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POLYGRAPH AND DECEPTION TESTS

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This is the first of a two-part article on the polygraph, psychological stress evaluator, and truth serum.

POLYGRAPH TESTING

The Theory

The polygraph technique is based upon two premises. First, psychological stress caused by the fear of detection will be manifested by involuntary physiological responses, and second, a polygraph examiner, based on these responses, can detect deception. A recent study explained the theory as follows:

The basic theory of polygraph testing is only partially developed. The testing process is complex and not amenable to easy understanding. The most commonly accepted theory at present is that, when the person being examined fears detection, that fear produces a measurable physiological reaction when the person responds deceptively. Thus, in this theory, the polygraph instrument is measuring the fear of detection rather than deception per se. And the examiner infers deception when the physiological response to questions about the crime or unauthorized activity is greater than the response to other questions. U.S. Congress, Office of Technology Assessment, Scientific validity of Polygraph Testing: A Review and Evaluation — A Technical Memorandum, OTA-TM-H-15 (1983) [hereinafter cited as OTA Report], reprinted in 12 *Polygraph* 196, 201 (1983).

The physiological responses used in polygraph testing are changes in blood pressure-pulse, respiration, and galvanic skin resistance. The polygraph machine simultaneously and continuously measures and records these physiological reactions on a graph or chart (polygram). Blood pressure-pulse is measured by a sphygmomanometer (blood pressure cuff) that is placed on the subject's arm; respiration is measured by pneumograph tubes that are fastened around the subject's abdomen and chest; and galvanic skin response is measured by electrodes that are attached to the subject's fingertips. Some machines are also equipped to record muscular activity. These tracings may reveal efforts to "beat" the machine and in some cases provide independent deception criteria. J. Reid & F. Inbau, *Truth and Deception* 262 (2d ed. 1977).

There seems little dispute that a quality polygraph machine can accurately measure and record these responses. See *State v. Dean*, 103 Wis.2d 228, 235, 307 N.W.2d 628, 632 (1981) ("A quality machine accurately measures and records these body responses."). The machine, however, detects neither deception nor the fear of detection; it provides only a recording of physiological responses. It is the examiner who, based on these recordings, infers deception. Critics argue that the physiological responses caused by the fear of detection have not been shown to be different from physiological responses caused by other emotions:

[T]here is no reason to believe that lying produces distinctive physiological changes that characterize it and only it . . . [T]here is no set of responses — physiological or otherwise — that humans emit only when lying or that they produce only when telling the truth . . . No doubt when we tell a lie many of us experience an inner turmoil, but we experience a similar turmoil when we are falsely accused of a crime, when we are anxious about having to defend ourselves against accusations, when we are questioned about sensitive topics — and, for that matter, when we are elated or otherwise emotionally stirred. Kleinmuntz & Szucko, *On the Fallibility of Lie Detection*, 17 *Law & Soc'y Rev.* 85, 87 (1982).

See also D. Lykken, *A Tremor in the Blood: Uses and Abuses of the Lie Detector* ch.4 (1981); Lykken, *The Lie Detector and the Law*, 8 *Criminal Defense* 19, 21 (May-June 1981) ("But people do not all react in the same way when they are lying and, more important, any reaction that you might display when answering deceptively you might also display another time, when you are being truthful.").

Moreover, even if one of the underlying premises of polygraph testing — fear of detection causes physiological reactions — were accepted, the proposition that the examiner can consistently detect deception by means of the polygraph technique need not be accepted. The examiner's role is critical because it is the examiner who decides whether there is sufficient indication of deception:

[T]he polygraph is not simply a machine or instrument that signals whether a person is being truthful or decep-

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tive. The instrument cannot itself detect deception. A polygraph test is very complex and depends heavily on the interaction between the examiner and the individual being tested, and requires that the examiner infer deception or truthfulness based on a comparison of the person's physiological responses to various questions. The quality of the questions asked depends in part on what information the examiner already has about the person being questioned. OTA Report, *supra*, reprinted in 12 Polygraph at 196 (statement of John Gibbons, Director of Office of Technology Assessment).

Even the proponents of the polygraph technique agree that the examiner, and not the machine, is the crucial factor in arriving at reliable results. J. Reid & F. Inbau, *supra*, at 5 ("[T]he most important factor involved in the use of any such instrument is the ability, experience, education, and integrity of the examiner himself."). The examiner's expertise is critical in (1) determining the suitability of the subject for testing, (2) formulating proper test questions, (3) establishing the necessary rapport with the subject, (4) detecting attempts to mask or create chart reactions or other countermeasures, (5) stimulating the subject to react, and (6) interpreting the charts. This expertise takes on added significance because of the number of unqualified examiners holding themselves out as experts. *Id.* at 304.

The Procedure

The polygraph technique involves several steps, the most important of which are the pre-test interview and the examination of the subject while attached to the machine. In addition, a post-test interview is considered important by some authorities. *Id.* at 4. Unlike the pre-test interview and the examination itself, the examiner need not remain objective in the post-test interview. Indeed, its principal function is usually to elicit a confession from those subjects considered deceptive.

The pre-test interview serves a variety of important functions. First, it is used to acquaint the subject with the effectiveness of the technique; this will allay the apprehensions of the truthful subject and stimulate the deceptive subject's concern about the prospect of detection. *Id.* at 13-14. Second, the pre-test interview is used to assess the suitability of the subject for testing. The examiner may be alerted to some condition, such as a physical ailment, low intelligence, or the use of medication, that may affect the test results. *Id.* at 233-47. Third, test questions are formulated with the subject's assistance during the interview.

Although there are several different examination techniques, the most common technique is the control question technique (CQT). Questions are formulated to elicit either a yes or no response. There are no surprise questions; the examiner reviews the questions with the subject during the pre-test interview to ensure that the subject understands them. Several different types of questions are used in the CQT. *Irrelevant questions* are used to obtain a subject's normal truthful reactions and chart tracings. Examples of irrelevant questions are: "Is your name [subject's name]?" "Are you over 21 years of age?" *Relevant questions* concern the subject matter under investigation. For example: "Did you take \$100 from your employer's safe?" Finally, control questions are used

in the examination. *Control questions* concern "an act of wrongdoing of the same general nature as the main incident under investigation, and one to which the subject, in all probability, will lie or to which his answer will be of dubious validity in his own mind." *Id.* at 28. See also Raskin, *Science, Competence, and Polygraph Techniques*, 8 Criminal Defense 11, 13 (May-June 1981) ("[T]he control question deals with similar subject matter, is very general in nature, covers a long span of time and a large number of possible acts, and it is almost impossible for most people to answer it with an unequivocal 'no' and with certainty that they are being completely truthful.") For this reason, control questions are sometimes called "probable lie" questions. An example would be: "Did you ever steal anything in your life?" Control questions are designed as a stimulus for the truthful subject.

Generally, the truthful person will respond more to the control questions than to the relevant questions because they represent a greater threat to him. For the same reason the deceptive person will respond more to the relevant questions than to the control questions. Therefore, the subject's comparative responses to the control and relevant questions are the key in the CQT. J. Reid & F. Inbau, *supra*, at 63; Orne, *Implications of Laboratory Research for the Detection of Deception*, in *Legal Admissibility of the Polygraph* 94, 96 (N. Ansley ed. 1975).

Most examiners use a global evaluation rather than a numerical scoring system to determine deception. Kleinmuntz & Szucko, *supra*, at 89. A number of examiners, however, use quantitative scoring systems. See Backster, *Total Chart Minutes Concept*, 11 Law & Order 77 (1963); Raskin & Hare, *Psychopathy and Detection of Deception in a Prison Population*, 15 Psychophysiology 126 (1978). In addition, in some techniques the final decision on whether the subject is being deceptive is often based, in part, on factors other than chart interpretation. For example, the examiner's clinical impressions of the subject during the pre-test interview and examination play a role in the final determination of deception. Critics contend that such a judgment is "a highly subjective and hence speculative interpretation about the meaning of a complex series of verbal, behavioral and physiological responses." Kleinmuntz, *The Polygraph as Credible Court Evidence*, *The Champion* 14, 16 (Sept.-Oct. 1984). See also D. Lykken, *supra*, ch. 6.

The examination typically consists of ten to twelve questions. The first one or two questions are irrelevant questions. Other irrelevant questions as well as the relevant and control questions are interspersed in the remaining questions. While the subject knows the questions, he does not know the order in which they will be asked. The examination lasts only a few minutes and is repeated at least one more time; often two or three more examinations are conducted. After the first examination, a stimulation test, usually a card test, is administered. J. Reid & F. Inbau, *supra*, at 42 & 85. In the card test, the subject is asked to select a card from a deck. The examiner then goes through all the cards, one at a time, asking if each was the one selected. The subject is instructed to answer "no"

each time, even when the selected card is shown. The examiner, supposedly based on the polygraph technique, then identifies the selected card. Often the identification is not made through the polygraph technique but because the cards are marked. The purpose of the test is to impress the subject with the efficacy of the technique.

Validity

The validity and reliability of polygraph testing remains controversial. The question is extremely complex. Orne, Thackray & Paskewitz, *On the Detection of Deception*, in *Handbook of Psychophysiology* 743, 751 (W. Greenfield & R. Steimback, eds. 1972) ("No fully satisfactory way is available at this time for evaluating the overall effectiveness of the technique, and it is probable that no such answer will be forthcoming in the near future from real life situations."). Prior to 1970 very little scientific experimentation had been conducted. Raskin, *supra*, at 13. See also Department of Defense, *The Accuracy and Utility of Polygraph Testing* (1984), reprinted in 13 *Polygraph* 1, 58 (1984) ("There has been more scientific research conducted on lie detection in the last six years than in the previous 60 years.").

Moreover, caution must be exercised before relying on the error rates frequently quoted in court decisions and in the literature. The figures used by field examiners are especially suspect because they are often based on the assumption that polygraph results are correct unless proven otherwise. In many instances no systematic follow-up studies have been conducted to verify the examiner's conclusions, verification criteria are not specified, and improper procedures are used to compute the error rate. Orne, *supra*, at 103-104; *Validity Panel*, in *Legal Admissibility of the Polygraph* 155 (N. Ansley ed. 1975) (statement of Gordon Barland). Favorable results from laboratory experimentation, on the other hand, cannot automatically be assumed to apply in real life situations. There are important differences between the laboratory and forensic environments that may undermine the validity of these experiments. The principal difference is that fear of detection is not as strong for experimental subjects. Lykken, *supra*, at 23 ("Since the emotional impact of such artificial simulations, as well as the importance to the individual of the outcome, is inevitably very different than in real life situations, such laboratory assessments provide no valid basis for estimating the accuracy of the lie test in the field.").

A number of authorities have questioned the validity of polygraph testing. See D. Lykken, *A Tremor in the Blood: Uses and Abuses of the Lie Detector* (1981); Kleinmuntz & Szucko, *A Field Study of the Fallibility of Polygraphic Lie Detection*, 308 *Nature* 449 (1984) (the validity of polygraphic interrogation has yet to be established). Other authorities support its validity. See J. Reid & F. Inbau, *supra*, at 304; D. Raskin, G. Barland & J. Podlesny, *Validity and Reliability of Detection of Deception* (June 1978). In the fall of 1983, the Office of Technology Assessment of the U.S. Congress submitted a report in which it reviewed and evaluated the research on polygraph validity. The report includes the following passage as part of its

findings:

OTA found meaningful scientific evidence of polygraph validity only in the area of criminal investigations. However, even here, there is a wide divergence in the results of the relevant research. Six prior research reviews showed average validity ranging from a low of 64 percent to a high of 98 percent. OTA's own review of 28 studies meeting minimum acceptable scientific criteria found that, for example, correct guilty detections ranged from 17 to 100 percent. Overall, the cumulative research evidence suggests that when used in criminal investigations, the polygraph test detects deception better than chance, but with significant error rates. OTA Report, *supra*, reprinted at 12 *Polygraph* 198, 200 (1983).

Other authorities summarized the research as follows:

[W]hen the control-question test normally used in the field is administered by police polygraph examiners and scored by inspection, rather than quantitatively, it appears to identify correctly about 75% of deceptive subjects, but at the expense of classifying 49% of truthful subjects as deceptive (Horvath 1977); the chance level of accuracy would be 50%. Similarly, a study by Barland and Raskin (1973) of field polygraph tests in criminal investigations found that 98% of the deceptive subjects were correctly identified, but 55% of the innocent subjects were erroneously identified as deceptive. Waid & Orne, *The Physiological Detection of Deception*, 70 *American Scientist* 402, 404 (1982).

For other articles and reports on the validity issue, see Department of the Defense, *The Accuracy and Utility of Polygraph Testing*, *supra*; Abrams, *Polygraph Validity and Reliability: A Review*, 18 *J. Forensic Sci.* 313 (1973); Ansley, *A Compendium on Polygraph Validity*, 12 *Polygraph* 53 (1983); Horvath, *Detection of Deception: A Review of Field and Laboratory Research*, 5 *Polygraph* 107 (1976).

Even the proponents of polygraph testing admit that "when errors do occur, they tend to be more of the false positive than the false negative type." Raskin, *supra*, at 15. In other words, it is more likely that an innocent person will be erroneously identified as deceptive than it is that a guilty person will be erroneously identified as nondeceptive.

Other problems associated with the validity of polygraph testing include efforts to "beat" the test. Again, the research on this issue appears inadequate: "The research on countermeasures has been limited and the results conflicting." OTA Report, *supra*, reprinted in 12 *Polygraph* at 201. For example, a recent study reported that a common tranquilizer, meprobamate, reduces the examiner's ability to detect deceptive subjects and that the examiners were unable to identify subjects that had used this drug. Waid, Orne, Cook & Orne, *Meprobamate Reduces Accuracy of Physiological Detection of Deception*, 212 *Science* 71 (1981).

ADMISSIBILITY OF POLYGRAPH RESULTS

The admissibility of polygraph evidence was first considered and rejected in *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923), in which the D.C. Circuit established the general acceptance test for the admissibility of scientific evidence. According to the court, the polygraph had not gained general acceptance in the fields of psychology and physiology. *Id.* at 1014. See generally Skolnick, *Scientific Theory and*

Scientific Evidence: An Analysis of Lie-Detection, 70 Yale L.J. 694 (1961). From *Frye* until the 1970s polygraph evidence was overwhelmingly rejected by the courts. *People v. Kenny*, 167 Misc. 51, 54, 3 N.Y.S.2d 348, 351 (Sup. Ct. Queens Cty., 1938), is an exception to the general rule of exclusion. That case, however, was soon undercut by *People v. Forte*, 279 N.Y. 204, 206, 18 N.E.2d 31, 32 (1938), which reaffirmed the N.Y. Court of Appeals' earlier position excluding the results of polygraph examinations.

In the early 1970s several trial courts rejected nearly fifty years of precedent and admitted the results of unstipulated polygraph examinations. In *United States v. Ridling*, 350 F. Supp. 90 (E.D. Mich. 1972), a federal district court found that "the theory of the polygraph is sound" and "directly relevant" to the issue (perjury) before the court. *Id.* at 95. The court went on to hold that the results of a polygraph examination conducted by a court-appointed expert would be admissible under certain conditions. *Id.* at 99. Polygraph results were also admitted in *United States v. Zeiger*, 350 F. Supp. 685 (D.D.C.), *rev'd*, 475 F.2d 1280 (D.C. Cir. 1972) (per curiam). The *Zeiger* court held 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." *Id.* at 690. In addition, in *People v. Cutter*, 12 Crim. L. Rptr. 2133 (Cal. Super. Ct. Nov. 6, 1972), a California court admitted polygraph evidence during a suppression hearing after finding that the "polygraph now enjoys general acceptance among authorities, including psychologists and researchers . . . as well as polygraph examiners . . ." *Id.* at 2134. In addition, several other courts reached the same result at this time. See *United States v. Hart*, 344 F. Supp. 522 (E.D.N.Y. 1971); *State v. Watson*, 115 N.J. Super. 213, 218, 278 A.2d 543, 546 (Hudson Cty. Ct. 1971) (sentencing); *Walter v. O'Connell*, 72 Misc. 2d 316, 317, 339 N.Y.S.2d 386, 388 (Queens Civ. Ct. 1972) (civil case); *In re Stenzel*, 71 Misc. 2d 719, 336 N.Y.S.2d 839 (Niagara Cty. Fam. Ct. 1972) (civil case). In *United States v. DeBetham*, 348 F. Supp. 1377, 1391 (S.D. Cal.), *aff'd*, 470 F.2d 1367 (9th Cir. 1972), *cert. denied*, 412 U.S. 907 (1973), the court indicated that polygraph results would have been admitted if the court had not been bound by precedent.

The trend in favor of admissibility which these cases seemed to forecast never completely developed. *Zeiger* was reversed per curiam, 475 F.2d 1280 (D.C. Cir. 1972), while *Ridling* and *Cutter* were never appealed, thus precluding the opportunity for appellate approval. Nevertheless, the courts' approach to polygraph evidence was altered by these decisions and the attention that they received in the literature. See generally Tarlow, *Admissibility of Polygraph Evidence in 1975: An Aid in Determining Credibility in a Perjury-Plagued System*, 26 Hastings L.J. 917 (1975); Note, *The Emergence of the Polygraph at Trial*, 73 Colum. L. Rev. 1120 (1973); Note, *Pinocchio's New Nose*, 48 N.Y.U. L. Rev. 339 (1973).

Generally, the recent cases can be divided into three groups. The first group consists of those courts that adhere to the traditional position, holding poly-

graph evidence *per se* inadmissible. A second group of courts admits polygraph evidence upon stipulation. Finally, several courts have held that the admissibility of polygraph evidence rests within the discretion of the trial court.

Per Se Exclusion

A majority of jurisdictions follow the traditional rule, holding polygraph evidence inadmissible *per se*. *United States v. Hunter*, 672 F.2d 815, 817 (10th Cir. 1982); *United States v. Clark*, 598 F.2d 994, 995 (5th Cir. 1979), *cert. denied*, 449 U.S. 1128 (1981); *Pulakis v. State*, 476 P.2d 474, 479 (Alaska 1970); *People v. Anderson*, 637 P.2d 354, 358 (Colo. 1981); *State v. Antone*, 615 P.2d 101, 109 (Hawaii 1980); *People v. Baynes*, 88 Ill. 2d 225, 244, 430 N.E.2d 1070, 1079 (1981); *State v. Catanese*, 368 So.2d 975, 981 (La. 1979); *Kelley v. State*, 288 Md. 298, 302, 418 A.2d 217, 219 (1980); *State v. Mitchell*, 402 A.2d 479, 482 (Me. 1979); *People v. Barbara*, 400 Mich. 352, 359, 255 N.W. 2d 171, 173 (1977); *State v. Michaeloff*, 324 N.W.2d 926, 927 (Minn. 1982); *Pennington v. State*, 437 So. 2d 37, 40 (Miss. 1983); *State v. Beachman*, 616 P.2d 337, 339 (Mont. 1980); *State v. Biddle*, 599 S.W.2d 182, 185 (Mo. 1980); *State v. Steinmark*, 195 Neb. 545, 548, 239 N.W.2d 495, 497 (1976); *State v. French*, 119 N.H. 500, 503, 403 A.2d 424, 426, *cert. denied*, 444 U.S. 954 (1979); *State v. Grier*, 307 N.C. 628, 645, 300 S.E.2d 351, 361 (1983); *State v. Olmstead*, 261 N.W.2d 880, 886 (N.D.), *cert. denied*, 436 U.S. 918 (1978); *Birdsong v. State*, 649 P.2d 786, 788 (Okla. Crim. App. 1982); *Commonwealth v. Brockington*, 500 Pa. 216, 220, 455 A.2d 627, 629 (1983); *State v. Copeland*, 278 S.C. 572, 582, 300 S.E.2d 63, 69 (1982), *cert. denied*, 103 S. Ct. 1802 (1983); *State v. Watson*, 248 N.W.2d 398, 399 (S.D. 1976); *Romero v. State*, 493 S.W.2d 206, 213 (Tex. Crim. App. 1973); *Lee v. Commonwealth*, 200 Va. 233, 237, 105 S.E.2d 152, 155 (1958); *State v. Frazier*, 252 S.E.2d 39, 49 (W. Va. 1979); *State v. Dean*, 103 Wis. 2d 228, 279, 307 N.W.2d 628, 653 (1981).

This exclusionary rule extends to evidence that a person was willing to take, took, or refused to take an examination. See generally Annot., 15 A.L.R.4th 824 (1982); Annot., 88 A.L.R.3d 227 (1978).

Some courts have relied upon the *Frye* general acceptance test as the basis for exclusion. See *Kelley v. State*, 288 Md. 298, 302, 418 A.2d 217, 219 (1980); *People v. Barber*, 400 Mich. 352, 377, 255 N.W.2d 171, 181 (1977). The courts that have adhered to the *Frye* standard have divided over the interpretation of that standard. According to *Frye*, psychology and physiology are the fields in which general acceptance must be achieved. 293 F. at 1014. Several decisions have expanded the "field" to include polygraph examiners. *United States v. Zeiger*, 350 F. Supp. 685, 689 (D.D.C.), *rev'd*, 475 F.2d 1280 (D.C. Cir. 1972); *United States v. DeBetham*, 348 F. Supp. 1377, 1388 (S.D. Cal.), *aff'd*, 470 F.2d 1367 (9th Cir. 1972), *cert. denied*, 412 U.S. 907 (1973); *United States v. Wilson*, 361 F. Supp. 510, 511 (D. Md. 1973). Such an approach is significant inasmuch as general acceptance is almost assured if the opinions of examiners are considered relevant. In *United States v. Alexander*, 526 F.2d 161 (8th Cir.

1975), however, the Eighth Circuit rejected this view: "Experts in neurology, psychiatry and physiology may offer needed enlightenment upon the basic premises of polygraphy. Polygraphists often lack extensive training in these specialized sciences." *Id.* at 164 n.6.

Other courts have rejected *Frye* as the appropriate standard for determining the admissibility of scientific evidence and have nevertheless also excluded polygraph evidence. *E.g.*, *State v. Catanese*, 368 So.2d 975, 979 (La. 1979); *State v. Brown*, 687 P.2d 751, 759 (Or. 1984). The principal argument against admissibility is lack of reliability. *United States v. Alexander*, 526 F.2d 161, 166 (8th Cir. 1975) ("[W]e are still unable to conclude that there is sufficient scientific acceptability and reliability to warrant the admission of the results of such tests in evidence."); *People v. Baynes*, 88 Ill. 2d 225, 239, 430 N.E.2d 1070, 1076 (1982) ("The primary obstacle in admission of polygraph evidence, stipulated to or not, has continually and consistently been the instrument's disputed scientific reliability."); *accord Pulakis v. State*, 476 P.2d 474, 479 (Alaska 1970); *State v. Bridle*, 599 S.W.2d 182, 185 (Mo. 1980); *Lee v. Commonwealth*, 200 Va. 233, 237, 105 S.E.2d 152, 155 (1958); *State v. Frazier*, 252 S.E.2d 39, 43-44 (W. Va. 1979).

Several points are made on this score. First, there is concern that polygraph testing lacks empirical validation. See *United States v. Wilson*, 361 F. Supp. 510, 514 (D. Md. 1973) ("incipient stage of experimental research"); *People v. Monigan*, 72 Ill. App. 3d 87, 96, 390 N.E.2d 562, 568 (1979) ("[T]he estimate of the degree of accuracy of polygraph tests seem[s] to come from polygraph examiners themselves."); *People v. Barbara*, 400 Mich. 352, 394-95, 255 N.W.2d 171, 189 (1977) ("[W]e find there is difficulty in empirically verifying polygraphic findings, . . . some questions concerning the accuracy figures, . . . and an apparent lack of a rational scientific explanation for this phenomenon.").

Second, numerous uncontrollable factors are involved in the examination. See *People v. Anderson*, 637 P.2d 354, 359 (Colo. 1981) ("Several uncontrollable or unascertainable physiological and psychological responses may cause difficulty or error. . . ."); *People v. Baynes*, 88 Ill. 2d 225, 236, 430 N.E.2d 1070, 1075 (1981) ("abnormal blood pressure, heart and respiratory irregularities, fatigue, intoxication, rationalization, extreme nervousness, meditative abstraction, controlled breathing, instrument discomfort, uncomfortable room temperature, obesity, hidden muscular contractions, self-inflicted pain, mental incompetence, psychopathy or schizophrenia, ingestion of a sedative, an attempt to suppress a cough, fear induced by suspicion or accusation, or lack of fear of detection.").

Third, the subjective nature of the deception determination is problematic. *People v. Anderson*, 637 P.2d 354, 360 (Colo. 1981) (The polygraph technique, "albeit based on a scientific theory, remains an art with unusual responsibility placed on the examiner."); *People v. Monigan*, 72 Ill. App. 3d 87, 98, 390 N.E.2d 562, 569 (1979) ("almost total subjectiveness surrounding the use of the polygraph and the interpretation of the results"); *State v. Frazier*, 252 S.E.2d 39, 48 (W. Va.

1979) ("subjective analysis").

Fourth, the absence of adequate standards for assessing the qualifications of examiners is an additional concern. See *People v. Anderson*, 637 P.2d 354, 360 (Colo. 1981) ("[T]he absence of adequate qualification standards for the polygraph profession heighten[s] the possibility for grave abuse. . . ."); *State v. Catanese*, 368 So. 2d 975, 982 (La. 1979) (lack of judicial and legislative control of competence of examiners).

Even if the reliability of the technique is established, additional problems are cited as reasons for exclusion — for example, the danger that an opinion concerning the truthfulness of a witness will intrude too much into the jury's historic function of assessing credibility, *People v. Baynes*, 88 Ill. 2d 225, 244, 430 N.E.2d 1070, 1079 (1981) ("A potential trial by polygraph is an unwarranted intrusion into the jury function."); *State v. Davis*, 407 So. 2d 702, 706 (La. 1981) ("usurps the jury's prerogative on a question involving credibility"); the danger that the jury will overvalue the expert's testimony, *United States v. Alexander*, 526 F.2d 161, 168 (8th Cir. 1975) ("When polygraph evidence is offered . . . it is likely to be shrouded with an aura of near infallibility, akin to the ancient oracle of Delphi."); *State v. Catanese*, 368 So. 2d 975, 981 (La. 1979) ("trier of fact is apt to give almost conclusive weight to the polygraph expert's opinion"); and the possibility that the trial will degenerate into a time consuming trial of the polygraph technique. *People v. Barbara*, 400 Mich. 352, 410, 255 N.W.2d 171, 196 (1977) ("possibility of bogging down trials with collateral matters, perhaps resulting in a trial of the polygraph, or a battle of experts"); *State v. Dean*, 103 Wis. 2d 228, 275, 307 N.W.2d 628, 651 (1981) ("a trial of the polygraph and the polygraph operator rather than a trial of the defendant's guilt").

Whether juries will be overawed by polygraph evidence is a matter of dispute. See generally Cavoukian & Heslegrave, *The Admissibility of Polygraph Evidence in Court: Some Empirical Findings*, 4 Law & Human Behavior 117 (1980); Carlson, Pasano & Jannuzzo, *The Effect of Lie Detector Evidence on Jury Deliberations: An Empirical Study*, 5 J. Police Sci. & Ad. 148 (1977); Markwart & Lynch, *The Effect of Polygraph Evidence on Mock Jury Decision-Making*, 7 J. Police Sci. & Ad. 324 (1979).

Admissibility Upon Stipulation

A substantial minority of states admit polygraph evidence upon stipulation of the parties. See generally Katz, *Dilemmas of Polygraph Stipulations*, 14 Seton Hall L. Rev. 285 (1984); Note, *Admissibility of Polygraph Data When Both Parties Have Stipulated That It Will Be Admissible*, 13 Land & Water L. Rev. 613 (1978); Note, *Admissibility of Polygraph Test Results Upon Stipulation of the Parties*, 30 Mercer L. Rev. 357 (1978); Casenote, *Stipulation Cannot Make Polygraph Results Admissible: State v. Biddle*, 47 Mo. L. Rev. 586 (1982).

For the most part, admissibility by stipulation has been achieved by court decision. *United States v. Oliver*, 525 F.2d 731, 737 (8th Cir. 1975), *cert. denied*, 424 U.S. 973 (1976); *Wynn v. State*, 423 So. 2d 294, 299-301 (Ala. Crim. App. 1982); *State v. Montes*, 136

Ariz. 491, 667 P.2d 191, 199 (1983); State v. Valdez, 91 Ariz. 274, 371 P.2d 894, 900 (1962); Holcomb v. State, 268 Ark. 138, 139, 594 S.W.2d 22, 23 (1980); Williams v. State, 378 A.2d 117, 120 (Del. 1977); State v. Fuller, 387 So. 2d 1040 (Fla. Ct. App. 1980); State v. Chambers, 240 Ga. 76, 76-77, 239 S.E.2d 324, 325 (1977); Pavone v. State, 273 Ind. 162, 164-66, 402 N.E.2d 976, 978-79 (1980); State v. Marti, 290 N.W.2d 570, 586-87 (Iowa 1980); State v. Roach, 223 Kan. 723, 735, 576 P.2d 1082, 1086 (1978); Corbett v. State, 584 P.2d 704, 707 (Nev. 1978); State v. McDavitt, 62 N.J. 36, 297 A.2d 849, 854-55 (1972); State v. Souel, 53 Ohio St. 2d 123, 133-34, 372 N.E.2d 1318, 1323-24 (1978); State v. Rebeterano, 681 P.2d 1265, 1268-69 (Utah 1984); State v. Renfro, 96 Wash.2d 902, 905, 639 P.2d 737, 739, *cert. denied*, 459 U.S. 842 (1982); Cullin v. State, 565 P.2d 445, 457 (Wyo. 1977).

Statutory provisions may accomplish the same result. Cal. Evidence Code § 351.1 (West Supp. 1984) provides: "Notwithstanding any other provision of law, the results of a polygraph examination, the opinion of a polygraph examiner, or any reference to an offer to take, failure to take, or taking of a polygraph examination, shall not be admitted into evidence in any criminal proceeding . . . unless all parties stipulate to the admission of such results."

At one time the trend toward admissibility by stipulation appeared so strong that it seemed only a matter of time before it became the majority rule. Recent decisions, however, cast doubt on this possibility. Indeed, several courts that initially permitted the admissibility of polygraph evidence upon stipulation have overruled their earlier decisions, holding polygraph evidence *per se* inadmissible. State v. Grier, 307 N.C. 628, 645, 300 S.E.2d 351, 356-61 (1983), *overruling* State v. Milano, 297 N.C. 485, 256 S.E.2d 154 (1979); Fulton v. State, 541 P.2d 871, 872 (Okla. Crim. App. 1975), *overruling* Castleberry v. State, 522 P.2d 257 (Okla. Crim. App. 1974), and Jones v. State, 527 P.2d 169 (Okla. Crim. App. 1974); State v. Dean, 103 Wis. 2d 228, 279, 307 N.W.2d 628, 653 (1981), *overruling* State v. Stanislawski, 62 Wis. 2d 730, 216 N.W.2d 8 (1974).

Courts rejecting the admissibility of stipulated examinations argue that the stipulation does nothing to enhance the reliability of polygraph evidence, which is the principal reason for exclusion. See Pulakis v. State, 476 P.2d 474, 479 (Alaska 1970); State v. Grier, 307 N.C. 628, 642, 300 S.E.2d 351, 359 (1983); Commonwealth v. Brockington, 500 Pa. 216, 220, 455 A.2d 627, 629 (1983); Romero v. State, 493 S.W.2d 206, 213 (Tex. Crim. App. 1973); State v. Dean, 103 Wis. 2d 228, 268-69, 307 N.W.2d 628, 648 (1981). Other arguments against the stipulation approach are that a stipulation that makes unreliable evidence admissible is contrary to public policy and is an invalid stipulation of law. People v. Monigan, 72 Ill. App. 3d 87, 88, 390 N.E.2d 562, 563 (1979).

According to some courts the answer to these objections is that admissibility does not derive "from the fact that the stipulation somehow imbues the evidence with reliability . . . but from the fact that the parties are estopped, by their stipulated waiver of the right to object, from asserting the unacceptability of the evi-

dence. . . ." Wynn v. State, 423 So. 2d 294, 299 (Ala. Crim. App. 1982); *accord* State v. Marti, 290 N.W.2d 570, 586-87 (Iowa 1980) (*estoppel*); State v. Rebeterano, 681 P.2d 1265, 1269 (Utah 1984) (*estoppel*). Other courts that accept polygraph results upon stipulation recognize, at least implicitly, that the technique possesses some degree of validity — at least when admitted under controlled conditions designed to ensure that the examination is properly administered by a competent examiner and to limit the purpose of admissibility. *E.g.*, United States v. Oliver, 525 F.2d 731, 736 (8th Cir. 1975), *cert. denied*, 96 S. Ct. 1477 (1976) ("We believe the necessary foundation can be constructed through testimony showing a sufficient degree of acceptance of the science of polygraphy by experienced practitioners in polygraphy and other related experts."); State v. Valdez, 91 Ariz. 274, 283, 371 P.2d 894, 900 (1962) (polygraphy "has been developed to a state in which its results are probative enough to warrant admissibility upon stipulation"); Corbett v. State, 584 P.2d 704, 707 (Nev. 1978); State v. McDavitt, 62 N.J. 36, 46, 297 A.2d 849, 854-55 (1972).

The theory recognized for admission of stipulated results may be critical. The waiver or estoppel theory could permit the prosecution to introduce polygraph results in its case-in-chief unless the stipulation limits admissibility to impeachment. In contrast, courts permitting admission of stipulated results under controlled conditions typically limit admissibility to credibility, with the result that the evidence is admissible only if the defendant takes the stand.

The leading case on admissibility by stipulation is State v. Valdez, 91 Ariz. 274, 371 P.2d 894 (1962), in which the Arizona Supreme Court held that stipulated polygraph results are admissible if the following conditions are met:

- (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 polygraph 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 with which a defendant is charged 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.