilized for this purpose. The subject is asked to select and remember a playing card. A series of cards, including the correct one, is then shown individually, and the subject is directed to deny the card's identity.⁴⁰ The anxiety produced by the forced deception will be detected by the examiner, thus affirming the infallibility of the machine and heightening the subject's tension. Finally, the examiner takes a recess and asks the subject whether any answer was untruthful.⁴¹ Assuming some

³² J. REID & F. INBAU, *supra* note 7, at 17. While the machine's accuracy must be asserted, the examiner must be careful not to create the impression that the interview is an interrogation. To do so would create confusion and undue emotion. The discussion may be interpreted as an accusation of guilt, thus risking the development of unrelated tension.

³³ *Id.* at 24-26. Test questions should be as clear and unambiguous as possible and the examiner must take into consideration the educational background of the subject.

³⁴ *Id.* at 25-32.

³⁵ Reid and Inbau define a control question as one concerning "an act of wrongdoing of the same general nature as the main incident under investigation, and one to which the subject, in all probability, will lie or to which his answer will be of dubious validity in his own mind." *Id.* at 28 (emphasis added) (footnotes omitted).

³⁶ Sometimes admissions of unrelated criminal activity develop and the control question must be revised. For instance, if the subject admits to shoplifting as a child, the control inquiry is reformed to, "Except for shoplifting, have you ever committed a crime?" By removal of the unrelated admission, emotion associated with it is eliminated, allowing for a firmer tension baseline level. *Id.* at 29.

³⁷ *See id.* at 24-28.

³⁸ *Id.* at 42-43.

³⁹ Abrams, *supra* note 2, at 99.

⁴⁰ The same test can be administered by the use of numbers. *Id.* at 99-100. The subject will choose a number between one and 10, for instance, and will be asked to respond in the negative when asked if this was the number he chose. *Id.* at 100. The examiner will detect the false response.

⁴¹ The examiner will look at the polygraphic readings in the presence of the subject before inquiring as to falsehoods. J. REID & F. INBAU, *supra* note 7, at 43-44. This gives the impression that an untruth has been discovered.

minor detail has been detected, the subject is asked to clarify any undisclosed inaccuracies. In the usual case this inquiry results in the disclosure of some inconsequential element, but a more serious omission may necessitate reevaluation of baseline levels.

The foundation for testing is now established. Baseline emotion levels are compared to levels on the relevant inquiry. Since the format, including the actual questions, has been fully explained, substantial increases in tension observed on the relevant inquiry are assumed to be verifications of a falsehood, rather than aberrations resulting from surprise or misconception. The effectiveness of the relevant inquiries is enhanced further when the examiner possesses confidential information about the subject. As only a guilty subject would understand the significance of an inquiry concerning such information, a supplemental verification of guilt is obtained if the polygraph registers a peak of tension.⁴²

IV. THE POLYGRAPH'S LIMITATIONS

The estimated effectiveness of the polygraph varies. Horvath and Reid rate success at 87.75 %;⁴³ Orne suggests eighty-five percent;⁴⁴ and Lykken concludes only sixty-four to seventy-five percent.⁴⁵ The variance in the estimates may be a function of the competence of the examiners, the personality differences in the subjects, or any one of a multitude of variables associated with the testing process. An examiner must evaluate the changes in blood pressure, skin resistance, respiration, and muscular movement. Regardless of the apparently high efficiency rates for polygraph testing, these conclusions may be faulty.

⁴² See *id.* at 55-59.

⁴³ Horvath & Reid, *The Reliability of Polygraph Examiner Diagnosis of Truth and Deception*, 62 J. CRIM. L., CRIMINOLOGY, & POLICE SCI. 276, 278-79 (1971) in J. REID & F. INBAU, *supra* note 7, at 391-92.

⁴⁴ *United States v. Zeiger*, 350 F. Supp. 685, 689-90 (D.D.C.) (quoting from transcripts of Professor Martin T. Orne, who testified for government), *rev'd per curiam*, 475 F.2d 1280 (D.C. Cir. 1972).

⁴⁵ Lykken, *The Psychopath and the Lie Detector*, 15 PSYCHOPHYSIOLOGY 137, 141 (Mar., 1978). In a recently published study the Office of Technology Assessment reviewed prior studies of the effectiveness of polygraph testing in specific-incident criminal investigations and concluded that it was impossible to determine a specific quantitative measure which accurately would reflect the overall effectiveness of the procedure. OTA STUDY, *supra* note 28, at 97. The study did conclude, however, that available research evidence did indicate that when the control question technique, see text *supra* notes 34-41, is used in specific-incident investigations, significant error rates are associated with the procedure. OTA STUDY, *supra* note 28, at 79.

The polygraph machine does not directly ascertain truth. Rather, it detects emotional change in the subject. Any willful falsification activates the sympathetic autonomic nervous system and this reaction is made evident by the subject's tension.⁴⁶ The foreign nature of a lie, although a relatively common event, is contrary to an individual's mental well-being. Consequently, the mind reacts with emotion which can be monitored by the polygraph. Unfortunately, the examiner never can be absolutely certain of the reason for the tension. It may be the psychological response to a known falsehood, but it also may come from another source. To illustrate, an individual wrongfully accused of a crime may be overly sensitive. The control question: "Have you ever committed a crime?" may be answered honestly with only modest increases in uneasiness; but the relevant question: "Did you steal the ring?" measures a pronounced tension. The examiner concludes guilt, but in reality, the observation may merely reflect oversensitivity caused by a prior accusation.⁴⁷ Thus, enhanced emotion mistakenly may result in a challenge to the subject's veracity.

Other factors adversely affect the machine's accuracy. A subject who is not concerned about being detected may not evince the requisite emotional tension and may therefore appear innocent. This may occur when the subject has so rationalized the criminal event that self-deception develops. There is no psychological reaction because the mind does not recognize the lie.⁴⁸ In a similar fashion, the mentally

⁴⁶ See, e.g., *United States v. Ridling*, 350 F. Supp. 90, 92 (E.D. Mich. 1972) ("A lie is an emergency to the psychological well-being of a person and causes stress. Attempts to deceive cause the sympathetic branch of the autonomic nervous system to react and cause bodily changes of such magnitude that they can be measured and interpreted.").

The autonomic nervous system contains the sympathetic and parasympathetic branches. The first imposes involuntary reactions of fight or flight during an emergency situation. When a person becomes angry or afraid, the sympathetic system invokes an increased heartrate, perspiration, increased respiration, and agitation. Contrastingly, the parasympathetic counters the sympathetic by calming the involuntary reactions. It lowers heartrate, perspiration, respiration, and agitation. For a general discussion of the autonomic nervous system see H. EYSENCK, *CRIME AND PERSONALITY* 81-82 (1979).

⁴⁷ See *Use of Polygraphs as "Lie Detectors" by the Federal Government, Hearings before the Subcommittee of the House Committee on Government Operations*, 88th Cong., 2d Sess. 368 (1964) (statement of Dr. John I. Lacey) [hereinafter cited as *Hearings*]. The report noted that oversensitivity may produce excessive physiological reactions to any questions perceived as relating to the subject's integrity. If a pretest interview is interpreted as an accusation of guilt, physiological changes may simply reflect an oversensitivity to the allegation. J. REID & F. INBAU, *supra* note 7, at 226. Further, anxiety over an unrelated personal matter may interfere with polygraphic readings. *Id.* at 220.

⁴⁸ Reid and Inbau cite as an example a criminal sentenced to death:

So engrossed does he become in his present predicament that his crime memories are rendered somewhat obscure; and he may have so vehemently protested his innocence

unbalanced person's reasoning may be so defective as to render any reading unreliable. The sociopath, for instance, is frequently a compulsive liar. His misrepresentations often are undetectable because falsifying has become an engrained portion of the personality.⁴⁹ Instead of resisting the falsehood, the mind adopts it.

The polygraph can recognize "lie" reports only in the form of physiological changes, and its accuracy therefore is limited by the dependability of the assumptions associated with the detection of these changes. Subjects who do not conform to the general pattern may be incorrectly branded guilty or mistakenly exonerated. Depressant drugs, for example, may lower anxiety and correspondingly reduce physiological responses.⁵⁰ In such a case the examiner mistakenly may accept innocence when the subject's false answers are concealed by the drugs. In other instances, through training, the subject successfully can control emotional disruptions. Since deception is measured by abnormally large anxiety gaps between the control and relevant responses, the subject's intentional control of emotion and the resulting rise in the control level will cause the relevant response to appear to be within comparable limits. Muscular activity, especially in the arm or leg, could also develop such a false reading by restricting blood and consequently increasing blood pressure.⁵¹ When heightened emotional levels emerge from the control question, anxiety from the relevant inquiry may appear roughly equivalent, implying innocence. By

. . . [that he was] convinced in his own mind that he was innocent. Were a person in such a state of mind given a Polygraph examination, he might not give any specific deception responses.

J. REID & F. INBAU, *supra* note 7, at 227-28.

⁴⁹ A sociopath is a person who experiences substantial social maladjustment while possessing normal intelligence and an absence of any brain disease which is apparent without sophisticated machinery. C. JEFFREY, *BIOLOGY AND CRIME* 66 (1979). The personality is characterized by a lack of guilt, inability to learn from experience, incapacity for loving relations, impulsiveness, and antisocial conduct. *Id.* Diagnosing this abnormality is not an easy task since there is generally no pain, anguish, or communication difficulty. The individual may be superficially charming with the major symptom being a past history of unreasonable behavior. S. HALLECK, *PSYCHIATRY AND THE DILEMMAS OF CRIME* 101-02 (1971). Obviously, a polygraph operator with limited experience may be unable to render a correct judgment of this psychological state. Since the subject lacks the capacity to feel guilt, lies can be expressed without remorse or hesitation and thus without any observable physiological response. Reid and Inbau discuss the difficulties in testing mentally defective individuals. J. REID & F. INBAU, *supra* note 7, at 250-51; *see also* Levitt, *supra* note 13, at 451-52.

⁵⁰ J. REID & F. INBAU, *supra* note 7, at 244. Reid and Inbau suggest, however, that subjects who consume sedatives prior to testing exhibit physical characteristics, including drowsiness and mental sluggishness, which are readily discernible to a trained examiner. *Id.* at 236, 244; *see generally* A. MOENSSENS & F. INBAU, *SCIENTIFIC EVIDENCE IN CRIMINAL CASES* 320-21 (2d ed. 1978) (describing symptoms of barbiturate abuse).

⁵¹ J. REID & F. INBAU, *supra* note 7, at 258.

contrast, artificially lowering the relevant response anxiety level will disrupt the formation of clear anxiety gaps, and thus indicate truthfulness. This may be accomplished through psychological evasion where subjects intentionally distract themselves, thereby moderating the polygraph readings.⁵² To illustrate, when a relevant question is asked, the subject will focus on an irrelevant matter so as to block physiological responses.⁵³ Through this method, the polygraph reports restrained emotion erroneously depicting innocence.

Obviously, the subject provides a constant threat of sabotage which must be frustrated by the examiner. Often, however, the examiner lacks sufficient training to discharge this function successfully.⁵⁴ Some operators have a police background, accompanied by limited coursework or internships.⁵⁵ This experience may be of valuable service in rendering many polygraph decisions but it is inadequate when the test is administered to the drug user or the mentally unbalanced individual. Subtle psychological judgments may be necessary to identify these abnormalities.⁵⁶ Unfortunately, too few examiners are equipped to make such judgments. By merely studying the machine's charts without an evaluation of the underlying psychological factors the examiner always risks a false declaration of innocence.

Although the rarity of confronting mentally abnormal subjects and the existence of discernible manifestations usually associated with drug use may justify the risk of error with underqualified examiners, there still exists the inherent and more prejudicial factor of subjective bias. Examiners are encouraged to render a tentative judgment of guilt at the pretest stage. Hesitations in the subject's response pattern,⁵⁷ tendencies to justify criminal activity,⁵⁸ nervousness,⁵⁹ and uncertainty with respect to test outcome⁶⁰ all may be viewed negatively by the tester. This subjective determination of guilt or innocence endangers the entire process. Framing the relevant inquiries may be less poignant when the examiner perceives the subject as

⁵² See *id.* at 210-14.

⁵³ *Id.* at 210-11.

⁵⁴ Skolnick, *supra* note 28, at 707.

⁵⁵ *Id.*; see *infra* notes 155-66 and accompanying text for a discussion of the qualifications that some states require of polygraph examiners.

⁵⁶ Skolnick, *supra* note 28, at 707 (comparing educational background of polygraph technician with that of psychiatrist and questioning examiner's ability to make necessary psychological judgments associated with polygraph testing).

⁵⁷ J. REID & F. INBAU, *supra* note 7, at 18-19.

⁵⁸ *Id.* at 19.

⁵⁹ *Id.* at 20.

⁶⁰ *Id.*

truthful, thereby allowing the subject intentionally to evade the true import of the question and, consequently, appear to respond honestly. Conversely, if the examiner perceives guilt, this may be the precursor of a relevant inquiry which is unintentionally accusatory. Intonations in delivery or the use of inflammatory language may enhance emotion in the subject. Since the examiner's actions are unwittingly performed, controlling bias is a formidable task. Described as the "halo" effect,⁶¹ this bias relates to the tendency to err in favor of preconceived notions.⁶² The problem is not limited to the questioning stage; it also has significant implications in the interpretation of polygraph readings, an equally complex, subjective procedure.⁶³

Subjectivity and inadequate educational requirements have the potential to influence adversely an examiner's conclusions and have lead Professor Inbau to conclude that only twenty percent of examiners are fully qualified.⁶⁴ Facing criticism, some jurisdictions have attempted to rectify this by monitoring the integrity and educational background of examiners.⁶⁵ Legislation is deficient, however, when it

⁶¹ Skolnick, *supra* note 28, at 713 (citing Thorndike, *A Constant Error in Psychological Ratings*, 4 J. APPLIED PSYCHOLOGY 25 (1920) as the originator of this term).

⁶² Skolnick cites as an example of this phenomenon the teacher who is more likely to give a better grade to a student with a "bright" reputation versus one perceived as "dull." *Id.*

⁶³ The subjectivity inherent in the interpretation of polygraph records is clearly demonstrated by the following list of questions Reid and Inbau suggest the examiner should ask himself in interpreting the polygraph records:

1. What is the subject's normal breathing pattern?
2. Was the subject cooperating fully during the test?
3. What question shows the greatest response in respiration?
4. What question shows the greatest response in blood pressure?
5. Does the subject show any response on the control questions? If not, are different control questions needed?
6. How do the subject's responses compare with his control question responses?
7. Which responses are greater *and more consistent*, the crucial questions or the control questions?
8. If the subject overresponded, is a guilt complex test advisable?
9. If the responses are not sufficiently clear as to either truth or deception, is a reexamination necessary?
10. Did the subject purposely try to overrespond or indulge in gross movements when his chosen card is called, or when he answered "yes" as so instructed on the "yes" test?

J. REID & F. INBAU, *supra* note 7, at 61 (emphasis in original); *see also* Abbell, *supra* note 2, at 40-41 (nature of information available to examiner, sources of information, and examiner's observations of subject's behavior all affect interpretation of charts); Horvath & Reid, *supra* note 43, at 279 (polygraph examiners' diagnoses based solely on polygraph records revealed that examiners erred at rates of approximately nine to 20% depending upon experience).

⁶⁴ *Hearings*, *supra* note 47, at 8 (statement of Fred E. Inbau, Professor of Law, Northwestern University School of Law).

⁶⁵ *See infra* notes 155-66 and accompanying text.

fails specifically to mandate a process for psychological evaluation.⁶⁶ Preliminary assessments of veracity and mental stability, detection of evasion techniques and drug use, and the framing of effective test questions all are linked to psychological theory.⁶⁷ Only an examiner with at least some psychological training can perform these functions adequately.⁶⁸

V. QUESTIONING THE STIPULATION PROCESS

Judicial skepticism of the polygraph's probative value generally results in a finding of inadmissibility.⁶⁹ Yet when the parties stipulate to the admissibility of polygraph results, the judiciary often acquiesces⁷⁰ despite lingering doubts about the reliability of the instrument. Courts thus create the paradox of admitting results in the face of persistent fears of error or deception.

There are, *inter alia*, three significant factors associated with polygraph evidence which must be considered in making a determination of admissibility: 1) the reliability of the procedure; 2) the qualifications of the examiner; and 3) the conclusions drawn from the examination.⁷¹ When the parties stipulate to the admissibility of polygraph evidence, the first two of these factors rarely are subject to challenge at trial because the parties have agreed to accept any errors associated with them.⁷² Unfortunately, some courts disallow further challenges

⁶⁶ See *infra* notes 165-66 and accompanying text.

⁶⁷ Abrams has described the polygraph procedure as "primarily a psychological approach" and has suggested that this is especially true during the pre-test interview which requires the examiner to convince the subject of the effectiveness of the technique, to observe his physical and mental state, and to review the personal history of the subject with an eye toward developing effective test questions. Abrams, *supra* note 2, at 99-100.

⁶⁸ One authority in the field of polygraph science has suggested that all examiners have either a bachelor's or master's degree in psychology. *Hearings, supra* note 47, at 393 (testimony of Dr. Joseph F. Kubis, Professor of Psychology, Fordham University).

⁶⁹ See *supra* note 3.

⁷⁰ See, e.g., *United States v. Oliver*, 525 F.2d 731, 736 (8th Cir. 1975), *cert. denied*, 424 U.S. 973 (1976); *Herman v. Eagle Star Ins. Co.*, 283 F. Supp. 33, 40 (C.D. Cal. 1966), *aff'd*, 396 F.2d 427 (9th Cir. 1968); *People v. Reagan*, 395 Mich. 306, 318-19, 235 N.W.2d 581, 587 (1975); *State v. Descoteaux*, 94 Wash. 2d 31, 614 P.2d 179, 183 (1980); see also *Israel v. McMorris*, 643 F.2d 458 (7th Cir. 1981), *cert. denied*, 455 U.S. 967, 970 (1982) (Rehnquist, J., dissenting) (noting that 23 states currently admit polygraph stipulations).

⁷¹ See, e.g., *United States v. Oliver*, 525 F.2d 731, 736-38 (8th Cir. 1975) (stipulated polygraph testimony admissible where sufficient showing of reliability of procedure, expertise of examiner, and utilization of proper examination techniques), *cert. denied*, 424 U.S. 973 (1976).

⁷² See, e.g., *State v. Bennett*, 17 Or. App. 197, 200-01, 521 P.2d 31, 33 (1974) (declining to consider question of admissibility since challenged testimony was introduced pursuant to written stipulation). *But see State v. Valdez*, 91 Ariz. 274, 283, 371 P.2d 894, 900 (1962) (trial judge has discretion to refuse to admit stipulated test results if not convinced of examiners' qualifications or propriety of test conditions); *accord Corbett v. State*, 94 Nev. 643, 646-47, 584 P.2d 704, 707 (1978).

to unfavorable polygraph results.⁷³ This is unwise. The purpose of a stipulation should be to overcome evidentiary prohibitions, not to introduce faulty testimony. As stipulation usually occurs prior to testing, when neither side knows the outcome, parties are able to evaluate only the polygraph procedure and the examiner's qualifications. They cannot be certain that the examiner will analyze the formulated data correctly.

Thus, the stipulation should be construed to apply only to the polygraph procedures and the examiner's qualifications, not to the conclusions drawn from testing. In order to remedy this problem, scientific conclusions must be questioned. This may be accomplished by cross-examining the expert who administered the test,⁷⁴ by subjecting the test results to the discretion of the trial judge,⁷⁵ and, in certain cases, by using another polygraph examiner to challenge application of the procedure. It also might be advisable to conduct a separate examination.⁷⁶ Regardless of the remedy selected, the examiner's interpretation of polygraph data and the conclusions drawn therefrom must be closely scrutinized when stipulation is the basis for admissibility.

Stipulation to the admission of evidence can be predicated on two legal theories: contract and waiver. Contractual analysis is not unprecedented in criminal law, and agreements between prosecutors and defendants are certainly commonplace. For example, a guilty plea may be entered to reduce a charge or in exchange for a recommendation of a light sentence.⁷⁷ In *Santobello v. New York*,⁷⁸ the

⁷³ E.g., *State v. Bennett*, 17 Or. App. 197, 200-01, 521 P.2d 31, 33 (1974).

⁷⁴ See *State v. Valdez*, 91 Ariz. 274, 283, 371 P.2d 894, 900 (1962); Comment, *The Admissibility of Polygraph ("Lie Detector") Evidence Pursuant to Stipulation in Criminal Proceedings*, 5 AKRON L. REV. 235 (1972). The polygraph testing procedure has been divided into four portions: data collection, pre-test interview, testing, and post-test interview. Abrams, *supra* note 2, at 104. Preparation for cross-examination should focus on each phase, including formulation of questions used during the examination and the presence of voice intonations. In probing the examiner's conclusions, relevant considerations include precisely what factors in the subject's answers or demeanor were considered and to what extent these factors would have to have differed to warrant a different final opinion on veracity.

⁷⁵ E.g., *State v. Valdez*, 91 Ariz. 274, 283, 371 P.2d 894, 900 (1962).

⁷⁶ Since the second examination most likely would be without stipulation, it would be necessary to prove the qualifications of the examiner. Even though the procedure was not stipulated, one could argue that since equipment identical to the first test was employed, the results should be admitted provided the examiner is qualified and the test is administered properly.

⁷⁷ See, e.g., *Santobello v. New York*, 404 U.S. 257 (1971); *Geisser v. United States*, 513 F.2d 862, 870-71 (5th Cir. 1975); *Williams v. State*, 341 So. 2d 214, 215-16 (Fla. Dist. Ct. App. 1976).

⁷⁸ 404 U.S. 257 (1971).

defendant pleaded guilty after agreeing with one prosecutor that no recommendation as to sentence would be made.⁷⁹ This agreement was not honored.⁸⁰ The United States Supreme Court reversed the defendant's conviction and found that "when a plea rests in any significant degree on a *promise or agreement* of the prosecutor, so that it can be said to be part of the *inducement or consideration*, such promise must be fulfilled."⁸¹

The contract analysis used in *Santobello* also has been applied where immunity was promised in return for providing information⁸² or actual testimony.⁸³ Negotiated pleas and immunity grants are both very common and, arguably, are indispensable to the orderly functioning of the criminal justice system.⁸⁴ Each of these examples illustrates the application of a contract in criminal law: The prosecutor and the defendant reach an agreement with benefits and burdens for each party.

Contractual analysis likewise is applicable to a stipulation for introduction of polygraph readings into evidence.⁸⁵ Stipulation generally involves a simple agreement by the parties to allow the use of the test results prior to knowing the outcome. In *Corbett v. State*,⁸⁶ both sides stipulated to a polygraph examination and to the admissibility of the results. When the outcome proved unfavorable to the defendant, he objected to admission of the evidence at trial.⁸⁷ Applying reasoning

⁷⁹ *Id.* at 258.

⁸⁰ *Id.* at 259.

⁸¹ *Id.* at 262 (emphasis added); see Westen & Westin, *A Constitutional Law of Remedies for Broken Plea Bargains*, 66 CALIF. L. REV. 471, 512-14 (1978) (suggesting *Santobello* offers defendants constitutional right to relief for broken plea bargains).

⁸² See, e.g., *State v. Hanson*, 249 Ga. 739, 744-45, 295 S.E.2d 297, 299 (1982).

⁸³ See, e.g., *Hammers v. State*, 261 Ark. 585, 591-92, 550 S.W.2d 432, 436-39 (1977); *State v. Tanner*, 425 So. 2d 760, 763-64 (La. 1983).

⁸⁴ See *Santobello*, 404 U.S. at 260 ("[t]he disposition of criminal charges by . . . 'plea bargaining', is an essential component of the administration of justice").

⁸⁵ In a typical case the parties agree that criminal charges will be dismissed if the examination indicates innocence, but if the results are unfavorable to the defendant the evidence will be admissible at trial. See, e.g., *Workman v. Commonwealth*, 580 S.W.2d 206 (Ky. 1979); *People v. Reagan*, 395 Mich. 306, 309-10, 235 N.W.2d 581, 582-83 (1975). In some cases the defendant has agreed to enter a plea of guilty to a lesser charge if the results are unfavorable. *State v. Davis*, 188 So. 2d 24 (Fla. Dist. Ct. App. 1966).

In instances where required court approval was not obtained, some courts have refused to enforce these agreements. *State v. Sanchell*, 191 Neb. 505, 510, 216 N.W.2d 504, 508 (1974); see also *infra* notes 92-97 and accompanying text.

⁸⁶ 94 Nev. 643, 584 P.2d 704 (1978).

⁸⁷ *Id.*

similar to that in *Santobello*, but here applied against the defendant, the Nevada Supreme Court refused to void the bargain⁸⁸ and allowed the stipulated polygraph evidence based on contract theory.⁸⁹

Alternatively, polygraph evidence is justified by the doctrine of waiver where, despite the undependable characteristics attributable to the machine, the parties previously have relinquished their objections.⁹⁰ Waiver operates to foreclose available relief irrespective of any entitlement: Once an individual acts to forego, the right is nullified.⁹¹ Although it frequently arises out of an agreement, waiver, unlike contract, also may develop unilaterally. With polygraph stipulations, the failure to object will preclude complaints concerning the admissibility of the evidence. Consequently, the contract and waiver approaches to stipulation are functionally equivalent.

Neither of the supporting theories considers the reliability of the procedure. For instance, in *State v. Davis*⁹² the court sustained an agreement whereby the prosecutor agreed to dismiss the case if the polygraph indicated innocence, and the defendant agreed to plead to manslaughter if the results indicated he was not telling the truth. After the examination vindicated the defendant, the prosecutor elected to proceed.⁹³ The Florida appeals court, highlighting the "pledge of the public faith,"⁹⁴ found the agreement binding as "a promise made by state officials—and one that should not be lightly

⁸⁸ *Id.* at 646-47, 584 P.2d at 706-07.

⁸⁹ *Id.* The court distinguished its holding from cases in which the parties do not stipulate. *Id.* It noted that principles of fairness and judicial efficiency were significant policy considerations "militat[ing] against a general rule admitting results of polygraph tests" when the parties do not concur, but that these principles were simply not compelling when the parties agree to the conditions of testing prior to the polygraph examination. *Id.* at 646, 584 P.2d at 706.

An additional factor in the court's finding was that the prerequisites to admissibility of polygraph testing as set out in *State v. Valdez*, 91 Ariz. 274, 283-84, 371 P.2d 894, 900-01 (1962), were satisfied in this case. *Corbett*, 94 Nev. at 647, 584 P.2d at 705; see *infra* notes 104-05, 148-51 and accompanying text for discussion of *Valdez*.

⁹⁰ *E.g.*, *State v. Dean*, 103 Wis. 2d 228, 246, 307 N.W.2d 628, 637 (1981) (stipulation operates as waiver of objection or challenge to validity of basic theory of polygraph); see *State v. Mick*, 546 S.W.2d 508, 509 (Mo. Ct. App. 1976) (as defendant voluntarily opened up subject of polygraph examination on redirect she waived objection to state's development of matter on recross).

⁹¹ See Rubin, *Toward a General Theory of Waiver*, 28 U.C.L.A. L. REV. 478, 483 (1981) ("[t]he most general definition of waiver . . . is a decision not to exercise a right, or, more precisely, a judicial finding that a person has lost a right as a result of his decision").

⁹² 188 So. 2d 24, 27 (Fla. Dist. Ct. App. 1966).

⁹³ *Id.* at 26. The polygraph examiner agreed upon by the parties concluded innocence although later he accepted another operator's contrary opinion in lieu of his own. *Id.*

⁹⁴ *Id.* at 27 (citing *State v. Ashby*, 43 N.J. Super. 350, 195 A.2d 635 (1963), *rev'd*, 43 N.J. 273, 204 A.2d 1 (1964)).

disregarded."⁹⁵ Rather than evaluating the propriety of the bargain, the court focused on the integrity of the bargaining process.⁹⁶ A better approach when faced with an unduly exploitative agreement would be to allow accrual of benefits to a defendant who relies on the bargain and to preclude enforceability of detriments as contrary to public policy.⁹⁷ This would ensure the integrity of the process while deterring prosecutorial abuse.

The need for caution when enforcing agreements for the admissibility of evidence is particularly acute when the evidence to be admitted is the result of a polygraph test. Oversensitivity from prior accusations⁹⁸ and heightened anxiety because of the examination's importance may result in pronounced tension. In light of these sources of inaccuracy, it is inadvisable and abusive to the process to accept a conviction based on a "truth telling" machine. Moreover, even if the polygraph happens to be correct in an individual case, it is a poor substitute for a trial. As long as courts consider it unreliable, respectability should not be gained simply because the test may function to determine the ultimate jury question. In fact, concern about excessive jury consideration of polygraph results has caused the judiciary to be particularly reluctant to admit this evidence.⁹⁹ This skepticism is not unwarranted. A recent study, for instance, indicates that "unfavorable polygraph evidence may be a deciding factor in . . . an ambiguous case."¹⁰⁰ The erroneously perceived infallibility of the technique

⁹⁵ *Id.* The propriety of negotiating a plea based on the opinion of the examiner, rather than directly on guilt, was never evaluated. Consequently, the agreement was upheld because of the promise. The court did not concern itself with the reliability of the procedure.

⁹⁶ *Id.*

⁹⁷ The courts steadfastly have refused to be used as instruments against the public good. *See, e.g., Shelley v. Kraemer*, 334 U.S. 1, 13-20 (1947) (refusing to enforce discriminatory covenants); *In re Andrews Estate*, 151 Misc. 361, 365, 272 N.Y.S. 847, 850 (1934) (ruling decedent's will so unfair as against public policy).

⁹⁸ *See supra* note 47 and accompanying text.

⁹⁹ *See, e.g., United States v. Bursten*, 560 F.2d 779, 785 (7th Cir. 1977); *United States v. Alexander*, 526 F.2d 161, 168 (8th Cir. 1975); *State v. Biddle*, 599 S.W.2d 182, 191 (Mo. 1980). In *Biddle*, the Missouri Supreme Court held polygraph evidence inadmissible based, *inter alia*, on its potential to mislead and displace the jury's fact finding function. *Id.* at 191. The court specifically noted the jury's function in determining truthfulness, and concluded: "There is no place in our jury system for a machine or an expert to tell the jury who is lying and who is not." *Id.* But *see Note, Stipulation Cannot Make Polygraph Results Admissible*, 47 Mo. L. REV. 586, 597 (1982) (suggesting that, as with other evidence, polygraph results will merely aid jury in their conclusions; restrictive approach taken by *Biddle* unwarranted).

¹⁰⁰ Markwart & Lynch, *The Effect of Polygraph Evidence on Mock Jury Decision-Making*, 7 J. POLICE SCI. ADMIN. 324, 331 (1979). In one study jurors who served in a case in which polygraph evidence was admitted were polled. The study revealed that five of the 10 jurors

may functionally abrogate some jurors' independence, and although all testimony may have this potential, it is especially troublesome when the evidence lacks a legally sufficient basis for admission.

An additional concern exists in jurisdictions which do not mandate even a minimum licensing requirement for the polygraph operator.¹⁰¹ Any beneficial aspects of the testing are diluted by the probability of deficient training,¹⁰² as some courts have recognized.¹⁰³ For instance, in *State v. Valdez*,¹⁰⁴ although the concept of stipulation was approved in principle, the court qualified its holding by requiring, *inter alia*, the following: 1) vesting discretion in the trial judge to refuse to admit the results of the polygraph test if he is not convinced of the examiner's qualifications or the propriety of the conditions under which the test was conducted; and 2) giving the opposing party the opportunity to cross-examine the operator with respect to his qualifications and training, the test conditions, the limitations and possibilities for error, and any other matter deemed pertinent by the trial judge.¹⁰⁵

Other decisions also have viewed critically the experience of the examiner, but in so doing necessarily have adopted the concept of

polled were so impressed by the scientific value of the polygraph that they accepted the truth of the testimony without question. Forkosch, *The Lie Detector and the Courts*, 16 N.Y.U. L.Q. REV. 202, 228-31 (1938-1939). *But see* Peters, *A Survey of Polygraph Evidence in Criminal Trials*, 68 A.B.A. J. 162, 164 (1982) where 19 lawyers who had utilized polygraph evidence at trial were surveyed. The following responses were recorded: none felt that polygraph testimony disrupted the trial; only two thought that polygraph testimony was unreasonable and unintelligible; and only four believed the judge or jury disregarded significant evidence because of polygraph testimony. *Id.* This survey is questionable, however, because of the unavailability of statistical controls including the absence of randomness, inadequate sample size, and subjective bias on the part of respondents.

¹⁰¹ For example, even though Massachusetts trial courts have been cautioned to verify the expertise of polygraph examiners, there is no state licensing statute setting minimum qualifications. *Commonwealth v. Vitello*, 381 N.E.2d 582, 588 (1978); *Commonwealth v. A Juvenile*, 365 Mass. 421, 429-30, 313 N.E.2d 120, 126 (1974).

¹⁰² See *supra* notes 54-56 and accompanying text.

¹⁰³ See, e.g., *United States v. Wilson*, 361 F. Supp. 510, 512 (D. Md. 1973) ("divergent reactions of the leading [polygraph] practitioners hardly inspires confidence in the reliability of the opinions of less distinguished practitioners").

¹⁰⁴ 91 Ariz. 274, 283, 371 P.2d 894, 900 (1962).

¹⁰⁵ *Id.* The court also required: 1) that the prosecutor, the defendant, and his counsel all sign a written stipulation providing for submission to the test and ultimate admissibility of the test results and the examiner's opinion and 2) that the trial judge instruct the jury that the examiner's testimony is only to serve as corroborative evidence and not to prove or disprove the case. *Id.* at 283-84, 371 P.2d at 900-01; see *infra* notes 150-51 and accompanying text for a discussion of the necessity for proper jury instruction.

stipulated polygraph reports.¹⁰⁶ In *United States v. Oliver*,¹⁰⁷ for example, the Court of Appeals for the Eighth Circuit recognized "that the reliability of a polygraph test depends primarily on the expertise of the examiner and upon his technique."¹⁰⁸ Noting, however, that the trial court found the examiner highly qualified in his field, the court affirmed the lower court's admission of the stipulated results.¹⁰⁹ The major problem associated with admitting polygraph evidence under these circumstances is apparent: Physiological responses must be interpreted and, regardless of the examiner's qualifications, the test reflects the examiner's subjectivity and lack of experience, or, in many cases, the subject's unrelated tension.

Stipulations may save time and energy by narrowing the issues, but efficiency should not be furthered at the expense of accuracy. The approach of the *Valdez* court indicates a sensitivity to the need for safeguards in jurisdictions where stipulations are allowed. Parties should be permitted and encouraged to disclose any limitations of the testing process. Decisions which ignore this information exclude from the jury facts which are necessary for a complete understanding of the polygraph and which, ultimately, may alter the verdict. If courts are justly to admit polygraph evidence on the basis of a stipulation, they must embrace accuracy.

Approval of a voluntary stipulation is simply too convenient. Undoubtedly, the evidence will render final determination of the action more probable,¹¹⁰ but not necessarily more accurate. When a subject succeeds in deceiving an examiner, the prosecution's case is unjustifiably injured by increasing the probability of the guilty going unpunished. Even when the results support the prosecution, there is no assurance of accuracy. Moreover, the picture of desperate people consenting to a questionable technique in the hope of buttressing their cases should haunt our social consciences. A stipulation obtained under that circumstance improperly exploits anxieties. As previously suggested, the fact that the subject is experiencing heightened tension because of the importance of the testing will increase erroneous conclusions.¹¹¹ An advisable approach, therefore, would be to substan-

¹⁰⁶ E.g., *United States v. Oliver*, 524 F.2d 731, 736 (8th Cir. 1975), *cert. denied*, 424 U.S. 973 (1976).

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* at 737.

¹⁰⁹ *Id.*

¹¹⁰ See *supra* notes 99-100 and accompanying text.

¹¹¹ See *supra* note 47 and accompanying text.

tially limit the use of the polygraph. Stated simply, the polygraph is unacceptably inaccurate. Its respectability should not be obtained by stipulation.

VI. FIFTH AMENDMENT CLAIMS

The fifth amendment provides a criminal defendant with a privilege against compelled testimony.¹¹² As evidentiary stipulations are based on consent, they by definition invoke the self-incrimination doctrine. As with other constitutional protections,¹¹³ an individual's protection against self-incrimination may be waived "provided the waiver is made voluntarily, knowingly, and intelligently."¹¹⁴ When these principles are viewed in light of the instant problem two issues arise: first, whether the fifth amendment is applicable to polygraph testimony; and second, if so, whether it is possible to ever knowingly waive the privilege.

Traditionally, the fifth amendment has been applied to testimonial rather than physical evidence.¹¹⁵ Identification procedures such as voice exemplars¹¹⁶ and clothes modeling¹¹⁷ do not involve any communicative act by the defendant and thus are not rendered inadmissible on privilege grounds. Additionally, seizure of tax records¹¹⁸ and blood samples,¹¹⁹ although potentially damaging, have been held nontestimonial. Consequently, such evidence is admissible despite the privilege. Nevertheless, dicta in *Schmerber v. California*¹²⁰ specifically distinguished polygraph evidence from these other forms of purely physical evidence:

¹¹² U.S. CONST. amend. V provides that "[n]o person . . . shall be compelled in any criminal case to be a witness against himself." *Miranda v. Arizona*, 384 U.S. 436 (1966); *Escobedo v. Illinois*, 378 U.S. 478 (1964).

¹¹³ E.g., *Edwards v. Arizona*, 451 U.S. 477 (1981) (right to counsel during interrogation).

¹¹⁴ *Miranda v. Arizona*, 384 U.S. 436, 444 (1966).

¹¹⁵ E.g., *United States v. Dionisio*, 410 U.S. 1 (1973); *Schmerber v. California*, 384 U.S. 757 (1966).

¹¹⁶ *United States v. Dionisio*, 410 U.S. 1, 7 (1973); see also *United States v. Wade*, 388 U.S. 218, 222-23 (1967) (no error in compelling defendant to utter in lineup words allegedly spoken during commission of crime).

¹¹⁷ *Holt v. United States*, 218 U.S. 245, 252-53 (1910).

¹¹⁸ *Couch v. United States*, 409 U.S. 322, 328-29 (1973) (seized records previously placed with accountant are not compulsion against defendant because information was not being extorted from accused himself). But see *Boyd v. United States*, 116 U.S. 616, 630 (1886) (person in possession of incriminating written statements may assert privilege).

¹¹⁹ *Schmerber v. California*, 384 U.S. 757, 765 (1966).

¹²⁰ *Id.*

Some tests seemingly directed to obtain 'physical evidence', for example, lie detector tests measuring changes in body function during interrogation, may actually be directed to eliciting responses which are essentially testimonial. To compel a person to submit to testing in which an effort will be made to determine his guilt or innocence on the basis of physiological responses, whether willed or not, is to evoke the spirit and history of the Fifth Amendment.¹²¹

The polygraph obviously employs physical measurements; however, these measurements are better understood as manifestations of psychological reactions. The machine tests the subject's reactions to provocative questions. Unlike voice exemplars, where the purpose is identification, a polygraph ostensibly measures the truthfulness of statements. As the United States Supreme Court suggested in *Schmerber*, psychological responses are utilized communicatively as testimony of truth rather than merely as physical evidence. In *Miranda v. Arizona*,¹²² oral admissions were elicited from an accused during an incommunicado interrogation. By recognizing such procedures as "psychologically rather than physically oriented,"¹²³ the court introduced psychological sensitivity to the invocation of the fifth amendment. It found custodial interrogation inherently coercive and, accordingly, required that there be adequate warnings before a waiver is permitted.¹²⁴

The polygraph also employs psychological influence. It exploits tension surrounding falsehoods by emphasizing the infallibility of the technique.¹²⁵ Baseline levels of anxiety are obtained after the card test stimulates emotion, and confrontation on minor inaccuracies solidifies the subject's belief in the machine's invincibility.¹²⁶ *Miranda* highlighted the psychological advantage derived when the defendant is deprived of outside contact.¹²⁷ The polygraph subject is clearly so

¹²¹ *Id.* at 764.

¹²² 384 U.S. 436, 439 (1966).

¹²³ *Id.* at 448.

¹²⁴ *Id.* at 478-79.

¹²⁵ See *supra* notes 31-42 and accompanying text.

¹²⁶ See *supra* notes 38-42 and accompanying text.

¹²⁷ *Miranda*, 384 U.S. at 449-55. The Court presented a variety of coercive interrogative techniques and described the essence of the practice as follows: "To be alone with the subject is essential to prevent distraction and to deprive him of any outside support. The aura of confidence in his guilt undermines his will to resist." *Id.* at 455.

deprived, being placed in isolation with the examiner and effectively denied any opportunity for contrary information. When the subject is physically removed from supporters, the psychological coercion is even more potent. Consequently, in order to obtain a valid fifth amendment waiver from criminal suspects who are to be subjected to polygraph testing, *Miranda* warnings are necessary.¹²⁸

The requirement for *Miranda* warnings prior to the administration of a polygraph test raises a complex issue. Proper operation of the examination is dependent upon the subject's belief that the machine never errs. The examiner is responsible for creating this impression.¹²⁹ As a consequence, waivers often are obtained without the defendant having been advised of the polygraph's numerous limitations.¹³⁰ *Miranda*, however, provided that "a heavy burden rests on the government to demonstrate that the defendant knowingly and intelligently waived his privilege against self-incrimination. . . ."¹³¹ The requirement of a knowing and intelligent waiver would appear to demand that the defendant be informed of the machine's inaccuracies and the potential for sabotage. This may have a significant impact on the accuracy of the test since the subject's candidness or confidence in the technique will be affected. Yet failure to disclose this fundamental information may render any stipulation ineffective because the defendant did not have full knowledge of the subject matter of the

¹²⁸ One author has suggested that hope of obtaining a confession is a major factor in police investigators' utilization of the polygraph: "For many polygraphers, the post test interrogation and the confession it so often induces is the real object of the whole exercise. A lie test diagnosis is a promissory note, not negotiable in many places, while a confession is pure gold, admissible in court, the finish to a criminal investigation" D. LYKKEN, A TREMOR IN THE BLOOD: USES AND ABUSES OF THE LIE DETECTOR 207 (1981). It is estimated that polygraph testing results in a confession in one-quarter to one-half of the examinations. *Id.* at 208.

¹²⁹ See *supra* notes 31-42 and accompanying text.

¹³⁰ See, e.g., *People v. Schiers*, 160 Cal. 2d 364, 329 P.2d 1 (1958) (per curiam). In *Schiers*, Judge Carter, dissenting from the denial of petition for a hearing by the California Supreme Court, detailed an example where psychological forces associated with the technique convinced a defendant of the polygraph's infallibility:

When we first asked him to take the test, he was agreeable to take it. So Lietenant [sic] Putty explained the test to him and asked him to pick out a card with a number on it, and when he was asked what the number was, he was to lie about it and the machine indicated he was lying.

So Mr. Schiers felt that the test was a fair one and agreed to take it. We told him that the test indicated that he was lying, and he said that he couldn't understand it, even though he believed it was accurate when they showed him the experiment. He couldn't understand why it indicated that he was lying when they asked the questions about the murder of his wife.

Id. at 379, 329 P.2d at 1 (Carter, J., dissenting).

¹³¹ *Miranda*, 384 U.S. at 475.

waiver. Stipulating into evidence the results of an imperfect test requires knowledge of the extent of its imperfections. Moreover, coercing the accused into accepting the premise of the machine's infallibility by the utilization of psychological tactics is deceptive.¹³² Since the fifth amendment cannot be waived except in a knowing and intelligent manner, admission by stipulation of polygraph evidence is questionable.

VII. THE RIGHT TO A POLYGRAPH

In recent years, a new polygraph controversy has evolved. Despite the machine's deficiencies, some defendants assert a right to present polygraph evidence over prosecutors' objections.¹³³ In *Chambers v. Mississippi*¹³⁴ and *Washington v. Texas*,¹³⁵ the United States Supreme Court acknowledged that the sixth amendment right to compulsory process¹³⁶ prohibits a trial court from arbitrarily applying state evidentiary rules to preclude a defendant from introducing exculpatory evidence necessary to his defense.¹³⁷

¹³² See *People v. Schiers*, 160 Cal. 2d 364, 384, 329 P.2d 1, 4 (1958) (Carter, J., dissenting) ("An innocent man, convinced of the device's accuracy, would anticipate a favorable result, not an involuntary admission of guilt. He cannot be held to have waived his privilege against an untruth.").

¹³³ See *Jones v. Weldon*, 690 F.2d 836, 838 (11th Cir. 1982) (per curiam); *United States v. Black*, 684 F.2d 481, 482 (7th Cir.), cert. denied, 103 S. Ct. 463 (1982); *Milano v. Garrison*, 677 F.2d 374, 375 (4th Cir. 1981); *McMorris v. Israel*, 643 F.2d 458, 459 (7th Cir. 1981), cert. denied, 455 U.S. 967 (1982).

¹³⁴ 410 U.S. 284 (1973).

¹³⁵ 388 U.S. 14 (1967).

¹³⁶ U.S. CONST. amend. VI. This right applies to the states through the due process clause of the fourteenth amendment. *Washington*, 388 U.S. at 19.

¹³⁷ In *Chambers*, the defendant, as one of his defenses, sought to offer witnesses who would have testified that someone other than the defendants had admitted to committing the murder for which the defendant had been indicted. *Chambers*, 410 U.S. at 289. The trial court refused to admit the testimony because it did not adhere to the Mississippi hearsay exception which was limited to declarations against pecuniary interest. *Id.* at 299. *Chambers* was convicted of murder and sentenced to life imprisonment; the Mississippi Supreme Court affirmed. *Id.* at 284. *Chambers* argued before the United States Supreme Court that the application of the evidentiary rule rendered his trial fundamentally unfair and deprived him of due process of law. *Id.* at 289-90. The Court noted that the rationale for the exclusion of statements against penal interest was premised on the potential for presentation of perjured testimony. *Id.* at 299. The Court found, however, that the testimony rejected by the trial court "bore persuasive assurances of trustworthiness" thus rendering a finding of inadmissibility of such evidence inconsistent with the general rationale for excluding declarations against penal interest. *Id.* at 302. Additionally, the Court took note of the critical nature of the testimony to *Chambers*' defense and concluded that "[i]n these circumstances, where constitutional rights directly affecting the ascertainment of guilt are implicated, the hearsay rule may not be applied mechanistically to defeat the ends of justice." *Id.*; see also *Green v. Georgia*, 442 U.S. 95, 97 (1979) (per curiam) (second trial in which capital punishment was imposed defendant was denied fair trial when Georgia hearsay rule was applied

In *McMorris v. Israel*¹³⁸ an accused, armed with the precedents of *Chambers* and *Washington*, successfully argued that his right to compulsory process was violated when the prosecutor refused to stipulate to polygraph evidence and gave no reasons for the refusal.¹³⁹ The United States Court of Appeals for the Seventh Circuit directed that a writ of habeas corpus issue unless the prosecutor could demonstrate "reasons which go to the reliability of the test or to the integrity of the trial process, not reasons which consider merely the relative tactical advantages from the use of the evidence to the prosecution and the defense."¹⁴⁰ Accordingly, the court remanded the case to assess the prosecutor's reasons for refusing to enter into the stipulation.¹⁴¹

Although the *McMorris* court held that a defendant's constitutional right to a fair trial may be infringed by a prosecutor's arbitrary refusal to stipulate to the admissibility of polygraph evidence,¹⁴² other circuits have rejected this approach.¹⁴³ Moreover, Justice Rehnquist criticized the *McMorris*¹⁴⁴ rationale, correctly recognizing that although Supreme Court precedent may prohibit the arbitrary exclusion of exculpatory evidence, it does "not suggest any limitation upon the

to render inadmissible critical and reliable testimony); see generally Westen, *Confrontation and Compulsory Process: A Unified Theory of Evidence for Criminal Cases*, 91 HARV. L. REV. 567 (1978) (general discussion of sixth amendment right to compulsory process with analysis of *Chambers* and *Washington* decisions).

In *Washington*, a Texas trial court, relying on two state statutes which provided that persons charged or convicted as co-participants were incompetent to testify for one another, sustained the prosecution's objection to the admissibility of the testimony of the defendant's accomplice. *Washington*, 388 U.S. at 16. The defendant was convicted of murder. The United States Supreme Court took note that the statutes at issue did not prohibit the co-participant from testifying for the state. *Id.* at 16-17. Finding that the statutes effectively left the accomplice free to lie for the state, but not on behalf of the defendant, the court found that the state arbitrarily denied the defendant "his right to have compulsory process for obtaining witnesses in his favor." *Id.* at 23.

¹³⁸ 643 F.2d 458 (7th Cir. 1981), cert. denied, 455 U.S. 967 (1982).

¹³⁹ *Id.* at 466.

¹⁴⁰ *Id.* at 464.

¹⁴¹ *Id.*

¹⁴² *Id.* at 466.

¹⁴³ See *Jones v. Weldon*, 690 F.2d 835, 838 (11th Cir. 1982) (per curiam); *Milano v. Garrison*, 677 F.2d 374, 375 (4th Cir. 1981); *Conner v. Auger*, 595 F.2d 407, 411 (8th Cir.), cert. denied, 444 U.S. 851 (1979); see also *Israel v. McMorris*, 455 U.S. 967, 971 (1982) (Rehnquist, J., dissenting to denial of certiorari).

Indeed, the Seventh Circuit subsequently limited its holding in *McMorris*. *United States v. Black*, 684 F.2d 481, 483-84 (7th Cir.) (*McMorris* "was merely our response to [a state's] experiment with polygraph evidence"; federal system has no standards for admissibility of polygraph evidence and thus is not bound to comply with requirements of due process in admitting or excluding such evidence), cert. denied, 103 S. Ct. 463 (1982).

¹⁴⁴ *Israel v. McMorris*, 455 U.S. 967, 969-71 (1982) (Rehnquist, J., dissenting to denial of certiorari).

reasons that may permissibly motivate the prosecutor's objection to the admission of inadmissible evidence."¹⁴⁵ Nevertheless, *Chambers* and *Washington* imply that at least under certain circumstances,¹⁴⁶ a defendant has a right to have exculpatory evidence admitted.

Unwilling to recognize this right, the states cannot be accused of acting in a whimsical or arbitrary manner. The inherent potential for examiners to exercise subjective bias in administering the examination, the lack or inadequacy of educational requirements for examiners, and the possibility of incorrect interpretations of physiological responses are at the core of their skepticism. Moreover, the defendant's willingness to take risks does not render the results stable. *Chambers* and *Washington* are founded upon the reliability of the evidence. In *Chambers*, for example, the exculpatory evidence unconstitutionally held inadmissible was described as testimony which "bore *persuasive assurances of trustworthiness*."¹⁴⁷ As has been argued throughout this article, polygraph testimony lacks such assurances of reliability. Consequently, this line of decisions should have no precedential value for a constitutional right to the admissibility of polygraph evidence.

VIII. NEEDED LEGISLATIVE ACTION

The reliability of the polygraph is questionable. If polygraph results are admitted into evidence, juries may be unduly influenced, and the perceived infallibility of the test may become the determining factor in their ultimate decision. If courts are to continue to authorize stipulated polygraphic results, certain legislative safeguards are needed.

Valdez imposed a duty on the trial judge to be convinced not only of the examiner's qualifications, but to allow for cross-examination,

¹⁴⁵ *Id.* at 969 (Rehnquist, J., dissenting to denial of certiorari).

¹⁴⁶ In *Chambers* the Court expressly limited its holding:

In reaching this judgment, we establish no new principles of constitutional law. Nor does our holding signal any diminution in the respect traditionally accorded to the States in the establishment and implementation of their own criminal trial rules and procedures. Rather, we hold quite simply that under the facts and circumstances of this case the rulings of the trial court deprived *Chambers* of a fair trial.

Chambers, 410 U.S. at 302.

¹⁴⁷ *Id.* (emphasis added); see *Washington*, 388 U.S. at 23 (defendant's witness "was physically and mentally capable of testifying to events that he had personally observed, and his testimony would have been relevant and material to the defense" (footnotes omitted)); see also *Green v. Georgia*, 442 U.S. 95, 97 (1979) (per curiam).

and more importantly, to instruct the jury that the results do not establish or disprove commission of a crime but only act in a corroborative fashion.¹⁴⁸ This decision signaled a refusal by the courts to accept agreements by the parties without critical examination. The *Valdez* precedent for judicial recognition of needed safeguards should be codified if stipulations are to be allowed. Such legislation would assist in protecting against abuse, and would serve to recognize the existence of unequal bargaining power in those cases where desperate defendants grasp at questionable arrangements. Further, legislation must resolve the inherent problems of multiple testing. The stipulation is normally based on a single test, with subsequent testing occurring only when the losing party is discontent. Despite the absence of an agreement, the additional examination may be desirable since it implicitly affronts credibility and furthers the primary purpose of cross-examination by impeaching the prior testimony. While it may seem fundamentally unfair to stipulate and then force another examination before the court, the fairness contemplated by *Valdez* would be hollow without some guarantee of accuracy.

Valdez also requires that a warning be given to the jury.¹⁴⁹ As stated, the judge must instruct the jury that the polygraph results alone do not establish or disprove guilt, but merely are corroborative.¹⁵⁰ It is inadvisable, however, for the instruction to be so limited. Additional warnings are needed to reduce the aura of infallibility which currently surrounds the machine and to ensure that the evidence truly will be treated as corroborative rather than controlling. Statutory incorporation of an instruction which specifically outlines the inherent inaccuracies of the technique would prevent undue reliance by the jury and would assure systematic utilization of polygraph testimony. As a suggested approach,¹⁵¹ this writer proposes the following instruction:

¹⁴⁸ *Valdez*, 91 Ariz. at 283-84, 371 P.2d at 900-01; see *supra* notes 104-05 and accompanying text.

¹⁴⁹ *Valdez*, 91 Ariz. at 283-84, 371 P.2d at 900-01.

¹⁵⁰ *Id.*; see *supra* text accompanying note 148.

¹⁵¹ Other authors have advocated a different instruction:

The theory of the lie detector is that it records the physiological manifestations of the emotional disturbance caused by consciously lying. It is possible that a witness may give false testimony, but because of poor memory, lapse of time or the excitement of the occasion, be unaware of the fact that his testimony is false. In such a situation the lie detector will not detect the untruth. Therefore, I must admonish you not to give undue weight to a diagnosis of truth, but to realize that the witness may be unconsciously lying. It is for you, the jury, after considering the witness' demeanor, the entire testimony, and all the evidence, to ultimately determine the truth or falsity of the testimony.

Streeter & Belli, "The Fourth Degree": *The Lie Detector*, 5 VAND. L. REV. 549, 557 (1952).

MEMBERS OF THE JURY:

You have heard testimony from a polygraph examiner who expressed an opinion as to the defendant's truthfulness based on the results of a test. Normally, scientific, technical, or other specialized knowledge is required to certify an individual as an expert; however, even when this exists, the testimony need not be accepted as valid. As with other expert testimony, polygraph evidence may be disregarded if you so choose, as its weight is measured solely by you. In making that decision, the polygraph should be viewed as unique. Unlike some other scientific tests, its accuracy is questioned by many knowledgeable persons. The court notes that the underlying theory of the polygraph has never been proven accurate. Further, subjectivity in the performance and interpretation of the examination could result in inaccuracy. The examiner's testimony alone does not prove or disprove any element of the crime. You are warned to scrutinize carefully all other testimony to assure sufficient corroboration before accepting the veracity of the test.

While a careful codification of the *Valdez* standards will increase the level of protection, supplemental enactments may be needed to reduce inaccuracy. For example, a statute authorizing an unobtrusive videotaping, which has been suggested by a number of authorities,¹⁵² would permit review of the examination.¹⁵³ This is necessary because standard polygraph reports may fail to reveal sources of error. To illustrate, intonations in the examiner's delivery of the questions may produce emotion in the subject. Even if unintentional, such an accusatory tone may result in unexplained tension and an erroneous conclusion of guilt. Videotaping the examination or viewing the proceedings via a one-way mirror would not interfere with the process and would provide a record by which the skill of the examiner could be evaluated.¹⁵⁴

This instruction is inadequate as it unduly suggests that only unconscious lying goes undetected. In reality, lying, whether intentional or unconscious, may be reported as truth, and honesty as a falsity. The better approach is for the court to leave the cross-examination for the attorneys but to charge the jury with specific admonishments which stress the polygraph's questionable theory, likelihood of error, and, most important, the need for corroborating testimony.

¹⁵² See, e.g., Pemberton, *supra* note 2, at 27-28.

¹⁵³ Several states require permanent recording of the subject's cardiovascular and respiratory patterns. E.g., ILL. ANN. STAT. ch. 111, ¶ 2403, § 3 (Smith-Hurd Cum. Supp. 1983-1984); KY. REV. STAT. § 329.020 (1983); MICH. COMP. LAWS ANN. § 338.1704 (West 1976). Nevada further requires the permanent recording of change in skin resistance. NEV. REV. STAT. § 648A.200(1)(b) (1981). None of the statutes reviewed by the author require videotaping of examination sessions.

¹⁵⁴ Pemberton, *supra* note 2, at 74-75 (citing Note, *Pinocchio's New Nose*, 48 N.Y.U. L. REV. 339, 354 (1973)). Pemberton suggests, however, that although the one-way mirror would permit monitoring of the test just as easily as videotaping, the latter provides a more accurate method of review. *Id.*

Therefore, when the results are to be used at trial, legislation requiring videotaping is advisable. Through this procedure the examiner could better explain how he arrived at a particular outcome, and the judge and jury would be able to make a more accurate assessment of the conduct of both the subject and the examiner. Consequently, the procedure would make apparent any questionable testing procedures and ultimately would serve to increase the precision and caution exercised by the examiner.

The expertise of the polygraph examiner is of the utmost importance.¹⁵⁵ Recognizing this, some states have adopted licensing statutes which require polygraph examiners to possess certain minimum qualifications,¹⁵⁶ and which provide for review of these qualifications by a licensing board.¹⁵⁷ Typically, a combination of general education and experience,¹⁵⁸ approved polygraph coursework,¹⁵⁹ an internship,¹⁶⁰

¹⁵⁵ See, e.g., *United States v. Oliver*, 525 F.2d 731, 737 (8th Cir. 1975), *cert. denied*, 424 U.S. 973 (1976); *Commonwealth v. A Juvenile*, 365 Mass. 421, 427, 313 N.E.2d 120, 124 (1974); see Horvath & Reid, *supra* note 43, at 276 (finding in one study evaluations of polygraph charts by experienced examiners were substantially more accurate than those conducted by inexperienced examiners (less than six months' experience)).

¹⁵⁶ See ARK. STAT. ANN. §§ 71-2201 to -2225 (1979 & Cum. Supp. 1983); GA. CODE ANN. §§ 43-36-1 to -16 (1982 & Cum. Supp. 1983); ILL. ANN. STAT. ch. 111, ¶¶ 2401-2432 (Smith-Hurd Cum. Supp. 1983-1984); KY. REV. STAT. §§ 329.010 to .990 (1983); MICH. COMP. LAWS ANN. §§ 338.1701 to .1729 (West 1976 & Cum. Supp. 1983-1984); MISS. CODE ANN. §§ 73-29-1 to -49 (1972 & Supp. 1983); NEV. REV. STAT. §§ 648A.010 to .290 (1981); N.M. STAT. ANN. §§ 61-26-1 to -17 (1978 & Cum. Supp. 1981); OKLA. STAT. ANN. tit. 59, §§ 1451-1476 (West Cum. Supp. 1982-1983); TEX. REV. CIV. STAT. ANN. art. 4413 (29cc) §§ 1-30 (Vernon 1976 & Cum. Supp. 1982-1983); VA. CODE §§ 54-916 to -922 (1982).

¹⁵⁷ See, e.g., ARK. STAT. ANN. § 71-2204 (1979); GA. CODE ANN. § 43-36-3 (1982); ILL. ANN. STAT. ch. 111, ¶ 2407, § 7 (Smith-Hurd Cum. Supp. 1983-1984); KY. REV. STAT. § 329.030 (1983); MICH. COMP. LAWS ANN. §§ 338.1705, .1710, .1717 (West 1976); MISS. CODE ANN. §§ 73-29-7, -9, -13 (1972 & Supp. 1983); NEV. REV. STAT. §§ 648A.080, .130 (1981); N.M. STAT. ANN. § 61-26-5 (1983); OKLA. STAT. ANN. tit. 59, §§ 1455, 1456, 1458 (West Cum. Supp. 1982-1983); TEX. REV. CIV. STAT. ANN. art. 4413 (29cc) §§ 5, 6, 8 (Vernon 1976 & Cum. Supp. 1982-1983); VA. CODE §§ 54-917, -919 (1982).

¹⁵⁸ The following states require either a college degree or a high school diploma and five years of investigative experience: GA. CODE ANN. § 43-36-6(5) (1982); MICH. COMP. LAWS ANN. § 338.1710(d) (West 1976); NEV. REV. STAT. § 648A.130(1)(c)(1981); OKLA. STAT. ANN. tit. 59, § 1458(5)(a) (West Cum. Supp. 1982-1983). Some states permit either a college degree or five years investigative experience, e.g., ARK. STAT. ANN. § 71-2207(5) (1976); MISS. CODE ANN. § 73-29-13(5) (1972); TEX. REV. CIV. STAT. ANN. art. 4413 (29cc) § 8(a)(2) (Vernon Cum. Supp. 1982-1983). Illinois requires a college degree. ILL. ANN. STAT. ch. 111, ¶ 2412, § 11 (c) (Smith-Hurd Cum. Supp. 1983-1984). Statutes in the following states do not specifically require general education or experience: KY. REV. STAT. § 329.030 (1983); N.M. STAT. ANN. § 61-26-7 (1983); N.D. CENT. CODE § 43-31-07 (Cum. Supp. 1981); VA. CODE § 54-918 (1982).

¹⁵⁹ E.g., ARK. STAT. ANN. § 1-2207(6) (1979); GA. CODE ANN. § 43-36-5 (6) (1982); ILL. ANN. STAT. ch. 111, ¶ 2412, § 11 (D) (Smith-Hurd Cum. Supp. 1983-1984); KY. REV. STAT. § 329.030 (2)(d)(1983); MISS. CODE ANN. § 73-29-13(6) (1972); NEV. REV. STAT. § 648A.130(1)(d) (1981); N.D. CENT. CODE § 43-31-07 (5) (Cum. Supp. 1981); OKLA. STAT. ANN. tit. 59, § 1458 (5)(b) (West Cum. Supp. 1982-1983); TEX. REV. CIV. STAT. ANN. art. 4413 (29cc) § 8(a)(3) (Vernon Cum. Supp. 1982-1983).

¹⁶⁰ See ARK. STAT. ANN. § 71-2207(6) (1979); GA. CODE ANN. § 43-36-6(7) (1982); KY. REV. STAT. § 329.030(2)(c) (1983); MICH. COMP. LAWS ANN. § 338.1710(e) (West 1976); MISS. CODE

and standardized testing¹⁶¹ are required. The absence of minimum statutory standards increases the burden on the judiciary to ascertain expertise. Legislatures in jurisdictions lacking such statutes should move quickly toward the introduction and adoption of such standards. Conversely, it should be noted that the existence of a licensing statute should not limit a court's ability to inquire further into an examiner's credentials.¹⁶² Considering the dramatic influence the examiner's testimony can interject at trial, a court should have the option to evaluate the level of actual experience,¹⁶³ potential bias, and any other challenge brought by interested persons concerning the examiner's abilities.¹⁶⁴

Finally, it has been said that the polygraph is primarily a psychological approach to the assessment of truth or deception.¹⁶⁵ Inadequate psychological training creates a grave danger of incorrect decisions by the examiner on questions of mental instability, abnormal

ANN. § 73-29-13 (6)(1972); NEV. REV. STAT. § 648A.130(2)(a) (1981); N.D. CENT. CODE § 43-31-07 (5)(Cum. Supp. 1981); OKLA. STAT. ANN. tit. 59, § 1458 (5)(b)(West Cum. Supp. 1982-1983); TEX. REV. CIV. STAT. ANN. art. 4413 (29cc) § 8(a)(3) (Vernon Cum. Supp. 1982-1983).

¹⁶¹ See ARK. STAT. ANN. § 71-2207(7) (1979); GA. CODE ANN. § 43-36-6 (8)(1982); ILL. ANN. STAT. ch. 111, § 2412, § 11(B)(Smith-Hurd Cum. Supp. 1983-1984); KY. REV. STAT. § 329.030 (5)(1983); MICH. COMP. LAWS ANN. § 338.1710(k)(West 1976); N.M. STAT. ANN. § 61-26-7 (1983); N.D. CENT. CODE § 43-31-07 (4) (Cum. Supp. 1981); OKLA. STAT. ANN. tit. 59, § 1458 (5)(c) (West Cum. Supp. 1982-1983); TEX. REV. CIV. STAT. ANN. art. 4413 (29cc) § 8 (a)(4) (Vernon Cum. Supp. 1982-1983).

¹⁶² *Commonwealth v. A Juvenile*, 365 Mass. 421, 429-30, 313 N.E.2d 120, 126 (1974) (trial judge's discretion should not be limited by formulating strict minimum standards for qualification of polygraph experts); see *Valdez*, 91 Ariz. at 283, 371 P.2d at 900 (1962) (admissibility of test results is subject to discretion of trial judge).

¹⁶³ The contrast between the level of experience required by a licensing standard and the level of actual acquired experience can be dramatic. For example, a Nevada polygraph license applicant must have completed at least 250 polygraphic examinations (usually during an internship). NEV. REV. STAT. § 648A.130(2)(b) (1981). By contrast, Charles Zimmerman who was offered as an expert in one case, had conducted over 20,000 polygraph examinations. *Commonwealth v. A Juvenile*, 365 Mass. 421, 430 n.7, 313 N.E.2d 120, 126 n.7 (1974).

¹⁶⁴ In *McLemore v. State*, 87 Wis. 2d 739, 748-49, 275 N.W.2d 692, 696-97 (1979), the Wisconsin Supreme Court held that a stipulation to admit polygraph evidence does not preclude a criminal defendant from introducing evidence to impeach the credibility of the polygraph examiner at an admissibility hearing outside the presence of the jury. Wisconsin does not have a licensing statute. The conflict arose because at the time of the trial the examiner had been placed on probation by the American Polygraph Association. *Id.* at 744-45, 275 N.W.2d at 694-95. In commenting on the *McLemore* decision, one author suggested that the impeachment evidence should be heard by the jury. Note, *Polygraph Evidence—Impeachment of Polygraph Examiner Testimony by Defense Experts Allowed at Admissibility Hearing*, 63 MARQ. L. REV. 143, 155 (1979). It should be noted that two years after the *McLemore* decision, the Wisconsin Supreme Court ruled that polygraph evidence is not to be admitted in any criminal proceeding unless a stipulation was entered on or before September 1, 1981. *State v. Dean*, 103 Wis. 2d 228, 279, 307 N.W.2d 628, 653 (1981).

¹⁶⁵ *Abrams*, *supra* note 2, at 99; see *supra* notes 46-56 and accompanying text.

response patterns, and psychological evasion techniques.¹⁶⁶ Accordingly, when polygraph testimony is to be utilized at trial, it is recommended that legislation require a psychologist or psychiatrist to accompany the polygraph operator during the testing in order to assist in important psychological judgments. Obviously this would entail additional expense to the parties, but the substantial risk of grievous error associated with the testing process mandates the adoption of this safeguard.

IX. CONCLUSION

As a truth-finding technique, polygraph testing has a blemished record. A variety of factors, including the personality of the subject and the ability of the examiner to detect sources of error, affect the accuracy of the technique.¹⁶⁷ Increasing numbers of courts nevertheless admit polygraph evidence when the parties so stipulate. The decision to stipulate, however, merely reflects the parties' willingness to agree to admit the results prior to knowing the outcome of the test. The stipulation procedure does not alleviate the many sources of inaccuracy. Indeed, if polygraph results are admitted, the jury is exposed to unduly influential and potentially faulty evidence which unfortunately may prove determinative of the ultimate issue of guilt or innocence. In short, the integrity of the criminal justice system is sacrificed when convictions and acquittals can be based on conclusions drawn from questionable technology. If this is to be avoided,

¹⁶⁶ Professor Skolnick has pointed out the importance of the examiner's training in clinical and social psychology. Skolnick, *supra* note 28, at 707. Reid and Inbau likewise emphasize the significance of psychological training and note that the six month course offered at the Reid College of the Detection of Deception in Chicago, Illinois includes such training as part of the curriculum. J. REID & F. INBAU, *supra* note 7, at 305.

¹⁶⁷ The Office of Technology Assessment's recently released study reviewed, *inter alia*, the various factors which affect polygraph examination validity and concluded that these factors suggest:

[T]here is a great deal more to understand about polygraph tests before one can be assured of their validity. Despite our lack of full understanding, however, several factors that affect validity are known. In part, the history of polygraph development over the past 15 to 20 years has been to systematize and improve polygraph procedures based on these factors. One central problem, not adequately addressed by either the literature on improvements in validity or countermeasures, is the extent to which these factors affect numbers of inconclusives. For policy purposes, clearly such distinctions and a sense of the magnitude of false decisions is needed. Substantial research, beyond what is currently available, would have to be conducted in order to answer such questions.

Id. at 92.

jurisdictions which favor admissibility of polygraph evidence by stipulation should adopt the suggested legislation as a means of scrutinizing the polygraph process and determining the proper weight to be accorded its results. This would acknowledge that there is no mystical pathway to truth.