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# Polygraph and Deception Tests: Part II

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# POLYGRAPH AND DECEPTION TESTS

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

The *Valdez* conditions have been adopted by many of the courts that admit stipulated polygraph results. *E.g.,* Wynn v. State, 423 So. 2d 294, 300 (Ala. Crim. App. 1982); State v. Souel, 53 Ohio St. 2d 123, 134, 372 N.E.2d 1318, 1323 (1978). Several courts have altered the conditions in some respects. For example, an oral agreement in open court in lieu of a written agreement is recognized by some courts. Wynn v. State, 423 So. 2d 294, 299 (Ala. Crim. App. 1982); State v. Marti, 290 N.W.2d 570, 587 (Iowa 1980); State v. Roach, 223 Kan. 732,736, 576 P.2d 1082, 1086 (1978). In addition, a warning that the defendant is waiving his right against self-incrimination is also required by other courts. Wynn v. State, 423 So. 2d 294, 299 (Ala. Crim. App. 1982).

The interpretation of the stipulation has raised a number of issues. *E.g.,* Young v. State, 387 So. 2d 512, 512-13 (Fla. Dist. Ct. App. 1980) (experts in addition to examiner not permitted to testify because their testimony was not part of the stipulation); Porterfield v. State, 150 Ga. App. 303, 257 S.E.2d 372, 373 (1979) (testimony concerning inconclusive results not admissible because not part of the stipulation). These cases highlight the importance of drafting the stipulation with care. For example, an agreement to admit the results of a polygraph examination conducted by a competent examiner does not encompass an examination by an examiner who is not licensed under the applicable state statute. Holcomb v. State, 268 Ark. 138, 140, 594 S.W.2d 22, 23 (1980); State v. Tavernier, 27 Or. App. 115, 118, 555 P.2d 481, 482 (1976). An agreement to admit the results of an examination permits the prosecution to use the results in his case-in-chief in the absence of a statement limiting the results to impeachment. White v. State, 269 Ind. 479, 483-84, 381 N.E.2d 481, 484-85 (1978); State v. Baskerville, 139 N.J. Super. 389, 394, 354 A.2d 328, 330 (1976).

Moreover, some courts have held that the agreement must be strictly construed; thus, when the state failed to comply with a stipulation that required the defense attorney to review all questions, the results of the examination were inadmissible. Chambers v. State, 146 Ga. App. 126, 128, 245 S.E.2d 467, 469 (1978). The argument for construing a stipulation strictly against the state is based on constitutional grounds: "Where an accused waives his constitutional right to remain silent in exchange for an agreement that his statements will not be used under certain conditions which are fulfilled, the bargain made by the State will be enforced." State v. Fuller, 387 So. 2d 1040, 1041-42 (Fla. Dist. Ct. App. 1980).

One other issue that has arisen in the stipulation cases deserves comment. In People v. Reeder, 129 Cal. Rptr 646 (1976), the court held that a defense counsel "who, in advance of the examination, stipulates that a defendant will submit to a polygraph examination and the results will be admissible at trial demonstrates incompetence." *Id.* at 648. This decision was subsequently vacated and the defendant's incompetency claim rejected. People v. Reeder, 65 Cal. App. 3d 235, 135 Cal. Rptr. 421 (1976). Later cases have also rejected such claims. For example, in one case the court held that when counsel agrees to an examination after the defendant insists on his innocence, there is no incompetence. People v. Berry, 118 Cal. App. 3d 122, 134, 173 Cal. Rptr. 137, 143, *cert. denied,* 454 U.S. 966 (1981). *See generally* Annot., 9 A.L.R.4th 354 (1981).

### Discretionary Admissibility

A few trial courts have admitted polygraph evidence without a stipulation. *E.g.,* United States v. Ridling, 350 F. Supp. 90, 99 (E.D. Mich. 1972); People v. Daniels, 422 N.Y.S.2d 832, 837 (S. Ct. 1979); State v. Sims, 52 Ohio Misc. 31, 369 N.E.2d 24 (Ohio C.P. 1977).

Moreover, several appellate courts have recognized a trial court's discretion to admit polygraph evidence even in the absence of a stipulation. The Seventh Circuit has repeatedly taken this position: United States v. Feldman, 711 F.2d 758, 767 (7th Cir. 1983); United States v. Black, 684 F.2d 481, 484 (7th Cir.), *cert.*

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*denied,* 103 S. Ct. 463 (1982); United States v. Rumell, 642 F.2d 213, 215 (7th Cir. 1981) (citing other cases). The Ninth Circuit has adopted a similar position: United States v. Falsia, 724 F.2d 1339, 1341 (9th Cir. 1983); United States v. Ferris, 719 F.2d 1405, 1408 (9th Cir. 1983); United States v. Estrada-Lucas, 651 F.2d 1261, 1264 (9th Cir. 1980); United States v. Marshall, 526 F.2d 1349, 1360 (9th Cir. 1975), *cert. denied,* 426 U.S. 923 (1976). In most cases, however, trial courts have exercised this discretion by excluding polygraph evidence.

Two jurisdictions, Massachusetts and New Mexico, have upheld the admissibility of polygraph evidence without stipulation. In Commonwealth v. A Juvenile, 365 Mass 421, 313 N.E.2d 120 (1974), the Supreme Judicial Court of Massachusetts held polygraph evidence admissible if the defendant agrees in advance to the admission of test results and the trial judge conducts a "close and searching inquiry" into the qualifications of the examiner, the methods employed in the examination, and the suitability of the defendant for testing. *Id.* at 426, 313 N.E.2d at 124. In subsequent cases, the court further defined the conditions under which unstipulated results may be admitted. First, if the defendant has already taken an examination, he must agree that the results of a new examination are admissible. Commonwealth v. Stewart, 375 Mass. 380, 384, 377 N.E.2d 693, 697 (1978). Second, the results of the examination cannot be admitted as substantive evidence; they affect only the credibility of the defendant. Thus, the defendant must testify before the results are admissible. Commonwealth v. Vitello, 376 Mass. 426, 450-52, 381 N.E.2d 582, 597-98 (1978); *accord* Commonwealth v. Moynihan, 376 Mass. 468, 478-79, 381 N.E.2d 575, 581 (1978). Third, admissibility is restricted to the defendant; polygraph evidence concerning a witness is not admissible. Commonwealth v. DiLego, 387 Mass. 394, 439 N.E.2d 807, 808 (1982). Finally, under some circumstances an indigent defendant is entitled to an examination at state expense. Commonwealth v. Lockley, 381 Mass. 156, 160-61, 408 N.E.2d 834, 838-39 (1980).

New Mexico has gone the furthest in admitting polygraph evidence. In State v. Dorsey, 88 N.M. 184, 539 P.2d 204 (1975), the New Mexico Supreme Court held that polygraph results are admissible if (1) the operator was qualified, (2) the testing procedures were reliable, and (3) the test of the particular subject was valid. *Id.* at 184-85, 539 P.2d at 205. *See also* State v. Urioste, 94 N.M. 767, 700, 617 P.2d 156, 159 (1980) (error to preclude cross-examination of examiner concerning chart and scoring); State v. Bell, 90 N.M. 134, 138-39, 560 P.2d 925, 929-30 (1977) (inconclusive results are irrelevant and therefore inadmissible).

Currently, New Mexico Evidence Rule 707 governs admissibility. This rule permits the admissibility of polygraph evidence in the discretion of the trial court under the following conditions. First, the examination must be conducted by a qualified examiner. Minimum qualifications include five years' experience administering or interpreting polygraph examinations or equivalent academic training and at least twenty hours of continuing education during the twelve months prior to the examination offered in evidence. N.M. Evid. R. 707(b). Second, the examination must include at least two relevant questions, at least three charts, and be quantitatively scored. N.M. Evid. R. 707(c). Moreover, the pre-test interview and actual testing must be recorded in full on an audio or video recording device. N.M. Evid. R. 707(e). Third, the party intending to offer the evidence generally must provide ten-day written notice to the other party, including copies of the examiner's report, each chart, the audio or video recording of the pre-test interview and actual testing, and a list of any prior examinations taken by the subject. N.M. Evid. R. 707(d).

**Constitutional Arguments**

Several constitutional arguments have been advanced to support the admissibility of polygraph evidence. *See generally* Clinton, *The Right to Present a Defense: An Emergent Constitutional Guarantee in Criminal Trials,* 9 Ind. L. Rev. 713, 810-15 (1976); Note, *Compulsory Process and Polygraph Evidence: Does Exclusion Violate a Criminal Defendant's Due Process Rights?,* 12 Conn. L. Rev. 324 (1980); Note, *Admission of Polygraph Results: A Due Process Perspective,* 55 Ind. L.J. 157 (1979); Note, *State v. Dean, A Compulsory Process Analysis of the Inadmissibility of Polygraph Evidence,* 1984 Wis. L. Rev. 237.

The principal constitutional argument focuses on the defendant's right to present a defense. In State v. Dorsey, 87 N.M. 323, 532 P.2d 912, 914-15 (N.M. Ct. App.), *aff'd on other grounds,* 88 N.M. 184, 539 P.2d 204 (1975), a New Mexico appellate court reversed a trial court's exclusion of polygraph evidence on the grounds that a defendant has a due process right to present critical and reliable defense evidence. In Jackson v. Garrison 495 F. Supp. 9 (W.D.N.C. 1979), *rev'd,* 677 F.2d 371 (4th Cir. 1981), a federal district court held that the exclusion of polygraph evidence denied a defendant a fair trial. In State v. Sims, 52 Ohio Misc. 31, 32, 369 N.E.2d 24, 46 (C.P. 1977), an Ohio trial court found an implied right to present defense evidence in the compulsory process guarantee, which, it concluded, compelled the admission of defense polygraph evidence. The precedential value of these cases, however, is not strong. *Jackson* was overruled on appeal, Jackson v. Garrison, 677 F.2d 371 (4th Cir. 1981), *Dorsey* was affirmed but not on constitutional grounds, State v. Dorsey, 88 N.M. 184, 539 P.2d 204 (1975), and *Sims* is inconsistent with later Ohio cases. Although the Ohio Supreme Court accepted the admission of stipulated polygraph results in State v. Souel, 53 Ohio St. 2d 123, 372 N.E.2d 1318 (1978), it rejected the constitutional arguments for admission in State v. Levert, 58 Ohio St. 2d 213, 215, 389 N.E.2d 848, 850 (1979).

The right to present defense evidence also was cited in McMorris v. Israel, 643 F.2d 458 (7th Cir. 1981), in which the defendant offered to stipulate to the admission of a polygraph examination. Although stipulated polygraph results were admissible under state law at that time, the prosecutor, without offering any reasons, refused to stipulate. In granting habeas corpus relief, the Seventh Circuit wrote: "Where credi-

bility is as critical as in the instant case, the circumstances are such as to make the polygraph evidence materially exculpatory within the meaning of the Constitution." *Id.* at 462. The court, however, rested its decision on narrower grounds; that is, the prosecution's refusal to stipulate without offering a valid ground for the refusal deprived the defendant of due process: "From all that appears, [the prosecutor] was acting solely for tactical reasons in the belief that a test would not be helpful to his case. If the prosecutor refuses *and states reasons,* it then becomes the duty of the court to determine whether the reasons offered rise above the purely tactical considerations present in a given case." *Id.* at 466.

The response to *McMorris* has been chilly. Justice Rehnquist characterized *McMorris* as a "dubious constitutional holding." Israel v. McMorris, 455 U.S. 967, 970 (1982) (Rehnquist, J., dissenting from denial of certiorari). Some courts simply reject the argument that the prosecution is required to provide reasons for its refusal to stipulate. *See* Jones v. Weldon, 690 F.2d 835, 838 (11th Cir. 1982). Other courts reject the broader proposition that there is a constitutional right to present polygraph evidence. *See* Bashor v. Risley, 730 F.2d 1228, 1238 (9th Cir. 1984); United States v. Gordon, 688 F.2d 42, 44 (8th Cir. 1982); Milano v. Garrison, 677 F.2d 374, 375 (4th Cir. 1981); Jackson v. Garrison, 677 F.2d 371, 373 (4th Cir. 1981); United States v. Glover, 596 F.2d 857, 867 (9th Cir.), *cert. denied,* 444 U.S. 860 (1979); Conner v. Auger, 595 F.2d 407, 411 (8th Cir.), *cert. denied,* 444 U.S. 851 (1979); United States v. Bohr, 581 F.2d 1294, 1303 (8th Cir. 1978), *cert. denied,* 439 U.S. 958 (1978); People v. Williams, 333 N.W.2d 577, 580 (Mich App. 1983).

Moreover, the Seventh Circuit itself has noted that *McMorris* applies only where a jurisdiction accepts stipulated polygraph results, United States v. Black, 684 F.2d 481, 483 (7th Cir.), *cert. denied,* 103 S. Ct. 463 (1982), and does not change the trial court's discretionary authority to exclude polygraph evidence. United States v. Feldman, 711 F.2d 758, 767 (7th Cir.), *cert. denied,* 104 S. Ct. 352 (1983); United States v. Lupo, 652 F.2d 723, 729 (7th Cir. 1981), *cert. denied,* 457 U.S. 1135 (1982).

### Proceedings Other Than Trial

Courts have admitted polygraph evidence at suppression hearings, People v. Cutter, 12 Crim. L. Rep. 2133 (Cal. Super. Ct. Nov. 6, 1972), sentence hearings, State v. Jones, 110 Ariz. 546, 551,521 P.2d 978, 983, *cert. denied,* 419 U.S. 1004 (1974); State v. Watson, 115 N.J. Super. 213, 218, 278 A.2d 543, 546 (Hudson Cty. Ct. 1971), and hearings for new trials. State v. Catanese, 368 So. 2d 975, 982-83 (La. 1979); People v. Barbara, 400 Mich. 352, 412-14, 255 N.W.2d 171, 197-99 (1977); People v. Snell, 118 Mich. App. 750, 768, 325 N.W.2d 563, 572 (1982); State v. Yodsnukis, 281 N.W.2d 255, 259-60 (N.D. 1979); State v. Olmstead, 261 N.W.2d 880, 886 (N.D.), *cert. denied,* 436 U.S. 918 (1978). *See generally* Note, *People v. Barbara: The Admissibility of Polygraph Test Results in Support of a Motion for New Trial,* 1978 Det. C.L. Rev. 347; Note, *Polygraph Examination Results Admissible in Post-Conviction Hearings,* 56 N.C.L. Rev. 380 (1978); 55 U. Det. J. Urb. L. 155 (1977).

Some of these courts have distinguished such proceedings from the trial itself. For example, the Michigan Supreme Court has held polygraph evidence admissible on a motion for a new trial although the same evidence is inadmissible at trial. People v. Barbara, 400 Mich. 352, 411-14, 255 N.W.2d 171, 197-98 (1977). According to the court, polygraph results may be of some assistance to the trial judge in deciding issues that typically arise in proceedings to determine whether a new trial should be granted: "Traditionally, the testimony of recanting or suddenly discovered witnesses has been highly suspect, largely because it is impossible to determine when the truth is being told. The polygraph won't do this either; not even its most ardent proponents would so contend. But it might help." *Id.* at 415, 255 N.W.2d at 199. The court also commented that admissibility in this context would provide an "opportunity to test [the] effectiveness of the polygraph. . . ." *Id.*

## RELATED ISSUES

### Fifth Amendment

In Schmerber v. California, 384 U.S. 757 (1966), the U.S. Supreme Court indicated, albeit in dictum, that compelled submission to a polygraph test would violate the Fifth Amendment's prohibition against compelled self-incrimination:

> Some tests seemingly directed to obtain "physical evidence," for example, lie detector tests measuring changes in body function during interrogation, may actually be directed to eliciting responses which are essentially testimonial. To compel a person to submit to testing in which an effort will be made to determine his guilt or innocence on the basis of physiological responses, whether willed or not, is to evoke the spirit and history of the Fifth Amendment. *Id.* at 764.

The courts that have admitted polygraph evidence have recognized the applicability of the privilege in this context: "The polygraph results are essentially testimonial in nature and therefore a defendant could not be compelled initially to take such an examination on the Commonwealth's motion." Commonwealth v. A Juvenile, 365 Mass. 421, 431, 313 N.E.2d 120, 127 (1974). The protection of the privilege would also extend to any comment on a defendant's refusal to submit to an examination. *See* Bowen v. Eyman, 324 F. Supp. 339, 341 (D. Ariz. 1970); MacDonald v. State, 164 Ind. App. 285, 293-94, 328 N.E.2d 436, 441 (1975). The defendant, however, may waive the privilege. *See* United States v. Oliver, 525 F.2d 731, 734-36 (8th Cir. 1975), *cert. denied,* 424 U.S. 973 (1976); United States v. Ridling, 350 F. Supp. 90, 97 (E.D. Mich. 1972); Commonwealth v. A Juvenile, 365 Mass. 421, 431-32, 313 N.E.2d 120, 127 (1974).

### Confessions

It is not uncommon for a defendant to make an incriminatory statement before, during, or after a polygraph examination has been administered. Since polygraph examinations involve testimonial evidence under the Fifth Amendment privilege against self-incrimination, the admissibility of statements made during the examination process may be subject to the

*Miranda* warnings. *Miranda* warnings are required only if the defendant is in custody, Berkemer v. McCarty, 104 S. Ct. 3138, 3145 (1984); California v. Beheler, 103 S. Ct. 3517, 3519 (1983), and subjected to interrogation. Rhode Island v. Innis, 446 U.S. 291 (1980). The defendant, however, may waive his right to remain silent and to counsel when he agrees to take a polygraph examination. *See* United States v. Iron Thunder, 714 F.2d 765, 771-72 (8th Cir. 1983); Henry v. Dees, 658 F.2d 406, 408 (5th Cir. 1981) (waiver invalid where examiner asked questions of a mentally retarded defendant that went beyond agreement to take examination).

Even if the defendant initially asserts his right to counsel after receiving *Miranda* warnings, he may subsequently waive that right by initiating conversations with the police, including a request for a polygraph examination. *See* Oregon v. Bradshaw, 103 S. Ct. 2830 (1983). In Wyrick v. Fields, 103 S. Ct. 394 (1982), the U.S. Supreme Court held that admissions made by a defendant during a post-test interview were admissible where the defendant, who was represented by counsel, requested a polygraph examination and was informed of his *Miranda* rights. The Court rejected the argument that new warnings were required prior to the post-test interview. However, not all statements that are made after an examination are necessarily admissible; they are admissible only if the defendant voluntarily and knowingly waives his rights to remain silent and to counsel. *See* United States v. Gillyard, 726 F.2d 1426, 1429-30 (9th Cir. 1984) (defendant did not validly waive right to a post-test interrogation by officers other than the examiner).

In addition to Fifth Amendment *Miranda* rights, a defendant's admissions during a polygraph examination may be excluded if they are obtained in violation of the Sixth Amendment right to counsel, Fields v. Wyrick, 706 F.2d 879, 880-81 (8th Cir. 1983) (defendant waived his Sixth Amendment right to counsel), or are involuntary under the due process clause. *See generally* Annot., 89 A.L.R.3d 230 (1979). Moreover, some courts have held that polygraph evidence is admissible for the limited purpose of showing the voluntariness of a confession. *See* United States v. Kampiles, 609 F.2d 1233, 1244-45 (7th Cir. 1979), *cert. denied,* 446 U.S. 954 (1980); Annot. 92 A.L.R.3d 1317 (1979).

**Pretrial Agreements**

In a few reported cases prosecutors have gone beyond stipulating to the admissibility of test results and have agreed to the dismissal of charges on the condition that the defendant pass a polygraph examination. *See generally* Annot., 36 A.L.R.3d 1280 (1971). In some cases the defendant had no obligations under such an agreement other than to cooperate in the examination. People v. Reagan, 395 Mich. 306, 309, 235 N.W.2d 581, 583 (1975); State v. Sanchell, 191 Neb. 505, 509-10 216 N.W.2d 504, 507-08 (1974), *cert. denied,* 420 U.S. 909 (1975). In other cases the defendant either agreed to admit the test results, Butler v. State, 228 So. 2d 421, 424-25 (Fla. Dist. Ct. App. 1969), or to enter a plea to a reduced charge in the event he failed the examination, State v. Davis, 188 So. 2d 24, 27 (Fla. Dist. Ct. App. 1966).

A determinative factor in the reported cases has been the existence of a statute requiring court approval for dismissals. When a trial court approved the dismissal or was cognizant of the agreement, appellate courts have held the prosecutor bound by the agreement on public policy grounds. Butler v. State, 228 So. 2d 421, 424 (Fla. Dist. Ct. App. 1969); State v. Davis, 188 So. 2d 24, 28 (Fla. Dist. Ct. App. 1966); People v. Reagan, 395 Mich. 306, 318, 235 N.W.2d 581, 587 (1975). According to these courts, the agreement represents a "pledge of public faith — a promise made by state officials — and one that should not be lightly disregarded." State v. Davis, 188 So. 2d 24, 27 (Fla. Dist. Ct. App. 1966). On the other hand, when court approval was required but not obtained, prosecution has been permitted even though a defendant successfully passed the examination. State v. Sanchell, 191 Neb. 505, 510, 216 N.W. 2d 504, 508 (1974) *cert. denied,* 420 U.S. 909 (1975). *See also* Snead v. State, 415 So. 2d 887, 889 (Fla. Dist. Ct. App. 1982) (oral agreement with Sheriff who lacked authority to enter into such an agreement is not enforceable).

Notwithstanding the lack of court approval, enforcement of such an agreement may be required on constitutional grounds. In agreeing to take a polygraph examination, the defendant waives his Fifth Amendment privilege against self-incrimination and it seems questionable that the state could induce such a waiver by promising to dismiss the charges in the event the defendant passes the examination and then renege on that promise after the defendant has waived his constitutional rights. *Cf.* Santobello v. New York, 404 U.S. 257 (1971) (enforceability of plea bargain); *see also* Mabry v. Johnson, 104 S. Ct. 2543 (1984).

## STATUTORY DEVELOPMENTS

The admissibility of polygraph evidence is the subject of legislation in a few jurisdictions. The most important example is New Mexico Evidence Rule 707, which makes polygraph evidence admissible in the discretion of the trial court under certain conditions. Another example is section 351.1 of the California Evidence Code which makes polygraph results inadmissible "unless all the parties stipulate to the admission of such results." Cal. Evid. Code § 351.1 (West Supp. 1984). Finally, a Wisconsin statute recognizes a privilege for all "oral and written communications during or any results of an examination using an honesty testing device. . . ." Wis. Stat. Ann. § 905.065 (West Supp. 1984-85).

These provisions are the exceptions rather than the rule. The more common statutory treatment of the polygraph involves licensure statutes. The significance of these provisions relates to the establishment of minimum standards for licensing. Ala. Code § 34-25-21 (Supp. 1984); Ark. Stat. Ann. § 71-2207 (1979); Fla. Stat. Ann. § 493.566 (West 1981); Ga. Code Ann. § 43-36-6 (1984); Ill. Ann. Stat. ch. 111, § 2412 (Smith-Hurd Supp. 1984-85); Ky. Rev. Stat. Ann. § 329.030 (Baldwin 1984); Mich Comp. Laws Ann. § 338.1710 (West 1976); Miss. Code Ann. § 73-29-13 (1972); Mont. Code Ann. § 37-62-202 (1983); Nev. Rev. Stat. § 648A.130 (1983); N.D. Cent. Code §43-31-07

(Supp. 1983); Okla. Stat. Ann. tit. 59, § 1458 (West Supp. 1984-85); Tex. Rev. Civ. Stat. Ann. art. 4413(29cc) § 8 (Vernon Supp. 1984). *See generally* Annot., 32 A.L.R.3d 1324 (1970) (polygraph licensing statutes).

The statutes will presumably play a role in determining the qualifications of experts in those jurisdictions that admit polygraph evidence, either in the discretion of the trial court or by stipulation. *See* Holcomb v. State, 268 Ark. 138, 140, 594 S.W.2d 22, 23 (1980) (stipulation interpreted to require a licensed examiner); State v. Tavernier, 27 Or. App. 115, 118, 555 P.2d 481, 482 (1976) (same). Typically, these statutes establish requirements relating to age, citizenship, character, and academic or investigative experience. Requirements governing polygraph schooling and internships are also common. In some jurisdictions the statute merely establishes an administrative agency which is responsible for the promulgation of rules governing polygraph examiners. *E.g.,* Va. Code §§ 54-916 to 54-922 (1982). Moreover, some provisions go beyond establishing qualification standards and prescribe the types of testing procedures that must be used in administering polygraph examinations. For example, the Nevada statute provides that only examinations conducted with approved instruments using standard and widely accepted techniques and using at least two charts may be administered. Nev. Rev. Stat. §§ 648A.200, .230 & .250 (1983).

## PSYCHOLOGICAL STRESS EVALUATOR

Psychological Stress Evaluation (PSE), which was developed in the early 1970s, is another technique used to detect deception. *See generally* L. Taylor, Scientific Interrogation ch. 11 (1984); Kenety, *The Psychological Stress Evaluator: The Theory, Validity and Legal Status of an Innovative "Lie Detector,"* 55 Ind. L.J. 349 (1980); Note, *The Psychological Stress Evaluator: Yesterday's Dream — Tomorrow's Nightmare,* 24 Clev. St. L. Rev. 299 (1975); Note, *The Psychological Stress Evaluator: A Recent Development in Lie Detector Technology,* 7 U. Cal. Davis L. Rev. 332 (1974).

PSE is based on the theory that a person's voice changes when that person is being deceptive; that is, the emotional stress accompanying the deception will produce physiological responses that can be recorded and analyzed. In this respect, PSE is similar to the polygraph. PSE measures changes in frequency modulations of the voice (microtremors), the inaudible component of the voice produced by muscles in speech production. As stress increases, frequency modulation decreases. In this respect, PSE differs from polygraphy because it measures only one physiological response.

The procedure used in PSE involves the audio recording of a person's voice and the transmitting of that recording into a voice stress evaluator. The evaluator receives the electronically transduced speech patterns, analyzes them, and registers the results on chart paper. The examiner then evaluates the chart for indications of stress (decreases in microtremors) and then determines whether deception is present.

Although PSE might be considered a "voice lie detector," it differs from a polygraph in a number of respects. Unlike the polygraph, a person can be subjected to PSE without being "hooked up" to the evaluator, without knowledge that the test is being conducted, and the evaluation is not limited to yes and no responses. More importantly, the validity of this type of examination is even more suspect than polygraphy. Although some studies support the validity of PSE evidence, independent studies of the technique have consistently challenged its validity. For example, in one study the PSE "failed to perform at a level better than chance expectancy. . . ." Timm, *The Efficacy of the Psychological Stress Evaluator in Detecting Deception,* 11 J. Police Sci. & Ad. 62, 65 (1983). In another study, the investigators concluded that "in no test of the present study was the PSE-criteria correspondence . . . or the differences between PSE evaluations and chance decisions and between correct and incorrect evaluations significant, as to support the claim for PSE validity as a detector of psychological stress." Nachson & Feldman, *Vocal Indices of Psychological Stress: A Validation Study of the Psychological Stress Evaluator,* 8 J. Police Sci. & Ad. 40, 50 (1980). Another commentator concluded that "the promise of voice stress analysis in the lie detection field is not and may never be a reality. All of the reliable evidence now available shows that none of the voice stress devices is useful in detecting deception. . . ." Horvath, *Detecting Decepting: The Promise and Reality of Voice Stress Analysis,* 27 J. Forensic Sci. 340, 349 (1982). *See also* D. Lykken, *supra,* at 159 ("There is no scientifically credible evidence that the PSE . . . can reliably measure difference in 'stress' as reflected in the human voice.").

A number of courts have considered the admissibility of PSE evidence. The overwhelming majority of these courts have rejected such evidence. Some courts have held that PSE evidence has not achieved general acceptance in the scientific community and thus is inadmissible under the *Frye* test. Barrel of Fun, Inc. v. State Farm Fire & Casualty, 739 F.2d 1028, 1032 (5th Cir. 1984); United States v. Traficant, 566 F. Supp. 1046, 1047 (N.D. Ohio 1983); United States v. Bothwell, 17 M.J. 684, 688 (A.C.M.R. 1983); Smith v. State, 31 Md. App. 106, 119-20, 355 A.2d 527, 535 (1976).

Others have simply concluded that PSE is not reliable. State v. Naas, 409 So. 2d 535, 548 (La. 1981); State v. Thompson, 381 So. 2d 823, 824 (La. 1980); State v. Schouest, 351 So.2d 462, 469 (La. 1977); State v. Ochalla, 285 N.W.2d 683, 684 (Minn. 1979); State v. Milano, 297 N.C. 485, 500, 256 S.E.2d 154, 163 (1979); Caldwell v. State, 267 Ark. 1053, 1060, 594 S.W.2d 24, 28 (1980); People v. Tarsia, 50 N.Y.2d 1, 405 N.E.2d 188, 191, 427 N.Y.S.2d 944, 946 (1980); State v. Makerson, 52 N.C. App. 149, 153, 277 S.E.2d 869, 872 (1981); *cf.* Heisse v. Vermont, 519 F. Supp. 36, 46 (D. Vt. 1980) (statute limiting licenses to polygraph examiners is rationally based on its wider acceptance of reliability).

In contrast to the majority rule, the New Mexico Supreme Court has ruled PSE evidence admissible in

the discretion of the trial court provided the offering party introduces evidence concerning (1) the qualifications and expertise of the examiner, (2) the reliability of the testing procedure employed as approved by authorities in the field, and (3) the validity of the test made in the particular case. Simon Neustadt Family Center, Inc. v. Bludworth, 97 N.M. 500, 504, 641 P.2d 531, 535 (1982). Thus, the New Mexico Supreme Court has adopted the same liberal approach to the admissibility of PSE evidence that it had previously embraced with polygraph evidence.

## TRUTH SERUM

So-called "truth serums" involve the use of drugs, such as scopolamine, sodium amytal, sodium pentothal, and brevital sodium, that are central nervous system depressants. *See generally* L. Taylor, Scientific Investigation ch. 10 (1984); Dession, Freedman, Donnelly & Redlich, *Drug-Induced Revelation and Criminal Investigation,* 62 Yale L.J. 315 (1952); Polen, *The Admissibility of Truth Serum Tests in the Courts,* 35 Temp. L.Q. 401 (1962); Note, *An Analysis of the Limited Legal Value of Truth Serum,* 11 Syracuse L. Rev. 64 (1959).

These drugs temporarily alter the subject's psychological state in such a way as "to induce a relaxed state of mind in which the suspect becomes more talkative and has less emotional control." MacDonald, *Truth Serum,* 46 J. Crim. L., Criminology & Police Sci. 259 (1955). The efficacy of "truth serums" as a method of lie detection has been viewed with skepticism by many commentators:

> [E]xperimental and clinical findings indicate that only individuals who have conscious and unconscious reasons for doing so are inclined to confess and yield to interrogation under drug influence. On the other hand, some are able to withhold information and some, especially character neurotics, are able to lie. Others are so suggestible they will describe, in response to suggestive questioning, behavior which never in fact occurred. Notwithstanding these limitations, a drug-induced interview may be a valuable adjunct to an otherwise thorough psychiatric examination. In some instances it may enable a psychiatrist to ascertain more quickly the depth and type of mental illness. But drugs are not "truth sera." They lessen inhibitions to verbalization and stimulate unrepressed expression not only of fact but of fancy and suggestion as well. Thus the material produced is not "truth" in the sense that it conforms to empirical fact. Dession, Freedman, Donnelly & Redlich, *supra,* at 319.

The courts have uniformly rejected the admissibility of statements made by a person while under the influence of "truth serum" drugs when those statements are offered to prove the truth of the matter asserted. *E.g.,* Lindsey v. United States, 237 F.2d 893, 895-96 (9th Cir. 1956); Fetters v. State, 436 A.2d 796, 800 (Del 1981); Zeigler v. State, 402 So. 2d 365, 373 (Fla. 1981), *cert. denied,* 455 U.S. 1035 (1982); State v. Linn, 93 Idaho 430, 433, 462 P.2d 729, 732 (1969); State v. Adams, 218 Kan. 495, 580, 545 P.2d 1134, 1144 (1976); Reed v. State, 644 S.W.2d 479, 482 (Tex. Crim. App. 1983); Cain v. State, 549 S.W.2d 707, 712 (Tex. Crim. App. 1977). *See generally* 3A J. Wigmore, Evidence § 998 (Chadbourn rev. 1970) (listing cases); Annot., 41 A.L.R.3d 1369 (1972).

This rule of exclusion also extends to the testimony of experts that a defendant was telling the truth while under the influence of such drugs. *E.g.,* Harper v. State, 249 Ga. 519, 526, 292 S.E.2d 389, 396 (1982); People v. Cox, 85 Mich. App. 314, 317, 271 N.W.2d 216, 218 (1978); Merritt v. Commonwealth, 386 S.W.2d 727, 729-30 (Ky. 1965). A different evidentiary issue is involved when an expert offers an opinion about a subject's mental state based on an examination that included the use of "truth serum" drugs. Some courts permit expert testimony in this situation. *See* People v. Cartier, 51 Cal. 2d 590, 601, 335 P.2d 114, 122 (1959); State v. White, 60 Wash. 2d 551, 374 P.2d 942, 950-53 (1962), *cert. denied,* 375 U.S. 883 (1963). *But see* People v. Ford, 304 N.Y. 679, 681-82, 107 N.E.2d 595, 596-97 (1952).

Finally, the use of "truth serum" drugs to induce a confession is challengeable on due process grounds. As the U.S. Supreme Court has remarked: "It is difficult to imagine a situation in which a confession would be less the product of a free intellect, less voluntary, than when brought about by a drug having the effect of a 'truth serum.' " Townsend v. Sain, 372 U.S. 293, 307-08 (1963); *see also* People v. Johnson, 32 Cal. App. 3d 988, 1002 109 Cal. Rptr. 118, 127 (1973).

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