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Note

***691 UNITED STATES V. POSADO: THE FIFTH CIRCUIT APPLIES DAUBERT TO POLYGRAPH EVIDENCE**

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I. Facts

The three defendants in *United States v. Posado* [FN1] were arrested at Houston International Airport while waiting to board their flight and were charged with conspiracy to possess and possession with intent to distribute in excess of five kilograms of cocaine. The defendants later claimed the law enforcement officers who arrested them searched their bags before obtaining their consent. They moved to suppress the evidence based on the Fourth Amendment. [FN2] The officers, however, claimed they obtained consent both orally and in writing before searching the bags and finding cocaine. To support the truth of their assertions regarding the circumstances of the search, the defendants arranged to undergo polygraph examinations. They informed the prosecution of this intention, invited the prosecution to participate in the tests, and offered to stipulate that the results would be admissible for all purposes. The prosecution declined. The defendants proceeded with the polygraph examinations. Each defendant submitted to two polygraph examinations by two separate examiners. Both sets of results indicated that the defendants were telling the truth. [FN3]

Thereafter, the defendants requested that the polygraph examiners be allowed to testify at the suppression hearing or, in the alternative, that a hearing be held to determine the admissibility of the polygraph evidence under the Federal Rules of Evidence and the guidelines established by the United States Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* [FN4] The defendants' proffer included the polygraph results, the qualifications of the two examiners and the affidavit of a third polygraph expert in support of the general reliability of the polygraph technique. The district court summarily refused to allow the polygraph evidence and refused to hold the requested evidentiary hearing. The district court then conducted the suppression hearing and denied the motion to suppress, finding that the defendants knowingly and voluntarily consented to a search before the bags were opened. [FN5] The defendants were tried and convicted on both counts. They appealed to the United States Court of Appeals for the Fifth Circuit. Held: The district court erred in applying a per se rule against the admissibility of polygraph evidence. Therefore, "the district court's ruling on the motion to suppress is (reversed), the defendants' convictions are (vacated) and *692 the case is (remanded) to the district court for consideration of the evidentiary reliability and relevance of the polygraph evidence proffered by the defendants under the principles embodied in the Federal Rules of Evidence and the Supreme Court decision in *Daubert*." [FN6]

Posado is the first case in which a federal court has relied on *Daubert* to change its position on the admissibility of polygraph evidence. [FN7] Furthermore, Posado addresses a highly controversial subject on which the Supreme Court has never ruled. [FN8] This case not only changes the law for the district courts within the Fifth Circuit, but is likely to be persuasive to other federal courts and to the many state courts whose own evidentiary guidelines are based on the Federal Rules of Evidence. Posado is particularly likely to influence those jurisdictions, such as Louisiana, which have explicitly announced their intention to be guided by other courts' interpretations of the Federal Rules or codes of evidence similar to the Federal Rules. [FN9] It is a case which, in its own words, "open(s) a legal Pandora's box" and "raise(s) as many questions as it answers," [FN10] but nonetheless points the way in which courts are now likely to go.

II. Prior Law

A. *Frye v. United States*

The polygraph, commonly known as the "lie detector," does not detect lies. It measures changes in blood pressure, pulse, respiration and galvanic skin response (GSR, or sweating). The developers of the polygraph believe these changes are indicative of the increased stress assumed to accompany the act of lying. [FN11] A *693 professional examiner or "polygrapher" is needed to administer the polygraph, evaluate the results and decide whether truthfulness or deception is indicated. [FN12] A party wishing to introduce polygraph evidence does so by tendering the polygrapher as an expert witness who will testify in the form of an opinion as to the subject's veracity. [FN13]

While the polygraph has enjoyed widespread use by employers and law enforcement agencies in extra-judicial contexts, [FN14] it has received a chilly reception from the courts. [FN15] Almost all jurisdictions, federal and state, have until recently chosen to follow *Frye v. United States*, [FN16] a short, citation-free case from the then Court of Appeals for the District of Columbia. The defendant in *Frye*, convicted of murder, appealed the trial court decision on the grounds that the trial court denied his proffer of an expert witness to testify to the exculpatory results obtained before the trial from a primitive version of today's polygraph. [FN17] The defendant had even offered to have the proffered witness conduct another test in the presence of the jury. The *Frye* court affirmed the conviction based on its view that this kind of 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." [FN18] The court stated as a general principle that "while 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 *694 acceptance in the particular field in which it belongs." [FN19] This became known as the "general acceptance test" or "Frye test." Thereafter, courts adopted this test not only to exclude polygraph evidence, but to determine the admissibility of almost all novel evidence claiming to be scientific or technical. [FN20]

B. The Fifth Circuit

The Fifth Circuit cited *Frye* in one of its earliest polygraph cases, *United States v. Frogge*. [FN21] The defendants in *Frogge* appealed their convictions of attempted escape from federal custody. They claimed, as an affirmative defense, that the United States Marshals from whose custody they tried to escape had accepted a bribe offer from them. The trial court instructed the jury to acquit the defendants if they believed the bribery evidence. The court refused, however, to grant the defendants' motion for a court appointed polygraph examination. The Fifth Circuit affirmed the convictions, relying on *Frye* and a United States Tenth Circuit case [FN22] for the proposition that "the rule is well established in federal criminal cases that the results of lie detector tests are inadmissible." [FN23]

In *United States v. Gloria*, the Fifth Circuit made clear that its rule against polygraph evidence was specifically based on the *Frye* "general acceptance" rationale. [FN24] The defendant underwent a polygraph examination before trial which supported his version of the events in question. The trial court refused to admit the polygraph evidence. In rejecting the defendant's appeal, the Fifth Circuit stated that "American courts have traditionally held such evidence inadmissible in criminal proceedings on behalf of either the prosecution or the defense because the polygraph has not yet been accepted by the courts as a scientifically reliable method of ascertaining truth or deception." [FN25] The Fifth Circuit reiterated this approach without additional comment in several subsequent cases which, like *Frogge* and *Gloria*, were all criminal proceedings. [FN26]

In *Smith v. Gonzales*, a civil rights action for false arrest and commitment, the Fifth Circuit stated that it "need not address the polygraph issue," [FN27] but added in a footnote that "polygraph evidence is inadmissible" and that there is "no exception to the rule for civil cases, nor for instances where the polygraph results are purportedly offered for a purpose other than that of asserting the truth *695 of the matter contained therein." [FN28] In *Barrel of Fun, Inc. v. State Farm Fire & Casualty Co.*, [FN29] also a civil case, the defendant insurance company refused to pay a fire claim based on its assertion of arson. In support of its assertion, the insurance company introduced expert testimony based on the results of a psychological stress evaluation (PSE), a type of "voice stress analysis" purportedly indicating whether a person is lying by measuring the stress in his voice. [FN30] The expert testimony in this case indicated that the plaintiff store owner knew, at the very least, that a fire would be set. The trial court allowed the testimony and in a bench trial found for the defendant. The plaintiff appealed. The Fifth Circuit vacated and remanded, concluding that there was no relevant distinction between the PSE and the polygraph and holding that expert testimony based on either technique was inadmissible. The court reiterated its position that "the polygraph does not command sufficient scientific acceptance" [FN31] and, while raising the possibility that the

Federal Rules of Evidence might have abolished the Frye test, stated that it "continued to utilize Frye's 'general scientific acceptability' criteria." [FN32] At the same time, the court added three other reasons for its continued barring of polygraph evidence: (1) the insufficient reliability of polygraph evidence, [FN33] (2) the risk that the trier of fact--judge or jury--would "abdicate . . . responsibility for determining credibility, and rely instead upon the assessment of a machine," [FN34] and (3) the risk that the trier of fact would give too much weight to polygraph evidence, which is "shrouded with an aura of near infallibility, akin to the ancient oracle of Delphi." [FN35]

Barrel of Fun was the Fifth Circuit's strongest and most detailed expression of opposition to polygraph evidence. While mainly relying on Frye, it also stated objections to polygraph evidence which have no connection to Frye. Significantly, this decision came four years after twelve judges of the Fifth Circuit (including Judge Tate, who was part of the Barrel of Fun panel) indicated in *United States v. Clark* a willingness to reconsider polygraph evidence if a proffer were made of "evidence tending to show advances in the state of polygraph art since the seminal opinion in *Frye v. United States* . . . upon which our authorities are based, or the competence of polygraph operators." [FN36]

***696** A softening of the Fifth Circuit's position occurred in *Bennett v. The City of Grand Prairie, Texas*, [FN37] the last major statement on the issue before *Posado*. *Bennett* reiterated the rule against the admission of polygraph evidence at trial. [FN38] It held, however, that a magistrate could consider polygraph evidence, in conjunction with other evidence, in determining probable cause for the issuance of an arrest warrant. [FN39] The *Bennett* court did not regard this as a true exception to the rule against polygraph evidence; rather, it saw no point in excluding polygraph evidence from a determination in which affidavits, hearsay evidence and evidence received from informants are allowed. [FN40]

The Fifth Circuit's position on polygraph evidence after *Bennett* can still be described--as *Posado* described it--as per se inadmissibility. [FN41] *Bennett* departed from its predecessors only in dicta. The opinion cited cases from other jurisdictions less hostile to polygraph evidence. [FN42] Moreover, the court twice stated that polygraph examinations can correctly detect truth or deception "80 to 90 percent of the time" [FN43]--a claim which many observers, then and now, would regard with skepticism. [FN44] *Bennett* also stated that "(u)nlike a lay jury, a magistrate possesses legal expertise; when determining probable cause, he is unlikely to be intimidated by claims of scientific authority into assigning an inappropriate evidentiary value to a polygraph report or to rely excessively on it." [FN45] Perhaps this statement was a response to *Barrel of Fun*'s concern that a judge as well as a jury might be overinfluenced by polygraph evidence. [FN46] Nonetheless, the Fifth Circuit's position on polygraph evidence remained among the most exclusionary in the country until *Posado*.

***697 C. Other Jurisdictions**

The Second [FN47] and Fourth [FN48] Circuits, as well as a plurality of state jurisdictions, [FN49] have had per se rules similar to that of the Fifth Circuit. The Third, [FN50] Tenth, [FN51] and D.C. [FN52] Circuits, however, have excluded polygraph evidence except when elementary fairness requires its admission; i.e., when a criminal defendant raises an issue the circumstances of which involve a polygraph and the prosecution is compelled to respond. [FN53] Many jurisdictions otherwise hostile to polygraph evidence allow it if the parties stipulate in advance that the results will be admissible and if certain conditions designed to ensure reliability are observed. Trial courts, however, retain the discretion to exclude polygraph evidence even if stipulated. [FN54] The Sixth, [FN55] Eighth, [FN56] and Eleventh [FN57] Circuits have adopted this approach. Still, some jurisdictions refuse to admit even stipulated polygraph evidence over an objection. [FN58]

Some jurisdictions which otherwise exclude polygraph evidence allow it under very limited, specified circumstances even if not stipulated. The Eighth Circuit allows it to show motive per Federal Rule 404(B) or to impeach testimony. [FN59] The Ninth Circuit, which is "uniformly inhospitable" to polygraph ***698** evidence because of its "overwhelming potential for prejudice," has suggested it might allow it "for a limited purpose that is unrelated to the substantive correctness of the results." [FN60] The Eleventh Circuit also allows polygraph evidence to impeach or corroborate testimony, but requires notice to the opposing party. In addition, the opposing party must be given an opportunity to arrange its own polygraph, after which admission of the evidence is still discretionary. [FN61] Louisiana, interestingly, which has traditionally excluded polygraph evidence at trial, appears to allow it in post-trial proceedings. [FN62]

A few jurisdictions give substantial discretion to trial courts to admit or exclude polygraph evidence. The First Circuit [FN63] and Seventh Circuit [FN64] generally disfavor polygraph evidence but allow the trial court

discretion, though "for the most part that discretion has been exercised to exclude the evidence." [FN65] New Mexico is the only jurisdiction to allow polygraph evidence for all purposes, subject only to statutory provisions designed to ensure reliability and to the sound discretion of the trial court. [FN66]

D. Daubert v. Merrell Dow Pharmaceuticals, Inc.

The "Frye test" is no longer "good law." It survived, old and frayed but still formidable, until 1993, when the United States Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, [FN67] a case involving expert scientific testimony *699 about the causal link between birth defects and the drug Bendectin, ruled that the Federal Rules of Evidence (Rules) superseded the Frye test. [FN68] The Court emphasized that the basic premise of the Rules, according to Rule 402, is that "all relevant evidence is admissible." [FN69] "Relevant evidence" is defined by Rule 401 as that which has "any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." [FN70] Rule 702 specifically governs the admissibility of expert testimony by providing that "(i)f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise." [FN71] While nothing in Rule 702 makes "general acceptance" a prerequisite to admissibility, the Rule does require, according to *Daubert*, that "the trial judge . . . ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." [FN72] Scientific evidence is "reliable" if it is scientifically valid, i.e., "ground(ed) in the methods and procedures of science . . . derived by the scientific method." [FN73] It is "relevant" if it "assist(s) the trier of fact to understand the evidence or to determine a fact in issue." [FN74] The Court emphasized the "gatekeeping" role of the trial judge, whose task it is to ensure that an expert's testimony is both reliable and relevant, and expressed confidence that "federal judges possess the capacity to undertake this review." [FN75]

The *Daubert* Court added some "general observations" in the form of four factors which it suggested might assist the trial court in its determination of reliability: (1) whether the theory or technique can be (and has been) tested according to the scientific method, (2) whether it has been subjected to peer review and publication, (3) the known or potential rate of error, and (4) "general acceptance," which is still relevant though not determinative. [FN76] The Court also noted that Rule 403 permits the trial court to exclude even relevant evidence "if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury," and cited with approval the view that the judge may exercise his discretion under Rule 403 more forcefully with regard to expert than to lay testimony. [FN77] In addition, the Court downplayed the potential for jury confusion, pointing out that "(v)igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are *700 the traditional and appropriate means of attacking shaky but admissible evidence." Finally, the Court noted that summary judgment and the directed verdict are always available to the parties in a case. [FN78]

Daubert has been characterized as mandating a "wider gate" but a "more vigilant gatekeeper." [FN79] It removed the requirement of "general acceptance" but replaced it with a more rigorous test of scientific reliability, which is, however, tempered by a general inclination to allow evidence which has probative worth and is not overly prejudicial. It was only a matter of time before *Daubert* would have its impact on the question of polygraph evidence.

III. How Posado Changes the Law

A. The Fundamental Change: No A Priori Rule

Posado clearly and repeatedly states that a per se rule against the admissibility of polygraph evidence is no longer viable after *Daubert*. [FN80] It notes that the Fifth Circuit per se rule was based on Frye [FN81] and that *Daubert* expressly rejected the Frye test. Nowhere, however, does Posado suggest that a per se rule not based on Frye would be acceptable. Instead, the holding of Posado strongly suggests that no circuit-wide rule can take the place of the trial court's case-by-case consideration of the relevance, reliability and prejudicial effect of the evidence in question given the specific circumstances of the case before it. [FN82] In other words, Posado reads *Daubert* as not only invalidating the Frye test, but as mandating trial courts to consider scientific or technical evidence on a case-by-case basis instead of simply applying an a priori rule, per se or otherwise. Posado therefore changes the law within the Fifth Circuit not only by doing away with the per se rule against polygraph evidence, but also by proposing no other rule in its place. The Federal Rules of Evidence as interpreted by *Daubert* are the only rules now governing

polygraph evidence within the Fifth Circuit.

The Posado court could have narrowly reasoned that Daubert merely invalidated the Frye test but did not preclude a non-Frye-based rule against polygraph evidence. Other courts have so reasoned. The Sixth Circuit, in *Conti v. Commissioner of Internal Revenue*, [FN83] rejected an appeal from the Tax Court's ruling that unstipulated polygraph evidence was not admissible. The Sixth Circuit determined that it "need not consider whether the Tax Court actually conducted a proper analysis of the polygraph evidence under the Supreme Court's decision in *701 Daubert." [FN84] The Sixth Circuit reasoned that the Tax Court based its decision on two independent grounds: (1) the Frye test, and (2) the Sixth Circuit rule, developed in *Wolfel v. Holbrook* [FN85] and *Barnier v. Szentmiklosi*, [FN86] which states that "unilaterally obtained polygraph evidence is almost never admissible under Evidence Rule 403." [FN87] The Sixth Circuit determined that the Tax Court properly relied on the *Wolfel/Barnier* rule (which was based on Federal Rule 403 rather than on Frye) as an "independent basis to deny the admission of the polygraph evidence," [FN88] thus implicitly concluding that the rule survived Daubert.

Two district courts within the Second Circuit reached a similar conclusion. The defendant in *United States v. Black* [FN89] sought to introduce the results of polygraph examinations which he claimed would confirm the veracity of his testimony and that of a friendly witness. The court denied the defendant's motion, relying on the Second Circuit's non-Frye-based per se exclusionary rule developed in *United States v. Bortnovsky* [FN90] and *United States v. Rea*. [FN91] The court explicitly stated that "(n)othing in Daubert changes the rationale set forth in *Rea* and *Bortnovsky*" and that "nothing in Daubert would disturb the settled precedent that polygraph evidence is neither reliable nor admissible." [FN92] In *United States v. Lech*, [FN93] the defendant moved to introduce the results of two separate polygraph examinations by two separate examiners. The court stated that it was willing to assume that the proffered evidence met the Daubert reliability criteria, but held that the probative value of the particular questions asked and answers given was far outweighed by the danger of unfair prejudice and jury confusion. [FN94] The continued viability of the Second Circuit's per se rule against the admission of polygraph evidence was thus not essential to the court's decision. Nevertheless, the court considered and rejected the defendant's argument that the rule needed to be reevaluated after Daubert, calling the argument "tenuous" because "the basis for the Second Circuit's reluctance to admit polygraph evidence is not based upon its view that polygraph exams are not generally accepted in the scientific community. Instead, the Second Circuit's concern . . . centers upon the methodology employed by the polygraph examiner, an important factor under Daubert." [FN95]

*702 These decisions interpreted Daubert as simply requiring that any circuit-wide rule regarding expert testimony not be based on the Frye "general acceptance" test. The Eleventh Circuit, on the other hand, has interpreted Daubert (in cases unrelated to polygraph evidence) as requiring an evidentiary hearing at the trial court level whenever the admissibility of expert testimony is at issue. [FN96] Though it has not ruled on the admissibility of polygraph evidence after Daubert, it has "encourage(d) district courts to make specific fact findings concerning their application of Rule 702 and Daubert in each case where the question arises, because such findings will facilitate this court's appellate review." [FN97]

Posado's interpretation of Daubert is in accord with the Eleventh Circuit. [FN98] The Posado court acknowledges that in applying this interpretation of Daubert to polygraph evidence it may be "opening a legal Pandora's box," but expresses its belief that "the wisdom and experience of our federal district judges will be required to fashion the principles that will ultimately control the admissibility of polygraph evidence under Daubert." [FN99]

B. Reliability of Polygraph Evidence

While stating that it is "not now hold(ing) that polygraph examinations are scientifically valid," [FN100] Posado attempts, albeit in passing, to make the case for the general reliability of polygraph evidence:

There can be no doubt that tremendous advances have been made in polygraph instrumentation and technique in the years since Frye Current research indicates that, when given under controlled conditions, the polygraph technique accurately predicts truth or deception between seventy and ninety percent of the time. Remaining controversy about test accuracy is almost unanimously attributed to variations in the integrity of the testing environment and the qualifications of the examiner. Such variation also exists in many of the disciplines and for much of the scientific evidence we routinely find admissible under Rule 702. Further, there is good indication that polygraph technique and the requirements for professional polygraphists are becoming progressively more standardized. In addition, polygraph technique has been and continues to be subjected to extensive study and

publication. Finally, polygraphy is now widely used by employers and government agencies alike. [FN101]

***703** This argument in favor of polygraph reliability is not necessary to the holding, which is clearly based on the logic of the Federal Rules of Evidence and *Daubert*. [FN102] It does, however, suggest that trial courts should no longer regard polygraph evidence as generally unreliable. [FN103] They should instead approach the issue of reliability with no preconceptions one way or another.

C. Probative Value Versus Prejudicial Effect

Posado's discussion of probative value versus prejudicial effect--"precisely the inquiry required of the district court by Rule 403" [FN104]--is specific to the facts of the instant case. The court cites "several factors that may operate to counterbalance the potential prejudicial effect of this testimony." [FN105]

First, the defense offered the prosecution the opportunity to participate in the exams and offered to stipulate as to use and admissibility in advance of knowing what the results would be. "In such a case, both parties have a risk in the outcome of the polygraph examination, simultaneously reducing the possibility of unfair prejudice and increasing reliability." [FN106] This is the rationale of those jurisdictions which allow polygraph evidence only if stipulated. [FN107] Reliability is increased because the defendant, knowing that his freedom is at stake, is likely to respond as polygraph theory suggests he should. In contrast, a defendant who undertakes a polygraph exam knowing that an adverse result can be quietly discarded is likely to remain at ease even when lying. The possibility of unfair prejudice is reduced because both parties agree to the exam, implicitly accept its relevance and reliability, and are willing to have the outcome of the case affected by it. In *Posado*, however, the prosecution declined the defense's offer, so that neither party had a risk in the outcome. The *Posado* court seems to be suggesting that even an unaccepted offer to stipulate will weigh in favor of admissibility. [FN108]

Second, the evidence in this case was offered in a pre-trial hearing before a judge. The court cites *Bennett* in support of the proposition that "(a) district ***704** court judge is much less likely than a lay jury to be intimidated by claims of scientific validity into assigning an inappropriate evidentiary value to polygraph evidence." [FN109] *Bennett* allowed polygraph evidence in a probable cause hearing; [FN110] *Posado* deals with a suppression hearing. A probable cause hearing is generally *ex parte* and may rely on the "totality of the circumstances," including affidavits and anonymous informants. [FN111] A suppression hearing, though not subject to the rules of evidence (except regarding privileges), [FN112] is an adversarial process more akin to a trial, and is often, as in this case, determinative of the outcome of the trial. If a judge can be relied upon not to give undue weight to polygraph evidence when hearing a pre-trial motion, maybe he can also be relied upon not to give undue weight to polygraph evidence when sitting as the trier of fact in a bench trial. The *Posado* court may have intended to limit the scope of its observation to pre-trial motions ("(w)e have consistently held that the rules of evidence are relaxed in pretrial suppression hearings" [FN113]), but its logic appears to extend to all hearings or trials before a judge.

Third, this was precisely the fact situation anticipated by Justice (later Fifth Circuit Judge) *Tate* in *State v. Catanese* [FN114] and described by commentators *Wright & Graham* as a case in which "the issue turns on the credibility of two witnesses whose testimony is so diametrically opposed that it can only be explained on the supposition that one of them is lying." [FN115] Here the district court was "required . . . to decide between the story told by the officers and that told by the defendants." [FN116] This was "not an unusual situation, and perhaps not sufficient alone to justify admission of 'tie-breaker' evidence carrying a high potential for prejudicial effect," [FN117] except that there was more: the only Spanish-speaking officer on the scene, who alone could testify as to what the Spanish-speaking defendants were told and as to their understanding of whether they were consenting to a search, was a particularly unreliable witness based on inconsistencies in his testimony and a past instance of lying. "Taken individually, each one of these inconsistencies can be explained and may seem inconsequential. Taken together, however, we believe that they can be said to enhance the need for evidence, and therefore its probative value, for clarifying which of the competing versions of what happened that day is true." [FN118] Impliedly, the outcome would be different if the officer were not the sole prosecution witness to the conversation in question or if the officer were more credible. The court ***705** does not say whether the same probative value would attach to polygraph evidence offered by the prosecution (for example, the favorable polygraph results of a testifying officer) against a sole defense witness of similarly problematic credibility. [FN119]

In summary, *Posado* does away with the Fifth Circuit's *per se* rule against polygraph evidence but offers no other rule in its place. It requires the trial courts to approach polygraph evidence on a case-by-case basis in accordance

with the Federal Rules of Evidence and Daubert. It suggests that polygraph evidence may be reliable under some circumstances. It offers an example of a Rule 403 analysis, in which it suggests that (1) an offer to stipulate (and, a fortiori, an actual stipulation) may reduce the prejudicial effect of polygraph evidence, (2) a pre-trial hearing before a judge (and maybe any bench trial) is a less prejudicial setting than a jury trial for such evidence, and (3) the need for additional, "tie-breaking" evidence in a close case where one witness directly contradicts the other increases the probative value of polygraph evidence. [FN120]

IV. Analysis

Few observers would disagree with the Posado court's findings that "tremendous advances have been made in polygraph instrumentation and technique in the years since Frye" and that "polygraph technique and the requirements for professional polygraphists are becoming progressively more standardized." [FN121] The claim that "the polygraph accurately predicts truth or deception between seventy and ninety percent of the time," for which Bennett among other authorities is cited, [FN122] is more dubious. [FN123] It would be more accurate to say that estimates of polygraph reliability range from below fifty percent to over ninety percent and that none of these estimates are free from methodological difficulties. [FN124] Even if a high estimate is accepted it cannot be taken at face value because of the unequal distribution of guilty and innocent in the universe of polygraph subjects. [FN125] In short, "no overall measure or single, simple judgment of polygraph testing validity can be established based on available scientific evidence." [FN126]

***706** The court is on stronger ground in stating that "controversy about test accuracy is almost unanimously attributed to variations in the integrity of the testing environment and the qualifications of the examiner," [FN127] which is precisely the reason why a case-by-case determination of reliability makes practical as well as legal sense. In such a determination, evidence can be introduced to show that some methods of questioning and scoring are more reliable than others under specified circumstances, that the most reliable methods were used and that the examiner possess the requisite level of training, experience and objectivity. [FN128]

Posado claims that other disciplines and other types of scientific evidence which are routinely accepted suffer from variations in reliability similar to those encountered with polygraph evidence. [FN129] This, if true, is not an argument for polygraph evidence but an argument for not singling out polygraph evidence as uniquely prone to unreliability. Indeed, Daubert requires that "any and all scientific testimony or evidence admitted (be) not only relevant, but reliable." [FN130] All such evidence should be subjected to the Daubert reliability criteria or "observations." [FN131]

State v. Foret, a Louisiana case, is a good example of the application of the Daubert criteria to expert psychological testimony. [FN132] The Louisiana Code of Evidence is largely based on the Federal Rules of Evidence. In Foret, the Louisiana Supreme Court announced its intention to follow Daubert and to adopt the Daubert criteria. [FN133] The defendant in Foret was convicted in a jury trial for attempted molestation of a juvenile. The alleged victim's testimony was an important factor in the jury's determination. That testimony was bolstered by a psychologist's expert testimony. The psychologist opined that the alleged victim was telling the truth. To support his conclusions, the psychologist relied on the supposed "dynamics" of Child Sexual Abuse Accommodation Syndrome (CSAAS). Victims with this syndrome are said to display certain characteristic reactions and behaviors which distinguish them from children in general. [FN134]

On appeal, the Louisiana Supreme Court determined that CSAAS failed at least three of the Daubert reliability factors. [FN135] First, the theory upon which CSAAS was based was inherently irrefutable (as are many psychological theories, ***707** especially those belonging to the realm of psychodynamic psychology) and hence untestable. [FN136] Second, one study attempting to validate CSAAS as a diagnostic tool found a thirty-two percent rate of error. The author of the study found the rate of error acceptable. The court, for the purpose of admissibility of testimony, did not. [FN137] Third, the usefulness, reliability and validity of CSAAS were not generally accepted either in the legal or scientific community. [FN138] The Louisiana Supreme Court faulted the trial court for not conducting a reliability analysis and thus failing to exercise its "gatekeeping" function, though the trial was conducted before the Daubert decision was announced. [FN139]

Even more significant than the Daubert-guided reliability analysis, was the Court's examination of the prejudicial effect of the expert testimony balanced against its probative worth under Rule 403 (Article 403 in Louisiana). The court ruled that CSAAS-based testimony was unreliable and, therefore, of extremely low probative worth. For the

purpose of argument, however, the court went on to assume that it was reliable and to ask whether, as expert testimony purporting to determine a witness' credibility, it could be helpful to the trier of fact. [FN140] The court surveyed other jurisdictions and concluded that "they almost uniformly hold that the testimony is inadmissible" because "(t)estimony by an expert is not particularly helpful to a jury that must rely upon its own common sense as a barometer for the evaluation of truthfulness." [FN141] The court cited with approval *United States v. Azure*, [FN142] which held that a pediatrician's comment on whether or not the alleged victim of sexual abuse was telling the truth was improperly allowed. The court also quoted *Azure's* citation of *United States v. Barnard*: [FN143]

***708** Credibility, however, is for the jury--the jury is the lie detector in the courtroom. . . . It is now suggested that psychiatrists and psychologists have more (expertise in weighing the veracity of a witness) than either judges or juries, and that their opinions can be of value to both judges and juries in determining (credibility). Perhaps. The effect of receiving such testimony, however, may be twofold: first, it may cause juries to surrender their own common sense in weighing testimony; second, it may produce a trial within a trial on what is a collateral but still an important matter. [FN144]

Thus, the *Foret* court held: "(T)he use of CSAAS-based testimony for the purpose of bolstering a witness' credibility creates a risk of prejudice that outweighs its questionable probative value." [FN145]

Foret belongs to a significant line of cases both before and after *Daubert* disallowing psychiatric and psychological testimony purporting to determine a witness' credibility. [FN146] One of these cases, *State v. Alberico*, [FN147] did rule that expert psychological testimony relating to post-traumatic stress disorder (PTSD) was reliable. Moreover, the court found the testimony probative of whether the victim was raped or sexually abused and not unduly prejudicial. It disallowed such testimony, however, because it was offered to prove the alleged victim's truthfulness and "that is for the jury to decide." [FN148] The reasoning of these cases is reminiscent of the cases which have disallowed polygraph evidence, such as the Fifth Circuit's *Barrel of Fun* [FN149] and, to some extent, Louisiana's *State v. Catanese*. [FN150] The common thread, in addition to questions of reliability, is the fear that the trier of fact would be so overawed by expert testimony as to a witness' credibility [FN151] that it would abdicate its own responsibility to make this determination. [FN152]

Posado suggests that a judge can be relied upon not to give undue weight to polygraph evidence despite the claim of such evidence to determine a witness' ***709** credibility. [FN153] Research suggests that a jury can as well. While there is no hard data supporting the oft-expressed view that juries are unduly influenced by polygraph evidence, there are studies indicating that juries are not unduly influenced, especially when properly instructed. [FN154] One such study concluded that polygraph evidence offered in exoneration of criminal defendants has a significant but not overwhelming effect on juries' perceptions of guilt, and that such effect is slightly reduced by the inclusion of a cautionary statement from the judge. [FN155] Furthermore, as *Daubert* reminds us, our adversarial system is characterized by "(v)igorous cross-examination" and "presentation of contrary evidence," [FN156] so that even if one side presents its "oracle of Delphi" the other side has the opportunity to present its "oracle of Delphi."

The probative value and prejudicial effect of polygraph evidence vary according to the nature of the case and the purpose for which the evidence is sought to be used. [FN157] It appears that, in general, probative value is at its greatest and prejudicial effect at its lowest when the evidence is offered by a criminal defendant, who is often in need of whatever exculpatory evidence he can get. Conversely, probative value is at its lowest and prejudicial effect at its greatest when offered against a criminal defendant, against whom the greater resources and (typically) greater credibility of the state are already arrayed. [FN158] *Posado* is certainly not inconsistent with this view and may even be read to imply it. [FN159]

Some have suggested that a lower threshold of admissibility for a criminal defendant might be required by the due process clauses of the Fifth and Fourteenth Amendments and compulsory process clause of the Sixth Amendment to the United States Constitution. [FN160] Support for this view is grounded in two United States Supreme Court cases which limited the extent to which a legislature or court may impinge on a defendant's right to present and compel testimony. [FN161] The defendant ***710** in *Washington v. Texas* [FN162] had been barred by state statute from introducing the exculpatory testimony of her accomplice. It was undisputed that the accomplice's testimony would have been relevant and that it was vital to the defense. The court held that the statute, which the state justified on the grounds of the presumed unreliability of an accomplice's testimony, was unconstitutional in that it arbitrarily infringed upon the defendant's Sixth Amendment right to present witnesses in her favor. [FN163] Chief Justice Warren declared that

(t)he right to offer the testimony of witnesses, and to compel their attendance, if necessary, is in plain terms the right to present a defense, the right to present the defendant's version of the facts as well as the prosecution's to the jury so it may decide where the truth lies. Just as an accused has the right to confront the prosecution's witnesses for the purpose of challenging their testimony, he has the right to present his own witnesses to establish a defense. This right is a fundamental element of due process of law. [FN164]

The defendant in *Chambers v. Mississippi* [FN165] was convicted of murdering a police officer during a riot. Only one witness (another police officer) claimed to have seen the defendant shoot the officer. Another individual confessed to the murder on four separate occasions but later repudiated his confession. The defendant was prevented by Mississippi's "voucher rule" [FN166] from cross-examining this individual. In addition, the hearsay rule prevented the defendant from eliciting testimony from the persons to whom the individual has confessed. The Supreme Court reversed the conviction. It found the disallowed testimony to be both facially reliable and critical to the defendant's case. Moreover, the court held that "the exclusion of this critical evidence, coupled with the State's refusal to permit Chambers to cross-examine (the individual who had confessed), denied him a trial in accord with traditional and fundamental standards of due process." [FN167] The court emphasized that its holding was limited to "the facts and circumstances of this case" and that it established "no new principles of constitutional law." [FN168] *Chambers* nevertheless stands for the proposition that rules of evidence cannot have the effect of depriving a criminal defendant of his right to mount a defense.

A polygraph examiner is, of course, an expert witness rather than a fact witness as in *Washington v. Texas* and *Chambers*. His testimony relates not to the facts themselves but to whether another witness is telling the truth about the *711 facts. [FN169] Thus, while the spirit of *Washington v. Texas* and *Chambers* may apply to polygraph evidence, the holdings probably do not. The right to present a defense does not necessarily include the right to introduce any expert testimony whatsoever, exculpatory though it may be. [FN170] "(A)ny and all scientific testimony or evidence" must be relevant, reliable and not overly prejudicial. [FN171]

Nevertheless, *Washington v. Texas* and *Chambers* should be kept in mind when considering the admissibility of polygraph evidence proffered by a criminal defendant. In a close case, a criminal defendant should prevail. [FN172] Additionally, a state rule of evidence which deviates from the Federal Rules of Evidence might have to yield to a criminal defendant's right to present expert testimony which is relevant, reliable and not unduly prejudicial. Louisiana, for example, provides that "in a criminal case, an expert witness shall not express an opinion as to the guilt or innocence of the accused." [FN173] While expert testimony that a criminal defendant is telling the truth might be the functional equivalent of an opinion as to his guilt or innocence, it is not quite the same and, under *Washington v. Texas* and *Chambers* (in addition to *Daubert* and *Posado*) should not be disallowed.

Finally, it is axiomatic that polygraph evidence can never be probative if truthful answers to the questions asked do not unambiguously "make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." [FN174] The defendant in *United States v. Lech*, [FN175] for example, was accused of bribing Board of Education officials to award him an asbestos removal contract. He sought to introduce evidence that he truthfully answered "no" when asked during the polygraph examinations whether he did indeed "bribe" or "try to bribe" the officials. [FN176] The trial court found that the questions related to the defendant's belief about the legal implications of his actions rather than to any factual circumstances underlying his belief, and that such information would not assist the jury in its role as trier of fact. [FN177]

The defendant in *United States v. Kwong* [FN178] was accused of attempting to murder an assistant United States attorney by sending her a booby-trapped *712 package. He sought to introduce evidence that he truthfully answered "no" when asked during the polygraph examination whether he "conspire(d) with anyone" to send the package and whether he was "the one that sent that package." [FN179] The trial court ruled, and the Second Circuit affirmed, that the questions were inherently ambiguous no matter how they were answered: "Kwong, however, was not charged with conspiracy and thus even a truthful 'no' response would not preclude a guilty verdict on attempted murder," and "even if Kwong honestly answered that he did not personally mail the package, this does not mean that he did not construct the booby-trap and arrange to have it mailed." [FN180]

V. Conclusion

A per se rule against the admissibility of polygraph evidence is "no longer viable (at least not in the Fifth Circuit) after Daubert." [FN181] An evidentiary hearing should be held whenever polygraph evidence is offered. [FN182] The evidence must be both relevant and reliable [FN183] and its probative value must not be "substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence." [FN184]

Polygraph evidence is capable of attaining an acceptable level of reliability. [FN185] Its potential prejudicial effect [FN186] can be offset by the need for the evidence and the use to which it is put. [FN187] In general, probative value is at its greatest and prejudicial effect at its lowest when the evidence is offered by a criminal defendant, when eyewitnesses are few and when the prosecution was offered an opportunity to participate in and stipulate to the polygraph examination.

A party seeking to admit polygraph evidence should ensure the highest degree of reliability possible. This can be done by (1) selecting an examiner or examiners whose credentials, experience and reputation will be relatively unassailable by the opposing party, (2) ascertaining that the examiner or examiners employ whichever methods of questioning and scoring have been shown by research to be appropriate for the subject, circumstances and type of case involved, and that the questions asked are unambiguously probative, (3) *713 engaging two separate examiners and having each examiner conduct two separate sets of tests, (4) inviting the opposing party to participate in the tests and offering to stipulate in advance to the admissibility of the results, and (5) possibly arranging for yet a third polygraph expert to testify as to the qualifications of the examiners and the soundness of their methodology.

A party should be prepared to show the specific need for the polygraph evidence. A scarcity of eyewitnesses, a critical issue whose resolution depends on which of two witnesses is telling the truth, some reason to doubt the veracity of the other party's witness, or a need to balance the greater perceived credibility of the other party's witness (e.g. a police officer) or lesser perceived credibility of one's own (e.g. a criminal defendant) are possible reasons for wanting to make use of polygraph evidence.

A party seeking to admit polygraph evidence for pre-trial purposes should argue for a lower threshold of admissibility in such circumstances. The same argument can be made if the setting is a bench trial. If the setting is a jury trial, research should be cited demonstrating that juries are not unduly influenced by polygraph evidence and that proper instruction can prevent this from happening. [FN188] A party who is a criminal defendant should cite *Washington v. Texas*, *Chambers* and *Posado* in support of a lower threshold of admissibility for polygraph evidence offered by a criminal defendant. Finally, any party seeking to admit polygraph evidence should remind the court of the "liberal thrust" of the Federal Rules of Evidence and *Daubert*.

A party opposing the introduction of polygraph evidence can no longer argue that it is inherently unreliable or prejudicial. The party must either attack the reliability of the specific evidence in question, show that it is unduly prejudicial under the circumstances, or claim that the other party did not show a need for the evidence. Opposition to reliable polygraph evidence will be most successful when there was no offer to stipulate or when there is already an abundance of witnesses and evidence.

A trial judge should approach the admissibility of polygraph evidence by first requiring the party seeking its admission to demonstrate its reliability. The same party should then be required to show how such evidence will assist the trier of fact. The mild, rebuttable presumption should be that non-stipulated polygraph evidence is neither necessary nor desirable. It should, in practice, be difficult for a party other than a criminal defendant to overcome this presumption absent unusual circumstances such as an extreme scarcity of evidence in a close case. A criminal defendant, on the other hand, should be allowed to go forward with polygraph evidence if it is reliable and can reasonably be expected to help his case. Once the requisite showings of reliability and probative value are made, the burden should shift to the party opposing the evidence to show that it is unduly prejudicial, confusing or misleading given the specific circumstances of the case. Of course, once a party's polygraph evidence is admitted, the *714 opposing party may then wish to offer its own polygraph evidence. In such a case the required threshold should, in fairness, be quite low.

Perhaps *Posado* has not opened Pandora's box after all. Polygraph evidence has not gone from per se inadmissible to per se admissible. [FN189] It remains, and should remain, disfavored. *Posado* may, in the end, result in only a modest increase in the admission of polygraph evidence, primarily in criminal cases. It will almost certainly result in an increase in the workload of trial judges.

[FN1]. 57 F.3d 428 (5th Cir. 1995).

[FN2]. See *Mapp v. Ohio*, 367 U.S. 643, 81 S. Ct. 1684 (1961) and its progeny.

[FN3]. *Id.* at 430-31.

[FN4]. 509 U.S. 579, 113 S. Ct. 2786 (1993).

[FN5]. *Posado*, 57 F.3d at 431.

[FN6]. *Id.* at 436.

[FN7]. *Conti v. Commissioner of Internal Revenue*, 39 F.3d 658 (6th Cir. 1994), cert. denied, 115 S. Ct. 1793 (1995), rejected an appeal of the Tax Court's ruling that unstipulated polygraph evidence was not admissible. The court determined that it "need not consider whether the Tax Court actually conducted a proper analysis of the polygraph evidence under the Supreme Court's decision in *Daubert*" because the Tax Court based its decision on Sixth Circuit precedent which survived *Daubert*. *Conti*, 39 F.3d at 662. *United States v. Lech*, 895 F. Supp. 582 (S.D.N.Y. 1995), and *United States v. Black*, 831 F. Supp. 120 (E.D.N.Y. 1993), rejected similar challenges to the Second Circuit's per se rule against the admission of polygraph evidence. See *infra* text accompanying notes 83-95.

[FN8]. The Supreme Court has repeatedly denied certiorari in polygraph cases, most recently in *Conti*, 115 S. Ct. 1793. In *United States v. Masri*, 547 F.2d 932 (5th Cir.), cert. denied, 434 U.S. 907, 98 S. Ct. 309 (1977) (White, J., dissenting), a minority of two justices urged that certiorari be granted in order to resolve the different approaches to polygraph evidence in the Circuits. A recent case, *Wood v. Bartholomew*, 116 S. Ct. 7 (1995), discussed the materiality of polygraph evidence under the Brady rule rather than the admissibility of the evidence itself.

[FN9]. See *State v. Foret*, 628 So. 2d 1116, 1121-22 (La. 1993). But see *State v. Beard*, 461 S.E.2d 486 (W. Va. 1995), a post-*Posado* case which reaffirms West Virginia's per se rule against polygraph evidence.

[FN10]. *Posado*, 57 F.3d at 436.

[FN11]. *United States v. Piccinonna*, 885 F.2d 1529, 1538 (11th Cir. 1989) (en banc) (Johnson, J., concurring in part and dissenting in part); *United States v. Gipson*, 24 M.J. 246, 248 (C.M.A. 1987); *Scientific Validity of Polygraph Testing: A Research Review and Evaluation--A Technical Memorandum* (U.S. Cong., Office of Technology Assessment, OTA-TM-H-15, Nov. 1983) (hereinafter OTA); 22 Charles A. Wright & Kenneth W. Graham, Jr., *Federal Practice and Procedures* S 5169 (1978). These assumptions have been only minimally researched. OTA, *supra* at 6, 96.

[FN12]. John E. Reid & Fred E. Inbau, *Truth and Deception* (2d ed. 1977); 22 Wright & Graham, *supra* note 11.

[FN13]. 22 Wright & Graham, *supra* note 11; *Development in the Law: Confronting the New Challenge of Scientific Evidence*, 108 Harv. L. Rev. 1481, 1499 (1995).

[FN14]. *Gipson*, 24 M.J. at 249.

[FN15]. 1 McCormick on Evidence S 206 (John William Strong ed., 4th ed. 1992). 3A Wigmore, Evidence S 999 (Chadbourn rev. 1970 & Supp. 1995) offers an exhaustive, jurisdiction-by-jurisdiction compilation of case law concerning admissibility of polygraph evidence.

[FN16]. 293 F. 1013 (D.C. Cir. 1923). A minor wave of change began following the adoption of the Federal Rules of Evidence in 1975; e.g., *United States v. Williams*, 583 F.2d 1194 (2d Cir. 1978) and *United States v. Jakobetz*, 955 F.2d 786 (2d Cir. 1992) (doing away with *Frye* in the Second Circuit); *United States v. Downing*, 753 F.2d 1224 (3d Cir. 1985) (overruling *Frye* in the Third Circuit); *United States v. Gipson*, 24 M.J. 246 (C.M.A. 1987) (anticipating *Daubert* in declaring that *Frye* was superseded by the new Military Rules of Evidence, in effect since 1980 and similar to the Federal Rules).

[FN17]. The instrument in *Frye* measured changes only in systolic blood pressure, whereas today's polygraph measures changes in both systolic and diastolic blood pressure as well as in pulse, respiration and galvanic skin

response. See *United States v. Posado*, 57 F.3d at 428, 434 (5th Cir. 1995); *United States v. Piccinonna*, 885 F.2d 1529, 1538 (11th Cir. 1989) (en banc) (Johnson, J., concurring in part and dissenting in part).

[FN18]. *Frye*, 293 F. at 1014.

[FN19]. *Id.*

[FN20]. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 113 S. Ct. 2786, 2791-92 (1993); *United States v. Posado*, 57 F.3d 428, 432 (5th Cir. 1995).

[FN21]. 476 F.2d 969, 970 (5th Cir. 1973).

[FN22]. *United States v. Rodgers*, 419 F.2d 1315, 1319 (10th Cir. 1969).

[FN23]. *Frogge*, 476 F.2d at 970.

[FN24]. 494 F.2d 477, 483 (5th Cir. 1974).

[FN25]. *Id.*

[FN26]. E.g., *United States v. Martino*, 648 F.2d 367 (5th Cir. 1981); *United States v. Masri*, 547 F.2d 932 (5th Cir.), cert. denied, 434 U.S. 907, 98 S. Ct. 309 (1977); *United States v. Cochran*, 499 F.2d 380 (5th Cir. 1974).

[FN27]. 670 F.2d 522, 528 (5th Cir. 1982).

[FN28]. *Id.* at 528 n.3.

[FN29]. 739 F.2d 1028 (5th Cir. 1984).

[FN30]. *Id.* at 1030 n.3.

[FN31]. *Id.* at 1031.

[FN32]. *Id.* at 1031 n.9.

[FN33]. *Id.* at 1031.

[FN34]. *Id.* (citing *United States v. Bursten*, 560 F.2d 779, 785 (7th Cir. 1977) (per curiam)).

[FN35]. *Id.* at 1032 (citing *United States v. Alexander*, 526 F.2d 161, 168 (8th Cir. 1975)).

[FN36]. 622 F.2d 917, 917 (5th Cir. 1980) (en banc) (Gee, J. concurring). *United States v. Posado*, 57 F.3d 428, 433 (5th Cir. 1995), also cites *United States v. Lindell*, 881 F.2d 1313, 1326 (5th Cir. 1989), as an example of a somewhat "expanded" view of polygraph evidence, but all Lindell states is that, for Brady rule purposes, impeachment evidence includes the results of a polygraph test. Lindell has probably been overruled by *Wood v. Bartholomew*, 116 S. Ct. 7 (1995).

[FN37]. 883 F.2d 400 (5th Cir. 1989).

[FN38]. *Id.* at 404.

[FN39]. *Id.* at 405-06.

[FN40]. *Id.*

[FN41]. *United States v. Posado*, 57 F.3d 428, 433 (5th Cir. 1995).

[FN42]. Including *United States v. Miller*, 874 F.2d 1255, 1262 (9th Cir. 1989) and *McMorris v. Israel*, 643 F.2d

458, 462 (7th Cir. 1981). Bennett, 883 F.2d at 405.

[FN43]. Bennett, 883 F.2d at 404-05.

[FN44]. Attempts to study the reliability and validity of the polygraph have encountered serious and perhaps insurmountable methodological difficulties. OTA, supra note 11, at 4-8, 95-96; David T. Lykken, *A Tremor in the Blood: Uses and Abuses of Lie Detectors* (1981); Rex J. Beaver, *Not Guilty by Reason of Polygraph*, 16 U. West L.A. L. Rev. 27 (1984); John C. Kircher et al., *Meta-Analysis of Mock Crime Studies of the Control Question Polygraph Technique*, 12 Law and Human Behavior 79 (1988); David C. Raskin, *The Polygraph in 1986: Scientific, Professional and Legal Issues Surrounding Application and Acceptance of Polygraph Evidence*, 1986 Utah L. Rev. 29. Estimates of reliability range from below fifty percent to over ninety percent. The most recent of several congressional studies of polygraph reliability concluded that "no overall measure or single, simple judgment of polygraph testing validity can be established based on available scientific evidence." OTA, supra note 11, at 4. Even John E. Reid and Fred E. Inbau, who are among the founding fathers of the modern polygraph, concede that "(a) statistical determination of the accuracy of the Polygraph technique is practically impossible." John E. Reid & Fred E. Inbau, *Truth and Deception* (2d ed. 1984). 1 McCormick, supra note 15, contains an extensive bibliography of technical literature on the polygraph.

[FN45]. Bennett, 883 F.2d at 405.

[FN46]. See supra text accompanying note 34.

[FN47]. *United States v. Rea*, 958 F.2d 1206 (2d Cir. 1992); *United States v. Bortnovsky*, 879 F.2d 30 (2d Cir. 1989).

[FN48]. *United States v. Brevard*, 739 F.2d 180 (4th Cir. 1984) (relying on an Eleventh Circuit decision, *United States v. Holman*, 680 F.2d 1340 (11th Cir. 1982), which itself was based on Frye-influenced precedent which the new Eleventh Circuit inherited from the Fifth Circuit from which it was created).

[FN49]. *United States v. Piccinonna*, 885 F.2d 1529, 1533-35 (11th Cir. 1989) (en banc); 1 McCormick, supra note 15.

[FN50]. *United States v. Johnson*, 816 F.2d 918 (3d Cir. 1987) (allowing polygraph evidence only to rebut defendant's claim of coerced confession).

[FN51]. *United States v. Hall*, 805 F.2d 1410 (10th Cir. 1986) only allowed the prosecution to introduce the fact that the defendant failed a polygraph to explain why the police did not conduct a more thorough investigation; *United States v. Hunter*, 672 F.2d 815 (10th Cir. 1982), echoed Frye.

[FN52]. *Tyler v. United States*, 193 F.2d 24 (D.C. Cir. 1951), was the original case allowing polygraph evidence only to rebut defendant's claim of coerced confession; *United States v. Skeens*, 494 F.2d 1050 (D.C. Cir. 1974), reaffirmed Frye.

[FN53]. See supra notes 50-52.

[FN54]. *State v. Valdez*, 371 P.2d 894 (Ariz. 1962), is the pioneering case for admitting stipulated polygraph evidence.

[FN55]. The Sixth Circuit's two-step analysis, based on *Wolfel v. Holbrook*, 823 F.2d 970 (6th Cir. 1987), and *Barnier v. Szentmiklosi*, 810 F.2d 594 (6th Cir. 1987), and reaffirmed in *Conti v. Commissioner of Internal Revenue*, 39 F.3d 658 (6th Cir. 1994), cert. denied, 115 S. Ct. 1793 (1995), generally excludes polygraph evidence, but allows it if stipulated with prior notice and commitment to abide by the result.

[FN56]. *United States v. Oliver*, 525 F.2d 731 (8th Cir. 1975).

[FN57]. *United States v. Piccinonna*, 885 F.2d 1529 (11th Cir. 1989) (en banc).

[FN58]. E.g., *People v. Monigan*, 390 N.E.2d 562 (Ill. App. Ct. 1979); *State v. Frazier*, 252 S.E.2d 39 (W. Va. 1979); *Fulton v. State*, 541 P.2d 871 (Okla. Crim. App. 1975).

[FN59]. *Underwood v. Colonial Penn. Insurance Co.*, 888 F.2d 588 (8th Cir. 1989).

[FN60]. *United States v. Miller*, 874 F.2d 1255, 1261 (9th Cir. 1989) (partly citing *Brown v. Darcy*, 783 F.2d 1389, 1394-95 (9th Cir. 1986)).

[FN61]. *United States v. Piccinonna*, 885 F.2d 1529 (11th Cir. 1989).

[FN62]. *State v. Catanese*, 368 So. 2d 975 (La. 1979). *Catanese* is a remarkable case for several reasons. The majority opinion is a concise, scholarly and balanced presentation of all of the technical and jurisprudential issues involved in the admissibility of polygraph evidence. Though unfavorable to admission in the case at bar, it opens the door to admissibility under certain conditions and cautiously entertains the prospect of greater admissibility in the future. Finally, Justice Tate's opinion, concurring in part and dissenting in part, anticipates the very fact situation dealt with in *Posado*.

[FN63]. *DeVries v. St. Paul Fire & Marine Insurance Co.*, 716 F.2d 939 (1st Cir. 1983); *United States v. Winter*, 663 F.2d 1120 (1st Cir. 1981).

[FN64]. *United States v. Rumell*, 642 F.2d 213 (7th Cir. 1981); *United States v. Kampiles*, 609 F.2d 1233 (7th Cir. 1979).

[FN65]. *DeVries*, 716 F.2d at 945 n.8.

[FN66]. N.M. R. Evid. 11-707 (codifying *State v. Dorsey*, 539 P.2d 204 (N.M. 1975), and *State v. Brionez*, 573 P.2d 224 (N.M. Ct. App. 1977)). New Mexico's polygraph statute is unique. It specifies the minimum qualifications necessary for a polygrapher to qualify as an "expert witness on the truthfulness of a witness": "five years' experience" "or equivalent academic training," "conducting or reviewing the examination in accordance with the provisions of this rule" and twenty hours per year of continuing education. It provides that "(s)ubject to the provisions of these rules, the opinion of a polygraph examiner may in the discretion of the trial judge be admitted as evidence as to the truthfulness of any person called as a witness if the examination was performed by a person who is qualified as an expert polygraph examiner pursuant to the provisions of this rule." It then specifies how the examination itself is to be conducted and scored and the notice and disclosure required of a party intending to use polygraph evidence.

[FN67]. 509 U.S. 579, 113 S. Ct. 2786 (1993).

[FN68]. *Id.* at 585-89, 113 S. Ct. at 2792-94.

[FN69]. *Id.* at 587, 113 S. Ct. at 2793 (citing Fed. R. Evid. 402).

[FN70]. 509 U.S. at 587, 113 S. Ct. at 2794 (citing Fed. R. Evid. 401).

[FN71]. 509 U.S. at 588, 113 S. Ct. at 2794 (citing Fed. R. Evid. 702).

[FN72]. 509 U.S. at 589, 113 S. Ct. at 2795.

[FN73]. *Id.* 590, 113 S. Ct. at 2795.

[FN74]. *Id.* at 590, 113 S. Ct. at 2795 (relying on Fed. R. Evid. 702).

[FN75]. 509 U.S. at 593, 113 S. Ct. at 2796.

[FN76]. *Id.* at 593-94, 113 S. Ct. at 2796-97.

[FN77]. *Id.* at 595, 113 S. Ct. at 2798 (relying on and citing Judge Jack B. Weinstein, Rule 702 of the Federal Rules

of Evidence Is Sound; It Should Not be Amended, 138 F.R.D. 631 (1991)).

[FN78]. 509 U.S. at 596, 113 S. Ct. at 2798 (citing *Rock v. Arkansas*, 483 U.S. 44, 61, 107 S. Ct. 2704, 2714 (1987)).

[FN79]. Bonnie J. Davis, Comment, Admissibility of Expert Testimony After Daubert and Foret: A Wider Gate, A More Vigilant Gatekeeper, 54 La. L. Rev. 1307 (1994).

[FN80]. *United States v. Posado*, 57 F.3d 428, 432-33 (5th Cir. 1995).

[FN81]. *Id.* at 432.

[FN82]. *Id.* at 436.

[FN83]. 39 F.3d 658 (6th Cir. 1994), cert. denied, 115 S. Ct. 1793 (1995).

[FN84]. *Id.* at 662.

[FN85]. 823 F.2d 970 (6th Cir. 1987).

[FN86]. 810 F.2d 594 (6th Cir. 1987).

[FN87]. *Conti v. Commissioner of Internal Revenue*, 39 F.3d 658, 663 (6th Cir. 1994), cert. denied, 115 S. Ct. 1793 (1995).

[FN88]. *Id.*

[FN89]. 831 F. Supp. 120 (E.D.N.Y. 1993).

[FN90]. 879 F.2d 30 (2d Cir. 1989).

[FN91]. 958 F.2d 1206 (2d Cir. 1992).

[FN92]. Black, 831 F. Supp. at 123.

[FN93]. 895 F. Supp. 582 (S.D.N.Y. 1995).

[FN94]. *Id.* at 585. See *infra* text accompanying notes 175-177.

[FN95]. 895 F. Supp. at 585-86. Subsequent to these cases and to *Posado*, the Second Circuit itself entertained the possibility that, given a suitable record, it would reconsider its position on polygraph evidence. *United States v. Kwong*, 69 F.3d 663 (2d Cir. 1995).

[FN96]. *United States v. Lee*, 25 F.3d 997 (11th Cir. 1994); *United States v. Gates*, 20 F.3d 1550 (11th Cir. 1994).

[FN97]. *Lee*, 25 F.3d at 999.

[FN98]. It will be interesting to see whether the Eleventh Circuit, in the spirit of its own *Lee* and *Gates* decisions, now strikes down its carefully crafted *Piccinonna* rules. See *United States v. Piccinonna*, 885 F.2d 1529 (11th Cir. 1989) (en banc) and *supra* text accompanying notes 57 and 61.

[FN99]. *United States v. Posado*, 57 F.3d 428, 436 (5th Cir. 1995).

[FN100]. *Id.* at 434.

[FN101]. *Id.* (footnotes omitted).

[FN102]. *Supra* notes 80-82 and accompanying text. This is so despite the court's statement that its per se rule was based on "antiquated concepts about the technical ability of the polygraph" as well as on "legal precepts that have been expressly overruled by the Supreme Court." *Posado*, 57 F.3d at 434.

[FN103]. Or as *Wright & Graham* put it, "a court can no longer take judicial notice that the major premise is false." 22 *Wright & Graham*, *supra* note 11. But see *State v. Beard*, 461 S.E. 2d 486, 493 (W. Va. 1995), which interprets *Daubert* and *Posado* as allowing per se inadmissibility based on general unreliability.

[FN104]. 57 F.3d at 435.

[FN105]. *Id.*

[FN106]. *Id.*

[FN107]. See *supra* notes 54-57 and accompanying text.

[FN108]. *Ulmer v. State Farm Fire & Casualty Co.*, 897 F. Supp. 299, 303 (W.D. La. 1995), following *Posado*, illustrates a variant of this: in a case where (as in *Barrel of Fun*) the defendant insurance company refused to pay a fire claim based on its assertion of arson, the court viewed with favor a polygraph examination undergone by the plaintiff at the request of the fire marshal even though the defendant itself did not participate in the examination.

[FN109]. *Posado*, 57 F.3d at 435.

[FN110]. *Bennett v. City of Grand Prairie, Texas*, 883 F.2d 400, 405-06 (5th Cir. 1989).

[FN111]. *Illinois v. Gates*, 462 U.S. 213, 103 S. Ct. 2317 (1983).

[FN112]. *Posado*, 57 F.3d at 435 (citing Fed. R. Evid. 104(a)).

[FN113]. 57 F.3d at 435.

[FN114]. 368 So. 2d 975, 984 (La. 1979) (Tate, J., concurring in part and dissenting in part).

[FN115]. 22 *Wright & Graham*, *supra* note 11, S 5169.

[FN116]. *Posado*, 57 F.3d at 435.

[FN117]. *Id.*

[FN118]. *Id.* at 435-36.

[FN119]. But see *Ulmer v. State Farm Fire & Casualty Co.*, 897 F. Supp. 299, 302 (W.D. La. 1995), for a very different reading of this part of *Posado*. "(T)he Fifth Circuit's teaching with respect to this last factor appears to be somewhat counter-intuitive: If the polygraph evidence is merely 'tie breaker' evidence, i.e. the trier of fact is required to decide between stories relatively equal in plausibility, the evidence may have less probative value compared to its prejudicial effect."

[FN120]. But see *supra* note 119.

[FN121]. *Posado*, 57 F.3d at 434. See *supra* note 17.

[FN122]. *Posado*, 57 F.3d at 434 n.7.

[FN123]. See *supra* note 44.

[FN124]. See *supra* note 44.

[FN125]. *Lykken*, *supra* note 44; *Beaber*, *supra* note 44.

[FN126]. OTA, supra note 11, at 4.

[FN127]. *United States v. Posado*, 57 F.3d 428, 434 (5th Cir. 1995). See OTA, supra note 11, at 95-96.

[FN128]. Possibly along the lines of New Mexico's polygraph statute and jurisprudence. See supra note 66. Also see *Ulmer v. State Farm Fire & Casualty Co.*, 897 F. Supp. 299, 303 (W.D. La. 1995), following *Posado*, in which the court based its finding of reliability on (among other things) the fact that the examiner was certified by the state and employed by state law enforcement bodies.

[FN129]. 57 F.3d at 434.

[FN130]. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 588, 113 S. Ct. 2786, 2795 (1993).

[FN131]. See supra text accompanying note 76.

[FN132]. 628 So. 2d 1116 (La. 1993).

[FN133]. *Id.* at 1121-22.

[FN134]. *Id.* at 1123-27.

[FN135]. *Id.* at 1127.

[FN136]. *Id.* at 1125. *Daubert*, relying on such prominent philosophers of the scientific method as Carl Hempel and Karl Popper, states that a theory must be testable in order to be considered scientific, and refutable or falsifiable in order to be testable. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 593-94, 113 S. Ct. 2786, 2796-97 (1993). According to Popper, a true scientific theory predicts that certain events will happen if certain other conditions exist. It can be tested by creating the conditions and seeing if the predicted events occur. If they don't, the theory is refuted; if they do, the theory is not "proved" (because a million confirming results do not guarantee that the million-and-first result won't be different) but it is accepted as the best theory we have. "Pseudo-scientific" theories appear to possess great explanatory power, but actually explain nothing. It is impossible to attempt to prove such a theory wrong, because every phenomenon can be pointed to by adherents of the theory as "confirmation" of the theory while no phenomenon is hypothesized in advance as capable of refuting the theory. Popper specifically cites psychodynamic (for example, Freudian) theory along with Adlerian psychology and Marxist historicism as prime examples of "pseudo-science." Karl R. Popper, *Conjectures and Refutations: The Growth of Scientific Knowledge* 33-59 (3d ed. 1969). See also Carl Hempel, *Philosophy of Natural Science* 19-49 (1966). Polygraph theory should, in principle, be refutable and testable despite the methodological difficulties encountered thus far. See OTA, supra note 11, at 6-8.

[FN137]. *Foret*, 628 So. 2d at 1126.

[FN138]. *Id.*

[FN139]. *Id.* at 1127.

[FN140]. *Id.* at 1127-30.

[FN141]. *Id.* at 1127.

[FN142]. 801 F.2d 336 (8th Cir. 1986).

[FN143]. 490 F.2d 907 (9th Cir. 1973).

[FN144]. *Foret*, 628 So. 2d at 1128 (citing *Azure*, 801 F.2d at 340 (citing *Barnard*, 490 F.2d at 912)).

[FN145]. 628 So. 2d at 1129.

[FN146]. See, in addition to *Azure and Barnard, United States v. Whitted*, 994 F.2d 444 (8th Cir. 1993); *Isely v. Capuchin Province*, 877 F. Supp. 1055 (E.D. Mich. 1995); *Gier v. Educational Service Unit No. 16*, 845 F. Supp. 1342 (D. Neb. 1994); *State v. Alberico*, 861 P.2d 192 (N.M. 1993).

[FN147]. 861 P.2d 192 (N.M. 1993).

[FN148]. *Id.* at 210. New Mexico apparently recognizes no contradiction between excluding expert psychological testimony relating to credibility and allowing expert polygraph testimony, which by definition relates to credibility. See *supra* note 66. A possible explanation is that the psychological testimony in question was offered to corroborate the victim's testimony against the defendant, whereas most proffers of polygraph evidence are made, as in *Posado*, by defendants seeking to exonerate themselves with their own testimony.

[FN149]. *Barrel of Fun, Inc. v. State Farm Fire & Casualty Co.*, 739 F.2d 1028, 1031 (5th Cir. 1982).

[FN150]. 368 So. 2d 975, 981 (La. 1979).

[FN151]. Whether in the form of a psychiatric or psychological opinion or in the form of a polygrapher's interpretation of the subject's physiological responses.

[FN152]. *Barrel of Fun*, 739 F.2d at 1031; *Catanese*, 368 So. 2d at 981.

[FN153]. *United States v. Posado*, 57 F.3d 428, 435 (5th Cir. 1995).

[FN154]. *Ann Cavoukian & Ronald J. Heslegrave, The Admissibility of Polygraph Evidence in Court: Some Empirical Findings*, 4 *Law and Human Behavior* 117 (1980).

[FN155]. *Id.*

[FN156]. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 595, 113 S. Ct. 2786, 2798 (1993).

[FN157]. See *Posado*, 57 F.3d at 428 and, by implication, *State v. Foret*, 628 So. 2d 1116 (La. 1993).

[FN158]. *Davis*, *supra* note 79, at 1333; W. Thomas Halbleib, Note, *United States v. Piccinonna: The Eleventh Circuit Adds Another Approach to Polygraph Evidence in the Federal System*, 80 *Ky. L.J.* 225, 247-49 (Fall, 1991/1992).

[FN159]. 57 F.3d at 435-36.

[FN160]. Halbleib, *supra* note 158. See also Paul C. Gianelli and Edward J. Imwinkelreid, *Scientific Evidence* 257-59 (1986).

[FN161]. A third United States Supreme Court case, *Rock v. Arkansas*, 483 U.S. 44, 107 S. Ct. 2704 (1987), held that the Arkansas' per se rule excluding hypnotically-refreshed testimony impermissibly infringed on a criminal defendant's right to testify on his or her own behalf. *Rock's* importance to the issue of polygraph evidence after *Daubert* and *Posado* might be to compel other jurisdictions to adopt *Posado's* invalidation of the per se exclusion of polygraph evidence at least where criminal defendants are concerned.

[FN162]. 388 U.S. 14, 87 S. Ct. 1920 (1967).

[FN163]. *Id.*

[FN164]. *Id.* at 19, 87 S. Ct. at 1923.

[FN165]. 410 U.S. 284, 93 S. Ct. 1038 (1973).

[FN166]. A largely superseded common-law rule where a party may not impeach his own witness. See *Chambers*, 410 U.S. at 295-96, 93 S. Ct. at 1046.

[FN167]. *Id.* at 302, 93 S. Ct. at 1049.

[FN168]. *Id.* at 302-03, 93 S. Ct. at 1049.

[FN169]. That is, polygraph evidence is always corroboration or impeachment evidence, which is why the "impeachment exception" of some jurisdictions makes no sense.

[FN170]. *United States v. Lech*, 895 F. Supp. 582, 586 (S.D.N.Y. 1995); *United States v. Gipson*, 24 M.J. 246, 252 (C.M.A. 1987).

[FN171]. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589, 113 S. Ct. 2786, 2795 (1993).

[FN172]. *Gipson*, 24 M.J. at 252, rejected "the notion that an accused has an independent, constitutional right to present favorable polygraph evidence," but conceded that *Washington v. Texas* and *Chambers* should give the defendant "the benefit of the doubt." 24 M.J. at 252.

[FN173]. La. Code Evid. art. 704.

[FN174]. Fed. R. Evid. 401.

[FN175]. 895 F. Supp. 582 (S.D.N.Y. 1995).

[FN176]. *Id.* at 583.

[FN177]. *Id.* at 585.

[FN178]. 69 F.3d 663 (2d Cir. 1995).

[FN179]. *Id.* at 667.

[FN180]. *Id.* at 668.

[FN181]. *United States v. Posado*, 57 F.3d 428, 432 (5th Cir. 1995).

[FN182]. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589, 113 S. Ct. 2786, 2795 (1993). But see *United States v. Pettigrew*, 77 F.3d 1500 (5th Cir. 1996), holding that the district court did not abuse its discretion in refusing to hold a hearing when the offered evidence clearly failed the relevance test.

[FN183]. 509 U.S. at 589, 113 S. Ct. at 2795.

[FN184]. Fed. R. Evid. 403; *Daubert*, 509 U.S. at 593-94, 113 S. Ct. at 2796-98.

[FN185]. *Posado*, 57 F.3d at 433-35.

[FN186]. See *supra* text accompanying notes 152-155.

[FN187]. *Posado*, 57 F.3d at 435-36.

[FN188]. See *supra* text accompanying footnotes 152-155.

[FN189]. See *United States v. Pettigrew*, 77 F.3d 1500 (5th Cir. 1996) (finding no abuse of discretion in the district court's refusal to admit polygraph evidence); *United States v. Dominguez*, 902 F. Supp. 737 (S.D. Tex. 1995) (refusing to admit polygraph evidence). *Dominguez* offers its own list of ten factors to be considered in determining whether probative value is outweighed by prejudice. 902 F. Supp. at 740.

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