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Admissibility of Polygraph Evidence in 1975: An Aid in Determining Credibility In a Perjury-Plagued System

By BARRY TARLOW*

IT has been said that decisions of the higher courts do not affect police behavior but only police testimony.¹ When, for example, an officer testified under oath that a defendant obligingly opened the trunk of a car, handed the officer a contraband-laden shoebox and advised the officer, “[y]ou can take whatever you want,”² the Supreme Court of California merely noted that “[d]efendant’s testimony, not surprisingly, differed from that of the officer.”³ Then, applying long established guidelines of appellate review, the high court deferred to an “implied” finding of the trial court that the officer was somehow telling the truth.⁴

Mr. Justice Brennan has observed, in the context of a hearing to determine the voluntariness of a confession, that a hearing on improper acquisition of evidence “normally presents the factfinder with conflicting testimony from the defendant and law enforcement officers about what occurred”⁵ Ordinarily “the question before the factfinder is whether to believe one or the other of two self-serving accounts of

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1. See, e.g., Note, *Effect of Mapp v. Ohio on Police Search-and-Seizure Practices in Narcotics Cases*, 4 COLUM. J.L. & SOC. PROB. 87, 103 (1968).

2. *People v. West*, 3 Cal. 3d 595, 602, 477 P.2d 409, 412, 91 Cal. Rptr. 385, 388 (1970).

3. *Id.*, 477 P.2d at 412, 91 Cal. Rptr. at 388.

4. But see, e.g., *Bumper v. North Carolina*, 391 U.S. 543 (1968): “[N]o sane man who denies his guilt could actually be willing that policemen search his room for contraband which is certain to be discovered.” *Id.* at 549, quoting *Higgins v. United States*, 209 F.2d 819, 820 (D.C. Cir. 1954).

5. *Lego v. Twomey*, 404 U.S. 477, 492 (1972) (dissenting opinion).

what has happened”⁶ This dilemma was present in *People v. Dickerson*,⁷ when an officer asserted that the defendant’s common-law wife, nine months pregnant, had willingly let the police enter the family home to seize evidence implicating Mr. Dickerson in a burglary. The woman maintained that the police disregarded her objections and entered. According to the court of appeal, the legality of the search was deemed by the trial court to pivot upon credibility. Viewing the woman as a “putative spouse, bearing this man’s child,”⁸ and the officer as a disinterested “man performing his duties,”⁹ the court was required to resolve “as . . . in most criminal cases” a conflict between the two “diametrically opposed statements of facts.”¹⁰ The trial court stated that it “must believe one or the other.”¹¹ Naturally it chose the officer’s version.

On appeal, Justice Kaus empathized with the trial “court’s apparent reluctance to find the officer’s version to be correct. It certainly approaches the inherently improbable.”¹² However, he concluded that the trial court’s criteria for weighing the officer’s testimony against that of the wife were “highly suspect.”¹³ The trial court had apparently ignored the following considerations: “the natural desire of a police officer to see a criminal brought to justice,” the fact “[t]hat law enforcement is often a ‘competitive enterprise,’” and the potential civil and administrative sanctions facing “a police officer who has conducted an illegal search and seizure.”¹⁴

Other courts have also intimated at least a minimal awareness of the seeming omnipresence of the police practice of adding to or subtracting from the facts. For example, in *Miranda v. Arizona*, Justice Harlan forecast rather accurately that police who deny third-degree tactics will “lie as skillfully about warnings and waivers.”¹⁵ *Adams v. Williams* was predicated upon the fact that “a person known to Sgt. Con-

6. *Id.*

7. 273 Cal. App. 2d 645, 78 Cal. Rptr. 400 (1969).

8. *Id.* at 649, 78 Cal. Rptr. at 403.

9. *Id.*

10. *Id.* at 650, 78 Cal. Rptr. at 403.

11. The appellate court found that the trial court did not have to believe either witness. As the search had been made without a warrant, the burden of justifying the procedure rested with the prosecution; the factfinder’s inability to determine which of the witnesses was telling the truth should have resulted in a holding that the prosecution had failed to sustain its burden. *Id.*

12. *Id.* at 651, 78 Cal. Rptr. at 404.

13. *Id.* at 650, 78 Cal. Rptr. at 403.

14. *Id.* at 650 n.4, 78 Cal. Rptr. at 403 n.4. See also *Theodor v. Superior Court*, 8 Cal. 3d 77, 501 P.2d 234, 104 Cal. Rptr. 226 (1972).

15. 384 U.S. 436, 505 (1966) (dissenting opinion).

nolly approached his cruiser and informed him that an individual seated in a nearby vehicle was carrying narcotics and had a gun at his waist."¹⁶ This "fact" had given Chief Judge Friendly cause for wonder, since the phantom informer was not invented until the second suppression hearing in the case; the officer's first version was that he was responding to a police radio report.¹⁷ The California Supreme Court has even implied that police uniformly lie about the existence of "furtive" gestures to justify auto stops and searches.¹⁸ Perhaps the most bizarre item is found in *California v. Krivda*,¹⁹ where, as amicus curiae, Illinois urged abolition of the exclusionary rule "because it causes the police to perjure themselves in hundreds of cases."²⁰

One solution to the problem may be provided by the science of polygraphy. In the leading California case of *People v. Cutler*,²¹ Judge Allen Miller explained a primary reason for reliance on expert opinion based upon polygraph examinations:

It is the experience of this court during his ten years of presiding at criminal trials that the great majority of trials on [the] issue of guilt or innocence turn on the credibility of witnesses that perjury is prevalent and the oath taken by witnesses has little effect to deter false testimony. The principal role of a trier of fact is the search

16. 407 U.S. 143, 144-45 (1972).

17. *Williams v. Adams*, 436 F.2d 30, 36 n.4 (2d Cir. 1970) (dissenting opinion), *rev'd on rehearing*, 441 F.2d 394 (2d Cir. 1971), *rev'd*, 407 U.S. 143 (1972).

18. *People v. Superior Court (Kiefer)*, 3 Cal. 3d 807, 827-28 n.13, 478 P.2d 449, 462-63 n.13, 91 Cal. Rptr. 729, 742-43 n.13 (1970). See also *United States v. Marshall*, 488 F.2d 1169 (9th Cir. 1974), where the appellate court overruled the trial court's fact-finding as to the veracity of the narcotics agents and branded them as perjurers: "These appeals present a distressing picture of the notions of the agents of the Bureau of Narcotics and Dangerous Drugs . . . who were involved in the case about the manner in which they are to perform their duties and their obligations toward citizens under the Constitution. . . . Two of the agents seem quite willing to make false affidavits, in which facts are distorted to achieve a result, such as a finding that seized evidence was in plain view." *Id.* at 1170-71.

19. 409 U.S. 33 (1972).

20. Oral Argument for the State of Illinois as Amicus Curiae, *California v. Krivda*, 12 Crim. L. Rptr. 4034, 4036 (1972). Three judges and a New York state prosecutor have argued that the burden of proof should be shifted to the state in so-called dropsy cases because of prevalent police perjury. *People v. Barrios*, 28 N.Y.2d 361, 369, 270 N.E.2d 709, 714, 321 N.Y.S.2d 884, 890 (1971) (Fuld, C.J., dissenting). But perjury prosecutions are rare; one judge said he would have referred a witness to the district attorney for perjury investigation except for the fact that the witness was a police officer. *People v. Carter*, 26 Cal. App. 3d 862, 875, 103 Cal. Rptr. 327, 335 (1972).

21. No. A176965 (Super. Ct. Los Angeles County, Cal. Nov. 6, 1972), 12 Crim. L. Rptr. 2133 (1972). After becoming convinced that the decision of the trial court would be affirmed and establish binding appellate authority supporting the admissibility of polygraph test results, the prosecution abandoned its appeal. 14 Crim. L. Rptr. 2420 (1974). See notes 65-69 & accompanying text *infra*.

for truth and any reasonable procedure or method to assist the court in this search should be employed.²²

It is important to observe that Judge Miller did not focus solely upon the collateral inquiries then before the court as factfinder; rather, though only as dictum, the *Cutler* opinion expressed concern with perjury which affects the issue of a person's guilt or innocence.²³ Other courts have voiced similar apprehensions.²⁴

If the judicial system is to fulfill its duty of searching for truth and maintaining integrity, it must commence a war against perjury.²⁵ The war cannot be won with weapons restricted to cross-examination, inferences from demeanor, and other relics from the crossbow era of Henry II. The arsenal against sophisticated witness mendacity must be equipped with the most advanced, accomplished, and effective scientific system devised to date. Unless we are interested in the preservation of institutionalized perjury, there is no tenable reason why qualified polygraphers should not be welcomed by courts confronting credibility questions;²⁶ clearly, polygraphy "appears to have something val-

22. 12 Crim. L. Rptr. at 2134.

23. The court concludes that the polygraph method of assisting in the search for truth should be employed to determine the ultimate issue as well as collateral issues such as search and seizure legality, the question presented directly in *Cutler*.

24. For cases involving the problem of perjury relating directly to substantive questions of guilt or innocence, see, e.g., *Napue v. Illinois*, 360 U.S. 264 (1959) (murder conviction reversed, principal prosecution witness committed perjury); *Mesarosh v. United States*, 352 U.S. 1 (1952) (conviction reversed, principal witness committed perjury in several instances); *Hysler v. Florida*, 315 U.S. 411 (1942) (denial of rehearing on writ of error corum nobis affirmed, where proof of perjury inconclusive); *United States v. Basurto*, 497 F.2d 781 (9th Cir. 1974) (conviction reversed, government's chief witness committed perjury before grand jury); *United States v. Chisum*, 436 F.2d 645 (9th Cir. 1971) (narcotics conviction reversed when narcotics agents, who were principal witnesses, were convicted of perjury); *United States v. Polisi*, 416 F.2d 573 (2d Cir. 1969) (robbery conviction reversed, newly discovered evidence established that principal government witness committed perjury); *Curran v. Delaware*, 259 F.2d 707 (3d Cir. 1958) (habeas corpus granted as to murder conviction when officers destroyed statements given by defendants and perjured themselves by claiming that no such exculpatory statements had been made); *Gondron v. United States*, 242 F.2d 149 (5th Cir. 1957) (conviction reversed, government agreed that key witness testified falsely); *Imbler v. Cravens*, 298 F. Supp. 795 (C.D. Cal. 1969), *aff'd*, 424 F.2d 631 (9th Cir.), *cert. denied*, 400 U.S. 865 (1970).

25. See generally Cohen, *Police Perjury: An Interview with Marcus Garbus*, 8 CRIM. L. BULL. 363 (1972); Grano, *A Dilemma for Defense Counsel: Spinelli-Harris Search Warrants and the Possibility of Police Perjury*, 1971 U. ILL. L.F. 405; Sevilla, *The Exclusionary Rule and Police Perjury*, 11 SAN DIEGO L. REV. 839 (1974); Comment, *Police Perjury in Narcotics "Dropsy" Cases: A New Credibility Gap*, 60 GEO. L.J. 507 (1971).

26. At present some courts require witnesses to undergo polygraph examinations in noncriminal cases. See Pfaff, *The Polygraph: An Invaluable Judicial Aid*, 50 A.B.A.J. 1130 (1964). Judge Pfaff's experience is borne out by Ferguson, *Polygraph*

uable to add to the administration of justice."²⁷

The Method and Theory of Polygraphy

The polygraphy instrument is designed to monitor and measure certain physiological responses of a person who is answering a set of "yes" or "no" questions. The instrument produces an electromechanical recording of uncontrollable physiological changes occasioned by the internal stress caused by an examinee's conscious insincerity. A standard polygraph ordinarily delivers this information with total accuracy.²⁸ The polygraph examiner's analysis of the physiological measurements and other circumstances of the examination lead to his expert opinion of whether the person answered the questions truthfully.²⁹

In *United States v. Ridling*,³⁰ Judge Joiner provided a comprehensive description of the theory of polygraphy. Based on the principle that the autonomic nervous system responds automatically, involuntarily, and uncontrollably to stress, the polygraph measures and records these responses such as blood pressure, pulse, respiration, and sweat gland activity. "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

V. Outdated Precedent, 35 TEXAS B.J. 531 (1972) [hereinafter cited as Ferguson]. See also Sevilla, *The Exclusionary Rule and Police Perjury*, 71 SAN DIEGO L. REV. 839, 873-74 (1974) (advocating use of test results at suppression hearings, to eliminate perjury).

Mr. Sevilla, a nationally recognized authority on polygraph evidence, has recently published a guide to the introduction of such testimony at trial. Sevilla, *Polygraph Evidence: The Case for Admissibility and Suggestions for Introduction*, 2 CRIM. DEFENSE (April 1975).

27. *United States v. DeBetham*, 348 F. Supp. 1377, 1384 (S.D. Cal.), *aff'd*, 470 F.2d 1367 (9th Cir. 1972), *cert. denied*, 412 U.S. 907 (1973).

28. The accuracy of the measurements themselves cannot be challenged if the instrument is working properly. However, the information is meaningless in isolation. Given form and content by reference to a specific examination, the information on physiological changes becomes a part of a system subject to error. See generally J. REID & F. INBAU, *TRUTH AND DECEPTION* 1-10 (1966) [hereinafter cited as REID & INBAU].

29. The expert's opinion only goes to the veracity of the person's stated beliefs. "Clearly, nothing in the entire technique can show the underlying empirical truth in the sense of the facts occurring in the past; but only whether the person examined himself believed his answers." C. McCORMICK, *EVIDENCE* § 207, at 505 (2d ed. 1972) (footnote omitted) [hereinafter cited as McCORMICK]. As described by one lawyer-polygrapher: "The polygraph instrument does not detect lies in the strict sense at all. If it 'detects' anything, it is the truth. Its application is quite narrow. The instrument does not believe or disbelieve as a juror must do. Its recordings only distinguish between the whole truth and something less than the whole truth, and there its function ends as a diagnostic aid. It cannot testify, but it can be used to provide the basis for expert opinion." Ferguson, *supra* note 26, at 536.

30. 350 F. Supp. 90 (E.D. Mich. 1972).

changes of such a magnitude that they can be measured and interpreted."³¹

This theory has not won universal approval. In *United States v. DeBetham*,³² Judge Thompson stated that it was relevant to admissibility that no conclusive findings could be made as to the underlying physiological hypothesis of the polygraph.³³ Moreover, "[t]he question of . . . validity is an extremely complex issue which may never be fully answerable."³⁴ For that matter, however, there does not appear to be general scientific acceptance of a theory to explain all the phenomena of aspirin. But even though aspirin's theoretical underpinnings may never be elucidated to the satisfaction of the scientific community, the fact is that it works. So does the polygraph.³⁵

31. *Id.* at 92.

32. 348 F. Supp. 1377 (S.D. Cal.), *aff'd*, 470 F.2d 1367 (9th Cir. 1972), *cert. denied*, 412 U.S. 907 (1973).

33. 348 F. Supp. at 1281 (footnote omitted).

34. Barland & Raskin, *Detection of Deception*, in *ELECTRODERMAL ACTIVITY IN PSYCHOLOGICAL RESEARCH* 435 (W. Prokasy & D. Raskin eds. 1973) [hereinafter cited as Barland & Raskin].

35. See generally Santa, *The Polygraph*, in R. CIPES, *CRIMINAL DEFENSE TECHNIQUES* ch. 66 (1974). Cleve Backster, director of an outstanding polygraph school in New York and San Diego who had administered over 50,000 examinations and developed the "Backster Zone of Comparison Test," provided a thorough explanation of how a polygraph operator actually conducts an examination, in his testimony at the court martial of Captain E. Medina. See C. ZIMMERMAN, *THE POLYGRAPH IN COURT* 17-18 (1972) [hereinafter cited as *POLYGRAPH IN COURT*].

Backster explains that the first step in conducting a polygraph test is a "pre-examination reliability estimate" to determine whether the operator has adequate case information and thereby "distinctness of issue." If this hurdle is passed, the operator will then start to construct test questions. First, he must formulate at least two "relevant questions," which are very direct and pointed to the central "target" issue; "nonambiguous questions . . . where semantics is quite an issue . . . so that the person taking the test will understand the question." To assure that the subject understands the questions he is encouraged to become involved in their formulation; they are read to him, and he is asked to explain them.

The next step is the formulation of "control" or "probable lie" questions. These are in a category similar to the "relevant questions," but must not "in any way usurp or detract from the reaction to the relevant question if the person were attempting deception"; the control questions are then placed close to the relevant questions in the testing structure. These questions are not directed at the subject matter of the examination and permit the examiner to compare the reactions of examinee. Then a series of "neutral questions," or those of which the examiner feels certain of the answer (as, "Is your first name John?") are selected, to be used "merely to orient the individual taking the test to any question being asked regardless of the type."

All of the questions are then carefully reviewed with the subject, again to insure comprehension and pertinence to the examination; "under no circumstances is a question injected into the testing" that has not been reviewed. This policy of avoiding surprise is directed toward the elimination of the subject's fear that some other incident will be raised, which might undermine the reliability of the responses to the relevant questions. Although the exact working of the questions is known to the examinee, the actual order

Summary of Salient Developments in Polygraphy and the Admissibility of Test Results

Chronologically, the significant advances in the quest for a scientific credibility evaluation assistance system, including the admissibility in evidence of the system's expert opinion output, may be summarized as follows:

1. In 1895, a pioneering criminologist, Cesare Lambroso, used a device known as a "hydrosphygmograph" as a means of testing the truth of statements made by criminal subjects. The instrument recorded changes in blood pressure and pulse patterns.³⁶

2. In 1923, the results of a systolic blood pressure measurement, correctly indicating that a suspect had told the truth when he denied his guilt, were excluded from evidence because the expert did not perform the test in the presence of the court while the defendant was testifying.³⁷ In upholding the trial court's discretion, the court of appeals set forth the infamous "general acceptance" standard for the admissibility of polygraph evidence: the opinion testimony would be admissible only if the scientific technique or device was sufficiently established to have gained general acceptance in the particular field.³⁸

3. In 1938, expert opinion testimony that a person had told the truth was admitted upon a foundational showing of validity of results based upon a device which measured psychogalvanic skin response.³⁹

in which they will be asked is not revealed.

The test is then administered, at least twice and usually three or four times "in order to have a consistency . . . as far as the presence of or a lack of reaction on the relevant questions." Backster's system involves a numerical scoring method with "at least 18 separate opportunities to determine truth or deception during the procedure." This technique prevents a distortion of the test result by any potential extraneous reaction to a single question. The charts are interpreted by the examiner, and the result is "a reading that would have to fall into three possibilities . . . that in the opinion of the examiner, the person was being deceptive, that they were being truthful, or that the test was inconclusive." *Id.*

36. REID & INBAU, *supra* note 28, at 1-2. See generally *id.* at 1-10. Prof. Fred Inbau, outspoken proponent on behalf of law enforcement, has been called "possibly the foremost authority on the subject" of truth detection. *People v. Davis*, 343 Mich. 348, 370, 72 N.W.2d 269, 281 (1955).

37. *But see* McCORMICK, *supra* note 29, at 505: "No one could reasonably contend that the [polygraph] test should be conducted in the courtroom at the trial."

38. *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923). The setting of *Frye* is taken not from the two-page reported opinion, but from Ferguson, *supra* note 26. Although *Frye* is the first reported opinion, the initial instance of use of the blood pressure method of truth detection in a court of law appears to have been in Los Angeles in 1913. See 3A J. WIGMORE, A TREATISE ON THE ANGLO-AMERICAN SYSTEM OF EVIDENCE IN TRIALS AT COMMON LAW § 999, at 949 n.3 (Chadbourn rev. 1970).

39. *People v. Kenny*, 167 Misc. 51, 3 N.Y.S.2d 348 (Sup. Ct. Queens County 1938). The *Kenny* foundation consisted of testimony from a person who chaired a uni-

4. In 1948, a truth determination system of unknown components served to convict a man of lewd and lascivious acts upon a child, and the admissibility of expert opinion testimony was sustained on appeal.⁴⁰

5. At least since 1954, the California Supreme Court has consistently recognized the admissibility of expert opinion testimony on matters such as character traits, including credibility, even under rather bizarre circumstances.⁴¹

6. In 1957, Justice Traynor of the California Supreme Court indicated that polygraph evidence did not yet have sufficient reliability to warrant admissibility.⁴²

versity psychology department, held a degree in philosophy and a doctorate in physics, had been a professor of physiology, and was also a priest. Judge Colden credited his claim of 6,000 examinations and nearly perfect interpretations of truth. The same year, the New York Court of Appeals refused to accept polygraph testimony, but understandably so because unlike *Kenny*, the "record [was] devoid of evidence tending to show a general scientific recognition that the pathometer possesses efficacy." *People v. Forte*, 279 N.Y. 204, 206, 18 N.E.2d 31, 32 (1938); see *Wicker, The Polygraphic Truth Test and the Law of Evidence*, 22 TENN. L. REV. 711, 716-17 (1953). Moreover, *Kenny* manifested a surprising prescience in accepting an opinion based solely on skin responses during questioning. In the field of psycho-physiology it has recently been observed: "It is a well-established fact that measures of electrodermal activity can discriminate between truth and deception at levels far beyond chance." *Barland & Raskin, supra* note 34, at 420.

40. *People v. Houser*, 85 Cal. App. 2d 686, 691, 694-95, 193 P.2d 937, 940, 942 (1948). The *Houser* court focused on a stipulation that the expert opinion could be admitted into evidence. See Note, 15 ALA. L. REV. 248, 255 (1962). See notes 176-89 & accompanying text *infra*. Cases have drawn "a valid distinction in admitting polygraph evidence only pursuant to stipulations" according to *State v. Ross*, 7 Wash. App. 62, 68, 497 P.2d 1343, 1347 (1972), but the nature of the distinction is not intimated. See *Herman v. Eagle Star Ins. Co.*, 283 F. Supp. 33, 35-40 (C.D. Cal. 1966), *aff'd*, 396 F.2d 427 (9th Cir. 1968).

41. See, e.g., *People v. Russel*, 69 Cal. 2d 187, 198-200, 443 P.2d 794, 802-03, 70 Cal. Rptr. 210, 218-19, *cert. denied*, 393 U.S. 864 (1968) (abuse of discretion to exclude psychiatric evidence as to emotional and mental status of complaining witness for purposes of impeaching credibility); *Cornell v. Superior Court*, 52 Cal. 2d 99, 101, 338 P.2d 447, 448 (1959) (mandate to compel in-custody examination by hypnotist regardless of whether evidence ultimately is deemed admissible; expertise established; method recognized by medical authorities); *People v. Cartier*, 51 Cal. 2d 590, 600-01, 335 P.2d 114, 121-22 (1959) (error to exclude expert opinion as to sanity formed while patient under influence of sodium-pentothal); *People v. Jones*, 42 Cal. 2d 219, 225-26, 266 P.2d 38, 43 (1954) (expert opinion based upon sodium-pentothal interview admissible not to prove facts asserted but for analysis of character). See also *McCORMICK, supra* note 29, at 510.

42. *People v. Carter*, 48 Cal. 2d 737, 752, 312 P.2d 665, 674 (1957). The *Carter* court held, *inter alia*, that it was error for a witness to testify to his willingness to clear himself of suspicion through a polygraph examination, thus implying that the defendant had not been willing to take such a test. Although the tests had sufficient probative value to garner a conviction in *People v. Houser*, 85 Cal. App. 2d 686, 193 P.2d 937 (1948), the *Carter* dictum preferred the approach of *People v. Wochnick*, 98 Cal. App.

7. In 1966, the United States Supreme Court suggested that the Fifth Amendment privilege against self-incrimination would save an individual from compelled testing which might determine "guilt or innocence on the basis of physiological responses."⁴³

8. In 1969, a federal appellate court recognized the advanced state of the polygraph system for assisting in the truth determination process. The court intimated that expert opinion testimony based upon polygraph evidence should be received if a proper evidentiary foundation was presented.⁴⁴

9. In 1972, three federal district courts⁴⁵ found a scientific system for credibility determination sufficiently reliable to be the basis for expert opinion testimony. The system consisted, in part, of a device which measured physiological responses to questioning, including: (1) psychogalvanic skin response; (2) blood pressure; (3) pulse rate; and (4) respiration rate.⁴⁶ Moreover, a federal appellate court intimated

2d 124, 126-28, 219 P.2d 70, 71-72 (1950) (apparently coerced polygraph examination without any foundation concerning polygraph's reliability; the court's understanding is indicated by its calling a four-measurement polygraph a systolic blood pressure device), and *People v. Porter*, 99 Cal. App. 2d 506, 510, 222 P.2d 151, 154 (1950) (in-chambers request at conclusion of testimony for the court to provide a polygraph examination for defendant; record devoid of reference to the state of the science of polygraphy). It appears that no reported California appellate case involving a polygraphy issue has had the benefit of any evidence or findings as to the reliability and validity of the procedure. *See, e.g.*, *People v. Schiers*, 19 Cal. App. 3d 102, 108-13, 96 Cal. Rptr. 330, 333-34 (1971). With the abandonment of the appeal in *People v. Cutler*, no California appellate court to date has been presented with a factual record from which the court could properly determine whether or not polygraph test results should be admissible; however, an appeal is now pending in *People v. Adams*, No. M69424 (Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974), which presents a complete factual record establishing the validity and reliability of a properly administered polygraph examination. *See notes 65-69 and accompanying text infra.*

43. *Schmerber v. California*, 384 U.S. 757, 764 (1966); *see Bowen v. Eyman*, 324 F. Supp. 339, 341 (D. Ariz. 1970); Note, *Constitutional Law: Supreme Court Delineates the Relationship Between the Fourth and Fifth Amendments*, 1967 DUKE L.J. 366, 381.

44. *United States v. Wainwright*, 413 F.2d 796, 802-03 (10th Cir. 1969), *cert. denied*, 396 U.S. 1009 (1970). Quoting Wigmore, Chief Judge Murrah suggested the condition that "an expert testify 'that the proposed test is an accepted one in his profession and that it has a reasonable measure of precision in its indications.'" 413 F.2d at 802. *See also Wainwright v. United States*, 448 F.2d 984, 987 (10th Cir. 1971) ("The original failure to establish a foundation appears to be an evidentiary problem already decided and not a constitutional question.").

45. *United States v. Zeiger*, 350 F. Supp. 685 (D.D.C.), *rev'd per curiam*, 475 F.2d 1280 (D.C. Cir. 1972); *United States v. Ridling*, 350 F. Supp. 90 (E.D. Mich. 1972); *United States v. DeBetham*, 348 F. Supp. 1377 (S.D. Cal.), *aff'd*, 470 F.2d 1367 (9th Cir. 1972), *cert. denied*, 412 U.S. 907 (1973).

46. *See notes 54-61, 70-75 & accompanying text infra.* On the measurements of polygraph instruments, *see REID & INBAU, supra note 28, at 3-4.* Another noteworthy decision is *United States v. Hart*, 344 F. Supp. 522 (E.D.N.Y. 1971), where Judge Judd

that trial courts have discretion to admit polygraph test results.⁴⁷

10. In 1972, a Los Angeles superior court found that, *inter alia*, appellate decisions should be reexamined in light of the fact that the polygraph technique enjoys general acceptance among psychologists, physiologists, and polygraphers as a reliable procedure for detecting deception and that, in view of the recognized accuracy "in excess of 90%," the proffered polygraph evidence should be admitted.⁴⁸

11. In 1973, a federal district judge in San Diego relied upon polygraph test results in granting a judgment of acquittal after a jury verdict of guilty,⁴⁹ and the California Senate, after extensive hearings, passed a bill which would permit polygraph test results to be introduced into evidence in judicial proceedings.⁵⁰

12. In 1974, the Supreme Judicial Court of Massachusetts encouraged trial judges to exercise their discretion in admitting polygraph test results.⁵¹ Although the court refused to hold that polygraph evidence is always admissible, or to enumerate specific minimum guidelines for admissibility, the opinion strongly indicates an affirmative approach to the problem by directing the trial courts to fairly and carefully exercise their discretion as to whether or not polygraph test results should be permitted in court. Similarly, but without encouraging the trial judges to admit the evidence, Chief Judge Chambers of the United States Court of Appeals for the Ninth Circuit commented: "We told the trial courts that they have the discretion to admit polygraph evidence."⁵²

found that the government was required to disclose to the defense all relevant material concerning a pretrial polygraph examination which had indicated the key government witness was not telling the whole truth. Curiously Hart thwarted a defense effort to submit polygraphic evidence under the dubious authority of *United States v. Bando*, 244 F.2d 833, 841 (2d Cir.), *cert. denied*, 355 U.S. 844 (1957). In *Bando*, one paragraph is devoted to expressing agreement with the trial court that there is a difference of opinion as to the scientific validity of the polygraph technique, and that scientists and people in general do not believe that polygraphy is reliable. This utterly erroneous conclusion, propounded without any evidentiary presentation in the trial court, was expressed by the court of appeals, without citation, and now serves as precedent to preclude probative evidence from district court consideration.

47. *United States v. DeBetham*, 470 F.2d 1367 (9th Cir. 1972), *cert. denied*, 412 U.S. 907 (1973).

48. *People v. Cutler*, No. A176965 (Super. Ct. Los Angeles County, Cal. Nov. 6, 1972), 12 Crim. L. Rptr. 2133 (1972).

49. *United States v. Gonzalez*, No. 13089 (S.D. Cal. 1973) (Enright, J.).

50. S.B. 119 (1973). The bill to amend the California Evidence Code was passed in the senate on May 9, 1973, but was not reported out of committee in the assembly.

51. *Commonwealth v. A Juvenile*, 313 N.E.2d 120 (Mass. 1974).

52. Statement at Oral Argument, Mar. 4, 1974, *United States v. Covarrubias*, No. 73-3242 (9th Cir. Mar. 12, 1974).

Reliability of the Polygraph Technique⁵³

Judicial Recognition of Reliability

In *United States v. DeBetham*,⁵⁴ the court considered the admissibility of a polygraph examination in a nonjury trial where the defendant was accused of knowingly transporting five grams of heroin. Defendant offered to introduce the results of a polygraph examination which established that he had no knowledge that the heroin was in his automobile. Although the trial court, apparently exercising its discretion, declined to admit the test results, it analyzed the polygraph field in depth, and found that the technique was extremely accurate *if* conducted by a competent examiner: "[T]he most important factor involved in the use of any [polygraph] is the ability, experience, education and integrity of the examiner himself."⁵⁵ In reviewing the extensive evidentiary presentation, the court noted that "the field of instrumental lie detection has . . . achieved the status of a department of systematized knowledge that is currently being enriched through further investigation and research."⁵⁶

The court went on to observe that it had considered testimony, which was essentially undisputed, that the polygraph test had a high

53. For a summary of numerous scientific experiments establishing the validity and reliability of polygraphs, see notes 76-88, 214-23 & accompanying text *infra*.

54. 348 F. Supp. 1377 (S.D. Cal.) (Thompson, J.), *aff'd*, 470 F.2d 1367 (9th Cir. 1972), *cert. denied*, 412 U.S. 90 (1973).

55. 348 F. Supp. at 1385, quoting REID & INBAU, *supra* note 28, at 4 (brackets in original).

56. 348 F. Supp. at 1384. See also POLYGRAPH IN COURT, *supra* note 35, at 23-24 (testimony of Cleve Backster):

[Q:] "[C]an [you] tell the court anything about the development in the past 20 years in the field of polygraph examinations that might have a bearing on the wisdom of using such information in an evidentiary capacity?"

[A:] "The primary task was that of trying to combine and consolidate the various techniques in the field into a more or less standardized polygraph technique. And I think as far as the evolution of polygraph technique is concerned, there has been a fantastic evolution. In other words, the test technique originally involved just a relevant question. You just asked the person if they did it, whatever it was, and there was not skillful use of any control procedure whatsoever and this went through a number of years in the polygraph. And then, in fact, through the introduction of the Reid Control . . . we started to really enhance the validity of the polygraph by having a comparison of the person's capability of reaction located very close by the relevant question being asked during the polygraph procedure. And I would say that the validity in polygraph really rose to fantastic heights with the introduction of this one factor. And since then we've gone to a great extent . . . toward standardization so that one examiner can read another examiner's charts Where we are utilizing standardized forms to where even through telephonic communication we know what the other examiner is speaking of. And my personal stress has been that this standardization has been very necessary to enhance professionalization of the polygraph and raise the reliability of it."

degree of accuracy when conducted by competent examiners under the proper conditions, and was estimated to have 90 percent accuracy with less than 1 percent error by reputable experts who based their statistics upon actual examinations in the field.⁵⁷

Of the authorities cited by the court the most well known were Mr. Reid and Mr. Inbau. In their book *Truth and Deception*, they reversed their opinion of thirteen years before that polygraph evidence should not be admissible. With the improvement of the polygraphic art, by 1966 their studies indicated that polygraph testing was 95 percent accurate with less than 1 percent error, 5 percent of the subjects not being capable of diagnosis because of psychological or physiological handicaps.⁵⁸ The court also considered the testimony of an army officer who had been director of criminal records of the Central Intelligence Division since 1965. He testified that during his entire career as an army polygraph operator, he was aware of only two persons who had "passed" the polygraph who were subsequently prosecuted.⁵⁹

The *DeBetham* court concluded that if field studies "even . . . actually approximate the accuracy achieved in the controlled experiments, between 80 and 90 per cent, the reliability of polygraph can fairly be termed 'substantial,' thus warranting a finding of probative worth."⁶⁰

[T]he truly qualified polygraph examiner can eliminate or prevent test errors arising from an unfit subject or improper examination conditions [S]uch an examiner's qualifications can be adequately tested through examination and cross-examination without unduly consuming the court's time [T]he Court is satisfied that sufficient safeguards exist to preclude significant impairment of the technique's reliability.⁶¹

57. 348 F. Supp. at 1384-85; see POLYGRAPH IN COURT, *supra* note 35, at 23 (testimony of Cleve Backster). Mr. Backster testified that he could recall only one or two instances, out of the thousands of examinations run by himself or under his supervision, in which the examiner's opinion as to the truthfulness or deception of the subject was later demonstrated to have been erroneous. He characterized these as "isolated examples, but fortunately they're far enough back"

58. REID & INBAU, *supra* note 28, cited in *United States v. DeBetham*, 348 F. Supp. 1377, 1384-85 (C.D. Cal. 1973). A number of authorities have reached similar conclusions as to the highly accurate results of a properly administered polygraph examination. See, e.g., ARTHUR & CAPUTO, INTERROGATION FOR INVESTIGATION 214 (1959) (1% error); Cureton, *A Consensus as to the Validity of Polygraph Procedures*, 22 TENN. L. REV. 728, 729 (1953) (3% error); Pfaff, *The Polygraph: An Invaluable Judicial Aid*, 50 A.B.A.J. 1130, 1132 (1964) (1% error); Wicker, *The Polygraphic Truth Test and the Law of Evidence*, 22 TENN. L. REV. 711, 713 (1953) (2-5% error); Note, *The Polygraph and Probation*, 9 IDAHO L. REV. 74, 76 (1972) (5% error).

59. 348 F. Supp. at 1389.

60. *Id.*

61. *Id.*

While affirming the district court's exercise of discretion in refusing to admit the test results, the appellate court observed that, "simply stated, the evidence at the [district court] hearing vigorously supports the accuracy of polygraphic evidence."⁶²

The Los Angeles Superior Court has also recognized the accuracy of the polygraph technique. In *People v. Cutler*,⁶³ the court admitted polygraph evidence offered by a defendant at a motion to suppress, and made several specific findings as to the accuracy of the science of polygraphy after approximately seven days of evidentiary hearings. These included findings that:

[T]he science of polygraphy including the developing of more sophisticated polygraph machines; the development of standards of procedures in pre-examination interviews; the elimination of unsuitable subjects; the programming of relative and control questions; the training and developing of qualifications for examiners has been the subject of great and significant advancement in the last ten years.

. . . [R]ecent laboratory and *in the field* research has established a generally recognized reliability and validity of the polygraph in excess of 90 percent.

. . . [T]he polygraph now enjoys general acceptance among authorities . . . and possesses a high degree of reliability and validity as an effective instrument and procedure for detecting deception.

. . . [M]any defense and security agents of the United States Government determine whether charges and court martials will be filed or prosecuted on the basis of polygraph examination.

. . . [S]everal law enforcement agencies in California uniformly refuse to file complaints or informations when no deception is shown in polygraph examinations of suspects . . .⁶⁴

The *Cutler* case suffered a strange fate, which hopefully will be rectified through the appeal now pending from another California decision, *People v. Adams*.⁶⁵ Although the district attorney in *Cutler* originally intended to appeal the trial court decision, after more than a year's delay he abandoned the appeal,⁶⁶ ostensibly because of a fear that the admissibility issue would not be squarely faced in the case,⁶⁷ but most likely in order to avoid establishing binding appellate prece-

62. 470 F.2d at 1368.

63. No. A176965 (Super. Ct. Los Angeles County, Cal. Nov. 6, 1972), 12 Crim. L. Rptr. 2133 (1972).

64. *Id.*, 12 Crim. L. Rptr. at 2134 (emphasis added).

65. No. M69424 (Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974). For other California cases involving polygraph admissibility, see note 42 *supra*.

66. Los Angeles Daily Journal, Jan. 2, 1974, at 1, col. 2.

67. *Id.*

dent for admissibility.⁶⁸ Therefore, he precluded the possibility of creating a basis for judicial notice of foundation evidence and dispensing with the need for an extensive foundational showing in each case. Of course the prosecutor was aware that his actions perpetuated the present inability of most defendants to utilize polygraph evidence due to lack of funds, time and ability to present the necessary foundation evidence. According to the trial judge, the district attorney's decision was "a cop-out."⁶⁹

Adams, on the other hand, may well determine the law concerning admissibility of polygraph evidence in California. In order to avoid the fate of *Cutler*, the trial judge placed the issue directly before the appellate court by making every factual and policy finding necessary for admission, concluding that he believed the test results should be admitted, but denying the motion to admit the evidence. The question of admissibility will be presented on appeal based upon a record which is highly favorable to defendant, but in such a manner that the district attorney cannot avoid resolution of the matter through procedural maneuvers.

Outside California, two federal district courts have also recognized the polygraph's high degree of accuracy. In *United States v. Zeiger*,⁷⁰ the defendant produced extensive testimony to establish a foundation for the in-court opinion evidence of a police officer who had administered a polygraph examination.⁷¹ The court found that:

68. The author was given this information by a "confidential, reliable informant," whose identity he is not free to reveal.

69. Los Angeles Daily Journal, Jan. 2, 1974, at 1, col. 2.

70. 350 F. Supp. 685 (D.D.C.), *rev'd per curiam*, 475 F.2d 1280 (D.C. Cir. 1972).

71. Numerous expert witnesses testified, including John Reid. Reid's study in conjunction with Frank Horvath, *The Reliability of Polygraph Examiner Diagnosis of Truth and Deception*, 62 J. CRIM. L.C. & P.S. 276 (1971), and book with Fred Inbau, REID & INBAU, *supra* note 28, had been relied upon by the district court in *United States v. DeBetham*, 348 F. Supp. 1377, 1381, 1385 (S.D. Cal. 1972). Lynn Marcy, a polygraph examiner with 15 years experience, stated that of the 30% of these 8,000 cases where the conclusions of his examination were subject to some form of verification (*e.g.*, subsequent confession, admission, or other evidence), he was aware of only six errors. The accuracy of the polygraph technique was well over 90%. 350 F. Supp. at 689-90.

Martin Orne, a respected polygraph authority and professor of psychology and psychiatry at the University of Pennsylvania, supposedly testified in support of the government's contention that the polygraph results should be excluded; however, he admitted that, according to his research and experience, the polygraph accuracy rate was 85% or higher. *Id.* at 689. David Raskin, professor of psychology at University of Utah and researcher in psychophysiology, testified that his laboratory experiments, though considerably less accurate than field examinations, still had an accuracy rate of approximately 82%. *Id.* Even the government's expert testified that the accuracy of polygraph was *vastly* better than chance. *Id.* at 687 n.7.

[t]oday, polygraphy has emerged from that twilight zone into an established field of science and technology . . . Its extensive use by law enforcement agencies, governmental security organizations, and private industry throughout the country is testimony to the undeniable efficacy of the technique.

. . . .
 . . . The testimony of the experts and the studies appearing in the exhibits lead the Court to believe that the polygraph is an effective instrument for detecting deception. The failure of the Government to demonstrate significant disagreement with this basic proposition, the absence of statistical data pointing to any other conclusions, and the accepted and widespread absorption of the polygraph into the operations of many governmental agencies, all confirm the Court's conclusion that the polygraph has been accepted by authorities in the field as being capable of producing highly probative evidence in a court of law when properly used by competent, experienced examiners.⁷²

In *United States v. Ridling*,⁷³ the court held that polygraph evidence, which it regarded as opinion testimony,⁷⁴ would be admissible in the pending perjury trial and recognized the reliability of the polygraph technique: "The evidence in this case indicates that the techniques of the examination and the machines used are constantly improving and have improved markedly in the past ten years."⁷⁵

Scientific Evidence of Accuracy

Several recent studies, including some relied upon in the cases discussed above, have been conducted in an attempt to assess the reliability and the validity of polygraph charts and interpretations. *Validity* is the degree to which a test predicts or measures accurately that which it is supposed to predict or measure; *reliability* refers to the degree to which a test consistently yields the same results regardless of the ac-

72. 350 F. Supp. at 690. The appellate court's reversal in *Zeiger* cannot be considered a statement that polygraph evidence is inadmissible, given the factual setting of the appeal. After the district court issued its opinion, a procedure allowing expedited appeals in "emergency cases" was invoked (D.C. CODE ANN. tit. 23, § 104(d) (1970)), resulting in relatively incomplete and hurried appellate briefs. Apparently feeling that such a significant issue should not be decided in the small amount of time (48 hours) afforded by the expedited procedure, the circuit court reversed without comment or opinion, believing it would have a more full and complete record after the case proceeded to trial. However, the defendant was acquitted of all charges, and the case never returned to the court of appeals. Personal communication with Frederick Barnett, attorney in *Zeiger*, in November, 1972. Mr. Barnett is a partner with F. Lee Bailey, in the Boston firm of Bailey, Alch & Gillis.

73. 350 F. Supp. 90 (E.D. Mich. 1972).

74. *Id.* at 93.

75. *Id.* at 94. For a thorough discussion of applicable case law and scientific information which lead to the conclusion that the polygraph is highly accurate, see Note, *The Emergence of the Polygraph at Trial*, 73 COLUM. L. REV. 1120 (1973).

curacy of the predictions. In order for a test to be valid it must be reliable; however, the converse is not true, for results can be entirely consistent without predicting anything.

Although tests administered in the laboratory are far less accurate than those involving an actual crime, Gordon H. Barland and David C. Raskin of the University of Utah conducted an experiment in which they administered polygraph examinations to seventy-two subjects, half of whom were participants in a mock crime situation.⁷⁶ The subjects, whose "crime" was theft of ten dollars, were told they could keep the money if they could successfully avoid detection. Three separate charts were recorded on each of the subjects and the relevant responses were scored on a continuum ranging from negative 3 (deception) to positive 3 (nondeception).

The charts were submitted to five polygraphers from the army's military school of polygraphy in Fort Gordon, Georgia. These examiners knew nothing about the individual subjects. Equipped only with the polygrams and the wording of the questions, each examiner scored the responses of the subjects for each physiological indicator, and the scores were then compared. Comparative analysis of the data revealed an average correlation of .86.⁷⁷ Out of the 559 cases where two examiners both reached some decision about a subject's truthfulness, they agreed 534 times, or approximately 95.5 percent.

A number of published studies have reported accuracy of field polygraph examinations in excess of 92 percent.⁷⁸ A recent article by Bersh⁷⁹ discusses what is probably the most extensive and thorough study published to date, conducted under the supervision of Robert Britentine for the Department of Defense. A panel of experienced military criminal lawyers were given the complete file on each case, with the polygraph results removed. Each attorney independently determined the guilt or innocence of each defendant based upon the available evidence and ignoring "legal technicalities." When all four panel

76. Barland & Raskin, *An Evaluation of Field Techniques in Detection of Deception*, in *PSYCHOPHYSIOLOGY* (1975).

77. This figure, known as the correlation coefficient, is a mathematical derivation used to ascertain the relationship between any two variables. (Plus or minus 1.00 meaning perfect correlation and 0.00 meaning no relationship at all).

78. Kubis, *Experimental and Statistical Factors in the Diagnosis of Consciously Suppressed Affective Experience*, 6 *J. CLINICAL PSYCH.* 12, 14 (1950); Mac Nitt, *In Defense of the Electrodermal Response and Cardiac Amplitude as Measures of Deception*, 33 *J. CRIM. L.C. & P.S.* 266, 271 (1942); Summers, *Science Can Get the Confession*, 8 *FORDHAM L. REV.* 334, 340 (1939).

79. Bersh, *A Validation Study of Polygraph Examiner Judgments*, 53 *J. APPLIED PSYCH.* 399 (1969).

members were in agreement as to guilt or innocence of a defendant, the decision of the polygraph examiner was the same as that of the panel in 92.4 percent of the cases.

These results reported by Bersh have been confirmed in Gordon Barland's doctoral research.⁸⁰ Using examinations of criminal suspects, Barland reported that the polygraph results were in agreement with the independent judicial outcomes in 90.9 percent of the cases. Therefore, the available evidence indicates that when the judgments of judicial outcomes by a panel of expert attorneys are used as a criterion of guilt or innocence the polygraph decisions are in very high agreement and can be used as an accurate prediction of trial verdicts.

In another study, conducted by John Reid and Frank Horvath,⁸¹ polygraph examination charts were selected from twenty-five actual criminal investigations wherein the truth had been ascertained from fully corroborated confessions of the guilty subjects. Of the seventy-five examinations administered in the cases, thirty-five were considered rather dramatically indicative of truth or deception to a fully qualified examiner. The remaining forty presented a serious challenge to even the best polygraphers. To assess the examiner's expertise in this highly difficult exercise in chart interpretation, the polygrams and a summary of the nature of the investigation were submitted to seven experienced examiners and three inexperienced examiners. The examiners were not advised of the age or sex of the subjects, nor the content of the questions asked; however, they were told where the relevant questions were located on the charts. The trio of inexperienced polygraphers attained an average of more than 79 percent correct judgments. The seven examiners who had more than six months experience achieved an average of more than 91 percent correct judgments in the detection of truth and deception.⁸²

In addition to experiments indicating the reliability and validity⁸³ of polygraphy, and the extreme difficulty of "beating" the test under

80. G. Barland, *Detection of Deception in Criminal Suspects*, 1975 (unpublished doctoral dissertation in University of Utah Library).

81. Reid & Horvath, *The Reliability of Polygraph Examiner Diagnosis of Truth and Deception*, 62 J. CRIM. L.C. & P.S. 276 (1971).

82. See also Blum & Osterloh, *The Polygraph Examination as a Means for Detecting Truth and Falsehood in Stories Presented by Police Informants*, 59 J. CRIM. L.C. & P.S. 133, 136-37 (1968), describing a study in which the examiner managed correctly to identify 102 of 106 critical statements as true or false from a group not renowned for veracity—underground informants.

83. See also Lykken, *The GSR in a Detection of Guilt*, 43 J. APPLIED PSYCH. 385-88 (1959), wherein a 93.9% correct classifications rate was recorded in an experiment involving mock crimes and a test based on galvanic skin response (GSR).

a variety of circumstances,⁸⁴ studies have confirmed the underlying theory of polygraphy: the relationship of measureable physiological responses to the psychological process of deception.⁸⁵ Experiments have revealed higher levels of detection where the subject is questioned about matters which have personal significance⁸⁶ (as opposed to material relevant only in the experimental context), and where the subject has a high motivation to avoid detection.⁸⁷ Such studies are highly significant in that they indicate an even higher level of polygraph accuracy in the "field," where the subject has a high motivation to avoid detection⁸⁸ and possesses personal knowledge of guilt, than in the mock laboratory situation.

84. See, e.g., Lykken, *The Validity of the Guilty Knowledge Technique: The Effects of Faking*, 44 J. APPLIED PSYCH. 258 (1960) (Twenty subjects, including psychologists, psychiatrists, and medical students were given training in the theory of the galvanic skin response (GSR) method, and were allowed to practice producing false responses. The subjects were then offered ten dollars if they could "beat" the test; correct classifications were achieved in 100% of these cases using objective scoring of the GSR results alone.); Davidson, *Validity of the Guilty Knowledge Technique: The Effects of Motivation*, 52 J. APPLIED PSYCH. 62 (1968) (using polygraph recording of GSR and the guilty knowledge technique in a simulated crime context, with motivation for deceiving the examiner (\$25-50) for half of the crimes and low (10¢-\$1) for the other half, correct classification was achieved in 92% of "guilty" subjects and 100% of "innocent" subjects.)

85. See, e.g., Gustafson & Orne, *The Effects of Verbal Responses on the Laboratory Detection of Deception*, in 2:1 PSYCHOPHYSIOLOGY 10, 13 (1965), describing a study resulting in a determination that having the subject verbally "lie" by means of a "no" response produced the highest detection rate; this is currently the procedure used in most laboratory studies, and most field examinations utilize questions phrased so that the subject must say "no" to avoid incrimination. The Gustafson-Orne experiments demonstrated that "psychological variables are the basic determinant of the alterations in physiological response upon which the detection of deception is based." It is interesting to note that this confirmation of the underlying theory of polygraphy was produced by, *inter alia*, M. T. Orne, a government witness in *United States v. Zeiger*, 350 F. Supp. 685, 689 (D.D.C. 1972).

86. See Thackray & Orne, *Effects of the Type of Stimulus Employed and the Level of Subject Awareness on the Detection of Deception*, 52 J. APPLIED PSYCH. 234 (1968). This study also attempted to provide exploratory data concerning the physiological responsiveness of lie detection stimuli when the subjects were unaware that their responses were being monitored. While there was no evidence that detection was inferior under the "not-aware" condition, difficulties in achieving a completely convincing situation of unawareness suggest caution in generalizing from these findings.

87. See Gustafson & Orne, *Effects of Heightened Motivation on the Detection of Deception*, 47 J. APPLIED PSYCH. 408 (1963). GSR responses were recorded for two groups, one "motivated to deceive the operator and withhold responses" and the other given no special instructions. Subjects who were motivated to deceive were more readily detected, as they more frequently produced "disproportionately large skin responses to critical as opposed to non-critical items . . ."

88. See also Barland & Raskin, *supra* note 34.

The Legal Rationale for Admission of Polygraph Test Results Expert Opinion Evidence Affecting Credibility

The testimony of an expert polygraph examiner consists of his opinion as to whether the subject of the examination was telling the truth or something less than the whole truth when answering the test questions. Of course, the expert is testifying as to the truth of the subject's stated beliefs; *i.e.*, as to whether the subject *believed* that his answers were true, rather than as to the actual empirical veracity of those answers.⁸⁹ After carefully arranged and supervised questioning, the polygraph recordings of emotional activity must be interpreted by the expert examiner "and that interpretation is stated in the form of an opinion."⁹⁰

In federal court, pursuant to rule 26 of the Federal Rules of Criminal Procedure, "[t]he trial court has considerable discretion as to matters of opinion."⁹¹ The guidelines for admitting an expert's opinion are clear: "A witness who by education and experience has become an expert in an art, science or profession may state his opinion as to a matter in which he is versed and which is material to the case, and he may also state his reasons for such opinion."⁹² The standard for appellate review is also well established: "[T]he qualifications of an

89. See note 29 *supra*.

90. *United States v. Ridling*, 350 F. Supp. 90, 93 (E.D. Mich. 1972). The ambit of allowable opinion was sketched by the Iowa Supreme Court: "The polygraph examiner properly qualified as an expert should be permitted to explain the nature of the tests given, state the questions asked and answers given, the reactions thereto as indicated by the equipment and his opinion as to defendant's telling the truth when answering the specific questions. The witness should not be asked nor permitted to answer directly that defendant was involved in the [crime]. If defendant was involved in the [crime] in this case he was . . . guilty. An expert, testifying to a hypothetical question or as to tests made may not go that far." *State v. Galloway*, 167 N.W.2d 89, 94 (Iowa 1969).

91. 3 L. ORFIELD, *CRIMINAL PROCEDURE UNDER THE FEDERAL RULES* 518 (1966). See also *Lyons v. United States*, 325 F.2d 370, 377 (9th Cir. 1963), *cert. denied*, 377 U.S. 969 (1964).

As of July 1, 1975, Article VII, Rules 701-05 of the new Rules of Evidence for United States Courts and Magistrates (reproduced in 43 U.S.L.W. 137, 140-41 (Jan. 14, 1975)) will govern evidentiary matters relating to opinion and expert testimony in federal courts. However, these new rules will not in any manner affect nor alter the analysis in the text.

92. *Holm v. United States*, 325 F.2d 44, 46 (9th Cir. 1963) (opinion based upon handwriting analysis). See also, *e.g.*, *Ignacio v. Guam*, 413 F.2d 513, 520 (9th Cir. 1969), *cert. denied*, 397 U.S. 943 (1970) (ballistics expert's opinion that a bullet came from a particular firearm); *United States v. Sollberger*, 411 F.2d 1019 (9th Cir. 1969) (chemist competent to testify to her conclusions); *United States v. Bourassa*, 411 F.2d 69, 74 (10th Cir.), *cert. denied*, 396 U.S. 915 (1969) (secret service agent's testimony that coins were counterfeit); *State v. Spencer*, 216 N.W.2d 131 (Minn. 1974) (expert opinion based on neutron activation analysis that firing a weapon is indicated).

expert are within the purview and discretion of the trial judge.' Unless the trial court's exercise of discretion is clearly erroneous, its decision as to the qualifications of an expert witness should not be disturbed."⁹³

In *Lindsey v. United States*,⁹⁴ the Ninth Circuit recognized the "increasing tendency to allow expert psychiatric opinion testimony as to the credibility and character traits of a witness."⁹⁵ Opinion testimony on credibility was admitted, for example, in *Hanger v. United States*,⁹⁶ where a psychiatrist testified as to whether a person believed a statement of events.⁹⁷ When polygraph test results are offered, the court is similarly presented with expert opinion testimony as to whether a person believed a statement of events. *United States v. Ridling* establishes that the trial judge has discretion to admit or exclude expert testimony based upon polygraph evidence subject only to the qualification of the expert and relevancy of the testimony.⁹⁸

Scientific Evidence: General Rules

According to Professor Strong, the literature of evidence tends "to restrict the term scientific evidence to specific data obtained by scientific means and to treat evidence whereby general propositions of science are furnished and applied under the head of expert testimony."⁹⁹

93. *Ignacio v. Guam*, 413 F.2d 513, 520 (9th Cir. 1969), *cert. denied*, 397 U.S. 943 (1970).

94. 237 F.2d 893 (9th Cir. 1956).

95. *Id.* at 897 (citations omitted).

96. 398 F.2d 91, 106 (8th Cir. 1968), *cert. denied*, 393 U.S. 1119 (1969).

97. The expert was asked whether there was a reliable way to determine when the defendant was telling the truth, and he responded that "there exists no 'black and white test' and that it 'is strictly a matter of judgment and experience of the examiner who questions the person.'" 398 F.2d at 106. The court further explained that such testimony did not usurp the function of the jury: "In this case, Dr. Alderete expressed his opinion as to whether Riley believed the statement given him when Riley made it. This is far short of Dr. Alderete expressing his expert opinion that he believed Riley's statement, or that Dr. Alderete believed the defendants guilty in accordance with Riley's statement." *Id.* Another court explained that the trial judge's discretion to admit opinion evidence as to credibility "must rest for the most part on the court's judgment as to whether an emotional or mental condition is involved which a body of laymen either would be unable to detect or would be unable to relate in terms of effect to the matter of credibility." *People v. Russel*, 69 Cal. 2d 187, 195, 443 P.2d 794, 900, 70 Cal. Rptr. 210, 216, *cert. denied*, 393 U.S. 864 (1968). This is the precise analysis for admission of expert opinion based upon polygraph evidence. See, e.g., Strong, *Questions Affecting the Admissibility of Scientific Evidence*, 1970 U. ILL. L.F. 1, 11 [hereinafter cited as Strong].

98. 350 F. Supp. at 93.

99. Strong, *supra* note 97, at 5. The demarcation line is said to be artificial, convenient and sometimes violated in the interests of perspective on the process of admitting scientific evidence. *Id.* at 5-6.

Evidence of the results of polygraph examinations has been categorized as scientific evidence.¹⁰⁰

Scientific evidence normally consists of scientific data to which some general scientific proposition is applied in order to draw the conclusion for which the testimony is offered.¹⁰¹ For example, ballistics testimony usually consists of some shells upon which there are markings (*data*) and testimony to the effect that no two bullets are marked identically after firing and that by comparing the markings, shells can be matched to the particular weapon from which they were fired (*general principle*). Assuming the expertise of the witness has been established, he may then testify to his *conclusion* as to which weapon fired the bullet. If that conclusion is relevant to the case (*e.g.*, the victim was wounded by a bullet which is matched to the gun found in defendant's pocket), it will be admitted. Of course, if it is not judicially noticed that no two bullets are marked exactly alike, a foundation for this premise must be established or the expert's testimony is irrelevant.¹⁰²

[L]ike other propositions, scientific propositions may yield conclusions of varying value for the case. These may intrude to some degree upon the "ultimate issues," and they may or may not be obscured by some human tendency of the jury to apply some other invalid proposition of its own to the basic data to reach an improper and "prejudicial" conclusion. Each of these factors ought to be considered with respect to scientific evidence, and are within the realm of judicial rather than scientific expertise.¹⁰³

Scientific Evidence: The Frye Standard Analyzed

At some point all new scientific principles presented in court have been subjected to judicial scrutiny.¹⁰⁴ Few, however, have been held

100. McCORMICK, *supra* note 29, at 504-07. *But see* United States v. Ridling, 350 F. Supp. 90, 93 (E.D. Mich. 1972) ("[T]he evidence in reality is opinion evidence.").

101. Strong, *supra* note 97, at 1-4.

102. *Id.* at 4, 14. See note 106 *infra*. If, *e.g.*, it is not always true that no two bullets are identical, the court should properly balance probative value against prejudice.

103. *Id.* at 14.

104. "[The officer] even stated positively that he knew that the bullet came out of the barrel of that revolver, because the rifling marks on the bullet fitted into the rifling of the revolver in question, and that the markings on that particular bullet were peculiar, because they came clear up on the steel of the bullet. . . . The evidence of this officer is *clearly absurd*, besides not being based on any known rule that would make it admissible. If the real facts were brought out, it [sic] would undoubtedly show that all Colt revolvers of the same model and the same caliber are rifled in precisely the same manner, and the statement that one can know that a certain bullet was fired out of a 32-caliber revolver, where there are hundreds and perhaps thousands of others rifled in precisely the same manner and of precisely the same character, is *preposterous*." *People v. Berkman*, 307 Ill. 492, 501-02, 139 N.E. 91, 94 (1923) (emphasis added).

to the rigorous "general acceptance" standard established for polygraph-based opinion testimony in *Frye v. United States*,¹⁰⁵ a 1923 decision by the District of Columbia Circuit: the opinion testimony would be admissible only if the scientific technique or device (there, systolic blood pressure measurement) was generally accepted in the particular scientific field involved.¹⁰⁶ Courts considering the admissibility of most types of scientific evidence have only required that the scientific principles supporting the expert testimony be established as reliable enough to insure acceptably probative results.¹⁰⁷

105. 293 F. 1013 (D.C. Cir. 1923).

106. Strong, *supra* note 97, at 11-13. Professor Strong suggests that the few areas of scientific evidence held to the more rigorous *Frye* standard have one or more of these characteristics in common: (1) they are not readily assignable to any branch of science when first offered; (2) they rely on a mechanical device or chemical process; (3) they deal with "ultimate issues" in some sense; and (4) the proposition is articulated as "probably such and such" as opposed, *e.g.*, to "bullet markings are *always* different."

107. The apparent judicial hostility toward the polygraph, evidenced by the determination of admissibility by more stringent standards than other scientific evidence, was recognized in Note, *The Polygraphic Technique: A Selective Analysis*, 20 DRAKE L. REV. 330, 336-37 (1971), and in C. McCORMICK, HANDBOOK OF THE LAW OF EVIDENCE § 170, at 363 (1954) [hereinafter cited as McCORMICK HANDBOOK]:

"We face at the outset the question, to what extent must the device, technique or theory be shown to have won scientific acceptance before the results or conclusions based thereon can be used in evidence? The court which first faced the question of the admissibility of the results of a 'lie-detector' examination announced as the test whether the supporting theory had gained general acceptance among 'psychological and physiological authorities.' The court held that this test was not met and rejected the evidence, and this particular kind of evidence has been rejected with like reasoning by other courts ever since. By contrast, another court quite recently, considering the admissibility of the results of the use of the Harger breath test for measuring intoxication seemingly rejected this criterion of general scientific acceptance, and said: 'Dr. Beerstecher [a biochemist] testified that the instrument in question is accurate and he gave his reasons for it. He admitted that there are others who disagree with its accuracy. The objection to his testimony, therefore, goes to its weight and not to its admissibility.'

"It seems that the practice approved in the second case is the one followed in respect to expert testimony and scientific evidence generally. 'General scientific acceptance' is a proper condition upon the court's taking judicial notice of scientific facts, but not a criterion for the admissibility of scientific evidence." The differential treatment of the admissibility of polygraph test results supports the conclusion that the *Frye* standard is really a device by which many jurists conceal their subjective beliefs that the polygraph will replace the jury system. *See, e.g.*, *United States v. Stromberg*, 179 F. Supp. 278, 280 (S.D.N.Y. 1959); *People v. Davis*, 343 Mich. 348, 372, 72 N.W.2d 269, 282 (1955). It may be explained by their reluctance to admit any scientific device which is not primarily an aid to the prosecution. *Cf., e.g.*, *Worley v. State*, 263 So. 2d 613, 616 (Fla. 1972) (Mager, J., concurring specially); *People v. Bobczyk*, 343 Ill. App. 504, 509, 99 N.E.2d 567, 570 (1951) (court emphasized *need* for test in law enforcement, admitting drunkometer results).

Some of the recent voiceprint cases are illustrative of judicial readiness to admit a notoriously unreliable form of evidence because it is helpful to the prosecution. Some courts, however, have refused to admit voiceprint evidence. *See, e.g.*, *United States v. Addison*, 498 F.2d 741 (D.C. Cir. 1974) (overruling admission of voiceprint evidence

If the question of the admissibility of polygraph test results were determined by the "aid to the jury" or "reliable enough to be probative" standards applied to most scientific evidence, polygraph evidence would clearly be admissible.¹⁰⁸ Perhaps, as the high accuracy of the polygraph technique is repeatedly established in courts, the emphasis on "general acceptance" will diminish; this may be particularly true in-

in *United States v. Raymond*, 337 F. Supp. 641 (D.D.C. 1972)); *People v. Law*, 40 Cal. App. 3d 69 (1974); *People v. Chapter*, 13 Crim. L. Rptr. 2479 (Super. Ct. Marin County, Cal. 1973). See also *Jones, Danger—Voiceprints Ahead*, 11 AM. CRIM. L. REV. 549 (1973). In *Hodo v. Superior Court*, 30 Cal. App. 3d 778, 106 Cal. Rptr. 547 (1973), the court alluded to the *Frye* "general acceptance" standard, but admitted the voiceprint evidence by holding that, although the technique was not generally accepted, the term "experts" was to apply only to those in the field who could be "expected to be familiar with its use." *Id.* at 778, 106 Cal. Rptr. at 553. In the case of voiceprints, this amounted to less than a half-dozen persons out of thousands of acoustics experts. Based on a single set of experiments performed by the key prosecution witness, Dr. Tosi, who claimed that they established that the technique has less than 6% error, the court determined that the process was reliable enough to have probative value and admitted the evidence. The three other major voiceprint decisions do not even mention the *Frye* standard. *United States v. Wright*, 17 U.S.C.M.A. 183, 37 C.M.R. 447 (1967) (reliability and accuracy of results based on testimony of Dr. Kersta, developer of test, whose testimony was rejected in *People v. King*, 266 Cal. App. 2d 437, 72 Cal. Rptr. 478 (1968)); *Worley v. State*, 263 So. 2d 613 (Fla. 1972) (accuracy based on Dr. Tosi's experiments); *State ex rel. Trimble v. Hedman*, 291 Minn. 442, 457-58, 192 N.W.2d 432, 441 (1971) (reliability based on Dr. Tosi's experiments; any disagreement with Dr. Tosi's results should go to weight, not admissibility). See also *Coppolino v. State*, 223 So. 2d 68, 70 (Fla. 1968), *cert. denied*, 399 U.S. 927 (1970) (test developed by witness for determining amount of poison in victim's body admitted despite witness's admission that not sufficiently reliable for publication in a medical journal, and other experts' testimony that they believed such a test was not possible; court, without mentioning *Frye* criteria, noted broad discretion in trial court as to reliability and admissibility of scientific evidence, and stated proper standard for review was whether scientific test was "so unreliable and scientifically unacceptable that [its] admission into evidence was error"); *Henson v. State*, 159 Tex. Crim. 647, 655-56, 266 S.W.2d 864, 869 (1953) (admission of "paraffin" test for gun shot residue on hands upheld because test not so "inherently unreliable"); *People v. Bobczyk*, 343 Ill. App. 504, 511, 99 N.E.2d 567, 570 (1951) (chemical tests for intoxication admitted; lack of uniformity of scientific opinion goes to weight, not admissibility); *United States v. Stifel*, 433 F.2d 431, 435-41 (6th Cir. 1970), *cert. denied*, 401 U.S. 994 (1971) (wide discretion in trial court in determining whether state of technology warrants admission of expert testimony; despite newness of technique of neutron activation analysis and lack of unanimity among experts as to conclusiveness of results; general acceptance "in the particular field in which it belongs" satisfied essentially by existence of four scientists who devoted the bulk of their time to development of the process).

108. The underlying principle that measurable physiological changes accompanying deception can be recorded by polygraph and interpreted by a competent examiner to a greater than 90% accuracy has been established. See notes 58-82 & accompanying text *supra*. Some courts are at last conceding, moreover, that polygraph evidence should be held to the same standard of "probative value" as other types of scientific evidence. See, e.g., *United States v. DeBetham*, 348 F. Supp. 1377 (S.D. Cal.), *aff'd*, 470 F.2d 1367 (9th Cir. 1972), *cert. denied*, 412 U.S. 907 (1973); *People v. Adams*, No. M69424 (Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974).

sofar as general rules of evidence regarding expert testimony can protect against the concerns which underlie the *Frye* doctrine¹⁰⁹ while not denying to juries what is unquestionably probative and extremely helpful evidence.¹¹⁰

The *Frye*¹¹¹ court ruled that the evidence in question had been properly excluded by the district court because "the *systolic blood pressure deception test* [had] not yet gained such standing and scientific recognition among physiological and psychological authorities as would justify the courts in admitting expert testimony deduced from the discovery, development, and experiments thus far made."¹¹²

The district court in *United States v. DeBetham*¹¹³ suggested that this language was the actual *holding* of the *Frye* case,¹¹⁴ and that it provides a clear basis for distinguishing polygraph evidence today from that presented in *Frye*.¹¹⁵ Therefore *Frye* merely held that a *specific device*, the systolic blood pressure test, was not yet admissible. Compared to a current credibility evaluation assistance system, such as the five-measurement polygraph,¹¹⁶ the process before the *Frye* court (which measured only blood pressure) was a primitive tool. It was no more a forerunner of modern polygraphy than was alchemy the dawn of neurosurgery.¹¹⁷

In spite of the narrow holding in *Frye*, dozens of tribunals have refused to admit polygraph test results by relying instead on the language in *Frye*:

[W]hile Courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made *must be sufficiently established to have gained general acceptance in the particular field in which it belongs*.¹¹⁸

109. Strong, *supra* note 97, at 14-15.

110. "Probableness" can, of course, properly be weighed against "the familiar dangers of misleading the jury, unfair surprise and undue consumption of time." MCCORMICK HANDBOOK, *supra* note 107, at 363-64.

111. *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923). See notes 37-38 *supra*.

112. 293 F. at 1014 (emphasis added).

113. 348 F. Supp. 1377 (S.D. Cal. 1972).

114. *Id.* at 1379.

115. *Id.* at 1382-84.

116. See notes 30-35 & accompanying text *supra*.

117. LAW-MEDICINE RESEARCH INSTITUTE, SCIENTIFIC INVESTIGATION IN CRIMINAL JUSTICE 14-15 (1969).

118. 293 F. at 1014 (emphasis added). *But see* *United States v. DeBetham*, 348 F. Supp. 1377, 1383 n.15 (S.D. Cal. 1972) ("It seems then that it is only subsequent opinions that have read into *Frye* a more special purpose.").

As part of its holding, the district court in *DeBetham* found that polygraphy did not meet the *Frye* "general acceptability" test. *Id.* at 1381-82. However, the *DeBetham* court appears to have read the *Frye* "general acceptance" requirement far too literally,

Even assuming that "general acceptance" governs the admissibility of scientific evidence,¹¹⁹ polygraphy would now satisfy that requirement.

Judicial Notice

Scientific testimony usually involves a general scientific principle and specific data or evidence to which that principle is applied by an expert in order to reach a conclusion relevant to the issues of the particular case.¹²⁰ The validity of the principles underlying such techniques as handwriting analysis, fingerprinting, and ballistics are so universally recognized that a court may take judicial notice of them and eliminate the necessity of establishing a foundation through expert testimony.

Professors McCormick¹²¹ and Strong¹²² have both noted that although the general acceptance standard is appropriate in determining whether a court shall take judicial notice of scientific assertions,¹²³ it is *not* a proper criterion for evaluating the admissibility of scientific evidence. Failure to meet the *Frye* test of general acceptance should not preclude admission of polygraph evidence per se, but should only re-

by demanding not only widespread acceptance of the technique and its use throughout the various scientific communities involved, but also "general acceptance" of the underlying scientific theory. Thus, *DeBetham* requires not only that all knowledgeable parties agree that the system works and actually employ it in fact, but further that they agree as to *why* the technique works. It is submitted that validity of a process is demonstrated not by the reasons *why* it works, but rather by the correlation between a particular event and certain desired effects. See notes 34-35 & accompanying text *supra*.

119. The *Frye* opinion has not enjoyed much repute among legal analysts who cannot find an acceptable rationale for its departure from normal evidentiary standards for the admission of scientific evidence. See notes 104-10 & accompanying text *supra*. See Strong, *supra* note 97, at 14. See also *United States v. Wilson*, 361 F. Supp. 510, 511 (D. Md. 1973) ("Thus rather than putting the issue in terms of 'general acceptance within a particular field' and engaging in an academic *dispute* as to the particular field in which polygraphy fits, the Court chooses to assess the progress of polygraphy by drawing on contributions from those engaged both in theory and practice.").

120. See notes 101-03 & accompanying text *supra*.

121. MCCORMICK HANDBOOK, *supra* note 107, at 363.

122. Strong, *supra* note 97, at 9 ("Even if judicial notice is not taken of the validity of a general proposition of science, that validity may still be established by an appropriate evidentiary showing by expert testimony."). See also Kaplan, *The Lie Detector: An Analysis of its Place in the Law of Evidence*, 10 WAYNE L. REV. 381, 386 (1964).

123. It is arguable that after the opinion of the appellate court in *United States v. DeBetham*, 470 F.2d 1367 (9th Cir. 1972), which recognized the reliability of polygraphs while upholding the discretion to exclude it, courts in the Ninth Circuit should take judicial notice of the validity of the polygraph technique. This interpretation is supported by the recent opinion in *United States v. Alvarez*, 472 F.2d 111 (9th Cir. 1973), which indicated that the trial court, which seems to have been presented with no evidentiary foundation, nonetheless had full discretion to admit or reject the polygraph evidence; such discretion would only seem possible under the circumstances in *Alvarez* if the validity of the technique were judicially noticed. See also *Ridling v. United States*, 350 F. Supp. 90, 94 (E.D. Mich. 1972).

quire the proponent of the evidence to present satisfactory expert testimony as to the technique's validity.

Frye in 1975: Reinterpreting "General Acceptance" in the "Particular Field"

Current case law establishes that only the opinions of polygraphers and those studying polygraphs (rather than psychologists and physiologists as suggested by *Frye*) should be considered in determining the general acceptance of polygraph evidence. For example, in *Lindsey v. United States*,¹²⁴ the Ninth Circuit invoked *Frye* for the requirement of "'general acceptance in the particular field in which it belongs,'" and then proceeded to define the "particular field" (use of sodium-pentothal) to consist of experts in "narcoanalysis." There was no suggestion of any need for general acceptance by medical doctors, psychiatrists, or psychologists.

Huntingdon v. Crowley,¹²⁵ involving the admissibility of a new blood grouping technique, applied a similarly restrictive approach. The California Supreme Court did not inquire into the technique's acceptance within the "particular field" of medical practitioners, nor even medical blood specialists. Rather, the court looked to the experts who might aid its determination:¹²⁶ those in the highly specialized field of "disputed paternity testing."¹²⁷ The court further stressed that the question of whether a scientific technique has, at any given point in time, gained general acceptance in its particular field is primarily a question of fact to be determined by the trial court.¹²⁸

Under this increasing restriction by courts of "particular field" to knowledgeable specialists, the proper inquiry is not whether polygraphy

124. 237 F.2d 893, 896-97 (9th Cir. 1956).

125. 64 Cal. 2d 647, 656, 414 P.2d 382, 390, 51 Cal. Rptr. 254, 262 (1966).

126. Compare *People v. Williams*, 164 Cal. App. 2d 858, 331 P.2d 251 (1958), where the issue was admissibility of Nalline test results, and the particular field was similarly limited: "It has been generally accepted by those who would be expected to be familiar with its use. In this age of specialization more should not be required." *Id.* at 862, 331 P.2d at 254.

127. 64 Cal. 2d 647, 656, 414 P.2d 382, 390, 51 Cal. Rptr. 254, 262 (1966); *cf.* *United States v. Stifel*, 433 F.2d 431, 438 (6th Cir. 1970), *cert. denied*, 401 U.S. 994 (1971) (general acceptance in field of neutron activation analysis shown essentially by four scientists who devoted substantial amount of their time to the field); *Hodo v. Superior Court*, 30 Cal. App. 3d 770, 106 Cal. Rptr. 547 (1973) (experts in voiceprint field limited to those "who could be expected to be familiar with the technique," totaling less than a half-dozen); *Coppolino v. State*, 223 So. 2d 68, 70 (Fla. 1968), *cert. denied*, 399 U.S. 927 (1970) (field consisted of one toxicologist).

128. 64 Cal. 2d 647, 656, 414 P.2d 382, 390, 51 Cal. Rptr. 254, 262 (1966); *Hodo v. Superior Court*, 30 Cal. App. 3d 778, 784-85, 106 Cal. Rptr. 547, 550 (1973); *People v. King*, 266 Cal. App. 2d 437, 443, 72 Cal. Rptr. 478, 482 (1968).

(much less its underlying theory) has gained general acceptance among physiologists and psychologists, as suggested in *Frye*,¹²⁹ rather, it is whether there is general acceptance of the technique by experts in polygraphy. Considering the restrictive definitions applied to other fields, and the requisite level of "general acceptance," the expert polygrapher certainly has cause for wonder. If the issue involves sodium pentothal the answer may be supplied by an expert narco-analyst. Paternity blood testing is a particular field. One toxicologist can establish acceptance for his idea. If four physicists develop a specialty, they attain general acceptance in their own field.¹³⁰ It is difficult to explain to an expert polygrapher that polygraphy is somehow not a field of its own, but depends upon what psychologists and physiologists think of the state of polygraph technology on any given day.

"General Acceptance" as "General Use"

Twenty-three years after *Frye*, the District of Columbia Circuit Court was called upon to interpret the standard it had articulated in that case. In *Medley v. United States*,¹³¹ the defendant had been arrested in possession of a revolver, bullets, and a fingernail file. The noses of the bullets had been scraped in a manner quite similar to that of bullets which had caused the death of a Mr. Boyer. Expert testimony, based upon a process known as "spectroscopy," indicated that the fingernail file "contained particles from the metal of a cartridge."¹³² The introduction of this testimony was objected to on the ground that the technique was "so little known as to lack the degree of certainty justifying its use as evidence in a criminal case." However, the court ruled that it was "easily demonstrable that [spectroscopy] is *now in general use in scientific research and industrial analysis*. There is nothing in the testimony which in any respect conflicts with the rule applied by us in *Frye v. United States* . . ."¹³³ Logically and legally, this "general use" analysis of *Frye* seems appropriate. Logically, a principle which is widely used in decisionmaking by those concerned with practical results, such as industry and governmental agencies,¹³⁴

129. The court in *People v. Adams*, No. M69424 (Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974), asserted that even this stricter standard has been achieved, with "in excess of 70% of physiologists and psychologists generally accept[ing] the proposition that [polygraph] recordings can be accurately interpreted."

130. See note 127 *supra*.

131. 155 F.2d 857 (D.C. Cir.), *cert. denied*, 328 U.S. 873 (1946).

132. *Id.* at 860.

133. *Id.* (emphasis added).

134. See, e.g., POLYGRAPH IN COURT, *supra* note 35, at 61 (testimony of Clayborne A. Lowry, criminal investigator, U.S. Army 1951-1968 & instructor, Fort Gordon School of Polygraph, that he could not recall a single case in the military in which a man was

can be assumed to be valid and reliable. Legally, the language in *Frye* that "[j]ust when a scientific principle or discovery crosses the line *between the experimental and demonstrable stages . . .* as would justify the court in admitting expert testimony deduced *from the discovery, development and experiments thus far made,*"¹³⁵ seems to distinguish between experimentation and development, and actual demonstrable application.

Thus, a scientific theory upon which only a handful of people are conducting scientific experiments is not sufficiently established to warrant admissibility. This was the case with the systolic blood pressure technique in 1923. On the other hand, a theory which has developed past the experimental stage to "general use" in science or industry should be admissible in court. Since spectroscopy met this general use standard it was properly admitted in *Medley*; the foundation was apparently established by the court's notice of two publications on the subject.¹³⁶

Under these "general use" guidelines, polygraphy clearly meets the "general acceptance" requirement of *Frye*. The widespread use of, and reliance upon, the polygraph by both private industry and government agencies was recognized by the district courts in both *DeBetham* and *Zeiger*:

[T]he Court was especially impressed with the evidence of widespread acceptance that the polygraph has received among federal and state law enforcement agencies, who apparently rely upon the technique in their day-to-day prosecutorial decision making.¹³⁷

[E]xtensive use by law enforcement agencies, governmental security organizations, and private industry throughout the country is testimony to the undeniable efficacy of the technique.¹³⁸

formally prosecuted after having been judged by a polygraph examiner to be telling the truth); *id.* at 77-78 (testimony of Robert Brisentine, chief polygraph advisor to the commanding officer, U.S. Army CID Agencies, to the same effect).

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

136. To support its finding of "general use," the court merely cited the 1936 publication of a work entitled *Spectroscopy in Science and Industry* and the 1938 records of *Proceedings of the Fifth Summer Conference on Spectroscopy and its Applications*. *Medley v. United States*, 155 F.2d 857, 860 n.4 (D.C. Cir.), *cert. denied*, 328 U.S. 873 (1946).

137. *United States v. DeBetham*, 348 F. Supp. 1377, 1389 (S.D. Cal. 1972).

138. *United States v. Zeiger*, 350 F. Supp. 685, 688 (D.D.C. 1972).

It is interesting to note the reliance of public officials on polygraphs when accused of impropriety. When Frank Rizzo, mayor of Philadelphia, was accused by a Democratic Party leader of offering to let him choose architectural firms for lucrative city projects in exchange for letting Rizzo pick the party's district attorney candidate, and the mayor flatly denied the allegation, a local newspaper proposed that both men take lie detector tests. Rizzo not only agreed, he proclaimed, "I have great confidence in the polygraph. *If it says a man lied, he lied.*" That was indeed what the polygraph

Similarly, the trial court in the recent California case of *People v. Adams* emphasized the widespread public and private use of polygraph testing and concluded defendant's foundation evidence was

sufficient to show that the *Frye* test of general acceptance has been met with respect to polygraph evidence testimony, not only among polygraph operators, physiologists, and psychologists, but also among investigatory agencies, generally.¹³⁹

"General Acceptance" as "Reliable Enough to Have Probative Value"

In *United States v. Zeiger*, the court observed:

[A]cceptance of the polygraph can be meaningfully determined only with respect to a particular purpose to which the device is used and the degree of reliability required for that purpose For the purpose here at issue, *Frye* requires such acceptance and recognition "as would justify the courts in admitting expert testimony" deduced from a polygraph examination. The general criterion required for the admission of evidence is its relevance or tendency to prove a material fact.¹⁴⁰ "[I]f evidence is logically probative, it should be received unless there is some distinct ground for refusing to hear it."¹⁴¹ And so *Frye* has been interpreted to demand general acceptance among the experts that current polygraph techniques possess a degree of reliability which satisfies the court of its probative value.¹⁴²

This interpretation of *Frye's* "general acceptance" would appear close to the traditional standard for the admission of scientific evidence.¹⁴³

said: Rizzo flunked six key questions." NEWSWEEK, Sept. 3, 1973, at 91 (emphasis added).

Similarly, former Lt. Governor Reinecke of California submitted to two days of polygraph testing in conjunction with charges of perjury stemming from the ITT affair. Though initially expressing his confidence that the tests would "clear me of any wrongdoing" (Los Angeles Times, Mar. 15, 1974, at 1), his confidence waned after he claimed the tests proved "inconclusive," and stated that, "I don't think there is a question of passing or flunking. . . . You are either reactive or not reactive." *Id.*, Apr. 6, 1974, at 1. The absurdity of Reinecke's assertion that he was just "a very reactive person" to the polygraph technique is apparent. See note 35 *supra*.

Even Los Angeles District Attorney Joe Busch, who has analogized the polygraph to "twentieth century witchcraft" when admissibility in court was suggested (Los Angeles Daily Journal, Jan. 2, 1974 at 1), immediately offered to take a polygraph when accused of election improprieties.

139. No. M69424 (Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974).

140. See 1 J. WIGMORE, A TREATISE ON THE ANGLO-AMERICAN SYSTEM OF EVIDENCE IN TRIALS AT COMMON LAW § 10 (3d ed. 1940). See notes 101-03 & accompanying text *supra*.

141. McCORMICK, *supra* note 29, at 433. Being "logically probative" would seem the equivalent of "possessing efficacy." *People v. Leone*, 25 N.Y.2d 511, 517, 255 N.E.2d 696, 699-700 (1969).

142. 350 F. Supp. 685, 687-88 (D.D.C. 1972) (footnotes are author's; court's footnotes omitted).

143. See notes 107-08 & accompanying text *supra*.

The evidence is overwhelming that the results of polygraphy are vastly more reliable than 51 percent¹⁴⁴ and would "render the desired inference more probable than it would have been without the evidence."¹⁴⁵ This should satisfy even those who want "reasonable certainty"¹⁴⁶ for fear that, with less probity, the prejudicial nature of the polygraph would be too overwhelming.

Use of Polygraph Evidence in Court

Pre-1972 Cases

With the exception of three state cases,¹⁴⁷ no pre-1972 court considered the question of admissibility of polygraph evidence at trial in the context of an evidentiary hearing to establish the reliability of the technique as a foundation for an informed decision.¹⁴⁸ Professor McCormick correctly observed that in all of these jurisdictions a court could have admitted polygraph test results had a proper evidentiary foundation been established.¹⁴⁹ An analysis of the three pre-1972

144. See notes 58-60, 76-82 & accompanying text *supra*, and notes 214-23 & accompanying text *infra*.

145. McCORMICK, *supra* note 29, at 437.

146. *People v. Forte*, 279 N.Y. 204, 206, 18 N.E.2d 31, 32 (1938).

147. *People v. Davis*, 343 Mich. 348, 72 N.W.2d 269 (1955); *People v. Leone*, 25 N.Y.2d 511, 255 N.E.2d 696, 307 N.Y.S.2d 430 (1969); *People v. Kenny*, 167 Misc. 51, 3 N.Y.S.2d 348 (Sup. Ct. Queens County 1938).

148. This was recognized as to federal cases by the district courts in *United States v. Zeiger*, 350 F. Supp. 685, 687 nn.4-5 (D.D.C. 1972), and *United States v. DeBetham*, 348 F. Supp. 1377, 1379 nn.1, 3 (S.D. Cal. 1972).

As to the state cases, see, e.g., *People v. Jones*, 52 Cal. 2d 636, 343 P.2d 577 (1959); *People v. York*, 174 Cal. App. 2d 305, 344 P.2d 811 (1959); *People v. Wochnick*, 98 Cal. App. 2d 124, 219 P.2d 70 (1950); *People v. Boney*, 28 Ill. 2d 505, 192 N.E.2d 920 (1963); *Zupp v. State*, 258 Ind. 625, 283 N.E.2d 540 (1972); *State v. Lowry*, 163 Kan. 622, 185 P.2d 147 (1947); *People v. Becker*, 300 Mich. 562, 2 N.W.2d 503 (1942); *State v. Kolander*, 236 Minn. 209, 52 N.W.2d 458 (1952); *Hawkins v. State*, 224 Miss. 309, 77 So. 2d 263 (1955); *State v. Cole*, 354 Mo. 181, 188 S.W.2d 43 (1945); *State v. Hollywood*, 138 Mont. 561, 358 P.2d 437 (1960); *Parker v. State*, 164 Neb. 614, 83 N.W.2d 347 (1957); *Boeche v. State*, 151 Neb. 368, 37 N.W.2d 593 (1949); *State v. Emery*, 27 N.J. 348, 142 A.2d 874 (1958); *People v. Forte*, 279 N.Y. 204, 18 N.E.2d 31 (1938); *State v. Foye*, 254 N.C. 704, 120 S.E.2d 169 (1961); *Looper v. State*, 381 P.2d 1018 (Okla. Crim. 1963); *Henderson v. State*, 94 Okla. Crim. 45, 230 P.2d 495 (1951); *Commonwealth ex rel. Hunter v. Banmiller*, 194 Pa. Super. 448, 169 A.2d 347 (1961); *Grant v. State*, 213 Tenn. 440, 374 S.W.2d 391 (1964); *Placker v. State*, 171 Tex. Crim. 406, 350 S.W.2d 546 (1961); *Davis v. State*, 165 Tex. Crim. 456, 308 S.W.2d 880 (1958); *State v. Bohner*, 210 Wis. 651, 246 N.W. 314 (1933).

149. "Many courts can easily recede from this position [excluding polygraphs] in a case where the foregoing facts as to acceptance and reliability are adequately proven by the expert himself as a foundation for his testimony giving the test-results." McCORMICK HANDBOOK, *supra* note 107, § 174, at 372.

state cases which did hear foundational evidence supports this conclusion.¹⁵⁰

Post-1972 Cases

The general trend in the cases decided since 1972 has been to recognize that polygraph evidence may be admitted on a case-by-case basis if a proper foundation has been established.¹⁵¹ The following language in *United States v. Wainwright* precipitated the shift away from per se exclusion of polygraph testimony:

[N]o judgment can be made without relevant expert testimony relating to the probative value of such evidence. *Wainwright* totally failed to supply the condition noted by Wigmore that *before such evidence be admitted an expert testify "that the proposed test is an accepted one in his profession and that it has a reasonable measure of precision in its indications."* The trial court properly excluded [the polygraph evidence] even though in a proper case it may be admissible.¹⁵²

150. In *People v. Kenny*, 167 Misc. 51, 3 N.Y.S.2d 348 (Sup. Ct. Queens County 1938), results of a form of polygraph known as a "pathometer" were admitted based upon a foundation established by Father Summers. See note 39 *supra*. When no foundation was proffered, the court in *People v. Forte*, 279 N.Y. 204, 206, 18 N.E.2d 31, 32 (1938), upheld the rejection of defendant's offer to take a pathometer test after conclusion of the evidence, stating "we cannot take judicial notice that the instrument is or is not effective for the purpose of determining the truth."

In *People v. Leone*, the court recognized that polygraph evidence could be admitted upon presentation of proper foundation, but found that the showing in the instant case was inadequate as it did not indicate "a general scientific recognition that the polygraph possesses efficacy." 25 N.Y.2d 511, 517, 255 N.E.2d 696, 699, 307 N.Y.S.2d 430, 434 (1969). The court emphasized that the polygrapher involved had been unable to reach any legally meaningful conclusions. *Id.* at 517, 255 N.E.2d at 699-700, 307 N.Y.S.2d at 434. The decision in *Leone* has, however, been limited to its facts and time period. *People v. McCains*, 42 App. Div. 2d 866, 867, 347 N.Y.S.2d 72, 74 (1973) (court implicitly recognized increased acceptance of polygraphy since *Leone*); *Walther v. O'Connell*, 72 Misc. 2d 316, 317-19, 339 N.Y.S.2d 386, 387-89 (Civ. Ct. Queens City 1972) (court admitted polygraph results as it would expert testimony in civil case, distinguishing *Leone* on the ground that the court in that case had dealt with an inexperienced polygraph examiner; apparently without foundational showing, court in effect took judicial notice of reliability of polygraph, and stated that in light of this reliability, previous legal precedents based on unreliability were not binding).

Finally, in *People v. Davis*, 343 Mich. 348, 372, 72 N.W.2d 269, 282 (1955), the court found that, although the foundational testimony was "noteworthy and valuable," it was insufficient in view of the "tremendous weight" such evidence would carry. However, the court's distrust of polygraphy was substantially based on the opinion of Professor Inbau. *Id.* at 370, 72 N.W.2d at 281. Inbau has since changed this opinion to favor admissibility of polygraph evidence. See note 58 & accompanying text *supra*.

151. There is some uncertainty as to whether this foundation must demonstrate probative value or general acceptance. Compare notes 107-08 & accompanying text *supra*, with notes 106, 111-12 & accompanying text *supra*.

152. 413 F.2d 796, 803 (10th Cir. 1969) (emphasis added), quoting 3 J. WIGMORE, EVIDENCE § 990 (3d ed. 1940).

Since *Wainwright*, numerous courts have either admitted polygraph evidence at trial after an adequate foundation had been established in an evidentiary hearing,¹⁵³ or have recognized that such evidence can be admitted when a proper foundation is established.¹⁵⁴

153. See, e.g., *United States v. Penick*, 496 F.2d 1105 (7th Cir. 1974) (sustaining trial court's discretion in admitting polygraph results as to one count and not as to other counts, and stating that under 18 U.S.C. § 3006(a) (1970) the trial court can appropriate funds for polygraph testing where defendant is indigent); *United States v. Grasso*, CR-72-179-LC (D. Mass. June, 1973); *United States v. Ridling*, 350 F. Supp. 90 (E.D. Mich. 1972); *United States v. Zeiger*, 350 F. Supp. 685 (D.D.C.), *rev'd per curiam*, 475 F.2d 1280 (D.C. Cir. 1972); *United States v. Dioguardi*, Crim. No. 72-1102 (E.D.N.Y. 1972); *People v. Richardson*, No. A014598 (Super. Ct. Los Angeles County, Cal. Sept. 21, 1974) (after evidentiary hearing, court admitted polygraph test results and dismissed prosecution); *People v. Marshall*, No. A128583 (Mun. Ct. Los Angeles County, Cal. June 6, 1974) (preliminary hearing); *People v. Harris*, No. A294977 (Super. Ct. Los Angeles County, Cal. June 26, 1973) (robbery conviction based on uncorroborated identification; new trial granted when defendant passed polygraph test); *Stenzel v. B.*, 71 Misc. 2d 719, 336 N.Y.S.2d 839 (Family Ct. Niagara City 1972) (results admissible in paternity case); *Walther v. O'Connell*, 72 Misc. 2d 316, 339 N.Y.S.2d 386 (Civ. Ct. Queens City 1972) (polygraph test results admissible in suit involving question of repayment of loan).

Polygraph evidence has also been admitted at sentencing hearings. *State v. Jones*, 110 Ariz. 546, 521 P.2d 978 (1974); *State v. Watson*, 115 N.J. Super. 213, 278 A.2d 543 (1971) (admitted because of desire to have available all material that might be useful at sentencing). Polygraph test results have been admitted at a hearing on a motion to suppress evidence. *United States v. Lucken*, CR 74-958 (S.D. Cal. Nov. 11, 1974) (Thompson, J.) (the judge, who had presided over the trial in *DeBetham*, admitted the polygraph results on the question of consent and proceeded to rule that the federal officers had testified falsely and the search was unlawful); *People v. Cutler*, No. A176965 (Super. Ct. Los Angeles County, Cal. Nov. 6, 1972), 12 CRIM. L. RPTR. 2133 (1972).

154. *United States v. Francis*, 487 F.2d 968, 972 (5th Cir. 1973), *cert. denied*, 94 S. Ct. 1615 (1974); *United States v. DeBetham*, 348 F. Supp. 1377 (S.D. Cal.), *aff'd*, 470 F.2d 1367, 1368 (9th Cir. 1972), *cert. denied*, 412 U.S. 907 (1973); *United States v. Lanza*, 356 F. Supp. 27, 30 (M.D. Fla. 1973); *Commonwealth v. A Juvenile*, 313 N.E.2d 120 (Mass. 1974).

Not surprisingly, in post-1972 cases where polygraph evidence was offered without foundation, the court rejected the evidence. *United States v. Francis*, 487 F.2d 968 (5th Cir. 1973) (sentencing hearing); *United States v. Sockel*, 478 F.2d 1134 (8th Cir. 1973); *United States v. Jenkins*, 470 F.2d 1061 (9th Cir. 1972), *cert. denied*, 411 U.S. 920 (1973); *People v. Thornton*, 11 Cal. 3d 738, 523 P.2d 267, 114 Cal. Rptr. 467 (1974); *State v. Jones*, 281 So. 2d 220 (Fla. Ct. App. 1973); *Cagle v. State*, 132 Ga. App. 227, 207 S.E.2d 703 (1974); *People v. Sanders*, 56 Ill. 2d 241, 306 N.E.2d 865, *cert. denied*, 94 S. Ct. 3178 (1974); *State v. Corbin*, 285 So. 2d 234 (La. 1973); *State v. Mower*, 314 A.2d 840 (Me. 1974); *People v. Bush*, 54 Mich. App. 77, 220 N.W.2d 333 (1974); *State v. Turley*, 521 P.2d 690 (Mont. 1974); *State v. Atkinson*, 191 Neb. 9, 213 N.W.2d 351 (1973); *State v. Clark*, 128 N.J. Super. 120, 319 A.2d 247 (App. Div. 1974); *Anonymous v. Anonymous*, 75 Misc. 2d 823, 348 N.Y.S.2d 938 (Family Ct. Rockland County 1973); *Castleberry v. State*, 522 P.2d 257 (Okla. Crim. App. 1974); *State v. Woo*, 527 P.2d 271, 273 (Wash. 1974) ("If we are to consider a departure from a virtually unanimous rule against the admissibility of polygraph examinations, absent stipulation, we must be furnished with a record sufficiently adequate to permit review of the subject."); *State v. Nemoir*, 62 Wis. 2d 206, 214 N.W.2d 297 (1974).

The Ninth Circuit Cases

Decisions within the Ninth Circuit are illustrative of the trends and problems in judicial treatment of admissibility of polygraph evidence. In *United States v. DeBetham*,¹⁵⁵ the district court ruled that it could not admit polygraph evidence because insufficient evidence had been presented to meet the *Frye* "general acceptability" test,¹⁵⁶ and that in any event two Ninth Circuit cases excluding polygraph evidence were controlling.¹⁵⁷ Although the court was apparently willing to reread *Frye* in light of the intervening years,¹⁵⁸ the Ninth Circuit precedent appeared insurmountable: "Were the Court writing on a clean slate, the foregoing conclusions . . . might well warrant a finding of admissibility in the instant case"¹⁵⁹

On appeal, the circuit court held that the two previous Ninth Circuit cases had *not* removed discretion from a federal court to admit polygraph evidence under appropriate circumstances.¹⁶⁰ However, the appellate court affirmed the conviction by concluding that due to the discretionary nature of admissibility, "[d]espite the strong showing made by appellant we are not ready to say that the trial judge abused his discretion in rejecting the offer."¹⁶¹ The court emphasized that it

In addition, in several post-1972 cases appellate courts rejected polygraph evidence without any discussion of foundation evidence or any indication that foundation testimony had been presented below. *United States v. Gloria*, 494 F.2d 477 (5th Cir. 1974); *United States v. Pacheco*, 489 F.2d 554 (5th Cir. 1974), *petition for cert. filed*, 43 U.S.L.W. 3039 (U.S. Aug. 13, 1974) (No. 73-1510); *United States v. Frogge*, 476 F.2d 969 (5th Cir.), *cert. denied*, 414 U.S. 849 (1973); *Flurry v. State*, 289 So. 2d 632 (Ala. Crim. App. 1973), *cert. denied*, 289 So. 2d 644 (Ala. 1974); *People v. McVet*, 287 N.E.2d 479 (Ill. 1972) (sentencing hearing); *Robinson v. State*, 309 N.E.2d 833 (Ind. Ct. App. 1974); *People v. Allen*, 49 Mich. App. 148, 211 N.W.2d 533 (1973) (sentencing hearing); *Commonwealth v. Brooks*, 309 A.2d 732 (Pa. 1973). *But see State v. Lucero*, 86 N.M. 686, 526 P.2d 1091 (1974), *overruling State v. Alderete*, 86 N.M. 176, 521 P.2d 138 (Ct. App. 1974).

155. 348 F. Supp. 1377 (S.D. Cal. 1972).

156. *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923). See notes 105-06, 111-46 & accompanying text *supra*.

157. *Cf. United States v. Salazar-Gaeta*, 447 F.2d 468 (9th Cir. 1971); *United States v. Sadrzadeh*, 440 F.2d 389 (9th Cir. 1971). It is hard to imagine why the district court felt constrained by either case, since they were easily distinguishable because no foundational showing of the accuracy of the technique had been presented; in fact, the *DeBetham* trial court noted this by including *Salazar-Gaeta* and *Sadrzadeh* in a citation to all of the federal cases rejecting polygraph which had been decided without an evidentiary hearing. 348 F. Supp. at 1379.

158. 348 F. Supp. at 1380, 1384. See note 118 *supra*.

159. 348 F. Supp. at 1391.

160. 470 F.2d 1367, 1368 (9th Cir. 1972).

161. *Id.* (emphasis added); *accord, United States v. Alvarez*, 472 F.2d 111, 113 (9th Cir. 1973) ("In line with our decision in [*DeBetham*] we hold that the trial judge did not abuse his discretion in rejecting the offer of the polygraph evidence.").

was *not* holding "that polygraphic evidence is never admissible."¹⁶²

The appellate court totally distorted the record to affirm this conviction. Judge Thompson did not exercise his discretion to exclude the test results, since he believed that the earlier Ninth Circuit decisions precluded him from admitting the evidence. In fact, the trial record establishes that he would have admitted the polygraph evidence if he had believed that he had discretion to do so. On petition for rehearing, however, the appellate court rejected the clearly appropriate approach of remanding to the trial court to allow the judge actually to *exercise* his discretion.

Unfortunately, the "admission within the trial court's discretion" approach of *DeBetham* has often been utilized to exclude polygraph evidence at the whim of the trial court.¹⁶³ Clearly, such arbitrary action constitutes a complete failure to exercise discretion, which is of course an abuse of discretion.¹⁶⁴ The trial court must weigh the conflicting interests, and should balance probative value against possible prejudice;¹⁶⁵ certainly the court must be governed by some standards. It seems imperative that appellate courts set out factors to guide the trial judges in exercising discretion.¹⁶⁶

162. 470 F.2d at 1368; *cf.* *United States v. Covarrubias*, No. 73-3242 (9th Cir. Mar. 12, 1974) (during oral argument, Chief Judge Chambers, a member of the *DeBetham* court, stated, "We told the trial courts they have discretion to admit polygraph evidence."); *United States v. Lucken*, CR 74-958 (S.D. Cal. Nov. 11, 1974) (Judge Thompson, the trial judge in *DeBetham* admitted polygraph test results on question of consent at hearing on motion to suppress and held the search was unlawful); *United States v. Gonzales*, CR 13089 (S.D. Cal. 1973) (Enright, J.) (judgment of acquittal based on polygraph results after jury verdict of guilty); *United States v. Walker*, No. 5108 (S.D. Cal. 1969) (after foundational evidence presented, polygraph evidence admitted on the question of compliance with knock and announcement requirements of 18 U.S.C. § 3109 (1970)).

In a rather curious decision, polygraph evidence was admitted at the voluntariness hearing but Judge Hauk would not allow the evidence to go to the jury; the court of appeals avoided the merits of the issue and affirmed the judgment of conviction. *United States v. Merrill*, No. 74-2247 (9th Cir. Nov. 6, 1972).

163. The author's apprehension is based on such cases as *United States v. Watts*, 502 F.2d 726 (9th Cir. 1974), *United States v. Alvarez*, 472 F.2d 111 (9th Cir. 1973), and extensive experience in other federal courts since *DeBetham*.

164. *See, e.g.*, *Fineberg v. United States*, 393 F.2d 417, 421 (9th Cir. 1968); *People v. Russel*, 69 Cal. 2d 187, 443 P.2d 794, 70 Cal. Rptr. 210 (1968). "The discretion intended, however, is not a capricious or arbitrary discretion, but an impartial discretion, guided and controlled in its exercise by fixed legal principles . . . in conformity with the spirit of the law, and in a manner to subserve and not to impede or defeat the ends of substantial justice." *Id.* at 194, 443 P.2d at 799, 70 Cal. Rptr. at 215, *quoting* *Bailey v. Taaffe*, 29 Cal. 422, 424 (1866).

165. S.B. 119 (1973) specifically incorporates CAL. EVID. CODE § 352 (West 1966), which utilizes just such a balancing approach to govern the trial court's discretion to exclude evidence. For text of S.B. 119, see note 263 *infra*.

166. The Seventh Circuit has at least articulated a justification for upholding the

Commonwealth v. A Juvenile

The Massachusetts Supreme Judicial Court has recently taken a cautious first step in this direction. In *Commonwealth v. A Juvenile*,¹⁶⁷ that court remanded on the ground "that the defendant's motions concerning polygraph tests were not denied by the trial judge as a matter of discretion but rather as a ruling of law."¹⁶⁸ While declining to "limit the trial judge's discretion . . . by formulating strict minimum standards as prerequisites to qualification of polygraph experts,"¹⁶⁹ and asserting that "further learning, experimentation and experience are necessary before more comprehensive and all encompassing rules are considered for adoption,"¹⁷⁰ the Massachusetts appellate court nonetheless emphasized the necessity of a true *exercise* of discretion by the trial judge by setting forth certain guidelines:

[I]f a defendant agrees in advance to the admission of the results of a polygraph test regardless of their outcome, the trial judge, after a close and searching inquiry into the qualifications of the examiner, the fitness of the defendant for such examination, and the methods utilized in conducting the tests, may, in the proper exercise of his discretion, admit the results As a prerequisite the judge would first make sure that the defendant's constitutional rights are fully protected.¹⁷¹

Although refusing to rule that "at this time polygraph test results should be generally admissible in evidence in criminal trials,"¹⁷² the

trial court's discretion in denying authorization of funds under 18 U.S.C. § 3006A (1970) for polygraph examinations as to several counts after authorizing such funds and admitting the resulting test evidence on one count, by noting that there was substantial evidence of defendant's guilt as to the counts on which the evidence was not admitted, and that no exceptional circumstances were presented as to these other counts. *United States v. Penick*, 496 F.2d 1105, 1109-10 (7th Cir. 1974). Although the appellate court failed to formulate any meaningful standards for the exercise of discretion, even this limited justification is a greater analysis than has yet been provided by the Ninth Circuit.

167. 313 N.E.2d 120 (Mass. 1974).

168. *Id.* at 128.

169. *Id.* at 126.

170. *Id.* at 128.

171. *Id.* at 124.

172. *Id.* at 125. This policy decision by the court—to leave the admissibility question within the discretion of the trial court, rather than to deem polygraph evidence generally admissible—is based on two premises, neither of which is convincing. First, the majority states that, "In sum, despite very significant progress in recent years, the field of polygraphy is still challenged forcefully on theoretical grounds . . ." *Id.* However, the authorities and articles cited in support of this contention date from 1950 to 1962, certainly prior to many of the recent and significant developments in the field. They are hardly persuasive as to the present state of the art. Secondly, the opinion asserts that "polygraphy . . . has yet to achieve a predictable level of consistency among examiners." *Id.* As extensively discussed elsewhere in this article, numerous scientific studies have shown polygraphy to be highly accurate, as has practical research. See notes 57-82 & accompanying text *supra*, & notes 214-23 & accompanying text *infra*.

Massachusetts court, in contrast to the Ninth Circuit, appears to be actively encouraging trial judges to admit polygraph evidence in their discretion after a defendant has consented to its use. The majority, responding to the dissenting opinions, rejected the suggestion to refer the entire polygraph dilemma to a commission for study:

[P]olygraphy has, for decades, been the subject of study, debate and controversy. It is too late in the day for just another study. Rather, the time is ripe for cautious judicial examination and evaluation Actual testing in the courts is necessary before [a decision as to rejection or acceptance of the concept] can be made.¹⁷³

Although the court might have at least indicated to the trial judges some of the situations in which an exercise of discretion in favor of admissibility would be appropriate,¹⁷⁴ the positive directive to proceed reasonably and carefully with such an exercise of discretion is itself a step in this direction. Unfortunately, a great deal of future litigation will be required to resolve the guidelines for determining how and when this discretion should be exercised.

It is implicit in the developing case law that regardless of the standards set by a court, the key to admissibility of polygraph evidence generally lies in the proponent attorney devoting the substantial amount of time that is necessary to prepare and present a sufficient foundation. The failure to make such a painstaking effort, or incorrect tactical decisions at the hearing, may not only result in inadmissibility in the immediate case, but may also perpetuate the line of poorly considered decisions rejecting polygraph testimony, thus foreclosing others from

The dispute is not *whether* the technique is accurate but whether the precise degree of accuracy is 85 or 98%. "[C]onclusiveness is not the requirement for admissibility of scientific evidence." *United States v. Stifel*, 433 F.2d 431, 441 (6th Cir. 1970). While it is true that the field of polygraphy, like other scientific fields, contains persons of differing competency and experience, so that accuracy may vary depending on the ability of the examiner, the Massachusetts court itself stresses the importance of the trial judge's examination of the qualifications of the expert and strongly indicates its faith in the judge's ability to make such an evaluation as a basis for exercising his discretion. 313 N.E.2d at 126, 129.

173. 313 N.E.2d at 129.

174. Similarly, situations in which the polygraph test results should properly be excluded might be indicated, as, for example, where two experts reach opposite conclusions, so that the probative value of the evidence is outweighed by undue consumption of time or potential confusion of the issues. See note 165 *supra* & note 274 & accompanying text *infra*. That this task is neither unique nor impossible is illustrated by *Gordon v. United States*, 383 F.2d 936, 939-40 (D.C. Cir. 1967), in which the court set out comprehensive guidelines as to what factors trial courts should consider in exercising their discretion to exclude or admit prior felony convictions offered by the government for impeachment purposes; the practical utility of such standards is evident in the numerous cases following *Gordon* that expressly relied on those guidelines.

benefiting from the use of such evidence in the future.¹⁷⁵

The Paradox of the Stipulation Cases

Even in jurisdictions where polygraph test results have been held inadmissible, some courts have admitted the identical evidence under the guise of a "stipulation."¹⁷⁶ However, at least one commentator has

175. For example, in *United States v. Urquidez*, 356 F. Supp. 1363 (C.D. Cal. 1973), the court acknowledged that *DeBetham* permits the admission of polygraph evidence under proper circumstances. However, *Urquidez* rejected the test results after an evidentiary hearing, and held "that, as of now, the validity of a polygraphic test is dependent upon a large number of variable factors . . . difficult, and perhaps impossible, to assess." *Id.* at 1367. This holding was relied upon in *State v. Curtis*, 281 So. 2d 514, 515 (Fla. Ct. App. 1973), to justify exclusion.

It is submitted that the following factual circumstances, not apparent in the opinion but based on the author's personal knowledge and an analysis of evidence at the hearing, explain the *Urquidez* decision, and emphasize the manner in which bad precedent is established: (1) The attorney presenting the case for admission of polygraph evidence attempted a 30-day "crash course" on the subject, and simply had an insufficient knowledge of polygraph evidence to present the motion properly or to make the correct strategic decisions. (2) For reasons still unclear, the Los Angeles federal public defender's office, which was in charge of the case, refused help volunteered by more experienced attorneys (specifically, counsel for *DeBetham* and *Cutler*). (3) The examiner who administered the test was not highly experienced; he would not have qualified under the proposed California Polygraph Bill. (4) The examiner's former employers testified at the hearing that he had been fired by them because of his lack of competence. (5) The test results themselves, when numerically evaluated, bordered on inconclusiveness, and a knowledgeable practitioner would have concluded that this was not an appropriate test case. (6) Because of his inexperience, the defense attorney consented to have his client examined by a second (allegedly incompetent) examiner, who used no generally recognized technique, who proceeded to testify for the government, contrary to the conclusions of the inexperienced defense examiner. Had the second examiner been appointed by the court or by stipulation of the parties from recognized, competent experts in the community, as suggested by the court in *United States v. Ridling*, 350 F. Supp. 90, 96-97, 99 (E.D. Mich. 1972), and by the proposed California Polygraph Bill, this conflict might have been avoided. In short, the circumstances of the *Urquidez* hearing made it as poor a forum for presenting the case for polygraph as is imaginable.

176. See, e.g., *Herman v. Eagle Star Ins. Co.*, 283 F. Supp. 33 (C.D. Cal. 1966), *aff'd*, 396 F.2d 427 (9th Cir. 1968); *State v. Bush*, 109 Ariz. 487, 512 P.2d 1221 (1973); *People v. Davis*, 270 Cal. App. 2d 841, 76 Cal. Rptr. 242 (1969); *People v. Houser*, 85 Cal. App. 2d 686, 193 P.2d 937 (1948); *State v. Brown*, 177 So. 2d 532 (Fla. Ct. App. 1965); *People v. Parisie*, 7 Ill. App. 3d 1009, 287 N.E.2d 310 (1972); *State v. Galloway*, 167 N.W.2d 89 (Iowa 1969); *State v. Freeland*, 255 Iowa 1334, 125 N.W.2d 825 (1964); *State v. McNamara*, 252 Iowa 19, 104 N.W.2d 568 (1960); *State v. Lowry*, 163 Kan. 622, 185 P.2d 147 (1947); *State v. Fields*, 434 S.W.2d 507 (Mo. 1968); *State v. McDavitt*, 62 N.J. 36, 297 A.2d 849 (1972); *State v. Lucero*, 526 P.2d 1091 (N.M. 1974); *State v. Bennett*, 521 P.2d 31 (Ore. App. 1974); *State v. Jenkins*, 523 P.2d 1232 (Utah 1974); *State v. Stanislawski*, 62 Wis. 2d 730, 216 N.W.2d 8 (1974); cf. *Jones v. State*, 527 P.2d 169 (Okla. Crim. App. 1974); *State v. Ross*, 7 Wash. App. 62, 497 P.2d 1343 (1972). But see *Stone v. Earp*, 331 Mich. 606, 50 N.W.2d 172 (1951).

As a practical matter, the practitioner should first have his client privately tested before making any decision as to whether to enter into a stipulation. Many attorneys have later regretted believing their client's false protestations of innocence after entering into an irrevocable stipulation.

observed the paradox in this approach: "[B]y what logic should stipulated polygraph evidence be admissible when the same evidence without stipulation is barred?"¹⁷⁷ While a stipulation may, of course, admit facts, "it is obviously inoperative"¹⁷⁸ if it attempts to "change the law."¹⁷⁹

An example of an acceptable stipulation is set forth in *State v. Towns*, 35 Ohio App. 2d 237, 243-44, 301 N.E.2d 700, 705-06 (1973): "It is hereby agreed by and between counsel for the State of Ohio and counsel for the defendant . . . and by and between the aforementioned parties and the defendant, Joseph L. Towns, himself, that the defendant will submit to a 'Polygraph Test' or tests, the subject matter being the homicide of John Butler and robbery of Sandy's Drive-In Restaurant which occurred December the Tenth of Nineteen Hundred and Seventy-One at the location of 850 Mt. Vernon Avenue in the City of Columbus, State of Ohio, to determine any knowledge or complicity of the aforementioned offenses. The 'Polygraph Test or Tests' to be administered by a person or persons duly qualified to administer such test(s) and acknowledged by all parties to this agreement to be qualified to administer this test or these tests and to testify at trial of this cause as an 'expert' or as 'experts' regarding all aspects of the test(s) as given.

"It is further agreed among all parties that the 'results' of the polygraph test(s) or examination(s), including the complete testimony of the person administering same to the defendant, shall be offered and received as evidence in the trial of this cause without objection of any kind by any party to this agreement. It is understood that the defendant has been fully advised of his rights under the Ohio and United States Constitutions prior to his agreeing to submit to such test(s) and knowingly and intelligently waives his right to remain silent and his right to seek the advice of counsel during any stage of the administration of the polygraph test(s) or examination(s).

"It is further understood by all parties that upon signing this entry of stipulation of use of polygraph test(s) and results in evidence, all parties and their successors in interest (i.e., such other counsel as the State of Ohio or the defendant may retain or employ for any subsequent trial which may result through the investigation of the subject matter of this cause) shall be mutually bound to the terms of said entry and the refusal of any party to submit to any portion of said entry shall be subject to comment by the other parties at any subsequent trial of this cause.

"It is also understood that the place and date of examination(s) of the defendant will be arranged and designated by counsel for the State of Ohio. The 'expert' or 'experts' who will examine the defendant will be selected from the Columbus Police Department and will be designated by counsel for the State of Ohio."

For the past ten years in Orange County, California, the district attorney's office has had a standing policy that any defendant who wishes to take a polygraph test to prove his innocence may take such an examination if he first stipulates to its admissibility at trial. As a practical matter no trial has ever been held after the test, since a defendant will have his case dismissed if he passes, or will plead guilty if he fails. Under this system, one case of a defendant accused of robbery was dismissed after a polygraph examination established his innocence even though he was identified by 17 eyewitnesses to the robbery. See *People v. Cutler*, No. A176965 (Super. Ct. Los Angeles County, Cal. Nov. 6, 1972), 12 Crim. L. Rptr. 2133 (1972) (testimony of Fred Martin, former chief polygrapher, Orange County District Attorney's Office).

177. Note, *The Polygraphic Technique: A Selective Analysis*, 20 *DRAKE L. REV.* 330, 341-42 n.109 (1971).

178. *Swift & Co. v. Hocking Valley Ry.*, 243 U.S. 281, 289 (1917).

179. *Los Angeles Ship Building & Drydock Corp. v. United States*, 289 F.2d 222, 231 (9th Cir. 1961).

Two positions have developed in response to this legal paradox. One, asserting that "a stipulation for admission does not increase the reliability of polygraph results,"¹⁸⁰ has logically resulted in holdings that the evidence should be excluded regardless of a stipulation.¹⁸¹ A second response is represented by the rationale of *State v. Valdez*,¹⁸² and meets the stipulation paradox by taking the position that the polygraph has attained such a level of accuracy as to justify admission upon stipulation.¹⁸³ However the distinction between "reliable enough for a stipulation" and "reliable enough for trial" is simply not meaningful. Cases admitting polygraph evidence on stipulation, like the cases excluding such evidence despite stipulation, recognize that it cannot be

180. *Pulakis v. State*, 476 P.2d 474, 479 (Alas. 1970).

181. *See id.*; *accord*, *State v. Trimble*, 68 N.M. 406, 362 P.2d 788 (1961); *Lewis v. State*, 500 S.W.2d 167 (Tex. Crim. App. 1973); *Romero v. State*, 493 S.W.2d 206 (Tex. Crim. App. 1973). *See also* *People v. Potts*, 74 Ill. App. 2d 301, 220 N.E.2d 251 (1966) (holding that stipulation does not foreclose appellate review of admissibility and finding that there had been inadequate inquiry into the test conditions and the examiner's qualifications).

182. 91 Ariz. 274, 371 P.2d 894 (1962). The *Valdez* court adopted additional safeguards for introduction of the polygraph evidence upon written stipulation of the parties:

"(1) That the county attorney, defendant and his counsel all sign a written stipulation providing for defendant's submission to the test and for the subsequent admission at trial of the graphs and the examiner's opinion thereon on behalf of either defendant or the state.

"(2) That notwithstanding the stipulation the admissibility of the test results is subject to the discretion of the trial judge, i.e. if the trial judge is not convinced that the examiner is qualified or that the test was conducted under proper conditions he may refuse to accept such evidence.

"(3) That if the graphs and examiner's opinion are offered in evidence the opposing party shall have the right to cross-examine the examiner respecting:

"(a) the examiner's qualifications and training;

"(b) the conditions under which the test was administered;

"(c) the limitations of and possibilities for error in the technique of polygraphic interrogation; and

"(d) at the discretion of the trial judge, any other matter deemed pertinent to the inquiry.

"(4) That if such evidence is admitted the trial judge should instruct the jury that the examiner's testimony does not tend to prove or disprove any element of the crime . . . but at most tends only to indicate that at the time of the examination defendant was not telling the truth. Further, the jury members should be instructed that it is for them to determine what corroborative weight and effect such testimony should be given." *Id.* at 283-84, 371 P.2d at 900-01.

183. *See id.*; *State v. Stanislawski*, 62 Wis. 2d 730, 216 N.W.2d 8 (1974) (finding of high accuracy of polygraph results was basis for abandoning 40-year old rule that polygraph evidence was inadmissible even upon stipulation by the parties); *cf.* *State v. Ross*, 7 Wash. App. 62, 497 P.2d 1343 (1972). *But see* *Gaddis v. State*, 63 Wis. 2d 120, 216 N.W.2d 527 (1974) (excluding evidence of a court-ordered examination because there was no stipulation by the parties).

logically argued that any "foundation" as to accuracy is achieved by stipulation.¹⁸⁴ Therefore, when a court admits polygraph evidence upon stipulation, it is probably because of a tacit belief in the accuracy of the technique.

A plausible rationale for admission by stipulation is that a stipulation at least expresses agreement of the parties to the competency of the examiner.¹⁸⁵ Since the ability of the examiner is the single most important variable affecting the accuracy of polygraph test results, such a stipulation is an indirect assurance of accuracy.¹⁸⁶ Rather than take this indirect approach, it would be better to recognize openly the accuracy of polygraphy and to restrict testimony to those "experts" who either (1) qualify for inclusion on a list of court appointed experts recognized to be competent,¹⁸⁷ (2) qualify under stringent state licensing schemes,¹⁸⁸ or (3) meet the standards suggested by Reid and Inbau for competent polygraph experts.¹⁸⁹

184. See, e.g., *State v. Trotter*, 110 Ariz. 61, 514 P.2d 1249 (1973) (error for court to fail to instruct, sua sponte, that the polygraph did not tend to prove or disprove any element of the crime charged, but at most only indicated whether at the time of the examination defendant was telling the truth).

185. Note, *The Polygraphic Technique: A Selective Analysis*, 20 DRAKE L. REV. 330, 342 (1971). The courts are split on the issue of the enforceability of a stipulation. In *Butler v. State*, 228 So. 2d 421 (Dist. Ct. App. Fla. 1969), and *State v. Davis*, 188 So. 2d 24 (Dist. Ct. App. Fla. 1966), enforcement of such an agreement between the prosecutor and the defendant was required. In both of these cases, it appears that the trial judge had approved the particular agreement involved. In *State v. Sanchell*, 191 Neb. 505, 216 N.W.2d 504 (1974), the court refused to enforce the agreement because of the absence of trial court approval. It is submitted that this latter case is incorrectly decided, and that agreements between prosecutor and defendant should be enforced in order to protect the integrity of the judicial system. The district attorney and the defendant should both be bound by the bargain into which they have entered. These three cases illustrate, however, the advisability of having the court participate in any stipulation agreement, or in having the agreement reduced to the form approved in *State v. Valdez*, 91 Ariz. 274, 283, 371 P.2d 894, 900 (1962). See note 182 *supra*.

186. *United States v. DeBetham*, 348 F. Supp. 1377, 1385 (S.D. Cal. 1972); REID & INBAU, *supra* note 28, at 4.

187. See, e.g., S.B. 119 § 898.3 (1973), as amended in Assembly Aug. 19, 1974. For text of S.B. 119, see note 263 *infra*. See discussion in notes 276-79 & accompanying text *infra*.

188. States which have passed legislation regulating polygraph examiners include Arkansas (ARK. STAT. ANN. §§ 71-2201 to -2225 (Supp. 1973)), Florida (FLA. STAT. ANN. §§ 493.40-.56 (1974-75 Supp.)), Georgia (GA. CODE ANN. §§ 84-5001 to -5016 (1970)), Illinois (ILL. STAT. ANN. ch. 38, §§ 202-1 to -30 (1973)), Kentucky (KY. REV. STAT. ANN. §§ 329.010-.990 (1972)), Mississippi (MISS. CODE ANN. §§ 73-29-1 to -47 (1972)), Nevada (NEV. REV. STAT. §§ 648.005-.210 (1973)), New Mexico (N.M. STAT. §§ 67-31A-1 to -11 (2d Repl. Vol. 10 1974)), North Dakota (N.D. CENT. CODE §§ 43-31-01 to -17 (Supp. 1973)), Texas (TEX. CIV. STAT. art. 4413 (29 cc) (1974-75 Supp.)), and Virginia (VA. CODE §§ 54-729.01-.018 (1974 Repl. Vol. 7A)).

189. See *United States v. DeBetham*, 348 F. Supp. 1377, 1388 (S.D. Cal. 1972), citing REID & INBAU, *supra* note 28, at 257. See note 248 *infra*.

The Policy Objections to the Admission of Polygraph Evidence: An Analysis and Response

Before analyzing the recent case of *United States v. Wilson*,¹⁹⁰ which raises all of the "major" misconceptions which can be termed objections to the admission of polygraph evidence, some of the relatively "minor" objections to admissibility may be noted.

First, it is asserted that polygraph evidence could present circumstances which violate a defendant's Fifth Amendment rights. This spectre is hardly a realistic possibility: it is clear that a defendant cannot be compelled to take a polygraph test,¹⁹¹ nor can a prosecutor comment upon his failure or refusal to submit to such a test; case law requires a reversal for constitutional error if either of these situations occurs.¹⁹²

One potential problem, discussed in *United States v. Ridling*¹⁹³ and noted in the *Adams*¹⁹⁴ case, is that, assuming that a defendant has voluntarily submitted to a polygraph examination conducted by an examiner of his own choice, whom the court finds to be competent, it would seem that the prosecution obviously has the right to request a second examination.¹⁹⁵ In fact, a procedure governing such an examination is set out in *Ridling*,¹⁹⁶ with the examiner chosen by agreement

190. 361 F. Supp. 510 (D. Md. 1973).

191. See, e.g., *Commonwealth v. A Juvenile*, 313 N.E.2d 120, 127 (Mass. 1974).

192. *Bowen v. Eyman*, 324 F. Supp. 339, 341 (D. Ariz. 1970). For a thorough discussion of the application of relevant Fifth Amendment principles, see Note, *Problems Remaining for the "Generally Accepted" Polygraph*, 53 B.U.L. REV. 375, 390-400 (1973). Compare *Schmerber v. California*, 384 U.S. 757 (1966), and *Griffin v. California*, 380 U.S. 609 (1965), with *POLYGRAPH IN COURT*, *supra* note 35. See also *United States v. Ridling*, 350 F. Supp. 90, 97-98 (E.D. Mich. 1972); *People v. Adams*, No. M69424 (Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974) at 12-13; *Commonwealth v. A Juvenile*, 313 N.E.2d 120, 127 (Mass. 1974) (before granting defendant's motion to permit polygraph examination, defendant must be informed of his constitutional rights and make voluntary, intelligent, and knowing waiver thereof).

193. 350 F. Supp. 90, 99 (E.D. Mich. 1972).

194. *People v. Adams*, No. M69424 (Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974) at 13.

195. This problem was apparently overlooked in *Commonwealth v. A Juvenile*, 313 N.E.2d 120 (Mass. 1974). If the opinion is interpreted in light of its rather lengthy discussion of defendant's Fifth Amendment rights to imply that such a second examination cannot be constitutionally compelled, this would seem a serious limitation on the decision to encourage trial courts to utilize their discretion to admit polygraph evidence. However, it would appear that the omission by the court was not intended to preclude such a subsequent examination.

196. *United States v. Ridling*, 350 F. Supp. 90, 97, 99 (E.D. Mich. 1972). This approach is also suggested in *People v. Adams*, No. M69424 (Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974) at 13.

of the parties or, if an agreement cannot be reached, by the court. This approach was utilized in the California Polygraph Bill proposed in the 1973 Senate session.¹⁹⁷

A second objection is that polygraph testimony would largely consist of self-serving hearsay. In *United States v. Stromberg*,¹⁹⁸ Judge Kaufman noted: "But a machine cannot be examined or cross-examined; its 'testimony,' as interpreted by an expert is, in that sense, the most glaring and blatant hearsay."¹⁹⁹ It is submitted that this position is patently absurd; the logic would apply equally to radar, drunkometers, voice spectrographs, neutron analysis, or computers. The expert, not the machine, testifies. The results on the machine merely provide data upon which he bases his opinion. The defendant's own statements are not hearsay, since they are not being admitted for the "truth of the assertion," but rather merely for the limited purpose of forming the basis of the expert's opinion, as in psychiatry.²⁰⁰ It has even been suggested by one court that because of the "great reliability" of polygraph results, they should serve as an *exception* to the hearsay rule;²⁰¹ however, it is unnecessary to take that additional step in light of the acceptable rationale discussed above.

A third "minor" objection is that admission of polygraph evidence would require such prolonged adjudication in each case that it would overly burden the administration of justice.²⁰² In any jurisdiction where the reliability of the polygraph is judicially noticed (as, where admissibility has been permitted by an appellate court), all that is required in any particular case is the qualification and testimony of the expert examiner.²⁰³

Some critics have also contended that the delay between the criminal event and the examination lessens the accuracy and reliability of the test results. One polygraph authority has testified about two personal experiences involving lengthy time lapses (one of seven years,

197. See S.B. 119 § 898.4(a)-(b) (1973), as amended in Assembly Aug. 19, 1974. For the text of S.B. 119, see note 263 *infra*.

198. 179 F. Supp. 278 (S.D.N.Y. 1959).

199. *Id.* at 280.

200. See *United States v. Parmen*, 461 F.2d 1203 (D.C. Cir. 1971).

201. *United States v. Ridling*, 350 F. Supp. 90, 99 (E.D. Mich. 1972).

202. *United States v. Urquidez*, 356 F. Supp. 1363, 1367 (C.D. Cal. 1973). The *Urquidez* court conducted an extensive, and no doubt confusing, hearing to establish the "foundation" for reliability of the polygraph. See note 172 *supra*. Such a hearing was probably not necessary in the Ninth Circuit at the time. See note 203 & accompanying text *infra*.

203. This is probably the situation at the present time in the Ninth Circuit, for example. See notes 155-61 & accompanying text *supra*.

the other of thirty-four years) in which convicted and imprisoned criminals asserted their innocence but, after polygraph examinations indicated that they were not telling the truth, later confessed their actual guilt.²⁰⁴

Objections have been raised to the introduction of test results when the examination is conducted by a polygrapher selected by the defendant. Allegedly, examinations administered by a "friendly" examiner are less reliable, since the subject knows that unfavorable results will be confidential. Therefore, he has less fear that his deception will be detected, which will diminish the physiological responses to untruthful answers.²⁰⁵ The theory was first propounded by Dr. Martin C. Orne, the government expert in *United States v. Zeiger*,²⁰⁶ but his own research demonstrates that criminal defendants, tested by a so-called "friendly" examiner, are sufficiently motivated to ensure accurate results.²⁰⁷

Anyone who understands the control question technique recognizes that complete lack of motivation yields inconclusive rather than erroneous results. It is necessary to have substantial reactions to control questions in order to arrive at a decision that the subject is truthful; failure to respond leads only to a judgment of inconclusiveness, rather than error. The only scientific study of the "friendly" polygrapher problem, based upon records of examinations of criminal defendants, clearly established that there was no difference in the rates of deceptive, truthful, and inconclusive results when tests conducted for defense attorneys were compared to those administered for the police agencies.²⁰⁸

204. See POLYGRAPH IN COURT, *supra* note 35, at 68 (testimony of Leonard H. Harrelson).

205. *Hearings on the Use of Polygraphs and Similar Devices by Federal Agencies Before a Subcomm. of the House Comm. on Gov't Operations*, 93d Cong., 2d Sess. 413 (1974) (testimony of Henry S. Dogin, deputy asst. attorney general) in 16 CRIM. L. RPTER. 2306, 2307 (1974).

206. 350 F. Supp. 685 (D.D.C. 1972).

207. Gustafson & Orne, *Effects of Heightened Motivation on the Detection of Deception*, 47 J. APPLIED PSYCH. 408-11 (1963). Orne established that subjects were sufficiently motivated to produce conclusive polygraph results when the only motivating factor was the examiner's suggestion that an intelligent subject could deceive the polygrapher. The motivations for a criminal defendant to avoid detection are much higher. There is the possibility of seeking dismissal of the charges if the subject is found to be truthful. Furthermore, a deceptive result presents the threat of loss of the subject's credibility in the eyes of his attorney and the possibility that he might resign from the case or urge his client to plead guilty.

208. As part of his project at the University of Utah, under a grant from the National Institute of Law Enforcement and Criminal Justice (see note 241 *infra*), Dr. David Raskin analyzed over 200 examinations conducted by Ted Ponticelli, approxi-

United States v. Wilson: The "Major" Objections

The *Wilson* case²⁰⁹ raises the remainder of the important objections to admissibility of polygraph evidence. The court, however, cited no persuasive precedent or scientific studies²¹⁰ to support any of its conclusions.²¹¹ In rejecting the polygraph evidence, the court asserted:

A fair statement is that while studies conducted by private and governmental organizations assess the validity and reliability of the technique at 70% to 95%,²¹² the systematic research relating to the validity of polygraph is still in its formative period and is ongoing.

. . . . Like polygraphy, the physical sciences often rely on non-physical intellectual models . . . [b]ut . . . *these processes are much more susceptible to controlled experimental verification.*²¹³

Although it is true that the polygraph technique was initially developed in the field, with scientific evaluation following,²¹⁴ numerous controlled systematic studies (described in some detail earlier)²¹⁵ have been recorded. For example, in the study by John Reid and Frank Horvath, the results, which established the polygraph's extremely high accuracy, were corroborated by the strongest possible objective evidence, actual confessions.²¹⁶ In the laboratory, D. T. Lykken eval-

mately half for defense attorneys without the knowledge of the prosecution, and the balance for the Costa Mesa police department. He produced the following data:

	Deceptive	Truthful	Inconclusive	Total
Defense	20 (20.4%)	76(77.6%)	2 (2%)	98
Police	21 (19.8%)	80(75.5%)	5 (4.7%)	106

209. 361 F. Supp. 510 (D. Md. 1973).

210. While *Wilson* does list several transcripts and articles which were read in the course of deciding the case (including the author's amicus brief in *United States v. DeBetham*, 348 F. Supp. 1377 (S.D. Cal. 1972)) it cites none of these "authorities" for any of its specific criticisms of the polygraph. See 361 F. Supp. at 511.

211. In *People v. Adams*, No. M69424 (Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974), the trial court considered all the objections raised in *Wilson*, reaching a contrary result on each point. However, in an opinion designed to test the present state of the law in California, the court refused to admit the evidence. See text following note 69 *supra*.

212. While it is true that a few individuals have estimated the accuracy of polygraphs as low as 70%, the overwhelming majority believe its accuracy is in excess of 85% with most of those estimating over 90%. See notes 58-82 & accompanying text *supra*.

213. 361 F. Supp. at 512-13.

214. Barland & Raskin, An Experimental Study of Field Techniques in "Lie Detection," paper presented at the Society for Psychophysiological Research, St. Louis, Mo., Oct. 24, 1971, in *POLYGRAPH IN COURT*, *supra* note 35, addendum II, and quoted in *United States v. DeBetham*, 348 F. Supp. 1377, 1381 (S.D. Cal. 1972).

215. See generally notes 58-82 & accompanying text *supra*.

216. See notes 81-82 & accompanying text *supra*.

uated the accuracy of the polygraph in excess of 93 percent in a situation in which the results were obviously susceptible of objective evaluation since Dr. Lykken knew which subjects had been told to pretend that they either had, or had not, committed a crime.²¹⁷ Moreover, it has been established that results in the field are even more accurate than those in the laboratory, since responses measured by the polygraph technique are more pronounced when the subject is highly motivated and the material involved is personal to the subject.²¹⁸

Another objection raised by the *Wilson* court was that polygraphy, albeit based on a scientific theory, remains an art with *unusual responsibility* placed on the examiner

.
The subtleties of physiological and psychological reaction also result in divergence in interpretation of the polygraph charts and the consistency of reaction necessary to reach a definite conclusion.²¹⁹

Wilson is totally incorrect to the extent that it suggests that interpretation of polygraph charts—as opposed, *e.g.*, to analysis of handwriting or ballistics—is essentially subjective, varying from polygrapher to polygrapher. For example, in the United States Army, charts of all polygraph tests administered in the field are reevaluated by a Quality Control Office. Errors by the field examiners are discovered very rarely by the examiners reviewing the charts.²²⁰ Presumably the examiners usually agree in their interpretation. Moreover, in an experiment by Gordon Barland of the University of Utah, five trained examiners reached almost identical conclusions in evaluating over 200 charts from over seventy subject examinees, even though the examiners knew nothing about the subjects and had only the charts and relevant questions on which to base their conclusions.²²¹

Similarly, in the experiment by Reid and Horvath²²² the charts

217. See note 83 *supra*.

218. See notes 86-88 & accompanying text *supra*.

219. 361 F. Supp. at 512-13. A similar argument is raised in *Commonwealth v. A Juvenile*, 313 N.E.2d 120, 125 (Mass. 1974). See note 172 *supra*.

220. POLYGRAPH IN COURT, *supra* note 35, at 64 (testimony of Claybourne Lowry, retired U.S. Army polygraph examiner). In fact, in the Mai Lai cases stemming from the Viet Nam war, polygraph charts from the field were simultaneously reproduced in Washington. Obviously, this procedure could only be undertaken if the charts themselves were susceptible of objective interpretation. In fact, both polygraphers in the field in Viet Nam and those in Washington reached extremely similar numerical results. Testimony of Ted Ponticelli, Case Review Officer (polygraph examiner and criminal investigator, Department of the Army), in *People v. Cutler*, No. A176965 (Super. Ct. Los Angeles County, Cal. Nov. 6, 1972), 12 CRIM. L. RPTR. 2133 (1972).

221. See notes 76-77 & accompanying text *supra*.

222. See notes 81-82 & accompanying text *supra*.

were evaluated with over 90 percent accuracy by seven experienced examiners who knew nothing about the particular subjects or the *questions asked*; they were told only where the relevant questions were located on the chart. Clearly the analysis of polygraph charts is not "subjective" when two competent polygraph examiners will almost always reach the same results²²³ when interpreting charts.

A third objection of the *Wilson* court was based on speculation concerning the "limitations" of the technique, or more specifically, possibilities of "beating" the test:

[T]he examiner must carefully watch for signs of psychosis, extreme neurosis, psychopathology, drunkenness and drugs [S]peculation survives that a portion of the population, sometimes called "pathological liars," can "beat" the machine. . . .

. . . .
 . . . The failure of a subject to react to a relevant question may be attributable to a yoga-like abstraction of the mind or perhaps even unusually low blood pressure, coupled with control of breathing. Alternatively, the subject may attempt to react artificially to irrelevant questions by hidden muscle contractions or self-infliction of pain, and by artificial conjuring of exciting images.²²⁴

Undoubtedly, the speculative possibilities which might affect the results of a scientific test could be massed against any discipline. The list of supposed deficiencies voiced against the polygraph technique contains factually incorrect information and "limitations" which, though having some validity, are so obscure or occur so rarely in the test situation that it is ridiculous to raise such arguments against admission of the polygraph.²²⁵ According to one study, attempts to deceive the polygraph, even by those who are guilty, occur less than 20 percent of the time²²⁶ and are easily detected.²²⁷ Moreover, an experienced

223. Though the experts differ on the *exact* degree of accuracy, almost all authorities agree that it ranges from 85% to almost 99%. See notes 58-82 & accompanying text *supra*. See also POLYGRAPH IN COURT, *supra* note 35, at 14 (testimony of Cleve Backster); *id.* at 45 (testimony of John Reid); *id.* at 70 (testimony of Leonard H. Harrelson, director of Keeler Institute, a major polygraph school).

224. 361 F. Supp. at 512-13; *cf.* Commonwealth v. A Juvenile, 313 N.E.2d 120, 125 (Mass. 1974) ("[T]he undisputed fact [is] that some persons can tell undetectable lies, e.g., pathological liars, emotionally unresponsive subjects who have rationalized their behavior . . .").

225. See *People v. Adams*, No. M69424 (Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974). "As to the physical condition of the examinee which may affect the test, the Court is satisfied that a trained, experienced operator can and will detect such conditions if they are sufficiently serious to materially affect the results of the test." *Id.* at 10.

226. In a five year study by Reid and Inbau, less than 20% of those who were guilty even attempted to fool the polygraph. Barland & Raskin, *supra* note 34, at 458.

227. The experienced polygrapher will readily observe "clues" which will indicate countermeasures are being attempted by the subject. *People v. Adams*, No. M69424

examiner has available specific procedures to counter every one of the attempts to "beat" the test.²²⁸

Experimentation has shown that modified yoga cannot be used to avoid detection;²²⁹ the very few persons in the Middle East and Orient who can alter their heart and respiration are relatively easy to detect.²³⁰ Attempts at controlled breathing are also easily detected and overcome by the examiner.²³¹

Although there is a conflict as to whether hidden muscle contractions can affect the results of polygraph tests, this countermeasure is often detectable.²³² Self-inflicted pain can result in artificial responses,

(Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974) at 8, 10-11; Barland & Raskin, *supra* note 34, at 458.

228. See Barland & Raskin, *supra* note 34, at 427, 458-70. See also POLYGRAPH IN COURT, *supra* note 35, at 11 (testimony of Cleve Backster):

[Q:] "To what extent are there methods that an individual might take to deceive an examiner, and I suppose the instrument although that would appear to be inappropriate, but to deceive an examiner into thinking that there were no responses when, in fact, deception was being attempted? Would drugs or any kind of conditioning operate to deceive an experienced and qualified examiner in your opinion?"

[A:] "I might mention that there are a lot of rumors that are passed around as to how you can beat the polygraph [T]he person, in order to adequately fool a polygraph examiner would have to prevent an oncoming reaction. And frankly I've been in this field and as I say for well over 20 years and I, myself, could not "beat" the polygraph. So, I don't worry about this. This has never been an actual problem; it's only been a theoretical problem. There are safeguards that can be put into the polygraph technique. For instance, anything that would cause the person not to react properly would eliminate the reaction on the control question as well as the relevant question. Now, if we do not see a capability of reaction during the actual polygraph examination, let's say within one or two questions on each side of the relevant question, where we can actually compare the lack of reaction on the relevant question to a presence of, on the control question, on one side or the other, we would come to no conclusion whatsoever. We would say that temporarily that person was not a fit subject for examining and continue the examining at a later time. So, the person has not at all beat the examiner in anyway. He has merely prolonged the examination procedure." See also *id.* at 69 (testimony of Leonard Harrelson, polygraph examiner).

229. See Barland & Raskin, *supra* note 34, at 459 (study by Moore; study by Kubis).

230. United States v. DeBetham, 348 F. Supp. 1377, 1387 n.38 (S.D. Cal. 1972). See also POLYGRAPH IN COURT, *supra* note 35, at 9 (testimony of Cleve Backster).

231. See Barland & Raskin, *supra* note 34, at 467-68; POLYGRAPH IN COURT, *supra* note 35, at 6 (testimony of Cleve Backster): "[A]lthough a person may ordinarily think that they can consciously control the breathing, any attempt to force a breathing pattern is recognizable by a trained polygraph examiner and the breathing pattern involves very dramatic suppressions and then compensations for the loss of oxygen during this suppressed period when the person was under the localized emotional stress of a question that was bothersome to him. So, these suppressions . . . form a very readable pattern"

232. See Barland & Raskin, *supra* note 34, at 465-66 (study by Moore (won't affect)). *Contra*, earlier study by Kubis).

but it can also be detected.²³³ There is a conflict as to whether one can affect polygraph results by conjuring up exciting images,²³⁴ and this tactic, if effective, is difficult to detect.²³⁵ In any event, such countermeasures would not necessarily result in a guilty man passing the polygraph, but might merely cause an "inconclusive" test result.²³⁶ Therefore, even if, *arguendo*, the fears of the *Wilson* court materialize and, in a rare case, a subject manages to "beat" the examiner, the resulting error masks "detection" and therefore guilt. It would *never* involve the greatest concern of a system dedicated to the presumption of innocence—the conviction of a person who was not guilty.²³⁷

As for persons suffering from psychosis, neurosis, drunkenness, and drugs, Professor Reid has found that, if they are afflicted enough to affect the test, they are easily spotted in a pretest interview by a competent examiner.²³⁸ In fact, studies indicate that use of tranquilizers or stimulants *increases* the probability of detection.²³⁹ The dreaded "pathological liar" (if such a psychiatric category exists at all) hardly constitutes an argument against admission.²⁴⁰ Research by Dr.

233. *Id.* at 466-67.

234. *Id.* at 460-61 (study by Moore (no effect). *Contra*, earlier study of Kubis (significant effect)).

235. *Id.* at 461.

236. *See id.* at 456-57.

237. *See* POLYGRAPH IN COURT, *supra* note 35, at 56 (testimony of Lemoyne Snyder, a polygraph expert and a medical-legal consultant with a law degree, and a medical degree from Harvard University): "[N]ow, all the time that I was with the State Police in Michigan, and we were running people every day . . . I don't recall of a single case of an innocent person being labeled as guilty. A few cases of guilty persons who were labeled as innocent. Of course, that is accounted for by the fact that some people just have such low key reactions that there just isn't enough of a variation on their chart to draw anything, it's too even all the way through [so that there couldn't be sufficient reaction to even be able to reach a conclusion]."

238. REID & INBAU, *supra* note 28, at 184. *See also* POLYGRAPH IN COURT, *supra* note 35, at 60-61 (testimony of Claybourne Lowry).

239. Barland & Raskin, *supra* note 34, at 469 (studies by Klump). *See also* POLYGRAPH IN COURT, *supra* note 35, at 11-12 (testimony of Cleve Backster):

[Q:] "If drugs of some kind were ingested which could, and there are such drugs, interfere with the pulse beat or the blood pressure or the rate of oxygenation, how would the examiner know that the person was under the influence of these drugs and therefore not suitable for an examination?"

[A:] "Actually, again, unless the person was under the effect of some type of drug to the point where it was extremely obvious from external senses, I don't look at it as being a very significant problem. . . . [I]f anything it was putting them in a better state for the polygraph examination. We've had people that have tried to use stimulants but all that does is exaggerate the size of the present reaction that would exist anyway and it just is no problem."

240. *See* POLYGRAPH IN COURT, *supra* note 35, at 12 (testimony of Cleve Backster):

[Q:] "Now, with reference to various kinds of individuals, and I refer now to mental condition, supposing a sociopath or a person who congenitally has a low level

Raskin has shown that psychopaths are as easy to detect in deception as other criminal subjects.²⁴¹ Certainly, infinitely more "liars" sway the hearts of the jury from the stand than could ever deceive a polygraph.

The *Wilson* court's fourth objection concerned "[t]he absence of national standards for the education of polygraph examiners [I]t is admitted that there exist numerous incompetent examiners."²⁴² As stressed throughout this article and by numerous courts, the importance of a qualified examiner cannot be overestimated since a "truly qualified polygraph examiner can eliminate or prevent test errors arising from an unfit subject or improper examination conditions"²⁴³ Although there is no doubt that there are incompetent examiners, just as there are incompetent physicians, one hardly need draw the conclusion that the courts are incapable of insuring that only qualified polygraph examiners are permitted to testify. The *DeBetham* court had no doubt that the competence of examiners could be determined without any undue consumption of time through proper examination and cross-examination;²⁴⁴ and the Massachusetts court in *Commonwealth v. A Juvenile* felt that this determination could be satisfactorily made "through close scrutiny by the trial judge of an examiner's qualifications" and by highly motivating the defendant to assure the reliability of the expert "by requiring the defendant to agree in advance (with all the proper [constitutional] safeguards) to the results of a polygraph

of social concern, in other words, really doesn't care or feel badly about what he's done, even though it's criminal, supposing he encounters a polygraph examination, is there any reason to believe that because of his state of mind, that he would not respond in a fashion that would enable you to diagnose deception?"

[A:] "I think this gets into the situation of the very basis upon which the polygraph successfully operates. In other words, if we must rely on making a person remorseful or let's say feel ashamed for what they have done, I think the polygraph wouldn't have gotten off home base. In other words, we are not relying at all on the repentance of the individual or the shame for that which has occurred. . . . So, the idea of the person feeling justified or rationalizing in any way is not allowed to interfere with the deceptional nature of the technique."

241. In an experiment conducted with prison inmates in British Columbia, Dr. Raskin obtained 95.5% correct identification of truthful and deceptive subjects in a mock-crime situation even though half of the subjects had been clinically diagnosed as psychopaths. Not a single guilty psychopath succeeded in deceiving the examiner. This data involves a completed portion of a larger study being conducted by Dr. Raskin under a grant from the National Institute of Law Enforcement and Criminal Justice. Personal communication with Dr. Raskin, January 1975.

242. 361 F. Supp. at 513.

243. *United States v. DeBetham*, 348 F. Supp. 1377, 1388 (S.D. Cal. 1972).

244. *Id.* See also, e.g., *People v. Adams*, No. M69424 (Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974) at 9.

test [being admitted in the case]."²⁴⁵

Even *Wilson* implies that states with stringent licensing procedures²⁴⁶ would not face any substantial problems as to the quality of experts.²⁴⁷ However, even without a licensing system, clear standards for qualification as an expert have been proposed by recognized authorities and have been embodied in judicial opinion.²⁴⁸ Moreover, appointment of experts from either an approved court list²⁴⁹ or by stipulation of the parties²⁵⁰ will help insure competent experts. Although the qualification of expert polygraphers is a serious concern, it is easily dealt with through procedures readily available to the court.²⁵¹

Another objection voiced by the *Wilson* court concerned "the disproportionate influence the polygraph examination evidence inevitably will exercise The spectre of 'trial by polygraph' replacing trial

245. 313 N.E.2d 120, 126 (Mass. 1974).

246. See note 188 *supra*.

247. 361 F. Supp. at 513. See also notes 276-79 & accompanying text *infra*.

248. *E.g.*, United States v. DeBetham, 348 F. Supp. 1377, 1386 (S.D. Cal. 1972), quoting REID & INBAU, *supra* note 28, at 257: "Before permitting the results to be admitted as evidence in any case, however, the courts should require the following: (1) That the examiner possesses a college degree. (2) That he has received at least 6 months of internship training under an experienced, competent examiner or examiners with a sufficient volume of case work to afford frequent supervised testing in actual case situations. (3) That the witness have at least 5 years' experience as a specialist in the field of polygraph examinations." This same list is cited as an example in Commonwealth v. A Juvenile, 313 N.E.2d 120, 126 n.6 (Mass. 1974), though the court therein did "not think it wise at this time to limit the trial judge's discretion on matters of expert testimony by formulating strict minimum standards as prerequisites to qualification of polygraph experts." *Id.* See also *People v. Adams*, No. M69424 (Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974) at 8-9.

The *DeBetham* court suggested cross-examination "upon the particular examiner's testing technique and reputation for competence and integrity." 348 F. Supp. at 1386; *cf.* United States v. Zeiger, 350 F. Supp. 685, 690 (D.D.C. 1972) (court did not hesitate to examine the witness's qualifications which were held to be sufficient even though he lacked a college degree).

Stringent national standards have been developed at the major polygraph schools. See, *e.g.*, POLYGRAPH IN COURT, *supra* note 35, at 13-14 (testimony of Cleve Backster on standards at military polygraphy school at Fort Gordon).

249. See United States v. Ridling, 350 F. Supp. 90, 96 (E.D. Mich. 1972). See notes 276-79 & accompanying text *infra*.

250. See notes 176-89 & accompanying text *supra*.

251. It is interesting to note that expert testimony regarding voice prints was admitted in California cases when the only standards for an examiner were proposed by a group consisting of less than a half-dozen out of thousands of acoustics experts. Even these standards were not met by Lt. Nash, the prosecutor's examiner in most of the cases. See, *e.g.*, *People v. Lawton*, No. CR-9485 (Riverside Super. Ct. San Bernardino County, Cal. 1973) (testimony of Dr. Tosi and Lt. Nash); *People v. Law*, 40 Cal. App. 3d 69 (1974); *Hodo v. Superior Court*, 30 Cal. App. 3d 778, 106 Cal. Rptr. 547 (1973). See note 107 *supra*.

by jury is more than a felicitous slogan."²⁵² Of course, when courts have admitted polygraph test results they have instructed the jury that the result is not to be considered evidence of innocence or guilt, but is only to go to the credibility of the witness, to be weighed with the other evidence, and to be subjected to the same critical standards as other expert opinion.²⁵³

To those who fear "usurpation" of the jury function through undue reliance by the jury on polygraph evidence, there are three answers. The first is that if a polygraph examination conducted by a competent examiner is as accurate as indicated,²⁵⁴ it merits such substantial reliance in a process whose primary purpose is the search for "truth." The second is that recognized experts in the field agree that the administration of justice would not collapse, but would improve, with the introduction of polygraph evidence.²⁵⁵ Jurors would not be overawed by the polygrapher's testimony, since he, like any other expert, can be subjected to careful and searching cross-examination.²⁵⁶ Indeed, the

252. 361 F. Supp. at 513. The *Wilson* court also noted that the polygraph result may go to the "ultimate issue." *Id.* at 511. However, this is hardly different from when a handwriting expert testifies in a forgery case or radar is used in a speeding case. Moreover, fears about "usurping" the function of the jury obviously do not arise in non-jury situations, such as motions to suppress (*e.g.*, *People v. Cutler*, No. A176965 (Super. Ct. Los Angeles County, Cal. Nov. 6, 1972), 12 Crim. L. Rptr. 2133 (1972)); trials to the court (*e.g.*, *United States v. DeBetham*, 348 F. Supp. 1377 (S.D. Cal. 1972)); or sentencing hearings (*e.g.*, *State v. Watson*, 115 N.J. Super. 213, 278 A.2d 543 (1971)). In any event, both CAL. EVID. CODE § 805 (West 1966) and the new Federal Rule 704 (reproduced in 43 U.S.L.W. 137, 141 (Jan. 14, 1975)) permit an expert to give an opinion even though it goes to the ultimate issue.

253. *See, e.g.*, *United States v. Ridling*, 350 F. Supp. 90 (E.D. Mich. 1972); *State v. Valdez*, 91 Ariz. 274, 371 P.2d 894 (1962).

254. *See* notes 58-60, 76-82, 214-23 & accompanying text *supra*.

255. *See, e.g.*, *Commonwealth v. A Juvenile*, 313 N.E.2d 120, 129 (Mass. 1974); *State v. Alderete*, 86 N.M. 176, 521 P.2d 138, 142 (1974) (Lopez, J., concurring); POLYGRAPH IN COURT, *supra* note 35, at 48 (testimony of John Reid); *id.* at 62 (testimony of Claybourne Lowry); *id.* at 79 (testimony of Robert A. Brisentine).

256. *See* POLYGRAPH IN COURT, *supra* note 35, at 44 (testimony of John Reid). Mr. Reid testified that cross-examination could expose any deficiencies in either the polygraph examination or examiner, and that the relevant information available in the literature would provide an adequate basis for such a challenge, as would the testimony of any one of "a great number of the different men that are prominent in the field." *See also id.* at 64 (testimony of Claybourne Lowry). According to Mr. Lowry, there is probably less than a one-half of 1% chance that an examiner's error could go undetected.

It is arguable, however, that the function of the jury *could* be "usurped" if polygraph testimony was permitted when the defendant did not take the stand. In contrast to its use as corroborating or impeaching testimony, the admission of such evidence when a defendant chooses not to testify would be "a substitute for direct testimony [and] would take away any opportunity for a cross-examination or for the jury to observe the demeanor and manner of testifying of the witness." *State v. Nemoir*, 62 Wis. 2d 206, 215,

Massachusetts Supreme Judicial Court's recent opinion stressed the importance of potential cross-examination by "both parties, depending on the outcome of the polygraph results and by whom the expert is called as a witness . . . regardless of who originally selected the expert witness."²⁵⁷

The third answer is that the concern for the "overwhelming impact" of the polygraph is greatly exaggerated and totally unjustified when viewed in the context of several actual cases in which polygraph evidence was admitted.

The suggestion that juries will follow blindly after polygraph results is an unfounded fear. Juries are all too capable of disregarding any evidence to which they do not take a shine. In *Commonwealth v. George O. Edgerly*, No. 95459, Middlesex Superior Court, 1961, polygraph test results adverse to the defendant were admitted by agreement of counsel, but the jury acquitted the defendant of murder.²⁵⁸

In *United States v. Grasso*,²⁵⁹ polygraph evidence was admitted after a proper foundation had been established. Following a verdict of not guilty, the jury was interviewed regarding their comprehension of the expert testimony and its effect on their decision.²⁶⁰ The responses of the jurors are enlightening:

These eight jurors told us that *they were impressed with the foundation testimony and were convinced that the polygraph did what it purported to do*, i.e., to verify the truthfulness of a response to any given question. However, despite their belief in the efficacy of the polygraph as a truth verifier, they were somewhat at a loss regarding what to do with the impact of the testimony of Mr. Charles H. Zimmerman on the test result itself. *Therefore, they*

214 N.W.2d 297, 301-02 (1974) (improper to consider admitting polygraph testimony if there is no offer of proof that defendant intends to take the stand); *accord*, S.B. 119 § 898.4(c) (1973), *as amended* in Assembly Aug. 19, 1974 (polygraph only admissible if examined party testifies). For the text of S.B. 119, see note 263 *infra*.

257. *Commonwealth v. A Juvenile*, 313 N.E.2d 120, 127 (Mass. 1974).

258. Brief for Defendant at 39, *Commonwealth v. Fatalo*, 346 Mass. 266, 191 N.E.2d 479 (1963); *accord*, Transcript of Evidentiary Hearing at 32, *People v. Lazaros*, CR-6237 (Oakland County, Mich. Cir. June 23, 1970); *see, e.g.*, *State v. Jenkins*, 523 P.2d 1232 (Utah 1974) (polygraph evidence of innocence, but jury found defendant guilty).

John Reid, polygraph examiner, has testified: "I think the juries are quite sophisticated, from my experience with juries over the years. I think that it is a system that if they had some definite prejudice going into the jury room, I am sure it would be dismissed and handled pretty easily. I am quite sure that this would not be an over-influence on the jury." Testimony of John Reid at evidentiary hearing in *People v. Lazaros*, CR-6237 (Oakland County, Mich. Cir. June 23, 1970). *See also* *People v. Adams*, No. M69424 (Alhambra Mun. Ct. Los Angeles County, Cal. May 14, 1974) at 13-14.

259. CR-79-179-LC (D. Mass. June, 1973).

260. A summary of the responses was published in Barnett, *How Does a Jury View Polygraph Results?*, 2:4 POLYGRAPH 275 (1972).

resolved to put aside the test results and see if they could not arrive at a verdict by considering the other evidence that was present at the trial and, should they be unable to do so, they would then turn to the polygraph test results as an additional piece of evidence to consider. Well, the fact of the matter is that they never got to the polygraph test results in so far as taking any part in their deliberations because they were able to arrive at a verdict of not guilty based upon the other evidence in the case. However, each of the eight Jurors that we interviewed was fairly positive that had the case been closer, i.e., had the outcome been in doubt, the polygraph tests standing by themselves and the integrity of the testimony would have been sufficient to raise a reasonable doubt in their minds and, consequently, they would had to have voted not guilty.

The interviews that we had with the Jurors in the *Grasso* case would seem to refute the often heard comment that the polygraph will replace the Jury or usurp the Jury's functions, or somehow be so prejudicial in its weight and impact that the Jury will disregard all other evidence and go on the polygraph test results alone. *Here we have direct proof that, at least in one case, not only did the polygraph test results not usurp the Jury's function but they were able to handle it in much the same manner they did all other evidence in the case.*

*They certainly were not overawed by it, they certainly did not feel that the polygraph test results by themselves were demonstrative of the guilt or innocence of Mr. Grasso and I think they handled the polygraph evidence in a very intelligent manner and certainly if they are at all representative of Jurors who have to deal with polygraph test results, then I think that we should be heartened to learn that they can consider such evidence and accord it whatever merit it deserves and treat it, perhaps in the same way as they do all other scientific evidence.*²⁶¹

Proposals for a Comprehensive Legislative Response to Polygraph: The California Experience

On January 29, 1973, Senator Arlen Gregorio²⁶² introduced Senate Bill 119²⁶³ in the California Senate. Although the bill was

261. *Id.* at 276-77 (emphasis added). It seems important to note that the jurors put no unusual weight on the polygraph; in fact, it seems to have been given even *less* weight than other evidence even though they were impressed with the foundation testimony and "convinced that the polygraph [would] . . . verify the truthfulness of a response . . ." *Id.*

262. D-San Mateo, California. The author collaborated extensively with Senator Gregorio in drafting the original bill and its revisions.

263. The version of the bill as amended in the Assembly August 19, 1974 is included herein in its entirety:

"PROPOSED TEXT OF S.B. 119

"Section 1. Chapter 3 (commencing with Section 898.1) is added to Division 7 of the Evidence Code to read:

"Chapter 3. Polygraph Examinations

"898.1 As used in this chapter:

eventually defeated in the eleven man California Assembly Committee on the Judiciary (having been approved by the corresponding thirteen man committee in the Senate and sent to the Senate floor on May 3, 1973, where it was passed on May 9, 1973), it should be carefully ex-

“(a) ‘Polygraph examination’ or ‘examination’ means the testing or questioning of individuals and the simultaneous recordation thereof, by means of any instrument or device of any type which is capable of measuring and permanently recording at least these physiological phenomena: (1) cardiovascular reactions, (2) respiratory pattern, and (3) the galvanic skin response, for the purpose of diagnosing truth or deception.

“(b) ‘Polygraph’ means any instrument or device referred to in subdivision (a).

“(c) ‘Examiner’ means any person who operates a polygraph.

“(d) ‘Examinee’ means any person who submits to a polygraph examination.

“(e) ‘Testing phase’ means the time during which the polygraph is in operation.

“(f) ‘Results’ means the opinion of the examiner based upon auditory and visual recordings made during the polygraph examination.

“898.2 The results of polygraph examinations administered by examiners qualified pursuant to Section 898.3 are admissible in all civil proceedings in courts of record upon the conditions set forth in this chapter, provided, that any such examination shall have been authorized or required by a court order which was issued not later than two years after the panel commences to qualify examiners under Section 898.3.

“898.3 *Not* later than December 31, 1975, the Judicial Council shall by rule establish procedures and standards which shall provide for the qualification of examiners by a panel of five members, four of whom shall be trial court judges or former trial court judges appointed by the Judicial Council and one of whom shall be an attorney appointed by the State Bar of California.

“It is the intent of the Legislature that examiners qualified under this section shall be of the very highest professional competence and integrity.

“898.4 (a) Except as provided in this chapter, the results of a polygraph examination shall be admissible under this chapter only if the court, upon the motion of the party who intends to introduce such results, issues an order permitting the examination. In addition to any other requirements imposed by law, the notice of such motion shall include a statement of the facts at issue upon which the examinee shall be examined, the name of the examinee, the name and business address of the examiner, the time and address of the examination, and shall further set forth the questions to be propounded to the examinee. The moving party shall make a showing that admission of polygraph results is necessary to assist the trier of fact in evaluating the veracity of a party or witness with respect to an essential fact at issue in the proceeding. Upon the motion of any party, and for good cause, the court may order the modification or deletion of questions to be propounded to the examinee. Except as provided in subdivision (b), the results of a polygraph examination shall be admissible under this chapter only upon a finding by the court that the examinee voluntarily submitted to the examination.

“(b) The court, upon the motion of any party, shall issue an order requiring that any party or witness undergoing an examination authorized by an order issued pursuant to subdivision (a) shall, as a condition to the admission into evidence of the results, submit to an examination administered by another examiner mutually agreed upon by the parties or, in the absence of such agreement, appointed by the court. The subject matter of such examination shall be substantially the same as the subject matter of the examination authorized pursuant to subdivision (a). Upon the motion of any party the court may further order that, as a condition to the admission into evidence of the results of any examination conducted pursuant to subdivision (a), the results of any other examination of the examinee on substantially the same subject matter by an examiner qualified under Section 898.3 shall also be admitted into evidence.

amined because of its comprehensive treatment of the various problems related to the admissibility of polygraph evidence. The bill, or an amended version of it, will probably be reintroduced at the next term of the legislature.²⁶⁴ If passed, it will undoubtedly serve as a model for other states and for courts considering procedures governing problems related to admissibility.

Senate Bill 119 can best be characterized as a legislative attempt to deal with the admission of polygraph evidence and related problems in a systematized, coherent fashion. Confronted with increasing judicial acceptance of the polygraph,²⁶⁵ the legislature appropriately sought this systematic approach rather than a piecemeal, case-by-case judicial resolution of the problems associated with the admissibility of polygraph test results.²⁶⁶

"(c) The results of an examination authorized pursuant to this chapter shall not be admissible unless testimony of the examinee has been admitted in the proceeding on the subject matter of such examination.

"(d) Polygraph examinations authorized or required by the court shall take place not less than seven days after the order is issued. The results of a polygraph examination shall not be admitted into evidence less than 20 days after the date of examination. Upon the motion of any party and for good cause, the court may order the reduction of the minimum time periods set forth in this subdivision.

"(e) Each question by the examiner and each answer by the examinee during the testing phase of the polygraph examination shall be electronically recorded.

"898.5 The court in its discretion may exclude the results of a polygraph examination or the content of the control question, as that term is customarily defined in the polygraph profession, and the answer thereto, if their probative value is substantially outweighed by the probability that their admission will (a) necessitate undue consumption of time, or (b) create substantial danger of undue prejudice, of confusing the issues, or of misleading the jury.

"898.6 This chapter shall not prohibit or otherwise apply to the admission into evidence of the results of a polygraph examination pursuant to a stipulation by the parties, including a stipulation made by a party prior to submitting to an examination, that the result shall be admissible.

"898.7 Neither the court nor any party shall have the right to comment on the failure of another party or witness to submit to a polygraph examination or to introduce the results.

"898.8 All other provisions of this code not inconsistent with the provisions of this chapter shall apply to the introduction of results of polygraph examinations into evidence under this chapter."

264. Upon request of the Board of Governors of the State Bar of California at its September 1973 meeting, a committee was selected to submit a report on the use of polygraph evidence in civil trials and to present a position as to California S.B. 119. After several meetings and the assimilation of a great deal of evidence and material, the committee submitted a highly favorable report on January 2, 1974; however, for still unexplained reasons, the Board of Governors did not release the report, but instead sent it back to the committee.

265. See notes 151-73 & accompanying text *supra*.

266. Some have also argued, with force, that the polygraph is a "great leveller," whereby the poor, inarticulate party can contend with a wealthy, educated opponent.

The bill deals with the numerous problems which have previously been discussed. It clearly expresses an intention to favor the use of polygraph evidence as a reliable credibility-detecting device and therefore to create a weapon against the wave of perjury confronting the courts.²⁶⁷ In addition, the bill confronts the Fifth Amendment problems and objections based upon invasion of privacy by establishing that a party must consent to taking a polygraph examination.²⁶⁸ The polygraph cannot be used unless the party testifies,²⁶⁹ and no mention may be made of a party's failure to submit to a polygraph examination.²⁷⁰ Moreover, the great "consumption of judicial time" required to establish a foundation for admissibility is avoided by this legislative recognition of the accuracy of a properly administered polygraph examination.²⁷¹

Two features of S.B. 119 attempt to cope with the major criticism of admitting polygraph evidence, the lack of qualification of many polygraphers.²⁷² The first requires that anyone desiring to introduce polygraph evidence must consent to a second examination by a stipulated examiner or by a court appointed expert if the parties fail to agree on an examiner.²⁷³ This second "neutral" expert will both assure quality and avoid a battle of charlatans. Further, if the two experts disagree, the court may refuse admission of the conflicting testimony in its discretion to exclude unduly prejudicial or confusing polygraph evidence.²⁷⁴

Hearings on Cal. S.B. 119 Before the Senate Committee on the Judiciary (testimony of Fred Barnett, Esq.) (March 27, 1973).

267. See notes 1-27 & accompanying text *supra*.

268. S.B. 119 § 898.4(a) (1973), as amended in Assembly Aug. 19, 1974; cf. *Commonwealth v. A Juvenile*, 313 N.E.2d 120, 127 (Mass. 1974). See also notes 191-97 & accompanying text *supra*.

269. See S.B. 119 § 898.4(c), *supra* note 263.

270. See *id.* § 898.7.

271. See note 162 *supra*.

272. See notes 242-51 & accompanying text *supra*.

273. See S.B. 119 § 898.4(b), *supra* note 263.

274. *Id.* § 898.5. The court is given discretion to eliminate or restrict polygraph evidence whenever its probative value is outweighed by either undue consumption of time or danger of undue prejudice, confusion, or misleading of the jury. In the case where the two experts disagree, the polygraph will arguably no longer be an "aid" to the jury, but rather will involve a lengthy and collateral battle of the experts. In such circumstances the court should exercise its discretion to exclude the evidence. Cf. CAL. EVID. CODE § 352 (West 1966).

This approach in S.B. 119 providing clear standards and parameters for the exercise of judicial discretion should be contrasted with the current approach adopted by the United States Court of Appeals in the Ninth Circuit where standardless "discretion" is becoming a synonym for exclusion at the whim of the trial court. See notes 163-66 & accompanying text *supra*.

The second safeguard in S.B. 119 is the establishment of standards and methods for qualifying experts. In the version of S.B. 119 which passed the Senate, qualification of polygraph experts was left to the court on an *ad hoc*, case-by-case basis.²⁷⁵ Undoubtedly recognizing that such a procedure will lead to an undue consumption of judicial time and a probable lack of uniformity in the quality of experts, the revision of S.B. 119 provided for a five member panel, appointed by the Judicial Council, to determine which polygraph examiners were qualified to testify in court.²⁷⁶ The panel was to be composed of four trial court judges or former trial court judges and one attorney²⁷⁷ who would have made their determination as to the qualifications of examiners by applying procedures and standards established by the Judicial Council.²⁷⁸ Obviously, the success of such a project would depend on

275. As a result of the concern with the qualifications of experts, the version of the bill which passed the senate did set extremely stringent standards which the court was to apply in assessing the qualifications of polygraph experts. S.B. 119 § 898.6 (1973), *as amended* in Senate May 7, 1973. Under this version not only did the expert have to meet extensive "minimum" standards including 250 hours of academic class instruction, 100 hours of directed practical exercises in polygraph technique and the administration of 300 actual examinations, but the clear intent of the statute was to select only the most qualified from *among* those who meet these standards. *See id.* "The intention of the Legislature is that the examiners qualified under this section shall have been found by the court to have attained the very highest professional competence, and shall have been found to meet the following absolute minimum standards . . ." *Id.* § 898.6(b) (emphasis added). "It is the further intention of the Legislature that in considering whether an examiner may be qualified as an expert witness, the court shall consider that *only a small portion of the examiners meeting the above absolute minimum standards . . .* are of the very highest professional competence." *Id.* § 898.6(c) (emphasis added).

Aside from problems of undue consumption of time and lack of uniformity in this approach, discussed above, any minimum standards should require an apprenticeship program under which the polygrapher is tested to assure that not only has he or she administered "300 polygraph examinations" but that they have been properly conducted. REID & INBAU, *supra* note 28, at 257.

276. *See* S.B. 119 § 898.3, *supra* note 263.

277. Drawing the panel from attorneys and judges rather than members of the California Association of Polygraph Examiners avoids what would be a de facto "Grandfather Clause." Under no circumstances, whether by provision or practice, should the quality of approved examiners be diluted by such a "Grandfather Clause."

278. *See* S.B. 119 § 898.3, *supra* note 263. In addition, the council is empowered to delineate those issues and types of proceedings in respect to which, in the interest of justice, polygraph examinations will not be admissible. S.B. 119 § 898.3(b), *as amended* in Assembly May 15, 1974; this provision was deleted from the version of the bill that appears in note 263 *supra*. Although this task is clearly more manageable than compiling a list of those issues and proceedings in which polygraph evidence is admissible, it is nevertheless difficult to imagine any specific matters or proceedings as to which such evidence should be uniformly banned. Most likely, such a power (if restored to the bill) would be applied exactly as § 898.5, setting general standards of probative

the council's enactment of viable yet stringent limitations and standards, and on the quality of the screening function performed by the panel. This would also further the legislative intent that examiners who qualify under this section "be of the very highest professional competence and integrity."²⁷⁹ In any event, S.B. 119 is a necessary and a well thought out experiment in the use of polygraph examinations in court.²⁸⁰

Conclusion

The reliability and validity of the polygraph technique and its probative value as evidence of credibility can no longer be doubted. What remains is the task of helping the judicial system free itself of erroneous conceptions about what Justice Traynor called a "lie detector."²⁸¹ In 1923, the year of the *Frye* case, Dean Wigmore foresaw: "If there is ever devised a psychological test for the valuation of witnesses, the law will run to meet it."²⁸² It has taken a half-century, but polygraphy and the law at last may be about to meet each other.

value versus prejudicial harm, rather than prohibiting polygraph evidence as to specified issues or proceedings.

279. *See id.* § 898.3.

280. One aspect of the proposed redraft which may be confusing is the apparent requirement that the party proposing the introduction of a polygraph examination must show that it is "necessary" to assist the trier of fact. *Id.* § 898.4(a).

281. As with other evidence, however, the drafters intended only that the polygraph evidence be "helpful" or "probative." Unfortunately, they clouded this intent by the selection of the word "necessary," which as far as this author knows, has no clearly understood meaning or application in the law of evidence.

282. 2 J. WIGMORE, A TREATISE ON THE ANGLO-AMERICAN SYSTEM OF EVIDENCE IN TRIALS AT COMMON LAW § 875 (2d ed. 1923).