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COMMENT

THE PSYCHOLOGIST AS EXPERT WITNESS: SCIENCE IN THE COURTROOM?*

INTRODUCTION

Since Sigmund Freud first introduced his psychoanalytic theory, the courts have sought the guidance of experts versed in the scientific study of human behavior.¹ While the variety of legal issues that may be illuminated by psychological research continues to expand,² this Comment will focus

* The author is indebted to Professors Donald N. Bersoff and Alan D. Hornstein and to Camille A. D'Ascoli for their thoughtful comments and suggestions.

1. See H. MÜNSTERBERG, *ON THE WITNESS STAND: ESSAYS ON PSYCHOLOGY AND CRIME* (1908); S. FREUD, *Psycho-Analysis and the Establishment of the Facts in Legal Proceedings*, in 9 *THE COMPLETE PSYCHOLOGICAL WORKS OF SIGMUND FREUD* 103 (std. ed. J. Strachey 1959) (originally published in 1906).

2. The techniques of psychology have been used to illuminate two fundamentally different types of legal issues. The first focuses on the wisdom of general legislative policies such as the effects of racial segregation, e.g., *Brown v. Board of Educ.*, 347 U.S. 483, 494-95 & n.11 (1954); Appendix to Appellants' Briefs, *The Effects of Segregation and the Consequences of Desegregation: A Social Science Statement*, *Brown v. Board of Educ.*, 347 U.S. 483 (1954), reprinted in 49 *LANDMARK BRIEFS AND ARGUMENTS OF THE SUPREME COURT OF THE UNITED STATES: CONSTITUTIONAL LAW* 41-66 (P. Kurland & G. Casper eds. 1975); the effects of jury size and selection upon jury decision-making, e.g., *Ballew v. Georgia*, 435 U.S. 223, 232-39 (1978); *Williams v. Florida*, 399 U.S. 78, 101 nn. 48 & 49 (1970); M. SAKS, *JURY VERDICTS* (1977); Goldman, Maitland & Norton, *Psychological Aspects of Jury Performance*, 3 *J. PSYCHIA. & L.* 367 (1975); Mitchell & Byrne, *The Defendant's Dilemma: Effects of Juror's Attitudes and Authoritarianism on Judicial Decision*, 25 *J. PERSONALITY & SOC. PSYCHOL.* 123 (1973); Rosenblatt & Rosenblatt, *Six-Member Juries in Criminal Cases: Legal and Psychological Considerations*, 47 *ST. JOHN'S L. REV.* 615 (1973); Tate, Hawrish & Clark, *Communication Variables in Jury Selection*, 24 *J. COM.* 130 (1974); Forum, *Forensic Sociology and Psychology: New Tools for the Criminal Defense Attorney*, 12 *TULSA L. REV.* 274 (1976); Note, *An Empirical Study of Six- and Twelve-Member Jury Decision-Making Processes*, 7 *MICH. J.L. REF.* 712 (1973); the nature of obscenity, e.g., *United States v. Roth*, 237 F.2d 796, 802, 804 & n.9, 811-17 (Appendix) (2d Cir. 1956) (Frank, J., concurring) (citing Research Center for Human Relations, New York University, *THE IMPACT OF LITERATURE: A PSYCHOLOGICAL DISCUSSION OF SOME ASSUMPTIONS IN THE CENSORSHIP DEBATE* (1954)), *aff'd*, 354 U.S. 476 (1957); Cairns, Paul & Wishner, *Sex Censorship: The Assumptions of Anti-Obscenity Laws and the Empirical Evidence*, 46 *MINN. L. REV.* 1009 (1962).

The second focuses on a particular factual issue raised at trial that may have a direct bearing on the outcome of the individual case, such as the effect of peer pressure and stress upon line-up and eyewitness identification, e.g., *United States v. Wade*, 388 U.S. 218, 228-39 (1967); *United States v. Amaral*, 488 F.2d 1148, 1152-54 (9th Cir. 1973); Buckhout, *Eyewitness Testimony*, 231 *SCI. AM.* 23 (1974); Kubie, *Implications for Legal Procedure of the Fallibility of Human Memory*, 108 *U. PA. L. REV.* 59 (1959); Levine & Tapp, *The Psychology of Criminal Identification: The Gap from Wade to Kirby*, 121 *U. PA. L. REV.* 1079 (1973); Lezak, *Some Psychological Limitations on Witness Reliability*, 20 *WAYNE ST. L. REV.* 117 (1973); Note, *Did Your Eyes Deceive You? Expert Psychological Testimony on the Unreliability of Eyewitness Identification*, 29 *STAN. L. REV.* 969 (1977); and the reliability and validity of employment testing, e.g., *Washington v. Davis*, 426 U.S. 229, 247 n.13 (1976); *Albemarle Paper Co. v. Moody*, 422 U.S. 405, 425-36 (1975); *Griggs v. Duke Power Co.*, 401 U.S. 424 (1971);

specifically on the courts' dependence upon psychological evidence and expert testimony to establish the presence or absence of mental disorders and the causal connection between such disorders and criminal or tortious conduct.³ The major premise of this Comment is that the modern trend toward the more liberal admission of psychological evidence and expert testimony⁴ does little to assure its probative value.⁵ The courts' limited inquiry into the expert's education, training, and experience ignores a far more fundamental problem — the underlying accuracy *vel non* of the psychological techniques upon which psychologists typically rely and the resultant validity of their diagnoses and opinions concerning the issue of ultimate fact.

Psychological expert testimony generally involves three levels of inference, moving from predominantly factual data about a person's behavior to opinions concerning the issue of ultimate fact.⁶ The first level of this hierarchy primarily consists of the psychologist's personal observations of the party made during the course of a clinical interview. Generally, this will include essentially objective data about the individual's behavior such

Wilson, *A Second Look at Griggs v. Duke Power Company: Ruminations on Job Testing, Discrimination, and the Role of the Federal Courts*, 58 VA. L. REV. 844 (1972); Note, *Employment Testing: The Aftermath of Griggs v. Duke Power Company*, 72 COLUM. L. REV. 900 (1972); Note, *Beyond the Prima Facie Case in Employment Discrimination Law: Statistical Proof and Rebuttal*, 89 HARV. L. REV. 387 (1975). See generally Bersoff & Prasse, *Applied Psychology and Judicial Decision Making: Corporal Punishment as a Case in Point*, 9 PROF. PSYCHOL. 400 (1978).

3. The term "mental disorder" is used throughout this Comment in a nonpejorative sense. There appears to be no neutral expression for the type of human behavior of interest to psychologists testifying in culpable insanity cases that transcends all theoretical biases. One commentator advocates the use of the term "crazy behavior" to describe those abnormal thoughts, feelings, and actions manifested by people for whom society has developed special legal rules. Morse, *Crazy Behavior, Morals, and Science: An Analysis of Mental Health Law*, 51 S. CAL. L. REV. 527, 543-54 (1978). For objections to the connotations of "mental illness," "mental disease," "mental defect," and the entire medical model of human behavior, see T. SZASZ, *The Myth of Mental Illness in IDEOLOGY AND INSANITY: ESSAYS ON THE PSYCHIATRIC DEHUMANIZATION OF MAN* 12 (1970); Morse, *supra*, at 535 n.14.

4. See pp. 544-54 *infra*.

5. For more sanguine and largely uncritical views of the role of psychologists as expert witnesses, see Cooke & Jackson, *Competence to Stand Trial: Role of the Psychologist*, 2 PROF. PSYCHOL. 373 (1971); Gaines, *The Psychologist as an Expert Witness in a Personal Injury Case*, 39 MARQ. L. REV. 239 (1956); Lassen, *The Psychologist as an Expert Witness in Assessing Mental Disease or Defect*, 50 A.B.A.J. 239 (1964); Levine, *Psychologist as Expert Witness in "Psychiatric" Questions*, 20 CLEV. ST. L. REV. 379 (1971); Louisell, *The Psychologist in Today's Legal World*, 39 MINN. L. REV. 235 (1955); Nash, *Parameters and Distinctiveness of Psychological Testimony*, 5 PROF. PSYCHOL. 239 (1974); Pacht, Kuehn, Bassett & Nash, *The Current Status of the Psychologist as an Expert Witness*, 4 PROF. PSYCHOL. 409 (1973); Rice, *The Psychologist as Expert Witness*, 16 AM. PSYCHOL. 691 (1961); Comment, *The Psychologist as an Expert Witness*, 15 KAN. L. REV. 88 (1966).

6. See generally Cleary, *Evidence as a Problem in Communicating*, 5 VAND. L. REV. 277 (1952), reprinted in SELECTED WRITINGS ON THE LAW OF EVIDENCE AND TRIAL 22-37 (W. Fryer ed. 1957).

as a description of symptoms indicative of a mental disorder (e.g., tics, stuttering) and the results of any psychological tests that may have been administered. What distinguishes this level of expert testimony from the other two is that it rests primarily upon empirical data.

The second level of testimony may be characterized as the diagnostic component. It represents the point along the testimonial continuum at which psychologists move from reporting their empirical observations to synthesizing this information to form a diagnosis that will classify and perhaps account for the behavior manifested by the individual during the course of the clinical interview and, in criminal cases, at the time of the crime. It is on this level that psychologists make judgments, based upon their skill in that discipline, about whether a person is suffering from a mental disorder. Whether the diagnosis is offered in terms of a particular diagnostic label (for example, schizophrenia or schizoid personality) or entails a lengthy description of the individual's personality, the critical element of this level of expert testimony is that the diagnosis is empirically based and derives its meaning from scientifically validated principles about human behavior. As we shall see, it is this crucial link with the scientific method that necessitates a reevaluation of the probative value of psychological evidence and expert testimony in the courtroom.

The third level of testimony elicited from psychological experts concerns the issue of ultimate fact, the ultimate factual question the jury must resolve. In the federal system, for example, witnesses, particularly experts, found it difficult to testify in terms that rigorously discriminated between "facts" and "opinions," and the courts were unable to distinguish the two without being unduly restrictive.⁷ Consequently, Federal Rule of Evidence 704⁸ was designed to permit witnesses to express their opinions on any matter, including the ultimate issue to be decided by the trier of fact, as long as it would be helpful to the jury and not waste time.⁹ While this rule may be justified in certain contexts, this Comment argues that the admission of psychological opinion testimony should be excluded for two reasons. First, the scientific bases for such opinions may be unsound. Second, even if such opinions are well-founded, countervailing factors outweigh their potential probative value, and psychological expert testimony regarding the ultimate fact may not be any more helpful to the trier of fact than the thoughtful opinion of an ordinary layperson.

Before examining the scientific underpinnings of psychological expert testimony, however, the scope of this inquiry must be outlined. First, although psychological expert testimony has been received in a variety of legal contexts,¹⁰ this Comment only addresses the admissibility of such

7. See FED. R. EVID. 704 (Advisory Committee's Note).

8. FED. R. EVID. 704 states: "Testimony in the form of an opinion or inference otherwise admissible is not objectionable because it embraces an ultimate issue to be decided by the trier of fact."

9. *Id.* (Advisory Committee's Note). See FED. R. EVID. 403, 701, 702.

10. Expert testimony by psychologists has been offered, albeit unsuccessfully in some instances, to prove whether there was a causal connection between a criminal

testimony in the evaluation of either criminal insanity pleas or mental disorders arising from tortious conduct. Second, because the literature appraising the scientific accuracy of psychological judgments is limited, any argument assailing the scientific bases of such opinions necessarily depends upon a diversity of studies, no one of which is conclusive. Taken collectively, however, the scientific literature does raise some disturbing questions about the courts' assumption that psychological techniques and diagnoses are sufficiently accurate to be deemed probative in a court of law. Although a major portion of this Comment is devoted to a review of the scientific data, the methodology of each study has not been independently evaluated. Every effort has been made, however, to cite the most highly regarded and authoritative texts and research articles in the field.¹¹ Whenever possible,

act and a mental disorder, *e.g.*, *Jenkins v. United States*, 307 F.2d 637 (D.C. Cir. 1962) (en banc); *People v. Felton*, 26 Ill. App. 3d 395, 325 N.E.2d 400 (1975); *Saul v. State*, 6 Md. App. 540, 252 A.2d 282 (1969); *Hogan v. State*, 496 S.W.2d 594 (Tex. Crim. App.), *cert. denied*, 414 U.S. 862 (1973); whether a criminal defendant was competent to stand trial, *e.g.*, *Blunt v. United States*, 389 F.2d 545 (D.C. Cir. 1967); *Colbert v. State*, 18 Md. App. 632, 308 A.2d 726 (1973); *People v. Crawford*, 66 Mich. App. 581, 239 N.W.2d 670 (1976); whether a person committed to a mental institution pursuant to an acquittal on the grounds of legal insanity may be released, *e.g.*, *United States v. McNeil*, 434 F.2d 502 (D.C. Cir. 1970) (per curiam); *People v. Pennington*, 66 Cal. 2d 508, 426 P.2d 942, 58 Cal. Rptr. 374 (1967) (in bank); *People v. Lyles*, 186 Colo. 302, 526 P.2d 1332 (1974) (en banc); whether a criminal defendant met the statutory definition of "defective delinquency," *e.g.*, *State v. Williams*, 278 Md. 180, 361 A.2d 122 (1976); whether an accused not raising an insanity defense had the requisite intent or capacity to commit an alleged criminal act, *e.g.*, *State v. Donahue*, 141 Conn. 656, 109 A.2d 364 (1954), *cert. denied*, 349 U.S. 926 (1955); *Tremain v. State*, 336 So. 2d 705 (Fla. Dist. Ct. App. 1976); *Douglas v. United States*, 386 A.2d 289 (D.C. Ct. App. 1978); whether a criminal defendant had a propensity to tell the truth, *e.g.*, *Smith v. State*, 564 P.2d 1194 (Wyo. 1977); whether a witness in a criminal prosecution was suffering from an underlying emotional problem that would effect the veracity of his testimony, *e.g.*, *United States v. Fields*, 3 M.J. 27 (C.M.A. 1977); whether a causal connection existed between a mental disorder and tortious conduct, *e.g.*, *Reese v. Naylor*, 222 So. 2d 487 (Fla. Dist. Ct. App. 1969); *Spann v. Bees*, 23 Md. App. 313, 327 A.2d 801 (1974); *City of Austin v. Hoffman*, 379 S.W.2d 103 (Tex. Civ. App. 1964); whether a person was suffering from a mental condition that rendered him permanently disabled under the terms of an insurance policy, *e.g.*, *Hidden v. Mutual Life Ins. Co.*, 217 F.2d 818 (4th Cir. 1954), or workmen's compensation act, *e.g.*, *Bilbrey v. Industrial Comm'n*, 27 Ariz. App. 473, 556 P.2d 27 (1976); *Busby v. Martin*, 166 So. 2d 660 (La. Ct. App. 1964); whether a person's mental condition was such that a petition for civil commitment should be granted, *e.g.*, *In re Wellington*, 34 Ill. App. 3d 515, 340 N.E.2d 31 (1975); whether a person civilly committed should be "restored to capacity," *e.g.*, *In re Masters*, 216 Minn. 553, 13 N.W.2d 487 (1944); whether eyewitness testimony was reliable, *e.g.*, *United States v. Amaral*, 488 F.2d 1148 (9th Cir. 1973); *United States v. Collins*, 395 F. Supp. 629 (M.D. Pa. 1975); *People v. Guzman*, 47 Cal. App. 3d 380, 121 Cal. Rptr. 69 (1975); and whether employment qualification tests were reliable and valid, *e.g.*, *Washington v. Davis*, 426 U.S. 229 (1976); *Albemarle Paper Co. v. Moody*, 422 U.S. 405 (1975); *Griggs v. Duke Power Co.*, 401 U.S. 424 (1971). See note 2 *supra*.

11. Most, if not all, of the scientific articles cited in this Comment appear in journals refereed and edited by psychologists prominent in their field who have presumably reviewed the methodology of each study.

reviews of the psychological literature in a particular area have been relied upon for support. The scientific studies cited below are not intended to convince the reader that such psychological judgments are unequivocally inaccurate but to demonstrate that researchers, publishing in psychology's most prestigious professional journals, have expressed a less than sanguine view about the accuracy of the techniques underlying psychological expert testimony. The doubts they raise not only mandate a reassessment of psychological expert testimony's probative value in the courtroom but should also stimulate researchers to supplement the limited, but generally negative, data currently available. Third, many of the criticisms regarding the scientific bases of psychological expert testimony are directly applicable to the testimony of psychiatrists.¹² Finally, this critique of psychological evidence and expert testimony is strictly limited to its role in a court of law. The premise of this Comment is that the degree of accuracy the courts should require psychologists to demonstrate is largely controlled by factors ordinarily not applicable in nonlegal contexts. The admissibility of scientific evidence in the courtroom is dictated not only by a showing of minimal probativeness but also by whether its probative value outweighs the various evidentiary counterweights¹³ — an extra layer of analysis that consumers of psychological services do not need to consider before embracing the therapeutic and informational benefits of the psychological sciences. Although the scientific bases of psychology may be adequate to sustain its validity as a social science, it is argued that in a legal context the courts should impose on psychology *qua* science the same standards for probative value that it demands of every other scientific process or technique. In light of this legal standard for admissibility, psychology arguably has not advanced to the stage where it can reliably aid the trier of fact in its search for truth and still surmount the evidentiary counterweights.

The nature of psychological evidence and expert testimony will be examined in four parts. First, the modern standard for the admissibility of such expert testimony will be reviewed. Next, the fundamental evidentiary problems scientific evidence and opinion testimony raise for the courts will

12. See generally J. ZISKIN, *COPING WITH PSYCHIATRIC AND PSYCHOLOGICAL TESTIMONY* (2d ed. 1975 & Supp. 1977); Ennis & Litwack, *Psychiatry and the Presumption of Expertise: Flipping Coins in the Courtroom*, 62 CALIF. L. REV. 693 (1974). These commentators conclude that psychiatric expert testimony should be severely curtailed if not eliminated altogether. With regard to civil commitment proceedings, Ennis and Litwack observed: "[T]here is no evidence that psychiatric opinions and terminology clarify rather than confuse the issues in a civil commitment proceeding, and there is good reason to believe that judges and juries could function quite adequately in a civil commitment proceeding without 'expert' opinion testimony." Ennis & Litwack, *supra*, at 696. Given that psychologists attempt to validate their observations empirically through the use of various assessment techniques, perhaps their expert testimony should be preferred by the courts over that offered by psychiatrists who do not rely upon such objective measures.

13. *E.g.*, FED. R. EVID. 403. Rule 403 states: "Although relevant, evidence may be excluded if its probative value is 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."

be discussed. Third, the underlying scientific bases and accuracy of psychological expert testimony will be analyzed. Finally, the probative value of such testimony will be evaluated in light of the various evidentiary counterweights.

PSYCHOLOGICAL EXPERT TESTIMONY IN THE COURTROOM

Psychologists in the United States have served as expert witnesses since at least the early 1920's;¹⁴ however, it was not until 1940 that the issue of the admissibility of psychological expert testimony was directly addressed by a state supreme court.¹⁵ Three decisions, *People v. Hawthorne*,¹⁶ *Hidden v.*

14. *E.g.*, *Dobbs v. State*, 191 Ark. 236, 85 S.W.2d 694 (1935); *Abbott v. State*, 113 Neb. 517, 204 N.W. 74 (1925); *State v. Driver*, 88 W. Va. 479, 107 S.E. 189 (1921). In *Dobbs*, the Supreme Court of Arkansas affirmed the trial court's refusal to permit a professor of psychology to answer a hypothetical question regarding a criminal defendant's sanity because the psychologist had not been properly qualified as an expert. The authority relied upon by the *Dobbs* court strongly suggests that the medical model of mental disorders was already firmly entrenched by 1935. See *Odom v. State*, 174 Ala. 4, 7, 56 So. 913, 914 (1911) ("As a general rule, only medical men — that is, persons licensed by law to practice the profession of medicine — can testify as experts on the question of insanity; and the propriety of this general limitation is too patent to permit discussion."); note 52 *infra*.

In *Abbott*, a psychologist was prevented from expressing an opinion in a sodomy case about the effect of parental suggestion on the imagination of a child between the ages of five and seven years. In *Driver*, the chief psychologist of a state bureau of juvenile research qualified as an expert in juvenile delinquency, but the West Virginia Supreme Court sustained the trial court's refusal to permit him to impeach a twelve-year-old attempted rape victim's testimony on the basis that the girl was a "moron." The court observed: "It is yet to be demonstrated that psychological and medical tests are practical, and will detect the lie on the witness stand." 88 W. Va. at 488, 107 S.E. at 193.

15. See note 16 *infra*.

16. 293 Mich. 15, 291 N.W. 205 (1940); *accord*, *People v. Crawford*, 66 Mich. App. 581, 239 N.W.2d 670 (1976) (extended *Hawthorne* to issue of competency to stand trial). In *Hawthorne*, a criminal defendant was charged with manslaughter and interposed an insanity defense. On appeal he contended, *inter alia*, that the trial court's refusal to qualify a psychologist as an expert witness was in error. Although all eight members of the Michigan Supreme Court agreed that the conviction should be affirmed, the justices split over whether a psychologist may qualify as an expert on insanity. Five members of the court concurred that a general medical training was not the *sine qua non* of an expert's competency to testify about criminal insanity. 293 Mich. at 22-26, 291 N.W. at 208-09. They argued that the proper standard for determining expertise was not the acquisition of a particular scientific degree but the extent of the witness' knowledge. *Id.* at 24-25, 291 N.W. at 209. The remaining three justices denied the admissibility of testimony by psychological expert witnesses on the grounds that only persons with medical training could properly present such evidence. *Id.* at 20, 291 N.W. at 207. Furthermore, they argued that insanity was a "disease" within the realm of medical science. The minority flatly stated: "Insanity, however, is held to be a disease . . . and, therefore, comes within the realm of medical science, which comprises the study and treatment of disease. Only physicians can qualify to answer hypothetical questions as experts in such science." *Id.* at 20, 291 N.W. at 207 (citation omitted); see note 52 *infra*.

Hawthorne presents the earliest reported standard for the admission of psychological expert testimony, and it is the first of a trilogy of authorities frequently

Mutual Life Insurance Company,¹⁷ and *Jenkins v. United States*,¹⁸ form the basis of modern legal authority for the proposition that psychologists who are qualified in terms of their education and experience may freely offer an opinion about the presence or absence of mental disorders and their causal

cited by the courts of other jurisdictions for the proposition that mental disorders are not the exclusive province of physicians and that for evidentiary purposes the testimony of a properly qualified psychologist should be freely admitted. *E.g.*, *Jenkins v. United States*, 307 F.2d 637, 643 n.14 (D.C. Cir. 1962) (en banc) (dictum); *People v. Davis*, 62 Cal. 2d 791, 800, 402 P.2d 142, 148, 44 Cal. Rptr. 454, 460 (1965) (in bank); *Watson v. State*, 161 Tex. Crim. 5, 8, 273 S.W.2d 879, 882 (1954).

17. 217 F.2d 818 (4th Cir. 1954). *Hidden* applied the rationale of *Hawthorne* to expert testimony by psychologists in civil actions. The plaintiff sought indemnity under the total and permanent disability clauses of an insurance contract, claiming that a "disabling nervous condition" prevented him from engaging in any gainful occupation. *Id.* at 819. Without citing any precedents, the Court of Appeals for the Fourth Circuit held that a clinical psychologist with a doctoral degree was qualified as an expert by virtue of his education and experience and that he should have been permitted to express his opinion about the present mental condition of the insured as well as his mental condition three years earlier when the insurance policy was in effect. *Id.* at 821.

18. 307 F.2d 637 (D.C. Cir. 1962) (en banc). In *Jenkins*, the preeminent authority of the trilogy, the defendant raised an insanity defense to the charges of housebreaking with intent to commit assault, assault with intent to rape, and assault with a dangerous weapon. *Id.* at 639. On appeal, the defendant alleged, *inter alia*, that the trial judge erred in instructing the jury to disregard the testimony of the three defense psychologists on the ground that they were not competent to give a *medical* opinion on whether the accused was suffering from a mental disease or defect when he committed the alleged crimes. *Id.* at 639, 642-43. Although *Jenkins* did not object to this jury instruction at trial, the Court of Appeals for the District of Columbia Circuit agreed to examine this issue because it was likely to arise upon retrial. *Id.* at 643. A new trial was ordered because of the trial judge's exclusion of a psychiatrist's revised diagnosis based, in part, upon psychological test reports that were not in evidence and administered thirteen months after his last personal examination of the defendant. *Id.* at 640-41.

Writing for the majority, Judge Bazelon sharply criticized the trial judge's automatic exclusion of psychological expert testimony predicated on the witnesses' lack of medical training. Advocating a less dogmatic rule, he emphasized that the standard of admissibility for such testimony must be evaluated in terms of its probative value to the trier of fact, observing:

We hold only that the lack of a medical degree, and the lesser degree of responsibility for patient care which mental hospitals usually assign to psychologists, are not automatic disqualifications. Where relevant, these matters may be shown to affect the weight of their testimony, even though it be admitted in evidence. *The critical factor in respect to admissibility is the actual experience of the witness and the probable probative value of his opinion.*

Id. at 646 (dictum) (emphasis added). Earlier in his opinion, Judge Bazelon noted: The determination of a psychologist's competence to render an expert opinion based on his findings as to the presence or absence of mental disease or defect must depend upon the nature and extent of his knowledge. It does not depend upon his claim to the title "psychologist." . . . When completion of [graduate] training is followed by actual experience in the treatment and diagnosis of

connection with criminal or tortious conduct.¹⁹ A majority of those jurisdictions that have discussed the admissibility of such testimony hold that psychologists and psychiatrists should be treated equally.²⁰ To date psychological expert testimony has been accepted in either a criminal or civil context by four of the eleven federal circuits²¹ and seventeen states.²² Maryland, in the face of a judicial trend to restrict such testimony there,

disease in association with psychiatrists or neurologists, the opinion of the psychologist may properly be received in evidence.

Id. at 645 (dictum) (footnotes omitted). The *Jenkins* court rejected the rigid medical-nonmedical distinction applied by the trial judge in favor of a standard designed to ensure the probativeness of the testimony. See note 52 *infra*.

Noting that not every psychologist may possess the requisite degree of skill and training required to diagnose mental conditions and to relate these disorders to past behavior, the court in *Jenkins* focused on the clinical psychologist with a doctoral degree as one of the most likely persons in the field to qualify as an expert witness. *Id.* at 644-45. The court proposed several factors a trial judge might consider in evaluating the competence of a psychologist to render an expert opinion: graduate training in programs approved by the American Psychological Association, clinical experience in association with psychiatrists or neurologists, and certification by the American Board of Examiners in Professional Psychology. *Id.* at 645.

19. See note 8 *supra*.

20. See Appendix *infra*. The courts in those jurisdictions not mentioned here have probably accepted psychological expert witnesses without question because their "expert" status has been legitimated by society through licensure. See pp. 563-64 *infra*.

21. Fourth, Fifth, Seventh and District of Columbia Circuits. See Appendix *infra*. A similar rule prevails in at least one district of the Third Circuit as well. *United States v. Tesfa*, 404 F. Supp. 1259, 1273-74 (E.D. Pa. 1975); *United States v. Green*, 373 F. Supp. 149, 157-58 (E.D. Pa. 1974). The Court of Military Appeals also appears to have adopted this standard. *Cf. United States v. Fields*, 3 M.J. 27, 28-29 (C.M.A. 1977) (counseling psychologist with M.A. degree specializing in field of alcohol and drug abuse rehabilitation properly held not qualified to testify regarding underlying emotional problem of Government's witness for purposes of impeaching his credibility in light of expert's education and experience).

22. California, Colorado, Georgia, Indiana, Kentucky, Maryland, Michigan, New Mexico, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Virginia, Wisconsin. See Appendix *infra*. Psychologists have attempted to testify about issues beyond the scope of this Comment in at least four other jurisdictions with varying success. *Cf. Douglas v. United States*, 386 A.2d 289, 295-96 (D.C. Ct. App. 1978) (trial court properly excluded testimony by psychologist concerning defendant's incapacity to commit type of sexual offenses with which he was charged); *In re Masters*, 216 Minn. 553, 559-60, 13 N.W.2d 487, 491 (1944) (dictum) (educational psychologist with master's degree permitted to testify without objection about results of intelligence tests administered to petitioner during restoration to capacity hearing of allegedly feeble-minded person); *State v. Deyo*, 358 S.W.2d 816, 825-26 (Mo. 1962) (per curiam) (dictum) (psychologists permitted to testify without objection about results of intelligence tests administered to accused for purposes of showing that her statements and confession were not voluntary due to feeble-mindedness); *State v. Huff*, 14 N.J. 240, 250, 102 A.2d 8, 13 (1954) (dictum) (qualified expert psychologist's testimony regarding mental age and capacity of accused properly excluded on ground that it sought to compare the defendant's mental ability with that of infant rather than ultimate issue of whether his conduct conformed with legal standard for insanity).

adopted legislation to reverse it.²³ Four states²⁴ admit psychological expert testimony but limit its scope, and none appears to exclude such testimony entirely.²⁵

The Arizona Court of Appeals has addressed the issue of the admissibility of psychological expert testimony only in the context of workmen's compensation actions. In *Bilbrey v. Industrial Commission*,²⁶ the court concluded that only expert medical testimony may be offered to establish the causal link between physical injuries and mental disabilities.²⁷ By framing the question in terms of whether a licensed clinical psychologist can present the required *medical* testimony, it was able to reject the proffered testimony on the basis of the Arizona medical practice statute.²⁸ In a later workmen's compensation case, *Kucko v. Industrial Commission*,²⁹ the court of appeals qualified the *Bilbrey* limitation on psychological expert testimony, noting that it did not exclude the testimony of qualified psychologists about the *present* mental capacity and ability of their clients.³⁰ Between the *Bilbrey* and *Kucko* decisions, however, the Arizona legislature amended the psychologist certification statute³¹ to permit psychologists to diagnose, treat, and correct human conditions ordinarily within the scope of their practice,³² responding, perhaps, to the strict prohibition set forth in *Bilbrey*. The *Kucko* court, however, made no

23. See note 349 *infra*. A similar, but far less explicit, effort to alter judicial restrictions on psychological expert testimony was undertaken by the Arizona legislature but with uncertain results. See text accompanying notes 31 to 33 & 312 *infra*.

24. Arizona, Florida, Illinois, Louisiana. See Appendix *infra*.

25. North Carolina may fall into this category; however, there are no reported decisions directly on point regarding the admissibility of psychological expert testimony. Cf. *State v. Peterson*, 24 N.C. App. 404, 407-08, 210 S.E.2d 883, 885-86 (1975) (no abuse of discretion in excluding opinion of clinical psychologist with doctoral degree about whether accused was unconscious in that he was experiencing dissociative reaction at time of crime; court noted general lack of agreement over qualification of nonmedical psychologist to testify about mental condition or competency).

26. 27 Ariz. App. 473, 556 P.2d 27 (1976).

27. The petitioner in *Bilbrey* had sustained a moderately severe head injury while at work and sought the continuance of workmen's compensation benefits on the ground that he was emotionally disabled as a result of the accident. *Id.* at 473, 556 P.2d at 27.

28. See note 52 *infra*.

29. 116 Ariz. 530, 570 P.2d 217 (1977).

30. The petitioner in *Kucko* had injured his back and had been declared partially disabled. He sought total disability compensation based upon the presence of a disabling mental condition, allegedly causally related to the accident, in addition to his physical impairment. *Id.* at 531, 570 P.2d at 218.

31. ARIZ. REV. STAT. §§ 32-2061 to -2087 (1976 & Cum. Supp. 1979).

32. ARIZ. REV. STAT. § 32-2084 (Cum. Supp. 1979) provides:

No provision of this chapter shall authorize any person to engage in any manner in the practice of medicine as defined by the laws of this state, except that any person certified by the provisions of this chapter shall be permitted to diagnose, treat and correct human conditions ordinarily within the scope of the practice of a psychologist.

See 1977 Ariz. Sess. Laws ch. 145, at 827.

reference to the revised statute even though the issue raised in that case was directly on point — whether the establishment of a causal link between a past physical injury and a present mental disorder would be considered “ordinarily within the scope of the practice of a psychologist.”³³

In *Reese v. Naylor*,³⁴ the Florida District Court of Appeals noted that there was no error in admitting the testimony of a qualified clinical psychologist concerning the diagnosis of a person’s mental condition based on the use of the devices and techniques ordinarily utilized by such practitioners.³⁵ In this personal injury action arising from an automobile accident, the clinical psychologist testified about the administration of various psychological tests and offered his diagnosis. The defense objected on the ground that the diagnosis of a patient’s mental condition was not within the scope of psychological practice as defined by statute and instead was clearly within the medical practice statute. The *Reese* court noted that for the purposes of a negligence action there may be a difference between the qualifications needed by an expert witness in the mental health field to testify about the causal relationship between a trauma and a mental condition and those needed to offer evidence regarding the nature or extent of such a mental condition.³⁶ The court never reached this issue, however, because it was not properly preserved at trial.³⁷

The prevailing rule in Illinois appears to be that qualified psychologists may offer an opinion concerning the mental condition of a person based solely upon psychological tests but only if those tests are administered at the request of a psychiatrist who will, in turn, incorporate the test results into his or her own diagnosis and expert testimony. The precise contours of this position, however, have not yet been delineated by the Illinois Supreme Court. In *People v. Noble*,³⁸ the supreme court discussed, but did not resolve,

33. ARIZ. REV. STAT. § 32-2084 (Cum. Supp. 1979).

34. 222 So. 2d 487 (Fla. Dist. Ct. App. 1969) (dictum).

35. *Id.* at 490.

36. *Id.*

37. *Cf. Seaboard Coast Line R.R. v. Hill*, 250 So.2d 311, 314-15 (Fla. Dist. Ct. App. 1971) (psychologist who was expert in human perception and environmental factors that might adversely affect perception was qualified to offer opinion about whether average driver would have seen train at railroad crossing in time to have avoided collision; significance and reaction of human beings to deceptive environmental factors might reasonably be considered beyond common knowledge of jurors and thus proper subject matter for expert opinion). *But cf. Lamazares v. Valdez*, 353 So. 2d 1257, 1258 (Fla. Dist. Ct. App. 1978) (admission of expert psychological testimony that defendant was untruthful and liable to make mistake or misjudgment in his driving ability to react to accident circumstances constituted reversible error because clear invasion of province of jury); *Termain v. State*, 336 So. 2d 705, 706-07 (Fla. Dist. Ct. App. 1976) (testimony of psychologist in support of entrapment defense that defendant was dependent on others and lacked will power was properly rejected by trial court because accused did not plead insanity and it would only confuse jury and create immaterial issues).

38. 42 Ill. 2d 425, 248 N.E.2d 96 (1969) (dictum). In *Noble*, the defendant was charged with murder and offered the expert testimony of a psychiatrist and a psychologist in support of his insanity defense.

the question whether psychologists are qualified to diagnose the existence and nature of mental disease and to determine whether there is a causal relationship between such disease and criminal behavior.³⁹ Although the trend in other jurisdictions to permit such testimony was noted by the court, it did not indicate whether Illinois should follow suit because the facts did not compel resolution of that issue. The Illinois Court of Appeals has put its own gloss on the *Noble* court's dictum by requiring that a foundation of psychiatric evidence be laid before testimony by psychologists, regardless of their qualifications, may be deemed relevant.⁴⁰ In *People v. Manning*,⁴¹ the court of appeals noted that it had interpreted *Noble* to stand for two propositions: first, a psychologist's testimony about the tests administered and the results thereof is irrelevant unless it forms the basis for a psychiatrist's opinion of the defendant's sanity,⁴² and second, the psychologist must possess the requisite education and experience — at least a doctoral degree and two years experience.⁴³ The *Manning* court observed that the trial judge's refusal to permit a psychologist — who possessed a master's degree in psychology and who had worked for about five years as a court psychologist — to testify as an expert witness regarding the results of intelligence tests she administered to a criminal defendant charged with armed robbery was not in error.⁴⁴ Despite the court's emphasis on the psychologist's limited qualifications, it noted that upon retrial she could testify about the intelligence tests she administered "if it assists proper psychiatric evidence of defendant's sanity."⁴⁵ Even if a proper psychiatric foundation is laid, it appears that qualified psychologists in Illinois may not testify about the ultimate issue of a criminal defendant's sanity.⁴⁶

39. *Id.* at 434, 428 N.E.2d at 101. The accused had been referred to the psychologist by the psychiatrist for psychological testing and evaluation. At trial, the court rejected the offer of proof involving the testimony of the psychologist and excluded his description of the psychological tests administered, the procedure used, and his opinion based upon results of these tests. The psychiatrist was not permitted to include in his own testimony any consideration of the results of the psychological testing in order to prevent him from doing indirectly what the psychologist could not do directly.

40. *People v. Manning*, 61 Ill. App. 3d 558, 378 N.E.2d 227 (1978) (dictum).

41. *Id.*

42. *Accord*, *People v. Gilliam*, 16 Ill. App. 3d 659, 663-64, 306 N.E.2d 352, 355-56 (1974); *People v. McBride*, 130 Ill. App. 2d 201, 204-06, 264 N.E.2d 446, 448-49 (1970).

43. 61 Ill. App. 3d at 564, 378 N.E.2d at 232 (dictum). *Cf. In re Wellington*, 34 Ill. App. 3d 515, 516-21, 340 N.E.2d 31, 33-35 (1975) (mental health specialist with bachelor's degree and forty hours of graduate work in clinical and experimental psychology improperly held qualified by trial court to give testimony on issue of mental competency in civil commitment proceeding; he was not qualified in terms of his education and experience, nor did he meet psychologist licensing requirements).

44. 61 Ill. App. 3d at 564, 378 N.E.2d at 233.

45. *Id.*, 378 N.E.2d at 233. *Quaere*: Whether the *Manning* court's second proposition — that a psychologist must present adequate credentials — has any real bearing on the admissibility of such expert testimony whenever it is offered as an adjunct to "proper psychiatric evidence"?

46. *See People v. Morthole*, 51 Ill. App. 3d 919, 927-28, 366 N.E.2d 606, 612 (1977) (dictum). *Cf. People v. Felton*, 26 Ill. App. 3d 395, 399-400, 325 N.E.2d 400, 403-04 (1975) (not reversible error to exclude such testimony).

The limitations on psychological expert testimony in Louisiana are unclear. In *State v. Alexander*,⁴⁷ the Louisiana Supreme Court laconically noted that an unlicensed practicing psychologist could not testify as an expert regarding the sanity of the defendant at the time of the offense because he "possessed no qualification as a psychiatrist,"⁴⁸ implying that only medically trained experts may offer such opinions.⁴⁹

In criminal actions, psychological expert testimony is generally offered to support or rebut pleas of insanity to felony charges. Typically, psychologists are permitted to testify about the nature of the tests they administer to defendants, to present analyses of the test data, and to offer diagnoses based upon that information. The state survey revealed that most of the controversy over admissibility concerned whether psychologists, once properly qualified, should have been permitted to express an opinion about the ultimate issue of fact. Generally, the restrictive approach of Arizona, Florida, Illinois, and Louisiana, insofar as it attempts to separate empirical observations from opinions regarding the issue of ultimate fact, is difficult to apply consistently. As the Advisory Committee noted with regard to Federal Rule of Evidence 704,⁵⁰ there are no bright line tests for distinguishing the limits of such opinion testimony, especially in light of the prominent role subjective interpretation plays in the evaluation of psychological test results and diagnoses.⁵¹ Another, albeit less persuasive, argument for limiting psychological expert testimony focuses on whether medical training is required to enable a witness to offer an opinion on whether a causal connection exists between a defendant's present or past mental condition and his or her criminal conduct and, if so, whether that condition is sufficient to excuse criminal responsibility based upon the legal standard for insanity.⁵² That psychologists do not possess a medical degree, however, does not resolve the more fundamental issue — whether the

47. 252 La. 564, 211 So. 2d 650 (1968).

48. *Id.* at 574, 211 So. 2d at 654.

49. *But see* *Busby v. Martin*, 166 So.2d 660, 662-63 (La. Ct. App. 1964) (clinical psychologist with doctoral degree who taught at university medical school properly permitted to offer opinion testimony in workmen's compensation case that petitioner could not return to job for psychological reasons possibly aggravated by the accident; psychologist deemed "eminently qualified" as expert even though he did not possess M.D. degree).

50. FED. R. EVID. 704 (Advisory Committee's Note). *See* text accompanying notes 7 to 9 *supra*.

51. *See* pp. 562-89 *infra*.

52. *E.g.*, *Saul v. State*, 6 Md. App. 540, 252 A.2d 282 (1969); *State v. Robertson*, 108 R.I. 656, 278 A.2d 842 (1971), *aff'g result on remand*, 111 R.I. 399, 303 A.2d 360 (1973). To demonstrate that the diagnosis of mental disorders should remain the exclusive province of physicians, the party opposing the admissibility of psychological expert testimony will typically argue that medical doctors are the only persons licensed by the state to practice medicine, and that the practice of medicine is generally defined by the state licensing statute to include the diagnosis and treatment of any physical or mental disease or disorder. *E.g.*, ARIZ. REV. STAT. § 32-1401(9) (1976); MD. ANN. CODE art. 43, § 119(f) (Cum. Supp. 1979); TEX. REV. CIV. STAT. ANN. art. 4510-4510a (Vernon 1976). Consequently, the treatment of mental disorders is a part of medical practice. Opponents argue further that although the specific terminology used to

probative value of the evidence offered by psychologists is appreciably influenced by such a medical-nonmedical distinction.

describe mental disorders may be shared by both psychiatrists and psychologists, it is used to denote a medical, not psychological, condition. Thus, psychologists who testify using such terminology are describing a mental disorder and are thereby offering a medical diagnosis and engaging in the practice of medicine. Because psychologists are not licensed by the state to practice medicine — the diagnosis and treatment of any physical or mental disease or disorder, *e.g.*, MD. ANN. CODE art. 43, § 639 (1971); TEX. REV. CIV. STAT. ANN. art. 4512c, § 3 (Vernon 1976); *contra* ARIZ. REV. STAT. § 32-2084 (Cum. Supp. 1979) (“except that any person certified by the provisions of this chapter shall be permitted to diagnose, treat and correct human conditions ordinarily within the scope of the practice of a psychologist”) — they are offering expert testimony about a matter outside the purview of their profession as defined by law. This medical-nonmedical distinction only distracts the courts from the fundamental issue, whether the information being conveyed to the trier of fact by psychological or psychiatric experts is scientifically accurate.

Two misconceptions underlie this argument. First, it ignores the arbitrariness of our idiomatic expressions for mental disorders. At least one commentator has argued that diseases without demonstrable organic components are incompatible with the traditional medical concept of disease — the causation of the symptomatology may be objectively determined. T. SZASZ, *supra* note 3, at 12-17. According to Szasz’ theory, the characterization of mental disorders as “illnesses” or “diseases” merely obscures the fact that they are not a typical part of medical practice. Our perception of them as “illnesses” is not empirically grounded but derived with reference to social values that may vacillate radically. Second, the fact that psychiatrists and psychologists share the same nomenclature does not necessarily imply that it is the language of *medical* diagnosis. While each profession may use the same terms to describe mental disorders, the theoretical conceptions they connote may be quite different. See pp. 576-82 *infra*.

Adherence to the medical-nonmedical distinction, as the *Hawthorne* and *Jenkins* courts clearly recognized, does not necessarily promote the fundamental purpose of expert testimony, to aid the trier of fact in its search for truth. The prevalence of the medical training argument to exclude psychological expert testimony may be attributed, in part, to the long-standing professional rivalry existing between psychologists and their medical counterparts, psychiatrists. See *Casimere v. Herman*, 28 Wis. 2d 437, 443, 137 N.W.2d 73, 76 (1965). See generally Grinker, Albee, Schachter, Garnezy, Thrasher & Mensh, *Emerging Conceptions of Mental Illness and Models of Treatment*, 2 PROF. PSYCHOL. 129 (1971). The tension between these two disciplines was evident in the amicus curiae briefs submitted to the *Jenkins* court by their respective professional organizations, the American Psychological Association and the American Psychiatric Association. The former argued that psychology was an established science and learned profession with its own methods of diagnosing mental diseases or defects. It urged that this field should not be considered the exclusive province of scientists with medical training. Amicus brief for American Psychological Association, *Jenkins v. United States*, 307 F.2d 637 (D.C. Cir. 1962) (en banc), *reprinted in* READINGS IN LAW AND PSYCHIATRY 155-59 (rev. ed. R. Allen, E. Ferster & J. Rubin 1975) [hereinafter cited as READINGS]. See generally Hoch & Darley, *A Case At Law*, 17 AM. PSYCHOL. 623 (1962).

In opposition, the American Psychiatric Association stressed that the treatment of illnesses, whatever their etiology, had traditionally been a *medical* concern and that the diagnosis and treatment of *mental illnesses* should be no exception. Amicus brief for American Psychiatric Association, *Jenkins v. United States*, 307 F.2d 637 (D.C. Cir. 1962) (en banc), *reprinted in* READINGS, *supra*, at 159-61. The American Psychiatric Association’s position was unequivocal: The psychologist was, at best, professionally subservient to the psychiatrist. The

Civil actions involving psychological experts deal primarily with tortious conduct. Typically, they are asked to testify about the results of

Association's brief quoted the text of a 1954 resolution entitled Resolution on the Relationship of Psychotherapy to Medicine. It was approved by the Board of Trustees of the American Medical Association, the Council of the American Psychiatric Association, and the Executive Council of the American Psychoanalytic Association, three medically oriented organizations. The following excerpt from that resolution reflects the tenor of the American Psychiatric Association's attitude toward psychologists in 1962.

Psychotherapy is a form of medical treatment and does not form the basis for a separate profession.

Other professional groups such as psychologists . . . , of course, use psychological understanding in carrying out their professional functions. Members of these professional groups are not thereby practicing medicine. *The application of psychological methods to the treatment of illness is a medical function.* Any physician may utilize the skills of others in his professional work, but he remains responsible legally and morally, for the diagnosis and for the treatment of his patient.

The medical profession fully endorses the appropriate utilization of the skills of psychologists *It further recognizes that these professions are entirely independent and autonomous when medical questions are not involved; but when members of these professions contribute to the diagnosis and treatment of illness, their professional contributions must be co-ordinated under medical responsibility.*

American Medical Association, American Psychiatric Association & American Psychoanalytic Association, Resolution on the Relationship of Psychotherapy to Medicine (1954) (emphasis added) [hereinafter cited as 1954 Resolution], *quoted in* Amicus brief for American Psychiatric Association, *Jenkins v. United States*, 307 F.2d 637, 648 n.1 (D.C. Cir. 1962) (en banc) (Burger, J., concurring), *reprinted in* READINGS, *supra*, at 160.

Notably, neither association discussed in its amicus brief how the scientific expertise of professional psychologists or psychiatrists could be translated into trustworthy opinions about the applicability of a particular legal standard. Their lack of attention to this critical detail may be attributed, in part, to confusion over the meaning of "mental disease or defect" in the criminal insanity statute invoked by the defendant in *Jenkins*. See W. LAFAVE & A. SCOTT, HANDBOOK ON CRIMINAL LAW § 38, at 291-92 (1972). While the court did not specify the particular statute in question, the *Durham* "product" test was the standard in effect at that time. D.C. CODE ANN. § 24-301 (1962). Underlying this phrase are two distinct concepts. One is the scientific notion of mental disorder, the presence or absence of which may be empirically demonstrated. The other derives its significance from the realm of social policy — it is the legal criterion that must be fulfilled to the satisfaction of the trier of fact before criminal behavior may be exculpated. The potentially prejudicial effects of permitting psychological expert testimony concerning the former concept to be generalized to the latter issue are addressed below. See pp. 593-98 *infra*. The point is that the professional associations' preoccupation with the medical-nonmedical debate obscured these two fundamental elements of psychological expert testimony.

Then Circuit Judge Burger, concurring in *Jenkins*, sharply criticized the majority for misconstruing the issue raised by the case. While Judge Bazelon focused on the probable probative value of the expert testimony rather than the nature of the expert's degree, see note 18 *supra*, Judge Burger framed the issue as a "question of a psychologist's competence to make a diagnosis of mental disease." 307 F.2d at 649 (Burger, J., concurring) (emphasis in original). His reliance upon the medical model of mental disorders was evidently a foregone conclusion. Citing the 1954 resolution

psychological tests administered to plaintiffs injured in accidents and to offer a diagnosis regarding the injured party's mental status. As in the criminal context, the primary objection to the admissibility of such expert testimony concerns whether a psychologist can express an opinion about the causal connection between the accident, the injury, and the present mental condition of the plaintiff. Objections are typically founded on the argument that such judgments require medical expertise.⁵³ An overwhelming majority of those jurisdictions that have addressed this issue have rejected the medical-nonmedical distinction in favor of the "probable probative value" rationale used in *Hawthorne* and *Jenkins*.

The qualifications of the psychological expert witness usually include possession of a doctoral degree in clinical psychology, a license by the

quoted in the American Psychiatric Association's brief, which he suggested was "plainly entitled to great weight," 307 F.2d at 648, he concluded:

[I]t would be proper, if a clinical psychologist is found qualified to testify as to the presence or absence of a mental disease and does so in opposition to a psychiatrist, to tell the jury they could take into account the difference in the education, training and experience of psychologists and psychiatrists and *the absence of medical training in the former*.

Id. at 651 (emphasis added). Given Judge Burger's characterization of the evidence as fundamentally medical, his suggested jury instruction might well nullify whatever probative value a nonmedical clinical psychologist's testimony might have for the trier of fact. Implicit in his argument is the position that testimony of this nature would constitute a *medical* opinion on a *mental disease* because "*the application of psychological methods to the treatment of illness is a medical function.*" *Id.* at 648 n.1 (quoting 1954 Resolution, *supra*) (emphasis added by Burger, J., concurring).

The dissenting opinion in *Jenkins* was even more emphatic in its opposition to psychological expert testimony: "[I]t must be concluded beyond doubt that the existence of a mental disease or defect is, first and foremost, a *medical* problem." *Id.* at 651 (Bastian, J., dissenting) (emphasis in original). See, e.g., *People v. Gilliam*, 16 Ill. App. 3d 659, 306 N.E.2d 353 (1974); *State v. Tull*, 240 Md. 49, 212 A.2d 729 (1965); *Colbert v. State*, 18 Md. App. 632, 308 A.2d 726 (1973); *Saul v. State*, 6 Md. App. 540, 252 A.2d 282 (1969). The dissent's rationale, however, is bewildering. It concluded that because the issue of mental illness was so nebulous and uncertain even to those of the medical profession who were experienced and trained in its diagnosis and treatment, it is sheer folly . . . to attribute to a lay psychologist, who admittedly is not a doctor of medicine, such diagnostic acuity as to entitle him to wear in a criminal courtroom the badge of an expert witness with respect to the existence of that elusive *medical* condition known as mental disease or defect. 307 F.2d at 651-52 (emphasis in original). The dissent ignored the equally plausible conclusion that expert testimony regarding such "elusive medical conditions" by both psychologists *and* psychiatrists ought to be excluded.

Despite the recognition in *Jenkins* of psychological expert testimony, its education and experience standard does not effectively ensure that psychological evidence and expert testimony will be even minimally probative because the scientific accuracy of psychological techniques and the diagnoses based thereon need not be demonstrated prior to qualifying the psychological expert. A recent review of the scientific literature seriously challenges the *Jenkins* court's basic assumption that the scientific basis of psychological expert testimony makes it reasonably accurate for evidentiary purposes. See pp. 562-89 *infra*.

53. *E.g.*, *Bilbrey v. Industrial Comm'n*, 27 Ariz. App. 473, 556 P.2d 27 (1976); *Reese v. Naylor*, 222 So. 2d 487 (Fla. Dist. Ct. App. 1969). See note 52 *supra*.

state to practice psychology, teaching experience at the college or graduate school level, and engagement in private practice or employment by a state mental institution or private clinic.⁵⁴ Other relevant factors include the expert's participation in a clinical internship, membership in the American Psychological Association, diplomate status with the American Board of Examiners in Professional Psychology, and publication of articles in professional journals.⁵⁵

Of the relatively few appellate decisions that have mentioned some or all of the non-projective psychological tests⁵⁶ administered to either criminal defendants or plaintiffs in tort actions, most frequently noted have been intelligence tests⁵⁷ and the Minnesota Multiphasic Personality Inventory.⁵⁸ In the projective test⁵⁹ category, the Rorschach inkblot⁶⁰ and the Thematic Apperception Test⁶¹ appear relatively common.

It is surprisingly rare for courts to evaluate the underlying accuracy of the psychological evidence being offered to the trier of fact.⁶² They have largely ignored the fundamental issue explored in this Comment, the scientific bases of the psychological tests administered and the diagnoses based thereon. The following section examines the admissibility of scientific evidence in general and the application of these principles to psychological evidence and expert testimony in particular in order to assure that it is minimally probative and that its probative value is not outweighed by the evidentiary counterweights.

PSYCHOLOGY AND THE NATURE OF SCIENTIFIC EVIDENCE AND EXPERT TESTIMONY

Rules of evidence are designed to permit the orderly and logical presentation of information to the trier of fact so that the truth may be fairly

54. See Appendix *infra*.

55. *Id.*

56. See pp. 570-72 *infra*.

57. *E.g.*, Jenkins v. United States, 307 F.2d 637, 639-40 (D.C. Cir. 1962) (en banc) (intelligence tests); Reese v. Naylor, 222 So. 2d 487, 489 (Fla. Dist. Ct. App. 1969) (Wechsler Adult Intelligence Scale (WAIS)); City of Austin v. Hoffman, 379 S.W.2d 103, 110 (Tex. Ct. App. 1964) (Stanford-Binet Intelligence Scale).

58. *E.g.*, People v. Myers, 35 Ill. 2d 311, 320, 220 N.E.2d 297, 303 (1966) (per curiam).

59. See pp. 572-75 *infra*.

60. *E.g.*, United States v. Caldwell, 543 F.2d 1333, 1353 n.99 (D.C. Cir. 1974), cert. denied, 423 U.S. 1087 (1976).

61. *E.g.*, State v. Robertson, 108 R.I. 656, 659, 278 A.2d 842, 844 (1971), *aff'g result on remand*, 111 R.I. 399, 303 A.2d 360 (1973).

62. *But see In re Masters*, 216 Minn. 553, 565, 13 N.W.2d 487, 493-94 (1944) (dictum) (court discusses limitations on intelligence test accuracy in case involving "restoration to capacity" of person adjudged feeble-minded and committed to state school); *but cf.* Dickenson v. Baltimore & O. Chicago Term. R.R., 42 Ill. 2d 103, 108, 245 N.E.2d 762, 765 (1969) (cross-examination permitted to establish lack of scientific accuracy of psychological testing and results).

and justly ascertained.⁶³ Initial determinations of materiality and relevancy are left to the discretion of the trier of law, and the ultimate determination of the evidence's probative value is reserved for the trier of fact.⁶⁴ Evidence is considered material if it bears upon an issue in the case.⁶⁵ The concept of relevancy requires that there be a tendency of the evidence to establish a material proposition.⁶⁶ The appropriate inquiry is whether the information conveyed during the course of psychological expert testimony would make the probandum — the presence or absence of a mental disorder and the causal connection between the criminal or tortious conduct and such a disorder — more probable after the evidence had been received than before its receipt.⁶⁷

When matters arise at trial about which the ordinary degree of knowledge and experience of the trier of fact is insufficient to enable it to make all the necessary inferences, the requisite knowledge and experience may be supplied by an expert witness.⁶⁸ Historically, the "opinion" rule, which excludes opinion testimony by laypersons, was founded on a jealous regard for the province of the jury; however, a more plausible basis for this theory, according to Professor Wigmore, is to avoid the presentation of superfluous evidence.⁶⁹ The opinion rule, however, does not apply to experts. The crucial justification for the admissibility of expert testimony is the

63. See, e.g., FED. R. EVID. 102 ("These rules shall be construed to secure . . . promotion of growth and development of the law of evidence to the end that the truth may be ascertained and proceedings justly determined."); 1 J. WEINSTEIN & M. BERGER, *WEINSTEIN'S EVIDENCE* ¶ 102[01], at 102-08 n.8 (1976) [hereinafter cited as *WEINSTEIN'S EVIDENCE*] ("But at least reasonably accurate truth finding must always be a central purpose.").

64. E.g., *United States v. Alexander*, 526 F.2d 161, 163-64 (8th Cir. 1975); *United States v. Stifel*, 433 F.2d 431, 438 (6th Cir. 1970), cert. denied, 401 U.S. 994 (1971); 1 J. WIGMORE, *EVIDENCE* § 12, at 299 (3d ed. 1940). See James, *Relevancy, Probability and the Law*, 29 CALIF. L. REV. 689 (1941).

65. E.g., FED. R. EVID. 401; MCCORMICK'S HANDBOOK OF THE LAW OF EVIDENCE § 185 (2d ed. E. Cleary 1972) [hereinafter cited as *MCCORMICK*].

66. See FED. R. EVID. 401 ("'Relevant evidence' means evidence having 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."); *MCCORMICK*, supra note 65, § 185, at 435. The federal rule does not alter the analysis; it merely combines the requirements of materiality and relevance into a single rule.

67. Generally, psychological testimony is based on the psychologist's firsthand observations of the party in question, and the issue of hearsay evidence is rarely raised. Compare *Spann v. Bees*, 23 Md. App. 313, 327 A.2d 801 (1974) (direct examination of plaintiff) with *Henderson v. State*, 159 Ind. App. 621, 308 N.E.2d 710 (1974) (opinion as to defendant's sanity at time of crime based, in part, upon interview with accused's family challenged as hearsay). However, even hearsay bases for psychological opinions are permitted by the federal rules of evidence. FED. R. EVID. 703. See also Note, *Hearsay Bases of Psychiatric Opinion Testimony: A Critique of Federal Rule of Evidence 703*, 51 S. CAL. L. REV. 129 (1977) [hereinafter cited as *Hearsay Bases*].

68. Rosenthal, *The Development of the Use of Expert Testimony*, 2 L. & CONTEMP. PROB. 403, 404 (1935).

69. 2 J. WIGMORE, supra note 64, § 557. 7 J. WIGMORE, *EVIDENCE* §§ 1918, 1920 (rev. ed. J. Chadbourne 1978); see Rosenthal, supra note 68, at 411-412.

expert's ability to relate to the trier of fact *accurate* conceptions about a particular matter that is beyond the ken of the ordinary layperson. Experiential capacity is the "skill to acquire accurate conceptions," and a person possessing this skill is considered an expert for evidentiary purposes.⁷⁰ Although expertise need not be linked with occupational experience or systematic training in a particular field to be deemed admissible, these two experiential factors frequently distinguish the expert's knowledge from the layperson's general knowledge and necessitate a preliminary offer of proof. Generally, the party proffering expert testimony must submit to the trier of law evidence of the expert's special or peculiar training, education, or experience with regard to the matter in question.⁷¹ For psychological experts, this offer of proof typically involves the recitation of their education, training, and professional experience and affiliations. The determination of whether an expert possesses the requisite experiential capacity is traditionally left to the discretion of the trial court.⁷² The tacit assumption is that evidence of education and experience alone will assure that the information and opinions being conveyed to the trier of fact will not only be outside the jury's general or ordinary experience but are also sufficiently accurate to be helpful to the trier of fact without unfair prejudice.⁷³

In light of the underlying purpose of expert testimony, two major criticisms regarding the relevance of psychological evidence and expert testimony may be made. First, such evidence must be excluded because it is irrelevant — it has no tendency to make the existence of any fact of consequence to the determination of the action more probable or less probable than the existence of such fact would be without it. This argument is a radical departure from current practice given the courts' pervasive use of psychological experts. If it could be satisfactorily demonstrated that psychological judgments and opinions are not more reliable than chance, then the trier of law would be justified in excluding such testimony because it would not be even minimally probative. Second, if psychological expert testimony is minimally probative, it is inadmissible because its probative value is outweighed by various countervailing factors. Each of these arguments is discussed at length below, but first the nature and purpose of scientific expert testimony must be examined.

Nature of Scientific Expert Testimony

Not every purportedly scientific principle is automatically acceptable to the court as the basis for expert testimony. Exactly what type of evidence courts will classify as "scientific" and apply special rules of admissibility

70. 2 J. WIGMORE, *supra* note 64, § 555, at 633.

71. *Id.* § 556, at 635.

72. *Id.* § 561.

73. *See* 7 J. WIGMORE, *supra* note 69, § 1923.

and exclusion to has never been satisfactorily explicated.⁷⁴ Accidents of history⁷⁵ or society's gradual legitimation of a particular scientific profession, as evidenced by licensure for example,⁷⁶ may play a decisive role. While the admissibility of an expert's testimony generally hinges on its helpfulness to the trier of fact in a particular case, the admissibility of a scientific technique turns on its reliability, which must be evaluated in terms of a legal standard in order to promote uniformity and consistency of decision-making.⁷⁷

A. *The Frye Test*

The most widely recognized standard that courts use to evaluate the admissibility of scientific evidence and its supporting expert testimony is that espoused in *Frye v. United States*.⁷⁸ Citing no authority, the Court of Appeals for the District of Columbia observed:

Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and 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 acceptance in the particular field in which it belongs.⁷⁹

74. McCORMICK, *supra* note 65, § 203, at 488; Strong, *Questions Affecting the Admissibility of Scientific Evidence*, 1970 U. ILL. L.F. 1, 11.

75. McCORMICK, *supra* note 65, § 203, at 488.

76. *E.g.*, Psychologists' Certification Act, MD. ANN. CODE art. 43, §§ 618-639 (1971 & Cum. Supp. 1979). See Hess, *Entry Requirements for Professional Practice of Psychology*, 32 AM. PSYCHOL. 365, 365 (1977) (as of 1977 practice of psychology regulated by statute in forty-nine states and District of Columbia).

77. See *Reed v. State*, 283 Md. 374, 381, 391 A.2d 364, 367-68 (1978).

78. 293 F. 1013 (D.C. Cir. 1923) (admissibility of systolic blood pressure deception test or "lie detector"). See Boyce, *Judicial Recognition of Scientific Evidence in Criminal Cases*, 8 UTAH L. REV. 313, 313 (1963-1964); Strong, *supra* note 74, at 10-11; Note, *Evolving Methods of Scientific Proof*, 13 N.Y.L.F. 677, 682 (1967) [hereinafter cited as *Evolving Methods*]. The *Frye* test has been cited with approval by a majority of the federal circuits and almost all of the state courts that have considered the question of the admissibility of scientific evidence. *E.g.*, *United States v. Kilgus*, 571 F.2d 508, 510 (9th Cir. 1978) (forward-looking infrared system); *United States v. Brown*, 557 F.2d 541, 556-57 (6th Cir. 1977) (dictum) (ion microprobiic analysis of hair sample); *United States v. Alexander*, 526 F.2d 161, 163 (8th Cir. 1975) (polygraph analysis); *United States v. Carter*, 522 F.2d 666, 685 n.67 (D.C. Cir. 1975) (identification of drawings or "doodles" left on desk pad at scene of burglary); *United States v. Baller*, 519 F.2d 463, 466 (4th Cir.), *cert. denied*, 423 U.S. 1019 (1975) (voice spectrograph analysis); *United States v. Cochran*, 499 F.2d 380, 393 (5th Cir. 1974), *cert. denied*, 419 U.S. 1124 (1975) (polygraph analysis); *Marks v. United States*, 260 F.2d 377, 382 (10th Cir. 1958), *cert. denied*, 358 U.S. 929 (1959) (polygraph analysis); *Reed v. State*, 283 Md. 374, 381-85, 391 A.2d 364, 368-69 (1978) (review of cases involving scientific evidence).

79. 293 F. at 1014.

The fundamental weakness of the *Frye* test, as originally formulated, was that it permitted members of a particular "scientific" profession to assert the truthfulness of their theories without requiring that some objective standard of reliability be met.⁸⁰ The *Frye* decision implies that "general scientific acceptance" of a theory by members of the *particular* field in question will somehow ensure the accuracy of the scientific evidence based upon that principle.⁸¹ This assumption is unfounded for two reasons.

First, for legal purposes scientific theories are useful only insofar as they consistently and accurately classify or explain various phenomena. For centuries dramatists, philosophers, theologians, and jurists have scrutinized human behavior in an effort to comprehend the inner workings of the mind.

80. Strong, *supra* note 74, at 9-15. Cf. FED. R. EVID. 703 ("The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to him at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence.") As a practical matter, this rule carries *Frye* one step further. Once the court accepts the witness as an expert, it generally does not attempt to second-guess the reliability of the information upon which the expert relies, thereby permitting absolute self-validation. See Gibbons, *Rules 701-706: Opinions and Expert Testimony*, 20 TRIAL LAW GUIDE 500, 503-06 (1977). See generally *Hearsay Bases*, *supra* note 67.

81. McCormick observed that the phrase "generally accepted as reliable" may carry different connotations depending upon whether it is the court or the scientists defining its meaning, MCCORMICK, *supra* note 65, § 203 n.32, and advocated that disagreement in the scientific community regarding the reliability of scientific evidence should go to its weight rather than its admissibility:

"General scientific acceptance" is a proper condition for taking judicial notice of scientific facts, but not a criterion for the admissibility of scientific evidence. Any relevant conclusions which are supported by a qualified expert witness should be received unless there are other reasons for exclusion. Particularly, probative value may be overborne by the familiar dangers of prejudicing or misleading the jury, and undue consumption of time.

Id. at 491 (footnotes omitted). The potential lack of uniformity in determining on a case-by-case basis whether a particular scientific technique is valid is the primary criticism of this approach. *Reed v. State*, 283 Md. 374, 387, 391 A.2d 364, 371 (1978). *But see id.* at 400-09, 391 A.2d at 377-82 (Smith, J., dissenting).

If, for example, the principles of phrenology were to gain wide recognition among its practitioners as a scientifically valid means of predicting dangerousness, strict interpretation of the *Frye* test would lead to the conclusion that such expert testimony was admissible. See generally R. SLOVENKO, *PSYCHIATRY AND LAW* 38-39 & n.19 (1973). A narrow view of the "general scientific acceptance" standard has led to the exclusion of both polygraph and voice spectrograph identification techniques as evidence in some jurisdictions. *E.g.*, *Reed v. State*, 283 Md. 374, 391 A.2d 364 (1978). See generally Decker & Handler, *Voiceprint Identification Evidence — Out of the Frye Pan and Into Admissibility*, 26 AM. U.L. REV. 314 (1977); Strong, *supra* note 74, at 12; Tarlow, *Admissibility of Polygraph Evidence in 1975: An Aid in Determining Credibility in a Perjury-Plagued System*, 26 HASTINGS L.J. 917 (1975). That something more than acceptance by a particular scientific discipline is required has been recognized in the context of the admissibility of polygraph examinations. At least one federal circuit has rejected the argument that the polygraph need only attain general acceptance among polygraph operators to satisfy the test for admissibility. *United States v. Alexander*, 526 F.2d 161, 164 n.6 (8th Cir. 1975).

This fascination with our "psychological being" underwent a radical transformation in the late nineteenth century when Freud introduced his psychoanalytic theory. It was during this period that the observation of human behavior was systematically subjected to the rigors of the scientific method.⁸² To be of any scientific value, a theory of personality must be evaluated in empirical terms:⁸³ how easily does it permit the user to move from abstract theory to empirical observation and vice versa?⁸⁴ Typically, the scientific method involves the systematic verification and articulation of a paradigm theory through empirical observations.⁸⁵ Greatly simplified, scientific analysis transforms these theoretical constructs into empirically verifiable principles that tend to explain certain phenomena or to predict their occurrence.⁸⁶ Recognition by a particular scientific community, however, cannot be the decisive *sine qua non* for evidentiary purposes.⁸⁷ The fact that certain psychological techniques are sufficiently established to

82. Despite Freud's urge to speculate about politics, religion, and culture, he clearly intended psychoanalysis to be an empirical science: "Freud saw himself as an intellectual conquistador, the leader of a movement to extend the vision of science, by rational means, beyond the limits the empiricists had set for it." P. RIEFF, *FREUD: THE MIND OF THE MORALIST* 2 (Anchor ed. 1961) (footnote omitted). See Amicus brief for American Psychological Association, *Jenkins v. United States*, 307 F.2d 637 (D.C. Cir. 1962 (en banc)), reprinted in *READINGS*, *supra* note 52, at 156 ("In any inquiry as to the testimonial competence of a psychologist to express an expert professional opinion, it is important to understand that psychology is an established science which makes use of the same fundamental methods of investigation and inquiry and the same criteria of objectivity and thoroughness as are used in all recognized scientific disciplines."); Scheibe, *The Psychologist's Advantage and Its Nullification: Limits of Human Predictability*, 33 *AM. PSYCHOL.* 869, 869 (1978).

It frequently has been observed that the science of human behavior is still in its infancy and cannot meet the degree of precision expected of the physical sciences. *E.g.*, C. HALL & G. LINDZEY, *THEORIES OF PERSONALITY* 69 (3d ed. 1978); Diamond & Louisell, *The Psychiatrist as an Expert Witness: Some Ruminations and Speculations*, 63 *MICH. L. REV.* 1335, 1341-42 (1965). Even if this is true, such an argument ignores the important threshold requirement that scientific evidence in a court of law must be shown to be at least logically relevant — accurate greater than chance. See pp. 560-62 *infra*. Without this minimal showing, laypersons may be expected to be just as accurate as the "experts."

83. Roth, Dayley & Lerner, *Into the Abyss: Psychiatric Reliability and Emergency Commitment Statutes*, 13 *SANTA CLARA LAW.* 400, 402-03 (1973).

84. C. HALL & G. LINDZEY, *supra* note 82, at 15.

85. T. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* 10-22 (2d ed. 1970). Kuhn theorizes that scientific advances may be conceptualized as a series of revolutionary steps, each accompanied by its own characteristic and dominant paradigm. Initially, there is a wide variety of competing theories and investigations until one particular set of ideas assumes the position of dominance. Hall and Lindzey observe that psychology has not advanced beyond the "preparadigmatic state": "There is no single theory that serves as a 'paradigm' to order known findings, determine relevance, provide an establishment against which rebels may struggle, and dictate the major path of future investigation." C. HALL & G. LINDZEY, *supra* note 82, at 15.

86. C. HALL & G. LINDZEY, *supra* note 82, at 9-15; T. KUHN, *supra* note 85, at 24. See MCCORMICK, *supra* note 65, § 203, at 488-89; Scheibe, *supra* note 82, at 869.

87. See Strong, *supra* note 74, at 12.

have gained general acceptance among psychologists offers no assurance that the information generated will serve as a reliable and valid basis for psychological judgments. As demonstrated below, the hidden premise underlying the *Frye* test is that the admissibility of scientific evidence ought to be evaluated in terms of its potential accuracy: how consistently do particular scientific techniques and the theories upon which they are based explain or predict certain phenomena in empirical terms? Without this critical proof of accuracy, scientific expert testimony would merely reflect the expert's personal opinions and beliefs. Recent cases dealing with the admissibility of various scientific techniques and supporting expert testimony have read such a proof of accuracy requirement into the *Frye* test.⁸⁸

A second, and comparatively minor, criticism is that the *Frye* test does not take into account those sciences that do not have dominant or "well-recognized" principles supported by a sufficiently large body of experts. The question of what groups are to be considered in determining the general scientific acceptance of various techniques also poses difficulties.⁸⁹ These weaknesses are of particular importance in psychology because no single model or theory of human behavior has attained wide acceptance among practitioners⁹⁰ and because novel, but accurate, scientific techniques may appear faster than there are experts to validate them.⁹¹ The trend toward eclecticism in psychology may also create a situation in which experts who support a particular constellation of behavioral theories may be difficult to locate.⁹²

B. *Modern Interpretations of the Frye Test*

Because of the broad language of the *Frye* test, modern interpretations of this standard have added a critically important gloss. In conjunction with the "general scientific acceptability" principle, most courts require a demonstration of accuracy. For example, in *United States v. Franks*,⁹³ the defendants challenged the admissibility of voiceprints on the ground that voice spectrographic analysis was too inaccurate to be admitted into evidence. In upholding the trial court's admission of such a novel scientific technique, the Sixth Circuit observed with regard to the *Frye* test: "[W]e deem general acceptance as being nearly synonymous with reliability. If a scientific process is reliable, or sufficiently accurate, courts may also deem it

88. See pp. 560-62 *infra*.

89. See, e.g., *Reed v. State*, 283 Md. 374, 495-96, 391 A.2d 364, 424 (1978) (Smith, J., dissenting).

90. See generally C. HALL & G. LINDZEY, *supra* note 82.

91. *Evolving Methods*, *supra* note 78, at 684-85; see *United States v. Addison*, 498 F.2d 741, 743-44 (D.C. Cir. 1974).

92. See *Diamond & Louisell*, *supra* note 82, at 1339.

93. 511 F.2d 25 (6th Cir.), *cert. denied*, 422 U.S. 1042 (1975).

'generally accepted.'"⁹⁴ Citing *Franks*, the Eighth Circuit held in *United States v. Alexander*⁹⁵ that the results of polygraph examinations of unstipulated accuracy should not be admitted into evidence at a criminal trial,⁹⁶ noting: "The reliability of a scientific technique is one of the most important factors that courts should consider in determining whether that technique is generally accepted in the scientific community."⁹⁷ In a footnote to its opinion, the *Alexander* court explained: "This ['general scientific acceptability'] test does not compel a showing of infallibility, but does require the submission of probative evidence indicating general acceptance in the relevant scientific community of the theory underlying such technique, *as well as sufficient assurance of accuracy and reliability.*"⁹⁸

Psychological evidence and expert testimony should be required to meet the *Frye* test's broad "general scientific acceptance" standard as well as to demonstrate that such evidence is accurate by some increment greater than chance before it may be deemed logically relevant by the trier of law.⁹⁹ According to the "logical relevance" theory,¹⁰⁰ any evidence having a tendency to prove any material fact must be admitted.¹⁰¹ Thus, everything that is even minimally probative should be deemed prima facie admissible.¹⁰² Based upon this concept, it appears that the threshold for admitting scientific expert testimony should be whenever it is more likely to be true than lay opinion.¹⁰³ Translating this test into scientific terms, the probability that the evidence is more truthful than not is tantamount to requiring that its accuracy be greater than what might be expected by chance. Once this minimum threshold is reached, the jury would decide the weight to be accorded such evidence.¹⁰⁴ Although the courts have held that a scientific technique offered at trial need not be supported by absolute

94. *Id.* at 33 n.12; *accord*, *United States v. Brown*, 557 F.2d 541, 556 (6th Cir. 1977); *see Reed v. State*, 283 Md. 374, 381-82, 391 A.2d 364, 367-68 (1978). Concern for reasonable reliability may even be replacing the "general scientific acceptance" standard. *See id.* at 416-17, 391 A.2d at 385 (Smith, J., dissenting).

95. 526 F.2d 161 (8th Cir. 1975).

96. *Id.* at 166.

97. *Id.* at 163; *see United States v. Williams*, 583 F.2d 1194, 1198-99 (2d Cir. 1978) (voice spectrogram).

98. *Id.* at 163 n.3 (emphasis added).

99. *Cf.* 3A J. WIGMORE, EVIDENCE § 990 (rev. ed. J. Chadbourn 1970) ("Judicial practice should liberally make use of [scientific experimental tests by psychologists]. All that should be required as a condition is the preliminary testimony of a scientist that the proposed test is an accepted one in his profession and *that it has a reasonable measure of precision in its indications.*" (emphasis added)). Wigmore characterizes the accuracy of a scientific device or process as its capacity for "trustworthiness." 3 *Id.* § 795, at 244.

100. *See Trautman, Logical or Legal Relevancy — A Conflict in Theory*, 5 VAND. L. REV. 385, 391 (1952); *Evolving Methods*, *supra* note 78, at 683.

101. *See* FED. R. EVID. 402; Trautman, *supra* note 100, at 388-92.

102. Trautman, *supra* note 100, at 392.

103. *See Romero, The Admissibility of Scientific Evidence Under the New Mexico and Federal Rules of Evidence*, 6 N.M.L. REV. 187, 198-201 (1976).

104. *See Decker & Handler, supra* note 81, at 362 n.304.

certainty of result or unanimity of scientific opinion to be admissible,¹⁰⁵ the degree of accuracy required is uniformly high. The trier of law is responsible for assessing logical relevance.¹⁰⁶ Thus, the first hurdle psychological evidence and expert testimony must surmount is to demonstrate that it is logically relevant — accurate more than chance — and therefore admissible.

The Probative Value of Psychological Evidence and Expert Testimony

Psychological expert testimony at trial typically consists of three elements: (1) a factual description of the party's behavior during the course of the clinical examination and a report on the nature and results of any psychological tests administered, (2) a diagnosis of the individual's mental condition, and (3) an opinion as to the causal connection between the mental disorder and the issue of ultimate fact. These three testimonial components correspond to the three levels of psychological expert testimony discussed in the Introduction.¹⁰⁷

Scientific evidence may be excluded by the trier of law for two reasons. First, it may be demonstrated that the evidence is so unreliable that it has no tendency to prove the probandum for which it is offered — the logical relevancy argument.

Second, even if the scientific techniques are sufficiently accurate to warrant their prima facie admission, the evidentiary counterweights require that the evidence and supporting testimony be excluded. Each of these reasons will be examined in turn.

105. *United States v. Stifel*, 433 F.2d 431, 438 (6th Cir. 1970), *cert. denied*, 401 U.S. 994 (1971) (“[N]either newness nor lack of absolute certainty in a test suffices to render it inadmissible in court. Every useful new development must have its first day in court.”); *see United States v. Baller*, 519 F.2d 463, 466 (4th Cir.), *cert. denied*, 423 U.S. 1019 (1975).

106. *Evolving Methods*, *supra* note 78, at 685. In *Reed v. State*, 283 Md. 374, 391 A.2d 364 (1978), the Maryland Court of Appeals held in a four to three decision that the admission of voiceprint evidence in a criminal trial constituted reversible error. Evaluating the admissibility of this novel technique, the court noted that if the reliability of a scientific technique could not be judicially noticed, its validity must be demonstrated before testimony based on it could be introduced into evidence. The Court observed that evidence of reliability could consist of expert witness testimony as well as the introduction of law journal articles, articles in scientific journals, and other publications bearing on scientific acceptance. The Court of Appeals rejected the argument that such inquires go to the weight, and not to admissibility, of scientific evidence. *Id.* at 386-88, 391 A.2d at 370-71; *see* note 81 *supra*. By adopting the *Frye* standard, the Court sought to avoid the “intolerable” problem of inconsistent judgments when a particular scientific technique is deemed reliable by the jury in one case but not in another. The *Reed* Court observed: “[T]he reliability of the underlying technique or process to perform as it is supposed to does not vary with different cases.” *Id.* at 387, 391 A.2d at 371.

107. *See* pp. 540-41 *supra*.

A. *The Exclusion of Psychological Evidence and Expert Testimony as Logically Irrelevant*

Depending upon the court's familiarity with the particular scientific technique in question, it may skip the first step in the analysis by taking judicial notice of psychology and thereby preclude any inquiry into the potential accuracy of the evidence.¹⁰⁸ Why the courts do not subject psychological evidence and expert testimony to the same sort of scrutiny novel scientific evidence receives remains a mystery. One explanation may be that the courts presume that the wide recognition psychology has received over the years legitimates it as a scientifically sound discipline and that such societal approval is tantamount to a guarantee of accuracy approaching that of other scientific specialties. It is theorized that as society began to legitimate the discipline of psychology, as evidenced by licensing statutes, psychologists sought recognition of that expertise in the courts. In those states without such statutes, but whose courts routinely qualified psychologists as experts, the proponents of licensure could point to such qualification as an indicator of their recognition as experts. This bootstrapping effect simultaneously resulted in the legitimation of psychology and its techniques publicly and in the courts. The recognition by the courts that expertise in mental disorders was not limited to those with medical training was the crucial turning point in the legitimation process.¹⁰⁹ Although courts often spoke in terms of the probable probative value of psychological opinions, they rarely took the opportunity to scrutinize the scientific underpinnings of the discipline and its techniques, deferring either to the legislative determination that psychology was a licensable scientific discipline or to the psychologists, who claimed to possess such special knowledge or skill about human behavior that the ordinary layperson without their training and experience would be unable to perceive important, legally relevant evidence. The courts evidently considered satisfactory proof of the psychological experts' education and experience sufficient to ensure that psychological evidence and expert testimony would be minimally

108. Judicial notice is taken when "judge[s] . . . decide questions of fact which are common knowledge in the community or to which one right answer is available from sources of indisputable accuracy." Roberts, *Preliminary Notes Toward a Study of Judicial Notice*, 52 CORNELL L.Q. 210, 218 (1967) (footnote omitted). By deciding questions of scientific fact as if they were questions of law with only one right answer, judicial notice forecloses all debate because taking judicial notice of a matter implies that it is indisputable, and no evidence to the contrary is admissible to dispute the indisputable. *Id.* at 218-19; see Morgan, *Judicial Notice*, 57 HARV. L. REV. 269, 279 (1944). Ordinarily, a party may argue at trial whether judicial notice should be taken of a particular fact. In cases involving psychological expert testimony, however, the courts appear to take "judicial notice" of psychology tacitly; consequently, there is no opportunity at trial to raise objections about the overall accuracy of psychological evidence. Roberts refers to a similar problem regarding the presentation of the validity of the scientific principle underlying a blood test to demonstrate non-paternity. Roberts, *supra*, at 218.

109. See note 52 *supra*.

probative. Consequently, no independent, critical evaluation of the scientific accuracy of psychological techniques and the diagnoses based thereon was necessary. If the experts are properly qualified in terms of their education and experience and their consensus is that the techniques involved are generally accepted by psychologists, an inquiry into the empirical foundations of psychological evidence and judgments may appear irrelevant to the courts. The courts will then rely upon rigorous cross-examination to expose the evidentiary weaknesses of the specific scientific techniques in question.

The scientific validity of psychological evidence and judgments may simply be taken for granted by the courts because the relevant community of experts in psychology tends to ignore the negative data regarding the reliability and validity of psychological testing,¹¹⁰ and they may be unaware of the subjective biases that significantly influence their clinical judgments.¹¹¹ Because there is little apparent controversy over psychological testing and diagnoses, such evidence would be readily admitted under the *Frye* standard unless the added dimension of scientific reliability and validity were scrutinized by the court to assess its underlying truth value. Unless judicial notice, tacit or otherwise, is taken of psychological techniques, the burden is on those wishing to introduce such evidence to prove that the psychological tests and judgments in question meet the threshold for admissibility — accuracy greater than chance. The argument that reliance upon the *Frye* test will eliminate lengthy and distracting inquiries into the reliability of the scientific evidence at trial¹¹² ignores the existence of well established and ostensibly accurate scientific techniques, such as psychological testing may not be that sufficiently accurate to warrant their admission at trial. As will be demonstrated, general scientific acceptance, at least in the field of psychology, does not necessarily offer any assurance of accuracy.

The probative value of psychological evidence should be analyzed as other types of novel scientific evidence are. A convenient analogue is polygraph evidence. While the particular scientific techniques and principles underlying polygraph expert testimony are quite different from those in psychology, both are ostensibly scientific disciplines, and there is no compelling rationale for treating one differently from the other.

In *United States v. Alexander*,¹¹³ the key issue on appeal was whether the polygraph machine and technique had attained sufficient scientific acceptance among experts in the relevant scientific disciplines to justify the admission into evidence of the results of a polygraph examination of unstipulated accuracy.¹¹⁴ The three crucial factors that led to the Eighth

110. See text accompanying notes 193 to 194 *infra*.

111. See pp. 582-87 *infra*.

112. See *Reed v. State*, 283 Md. 374, 388-89, 391 A.2d 364, 371-72 (1978).

113. 526 F.2d 161 (8th Cir. 1975).

114. *Id.* at 164.

Circuit's exclusion of that evidence were lack of accuracy,¹¹⁵ the potential bias of the expert,¹¹⁶ and the influence of extrinsic and uncontrollable factors on the test results.¹¹⁷ Each of these criticisms and others are applicable to psychological evidence and expert testimony.

1. Accuracy of Psychological Tests

Psychology's most ambitious attempt to quantify human behavior has been through the use of psychological tests and techniques.¹¹⁸ Testing appears to play an important role in a clinician's professional activities, and substantial time is devoted to psychological testing irrespective of a psychologist's clinical orientation.¹¹⁹ Psychological tests are essentially objective and standardized measures of samples of behavior¹²⁰ and have been devised to measure a variety of factors such as character and personality, intelligence, educational achievement, vocational aptitude, and psychopathology.¹²¹ There are no psychological tests that purport to measure mental competency based upon a legal standard.¹²²

A fundamental criticism of psychological tests and techniques is that their accuracy may be a function of the methodology used to evaluate the data they generate. The selection of assessment technique may significantly alter both the accuracy and objectivity of the results.¹²³ Other criticisms of

115. Based upon the available literature, the *Alexander* court observed that commentators had estimated the error rate for polygraphs to be between nine and twenty-five percent or more. *Id.* at 165. See Horvath, *The Effect of Selected Variables on Interpretation of Polygraph Records*, 62 J. APPLIED PSYCHOL. 127 (1977).

116. The court of appeals explained:

"The distinction is that polygraphy, albeit based on a scientific theory, remains an art with *unusual responsibility* placed on the examiner. The acquainting of the examiner with the subject matter is often a source of improper suggestion, conscious or subconscious. The preparation of the test and discussion with the examinee of the polygraph procedure furnishes additional opportunity for improper subjective evaluation."

526 F.2d at 167 (quoting *United States v. Wilson*, 361 F. Supp. 510, 512 (D. Md. 1973)) (emphasis in original).

117. The court observed: "[T]here are too many uncontrollable or unascertainable factors which may affect the polygraphist's conclusion as to the veracity or falsity of the examinee's responses." 526 F.2d at 165.

118. See generally THE EIGHTH MENTAL MEASUREMENTS YEARBOOK (O. Buros ed. 1978) [hereinafter cited as EIGHTH MMY]; THE SEVENTH MENTAL MEASUREMENTS YEARBOOK (O. Buros ed. 1972) [hereinafter cited as SEVENTH MMY].

119. Wade & Baker, *Opinions and Use of Psychological Tests: A Survey of Clinical Psychologists*, 32 AM. PSYCHOL. 874, 875, 879 (1977) (71.8% of clinicians responding to survey reported that test results were used at some stage of treatment process).

120. A. ANASTASI, PSYCHOLOGICAL TESTING (4th ed. 1976). Despite the apparent popularity of psychological testing, inferences about underlying "disease" processes drawn from such techniques are merely theoretical speculations. As one commentator observed: "Behavior is the only data in mental health diagnosis that all diagnosticians would agree is relevant." Morse, *supra* note 3, at 546.

121. See generally EIGHTH MMY, *supra* note 118; SEVENTH MMY, *supra* note 118.

122. J. ZISKIN, *supra* note 12, at 146-47.

123. The controversy continues over whether psychological tests involving either an actuarial or clinical method of assessment yield a significantly superior predictive

psychological tests and techniques typically focus on one or more of the following factors: (1) adequacy of standardization, (2) low reliability or insufficient data on reliability, and (3) low validity or insufficient data on validity.¹²⁴

Standardization. This term refers to the uniformity of the administration and scoring of psychological tests.¹²⁵ Standardization poses two crucial problems. First, deviations from the test instructions as to exactly how the testing materials are to be administered may influence test results significantly.¹²⁶ Second, the person being tested must conform to the limited features of the test's normative population or biased interpretations may result.¹²⁷ Despite the availability of standardized scoring for both non-projective and projective tests, personalized procedures based on the clinician's experience appear to be the favored means of evaluating test results.¹²⁸

Reliability. Test reliability is the consistency of scores obtained by the same persons when retested with the identical test or with an equivalent form of the test.¹²⁹ Professional standards for test reliability generally require a coefficient of about .80 or higher.¹³⁰ One commentator argues that

result. *E.g.*, A. ANASTASI, *supra* note 120, at 485-87; Meehl, *Seer Over Sign: The First Good Example*, 1 J. EXPERIMENTAL RESEARCH PERSONALITY 27, 27 (1965). Actuarial, or statistical, assessment is an analytical procedure designed to permit any person or machine properly trained or programmed always to score the same test identically. J. ZISKIN, *supra* note 12, at 147-48. Clinical assessment is a method of analysis that is mediated by the individual evaluator's judgment and reflection; hence, the scoring may vary from psychologist to psychologist. *Id.* Overall, statistical prediction is nearly always more accurate. Morse, *supra* note 3, at 594. One recent study concludes: "[C]linical judgment plays an important role in the testing process for most clinicians. Clinical judgment not only affected test interpretation but also the use of test results." Wade & Baker, *supra* note 119, at 876.

124. J. ZISKIN, *supra* note 12, at 149. See generally Bersoff, *Silk Purses into Sow's Ears: The Decline of Psychological Testing and a Suggestion for Its Redemption*, 28 AM. PSYCHOL. 892 (1973).

125. A. ANASTASI, *supra* note 120, at 25.

126. *Id.* at 25-26; L. CRONBACH, *ESSENTIALS OF PSYCHOLOGICAL TESTING* 53 (3d ed. 1970); see AMERICAN PSYCHOLOGICAL ASSOCIATION, *STANDARDS FOR EDUCATIONAL & PSYCHOLOGICAL TESTS* §§C1-C3.5, at 17-19 (1974) [hereinafter cited as *APA STANDARDS*]. The *APA STANDARDS* have been widely recognized by the federal government and the federal courts. Lerner, *The Supreme Court and the APA, AERA, NCME Test Standards: Past References and Future Possibilities*, 33 AM. PSYCHOL. 915 (1978); see note 132 *infra*. The standardization of norms permits the test score to be interpreted by comparison with the scores of some normative population. Thus, the standardized scores obtained from one norm group may not be appropriate for everyone. A. ANASTASI, *supra* note 120, at 88-90; see *APA STANDARDS, supra*, §§D1-D7, at 19-24. The broader the norm group the greater the likelihood that the test results will be generalizable. A. ANASTASI, *supra* note 120, at 89-90.

127. See J. ZISKIN, *supra* note 12, at 152-53.

128. Wade & Baker, *supra* note 119, at 875-76. (38.9% favored personalized procedures for evaluating objective tests, and 81.5% favored such procedures for projective tests).

129. A. ANASTASI, *supra* note 120, at 27; see *APA STANDARDS, supra* note 126, §§F1-F3, at 48-52.

130. A. ANASTASI, *supra* note 120, at 109.

courts should exclude any testimony or conclusion based upon the results of a test with a correlation coefficient of less than .80 on the grounds that it fails to meet the standards of reliability accepted by the profession and thus cannot support a conclusion with "reasonable certainty."¹³¹

Validity. The traditional definition of test validity is the extent to which a test actually measures what it purports to measure.¹³² The determination of validity usually requires the comparison of test results with independent, external criteria of whatever the test is designed to measure.¹³³ The modern interpretation of this concept is that "no method or instrument of assessment is valid or invalid a priori," and "[t]he validity of a measuring device must be evaluated in terms of the purpose for which it is intended."¹³⁴ The level of validity an instrument must attain before it may be deemed acceptable is essentially a comparative measure. There is no general answer to the question of how high a validity coefficient should be.¹³⁵ If the treatment of validity in the employment and school testing contexts may be extended to psychological testing generally, three different concepts of validity emerge. First, if no other assessment techniques are available, the validity of a new instrument may be evaluated in comparison with the correlation that might be expected by chance, which is 0.00.¹³⁶ Second, the validity of a new test may be evaluated by comparing it with other available instruments to determine if the new test significantly reduces selection errors. A new test may also be used in combination with existing ones to determine if its addition to the battery increases their independent validity

131. J. ZISKIN, *supra* note 12, at 154.

132. A. ANASTASI, *supra* note 120, at 28; see APA STANDARDS, *supra* note 126, §§ E1-E2.3, at 25-33. The validity of psychological tests has been the focal point of a trilogy of recent employment discrimination cases decided by the Supreme Court. *Washington v. Davis*, 426 U.S. 229, 247 n.13 (1976); *Albemarle Paper Co. v. Moody*, 422 U.S. 405, 425-36 (1975); *Griggs v. Duke Power Co.*, 401 U.S. 424 (1971); see EEOC Guidelines on Employee Selection Procedures, 29 C.F.R. §§ 1607.3-1607.8 (1978); OFCC Guidelines on Employee Selection Procedures, 41 C.F.R. §§ 60-3.5 to -3.7, -3.12 to -3.13 (1978). See generally articles and notes cited note 2 *supra*. The Supreme Court has recognized the importance of three types of validity, "criterion," "construct," and "content" validity. *Washington v. Davis*, 426 U.S. 229, 247 n.13 (1976).

If a test is designed to indicate aptitude for science studies, for example, and a significant number of students taking the test either score high and subsequently do poorly in science (false positive) or score low and do well (false negative), the test is of dubious value for discriminating between the persons who will be successful science students and those who will not.

133. A. ANASTASI, *supra* note 120, at 28.

134. Bersoff, *supra* note 124, at 893.

135. A. ANASTASI, *supra* note 120, at 165.

136. See EEOC Guidelines on Employee Selection Procedures, 29 C.F.R. § 1607.5(c)(1) (1978); OFCC Guidelines on Employee Selection Procedures, 41 C.F.R. § 60-3.12(b)(5) (1978); DHEW Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance, 45 C.F.R. § 84.13(a)(2) (1978). A perfect positive correlation between the test and the external standard is denoted as 1.00. A perfect negative correlation is -1.00. If there is absolutely no relationship between these elements, the expected correlation will be chance or 0.00.

incrementally.¹³⁷ Third, validity may be viewed in an absolute or practical sense when the correlation's margin of error must be relatively small. This third approach has been alluded to in the federal regulations governing employment testing¹³⁸ and, in effect, has been imposed by the courts in at least two instances.¹³⁹ The implication is that if the correlation is not perfect or near perfect, the test will be deemed unacceptable because some of the persons singled out by the instrument do not really fulfill the criterion, and those not selected may be highly qualified.

There are three types of test validity: content validity, criterion-related validity, and construct validity. "Content validity" is the systematic examination of test content to determine whether it covers a representative sample of the skills or knowledge the individual should have mastered.¹⁴⁰ A test may appear valid because it consists of questions regarding a particular subject matter, but it really may not be valid.¹⁴¹ A number of other subtle

137. See text accompanying notes 191 to 192 *infra*.

138. EEOC Guidelines on Employee Selection Procedures, 29 C.F.R. § 1607.5(c)(2) (1978).

139. *Armstead v. Starkville Mun. Separate School Dist.*, 461 F.2d 276, 280 (5th Cir. 1972) (Graduate Record Examination scores used for hiring teachers not reliable or valid measure for that purpose because "cut-off score would eliminate some good teachers"); *Merriken v. Cressman*, 364 F. Supp. 913, 920 (E.D. Pa. 1973) (questionnaire designed to identify potential drug abusers in public junior high school found to result in significant errors in identification). Summarizing the holding in *Merriken*, one commentator states:

Validity coefficients that psychologists might find highly acceptable may not pass constitutional muster. One court has ruled that "[w]hen a program talks about labeling someone as a particular type and such a label could remain with him for the remainder of his life, the margin of error must be almost nil." "Nil" implies almost nearly perfect coefficients. Few, if any, psychometric instruments yield reliability, much less validity, coefficients above .95.

Bersoff, *Regarding Psychologists Testily: Legal Regulation of Psychological Assessment in the Public Schools* (to be published in 39 MD. L. REV. (1979)) (footnote omitted). The courts' understanding of the level of validity that should be required before a test can be deemed acceptable may be considered naïve by psychologists; however, it is clear that to the extent that psychological tests inform the legal decision-making process their validity must be uniformly high.

In the employment testing context, however, the federal regulations governing such assessment techniques only require that the relationship between the test and at least one relevant criterion be statistically significant to the 0.05 level. See note 136 *supra*. This suggests that an employment test may be considered valid even if the margin of error is relatively large as long as the incremental validity is such that the test will enable the decision-maker to make a somewhat more accurate selection. The guidelines also appear to require that the tests be practically significant — in addition to being statistically significant measures, they should also not eliminate qualified applicants who did not pass the test. See EEOC Guidelines on Employee Selection Procedures, 29 C.F.R. § 1607.5(c)(2) (1978).

140. A. ANASTASI, *supra* note 120, at 134; APA STANDARDS, *supra* note 126, §§ E12-E12.4, at 28-29, 45-46.

141. This is known as face validity and should not be confused with content validity. Face validity merely refers to whether a particular test "looks valid" to the persons who take it and is not related to validity in a technical sense. APA STANDARDS, *supra* note 126, at 29. This is generally considered a desirable feature for

flaws in test design may also bias results.¹⁴² "Criterion-related validity" indicates the effectiveness of a test in predicting an individual's behavior in specified situations.¹⁴³ One problem with this form of validity is criteria contamination — those persons whose judgments serve as the independent measure of what the test is designed to predict may be influenced by the knowledge that the person being rated did well or poorly on the test being validated, thereby spuriously or artificially raising the correlation between the test scores and the criterion.¹⁴⁴ One commentator has suggested that only criterion-related validity has any evidentiary relevance.¹⁴⁵ "Construct validity" refers to the extent to which it may be said that the test measures a theoretical construct or trait, for example, intelligence, verbal fluency, neuroticism, or anxiety.¹⁴⁶ It focuses on a broader, more enduring, and more abstract kind of behavioral description than the other types of validity and requires the gradual accumulation of information from a variety of sources.¹⁴⁷

Psychologists typically administer one or more of the following types of tests when they examine persons involved in litigation: intelligence tests,¹⁴⁸ non-projective personality tests,¹⁴⁹ projective techniques,¹⁵⁰ and tests to detect organic brain damage.¹⁵¹ Because tests to detect the presence of organic brain damage tend to be reasonably accurate,¹⁵² this Comment will focus on some of the important problems associated with the interpretation of the remaining three categories of tests.

tests in terms of rapport and public relations with the examinees. A. ANASTASI, *supra* note 120, at 139-40.

142. A properly designed test should take into account the following sources of test bias: The test must adequately cover all the major aspects of the curricular content and in the correct proportion; the content area should be fully described in advance rather than being defined after the test has been prepared; content must be broadly defined to include the major objectives of instruction as well as the subject matter, *i.e.*, application of principles and interpretation of data along with factual knowledge; the content sampled by the test should not be overgeneralized; and irrelevant factors must be excluded, *e.g.*, is a test designed to measure the effects of instruction in mathematics unduly influenced by the ability to understand verbal directions? A. ANASTASI, *supra* note 120, at 135.

143. *Id.* at 140. Performance on the test is checked against a criterion, *i.e.*, a direct and independent measure of what the test is designed to predict. *Id.*; APA STANDARDS, *supra* note 126, §§ E3-E11, at 26-28, 33-45.

144. A. ANASTASI, *supra* note 120, at 141-42.

145. J. ZISKIN, *supra* note 12, at 155.

146. *Id.* at 151; APA STANDARDS, *supra* note 126, §§ E13-E13.2.6, at 29-31, 46-48.

147. A. ANASTASI, *supra* note 120, at 151.

148. *See* note 57 *supra*.

149. *See* note 58 *supra*.

150. *See* notes 60 & 61 *supra*.

151. Buckler v. Sinclair Ref. Co., 68 Ill. App. 2d 283, 288, 216 N.E.2d 14, 17 (1966); Spann v. Bees, 23 Md. App. 313, 317, 327 A.2d 801, 803-04 (1974).

152. *See* A. ANASTASI, *supra* note 120, at 471; Golden, *Validity of the Halstead-Reitan Neuropsychological Battery in a Mixed Psychiatric and Brain-Injured Population*, 45 J. CONSULTING & CLINICAL PSYCHOL. 1043 (1977). The results of these tests are more susceptible to empirical verification by other scientifically accurate techniques (*e.g.*, x-rays, brain scans, electroencephalograms).

Intelligence Tests. In general, intelligence tests are not appropriate instruments for evaluating personality characteristics, although clinicians may misuse the data for that purpose.¹⁵³ Studies have demonstrated that scores on these tests may be significantly influenced by such factors as the examinee's home environment, cultural background, state of health, nutrition,¹⁵⁴ geographical location,¹⁵⁵ and even the arrangement of furniture in the testing room.¹⁵⁶ Furthermore, examiner differences and examiner-subject interaction may alter the results of intelligence tests.¹⁵⁷

Non-Projective Tests. The most popular and exhaustively studied instrument in this category is the Minnesota Multiphasic Personality Inventory (MMPI).¹⁵⁸ Reviews of the current literature indicate that this test,

153. Ziskin warns that when psychologists employ intelligence tests as clinical instruments in evaluating personality characteristics "the data on academic validity have no meaning and there has been no adequate demonstration that one can assess an individual's personality from his performance on an intelligence test." J. ZISKIN, *supra* note 12, at 158; see A. ANASTASI, *supra* note 120, at 326.

Two of the most popular intelligence tests are the Stanford-Binet Intelligence Scale and the Wechsler Adult Intelligence Scale (WAIS). A. ANASTASI, *supra* note 120, at 230; Wade & Baker, *supra* note 119, at 876 (Table 2). The validity of the former is primarily limited to the prediction of school performance, teachers' ratings, and achievement scores. J. ZISKIN, *supra* note 12, at 157. Its predictive validity for other purposes has not been adequately demonstrated. *Id.* One reviewer of the literature has noted that this test has been largely superseded by the WAIS, and given its age and limited utility, the Stanford-Binet is about ready for retirement. See Freides, in SEVENTH MMY, *supra* note 118, § 425, at 772-73. The WAIS's weaknesses include the fact that the norms were based upon tests administered prior to 1955 and that the scoring criteria permit a fair degree of latitude in interpreting responses. Lyman, in SEVENTH MMY, *supra* note 118, § 429, at 788-90.

154. J. ZISKIN, *supra* note 12, at 157.

155. Tsushima & Bratton, *Effects of Geographic Region upon Wechsler Adult Intelligence Scale Results: A Hawaii - Mainland United States Comparison*, 45 J. CONSULTING & CLINICAL PSYCHOL. 501 (1977).

156. Delprato & Jackson, *The Effects of Seating Arrangement upon WAIS Digit Span and Digit Symbol Performance*, 31 J. CLINICAL PSYCHOL. 88 (1975).

157. A. ANASTASI, *supra* note 120, at 33-34, 39-41; J. ZISKIN, *supra* note 12, at 157-58. See pp. 582-87 *infra*. Even scoring intelligence test responses as either a "plus" or "minus" may lead to disagreements between experienced psychologists. Sattler & Ryan, *Scoring Agreement on the Stanford-Binet*, 29 J. CLINICAL PSYCHOL. 35, 38 (1973) (comparing scoring agreement of psychologists with doctoral degrees, trained psychology graduate students, and untrained psychology graduate students, study concluded that scoring accuracy did not differ significantly among these groups and that "[o]verall, the raters showed considerable scoring disagreement").

158. A. ANASTASI, *supra* note 120, at 497. See Butcher & Tellegen, *Common Methodological Problems in MMPI Research*, 46 J. CONSULTING & CLINICAL PSYCHOL. 620 (1978). The MMPI consists of 550 affirmative statements to which the examinee gives the response "true," "false," or "cannot say." A. ANASTASI, *supra* note 120, at 497. The test yields a profile analysis based upon the interrelationships of the scores on ten clinical scales. A high score on a scale has been found to predict positively the corresponding final clinical diagnosis or estimate in more than sixty percent of new psychiatric admissions. Ellis, in THE FIFTH MENTAL MEASUREMENTS YEARBOOK § 86, at 166-67 (O. Buros ed. 1959).

The ten clinical scales are hypochondriasis, depression, hysteria, psychopathic deviate, masculinity-femininity, paranoia, psychasthenia, schizophrenia, hypo-

in the hands of an expert, may provide valid and clinically useful information about the emotional status of a cooperative subject, but its ability to aid in diagnostic classification is not well established.¹⁵⁹ The "true-false-cannot say" format of the MMPI may also alter the reliability of the test, given the fact that some people tend to respond to all questions that strike them as equivocal by consistently selecting one of these responses.¹⁶⁰ Although the MMPI has a built-in "lie" scale, it is difficult to detect those subjects who respond in terms of what they believe to be the socially desirable answer and not as themselves.¹⁶¹ The extent to which self-report inventories such as the MMPI are subject to examinee dissembling and response sets has not been fully evaluated.¹⁶² The MMPI also suffers from inadequate reliability.¹⁶³ Many of the interscore differences that determine the final profile code may result from chance.¹⁶⁴ The MMPI has been characterized as a "psychometric nightmare" by one psychological re-

mania and social introversion. Eight of them (all except the masculinity-femininity and social introversion scales) consist of items that differentiated between a specified clinical group and a normal control group of approximately 700 persons who were predominantly rural Minnesota adults with less than a high school education. This geographically and educationally atypical population sample has introduced many non-generalizable anomalies into the scale contents. Rodgers, in SEVENTH MMY, *supra* note 118, § 104, at 248-49; see A. ANASTASI, *supra* note 120, at 503-04. Also, this sample does not adequately account for cultural differences. A. ANASTASI, *supra* note 120, at 504; Costello, Tiffany & Gier, *Methodological Issues and Racial (Black-White) Comparisons on the MMPI*, 38 J. CONSULTING & CLINICAL PSYCHOL. 161 (1972); Gynther, in SEVENTH MMY, *supra* note 118, § 104, at 242; Gynther, *White Norms and Black MMPIs: A Prescription for Discrimination?*, 78 PSYCHOL. BULL. 386 (1972); Witt & Gynther, *Another Explanation for Black-White MMPI Differences*, 31 J. CLINICAL PSYCHOL. 69 (1975).

The principal applications of the MMPI are in the area of differential diagnosis. A. ANASTASI, *supra* note 120, at 500. The original MMPI scales were designed to discriminate between normals and certain traditional diagnostic categories, but in subsequent usage, the scales have been treated as measures of personality traits. *Id.* at 501. Examiners are cautioned against interpreting literally the clinical scales. For example, it cannot be assumed that a high score on the schizophrenia scale indicates the presence of schizophrenia. *Id.* at 500. A plethora of additional MMPI scales has evolved over the years; however, many of these have not been adequately validated. Butcher & Tellegen, *supra*, at 622.

159. Rodgers, in SEVENTH MMY, *supra* note 118, § 104, at 244; see J. ZISKIN, *supra* note 12, at 160. Rodgers adds: "[The MMPI] is most useful to supplement rather than to replace information obtained by interview or clinical observation." Rodgers, in SEVENTH MMY, *supra* note 118, § 104, at 244. See pp. 582-88 *infra*.

160. A. ANASTASI, *supra* note 120, at 520-21; J. WIGGINS, PERSONALITY AND PREDICTION: PRINCIPLES OF PERSONALITY ASSESSMENT 423-25 (1973); J. ZISKIN, *supra* note 12, at 160.

161. A. ANASTASI, *supra* note 120, at 515-17; J. WIGGINS, *supra* note 160, at 420-23; J. ZISKIN, *supra* note 12, at 160.

162. A. ANASTASI, *supra* note 120, at 515-17, 520-21; J. WIGGINS, *supra* note 160, at 420-25; J. ZISKIN, *supra* note 12, at 160. A "response set" is a predisposition to respond on a basis other than the person's personality.

163. A. ANASTASI, *supra* note 120, at 503.

164. *Id.*

searcher,¹⁶⁵ and most reviewers agree that its effective use and interpretation requires a considerable degree of sophistication and experience.¹⁶⁶

Projective Techniques. These clinical instruments may be distinguished from non-projective tests insofar as they require a greater degree of clinical judgment in their use and interpretation.¹⁶⁷ They consist of unstructured tasks designed to encourage the free play of the individual's fantasy; thus, the test stimuli are intentionally vague or ambiguous.¹⁶⁸ Examples of such instruments are the Rorschach inkblots,¹⁶⁹ the Thematic

165. Rodgers, in SEVENTH MMY, *supra* note 118, § 104, at 250.

166. A. ANASTASI, *supra* note 120, at 504; Gynther, in SEVENTH MMY, *supra* note 118, § 104, at 242-43; Rodgers, in *id.* at 250; *see* note 159 *supra*. Increased use of computerized MMPI scoring and interpretation systems promises to reduce the effects of diagnostician bias. *See* J. ZISKIN, *supra* note 12, at 161-62; Eichman, in SEVENTH MMY, *supra* note 118, § 105, at 250-52; Manning, *Programmed Interpretation of the MMPI*, 35 J. PERSONALITY ASSESSMENT 162 (1971). *But see, e.g.*, Butcher, in EIGHTH MMY, *supra* note 118, § 617, at 942.

167. A recent survey of clinical psychologists reveals that projective testing is the most favored type of psychological testing. Wade & Baker, *supra* note 119, at 876 (Table 2), 880.

168. Anastasi explains:

The underlying hypothesis is that the way in which the individual perceives and interprets the test material, or "structures" the situation, will reflect fundamental aspects of his psychological functioning. In other words, it is expected that the test materials will serve as a sort of screen on which the respondent "projects" his characteristic thought processes, needs, anxieties, and conflicts.

A. ANASTASI, *supra* note 120, at 558-59.

169. Examinees are shown a series of ten inkblots on cards and asked to explain what the blot could represent. *Id.* at 560. *See* United States v. McNeil, 434 F.2d 502, 505-09 (D.C. Cir. 1970) (per curiam) (Bazelon, C.J., concurring). The Rorschach is by far one of the most popular psychological techniques, Wade & Baker, *supra* note 119, at 876 (Table 2), and yet there is little evidence to support its reliability and validity, *see* text accompanying notes 181 to 187 *infra*. For critical reviews of the literature since 1959, *see* EIGHTH MMY, *supra* note 118, § 661, at 1040-45; SEVENTH MMY, *supra* note 118, § 175; THE SIXTH MENTAL MEASUREMENTS YEARBOOK § 237 (O. Buros ed. 1965) [hereinafter cited as SIXTH MMY]. *See generally* HANDBOOK ON PROJECTIVE TECHNIQUES 221-421 (B. Murstein ed. 1965) [hereinafter cited as PROJECTIVE TECHNIQUES].

Apperception Test (TAT),¹⁷⁰ verbal techniques,¹⁷¹ and expressive techniques.¹⁷²

Most projective techniques appear to lack adequate standardization with respect to both administration and scoring.¹⁷³ Even subtle differences in the phrasing of verbal instructions and in examiner-subject relationships can appreciably alter performance on these instruments.¹⁷⁴ Factors such as verbal ability, hunger, lack of sleep, drugs, anxiety, and frustration have also been shown to affect test results.¹⁷⁵ In short, projective technique responses can be meaningfully interpreted only when the examiner has extensive information about the circumstances under which they were obtained and the aptitudes and experiential background of the examinee.¹⁷⁶ The normative data for many projective instruments may be completely

170. The TAT, in contrast with the inkblot technique, presents more highly structured stimuli and requires more complex and meaningful organized verbal responses. A. ANASTASI, *supra* note 120, at 565. It consists of about eighteen cards depicting ambiguous situations and one blank card. The examinee is asked to make up a story to fit each picture telling what led up to the event shown, describing what is happening at the moment and what the characters are feeling and thinking, and giving the outcome. In the case of the blank card, the person is instructed to imagine some picture on the card, describe it, and then tell a story about it. *Id.*

After the Rorschach, the TAT is the second most popular instrument among clinical psychologists. Wade & Baker, *supra* note 119, at 876 (Table 2). Its reliability and validity as a diagnostic tool has been challenged over the years, and a recent review of the literature seriously questions its usefulness as an assessment technique given its dubious reliability, validity, and standardization. See SWARTZ, in EIGHTH MMY, *supra* note 118, § 697, at 1127-30. Its utility appears to be primarily limited to differentiating groups (e.g., psychotic from neurotic) and not trait identification in specific individuals. SEVENTH MMY, *supra* note 118, § 181; SIXTH MMY, *supra* note 169, § 245. See generally PROJECTIVE TECHNIQUES, *supra* note 169, at 425-606.

171. Examples of this technique are word association and sentence completion tests. See A. ANASTASI, *supra* note 120, at 569-71. See generally PROJECTIVE TECHNIQUES, *supra* note 169, at 777-906.

172. An example of this technique is the Draw-A-Person (D-A-P) test in which examinees are provided with paper and pencil and asked to draw a person. Upon completion of that task, they are asked to draw a person of the sex opposite of that of the first figure. A. ANASTASI, *supra* note 120, at 575. For critical reviews of the reliability and validity of this projective test, see Adler, *Evaluation of the Figure Drawing Technique: Reliability, Factorial Structure, and Diagnostic Usefulness*, 35 J. CONSULTING & CLINICAL PSYCHOL. 52, 56-57 (1970); Dmitruk, *Situational Variables and Performance on Machover's Figure-Drawing Test*, 35 PERCEPTUAL & MOTOR SKILLS 489-490 (1972); Harris, in SEVENTH MMY, *supra* note 118, § 165, at 401-04; Kokonis, *Choice of Gender on the DAP and Measures of Sex-Role Identification*, 35 PERCEPTUAL & MOTOR SKILLS 727 (1972); Roback, *Human Figure Drawings: Their Utility in the Clinical Psychologist's Armamentarium for Personality Assessment*, 70 PSYCHOL. BULL. 1, 16-17 (1968) (review of literature); Swensen, *Empirical Evaluations of Human Figure Drawings: 1957-1966*, 70 PSYCHOL. BULL. 20, 40 (1968). See generally PROJECTIVE TECHNIQUES, *supra* note 169, at 609-99.

173. A. ANASTASI, *supra* note 120, at 578. See Dana, in EIGHTH MMY, *supra* note 118, § 661, at 1040-42 (Rorschach); Peterson, in *id.* at 1042-45 (Rorschach).

174. A. ANASTASI, *supra* note 120, at 578.

175. *Id.* at 584.

176. *Id.*

lacking, grossly inadequate, or based on vaguely described populations.¹⁷⁷ There is also a distinct lack of objectivity in the evaluation of projective instruments,¹⁷⁸ and clinicians tend to rely solely on their "general clinical experience" to interpret test results.¹⁷⁹ Such experience is almost certain to produce a distorted picture because clinical psychologists deal primarily with mentally disordered individuals: the clinician may lack sufficient firsthand familiarity with the characteristic reactions of normal people.¹⁸⁰

Because of the relatively unstandardized scoring procedures and the paucity of normative data, scorer reliability becomes an important consideration in projective testing.¹⁸¹ Interpretative scorer reliability is the extent to which different examiners attribute the same personality characteristics to the examinee on the basis of their interpretation of an identical record.¹⁸² Few adequate studies have been conducted regarding the scorer reliability of projective techniques.¹⁸³ Research has revealed remarkable divergence in the interpretations given by reasonably well qualified test users.¹⁸⁴ Attempts to measure other types of projective test reliability, for example, internal consistency and retest reliability, have fared equally poorly.¹⁸⁵ Furthermore, the large majority of published validation studies on projective techniques is inconclusive at best,¹⁸⁶ and those studies that have

177. *Id.* at 578. Also, interpretation of projective test performance often involves subgroup norms that the clinician must derive on the basis of clinical experience or published data. Unless these subgroups are correlated in terms of age or education, for example, these norms may lead to faulty interpretations. *Id.* at 579.

178. With the Rorschach, for example, there are a number of situational factors that may significantly influence the psychologist's assessment procedure. Dana, in EIGHTH MMY, *supra* note 118, § 661, at 1041-42; Peterson, in *id.* at 1044.

179. Wade & Baker, *supra* note 119, at 879-80. The authors observed that the clinical psychologists in their survey were clearly indifferent to the importance of reliability and validity in test selection or use, and that they were more inclined to accept their personal hypotheses over test results if the two were in conflict. *Id.*

Reliance upon clinical experience tends to increase the ambiguity of the examiner's interpretations of the subject's responses. A. ANASTASI, *supra* note 120, at 584. Anastasi remarks:

[P]erhaps the most disturbing implication is that the interpretation of scores is often as projective for the examiner as the test stimuli are for the examinee. In other words, the final interpretation of projective test responses may reveal more about the theoretical orientation, favorite hypotheses, and personality idiosyncracies of the examiner than it does about the examinee's personality dynamics.

Id. at 578. Even when objective scoring systems are available, an overwhelming majority of clinicians indicated that they would still evaluate test results according to their personal or clinical hypotheses or opinions. Wade & Baker, *supra* note 119, at 875-76.

180. A. ANASTASI, *supra* note 120, at 578.

181. *Id.* Wade and Baker's survey revealed that 81.5% of the clinical psychologists responding preferred to use personalized procedures to evaluate the results of projective tests. Wade & Baker, *supra* note 119, at 876.

182. A. ANASTASI, *supra* note 120, at 578.

183. *Id.*

184. *Id.*

185. *Id.* at 579-80.

186. *Id.* at 581.

been designed to avoid all the major pitfalls of projective technique validation generally conclude that the validity of these instruments is either zero or very low.¹⁸⁷

As psychometric instruments, projective techniques have been criticized on several grounds: they are founded upon a questionable theoretical rationale; there is ample evidence that alternative explanations may account as well or better for the individual's responses to unstructured test stimuli;¹⁸⁸ and projective techniques are inadequate when evaluated in accordance with test standards.¹⁸⁹ Thus, it would seem more appropriate to limit their use to that of a supplementary, qualitative interviewing aid for the skilled clinician.¹⁹⁰

It is frequently asserted that criticism of psychological tests individually is inappropriate, since they are usually administered in conjunction with other instruments, the implication being that the accuracy of the entire test battery transcends the limited reliability and validity of its parts.¹⁹¹ The available evidence suggests that this assumption may be unfounded, at least with respect to certain batteries of tests, and that such test batteries may actually be less reliable and valid than their component parts.¹⁹²

The continued popularity of psychological testing among clinicians despite all the negative data available concerning test accuracy remains a mystery. One recent study of psychological test usage hypothesizes that many clinicians are indifferent to such negative research because their

187. *Id.* at 583-84; Little, *Problems in the Validation of Projective Techniques*, in PROJECTIVE TECHNIQUES, *supra* note 169, at 78. See Dana, in EIGHTH MMY, *supra* note 118, §661, at 1040-42 (Rorschach); Peterson, in *id.* at 1042-45 (Rorschach); Swartz, in *id.* § 697, at 1127-30 (TAT).

188. A. ANASTASI, *supra* note 120, at 585.

189. *Id.* Anastasi has observed that there is an impressive collection of studies that have failed to demonstrate any validity for such projective techniques as the Rorschach and D-A-P techniques.

190. *Id.* at 586. Regarding projective techniques, Anastasi has concluded: "Their value as clinical tools is proportional to the skill of the clinician and hence cannot be assessed independently of the individual clinician using them." *Id.* It is unclear, however, whether clinical experience necessarily leads to greater diagnostic skill. See p. 586 *infra*.

191. *E.g.*, McCreary, *Training Psychology and Law Students to Work Together*, 8 PROF. PSYCHOL. 103, 108 (1977).

192. Goldberg, *The Effectiveness of Clinicians' Judgments: The Diagnosis of Organic Brain Damage From the Bender-Gestalt Test*, 23 J. CONSULTING PSYCHOL. 25 (1959); Wildman & Wildman, *An Investigation into the Comparative Validity of Several Diagnostic Tests and Test Batteries*, 31 J. CLINICAL PSYCHOL. 455 (1975); cf. Golden, *Some Effects of Combining Psychological Tests on Clinical Inferences*, 28 J. CONSULTING PSYCHOL. 440, 444 (1964) (reliability and validity of test battery including Rorschach, TAT, and MMPI did not increase as a function of number of tests). In the Wildman and Wildman study, none of several combinations of four popular psychometric instruments significantly improved the accuracy of prediction. In fact, the accuracy rate for some of them decreased when they were combined to form a test battery. No test battery will eliminate the effects of examiner-subject interactions or interpretive bias, and combinations of tests may provide even more opportunities for these factors to operate. J. ZISKIN, *supra* note 12, at 180 n.56. See pp. 582-87 *infra*.

opinions of a test's value are derived principally from their personal experience with the test.¹⁹³ Although poor reliability and validity were recognized as distinct disadvantages of psychological tests, those characteristics were not considered particularly important in test-use decisions.¹⁹⁴ This approach to testing maximizes the clinician's susceptibility to "illusory correlations" — pervasive subjective biases.¹⁹⁵

2. Accuracy of Psychological Diagnoses

Much of the confusion over diagnosis may be attributed to the ambiguities inherent in the psychological nomenclature. The standard lexicon for both psychology and psychiatry is the *Diagnostic and Statistical Manual of Mental Disorders (DSM-II)*¹⁹⁶ published by the American

193. Wade & Baker, *supra* note 119, at 879.

194. *Id.*

195. *Id.* at 879, 881. See text accompanying notes 225 to 228 *infra*.

196. AMERICAN PSYCHIATRIC ASSOCIATION, *DSM-II: DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS* (2d ed. 1968) [hereinafter cited as *DSM-II*]. The foreword of *DSM-II* cryptically states:

In the case of diagnostic categories about which there is current controversy concerning the disorder's nature or cause, the Committee has attempted to select terms *which it thought would least bind the judgment of the user*. The Committee itself included representatives of many views. It did not try to reconcile those views but rather to find terms which could be used to label the disorders about which they wished to be able to debate.

Gruenberg, *Foreword to id.* at viii-ix (emphasis added). Contrary to the wishes of the Committee on Nomenclature and Statistics, the publication and widespread use of such a standardized nomenclature arguably curtails debate over the meaning of these ambiguous labels and provides them with a semblance of precision. The fact that the *DSM-II* offers an integrated classification scheme of behavioral disorders, in contrast with prior diagnostic systems, should not be interpreted to mean that there is substantial agreement about the nosology. See, e.g., Conover, *Psychiatric Distinctions: New and Old Approaches*, 13 J. HEALTH & SOC. BEHAVIOR 167 (1972) (review of literature); Jackson, *The Revised Diagnostic and Statistical Manual of the American Psychiatric Association*, 127 AM. J. PSYCHIA. 65, 69-71 (1970); Taylor & Heiser, *Phenomenology: An Alternative Approach to Diagnosis of Mental Disease*, 12 COMPREHENSIVE PSYCHIA. 480 (1971); Zubin, *Classification of the Behavior Disorders*, 18 ANN. REV. PSYCHOL. 373 (1967).

A number of other potential sources of diagnostic disagreement among clinicians using the *DSM-II* nomenclature have also been identified, including subject variance, occasion variance, information variance, observation variance, and criterion variance. Spitzer, Endicott & Robins, *Clinical Criteria for Psychiatric Diagnosis and DSM-III*, 132 AM. J. PSYCHIA. 1187, 1187-88 (1975). One study concluded that the *DSM-II* nosology is not a true specialist language and suggested that "everyday lay language would offer at least as structured, as reliable and as public a set of terms for describing human behaviour and psychological characteristics." Agnew & Bannister, *Psychiatric Diagnosis as a Pseudo-Specialist Language*, 46 BRIT. J. MED. PSYCHOL. 69, 73 (1973).

The *DSM-II* is the product of the American Psychiatric Association's (APA) Committee on Nonmenclature and Statistics, members of the APA, consultants, and comments based on field testing. An interesting exception to this process was the elimination several years ago of one *DSM-II* diagnostic category, homosexuality, in an extraordinarily unscientific and subjective manner. In December 1973 the trustees

Psychiatric Association. Although the following critique of this diagnostic nomenclature is derived primarily from materials and commentary authored by psychiatrists, the criticisms they raise are equally applicable to psychologists who use the *DSM-II* for diagnostic purposes.

The standards of reliability and validity used to judge the accuracy of psychological testing are equally applicable to classification systems such as a diagnostic nomenclature. Reliability in this context refers to the consistency with which subjects may be classified.¹⁹⁷ Validity refers to the utility of the system for its various purposes.¹⁹⁸ Another way to view reliability and validity is to think of the former as referring to the degree of correlation or correspondence of judgment between professionals using the same method and the latter as referring to the degree of correlation or correspondence between the judgment reached by professionals and some fact in the external world.¹⁹⁹ For psychological diagnosis, the purposes of a nomenclature are communication about clinical features, etiology, course of illness, and treatment. It has been observed: "A necessary constraint on the validity of a system is its reliability. There is no guarantee that a reliable system is valid, but assuredly an unreliable system must be invalid."²⁰⁰ The reliability and validity of psychological judgments are examined separately below.

(a) *Reliability of Psychological Diagnoses*

Studies of the reliability of psychological diagnoses are rare; however, a number have been conducted regarding psychiatric diagnoses. In a review of six major studies of the reliability of psychiatric diagnosis conducted

of the APA voted to discontinue the classification of homosexuality as a mental disorder. The resulting furor led to a referendum vote by the entire membership of 20,000 on April 8, 1974. The tabulated results were 5,854 in favor of the trustees' position, 3,810 against, and 367 abstentions, with 41% of the membership not voting. *N.Y. Times*, April 9, 1974, at 12, col. 4. For the documents implementing this decision, see READINGS, *supra* note 52, at 71-73. The debate over the exclusion of homosexuality from the *DSM-II* continues, and its strong political, as opposed to scientific, overtones have been widely recognized. See Saltonstall, *Psyching Out Homosexuality*, *Wash. Post*, Dec. 18, 1977, at C1, col. 3. A subsequent survey of 2,500 psychiatrists has revealed that 69% of them agreed that homosexuality was a pathological adaptation to normal sexual development and not medically normal. *Id.* at C2, col. 3. This unscientific majority vote procedure extends to the adoption of the other *DSM-II* categories as well. Zubin, *supra*, at 397.

197. Spitzer & Fleiss, *A Re-analysis of the Reliability of Psychiatric Diagnosis*, 125 *BRIT. J. PSYCHIA.* 341, 341 (1974).

198. *Id.*

199. Ennis & Litwack, *supra* note 12, at 697-98.

200. Spitzer & Fleiss, *supra* note 197, at 341. See Kreitman, *The Reliability of Psychiatric Diagnosis*, 107 *J. MENT. SCI.* 876, 883-84 (1961). Helzer *et al.* have observed: "If two psychiatrists operating within the same diagnostic framework cannot agree, it is likely that at least one of the two is wrong. The more disagreement there is, the greater the likelihood that any individual judgment is invalid." Helzer, Robins, Taibleson, Woodruff, Reich & Wish, *Reliability of Psychiatric Diagnosis: I. A Methodological Review*, 34 *ARCH. GEN. PSYCHIA.* 129, 129 (1977) [hereinafter cited as Helzer I].

between 1956 and 1975, two researchers calculated interrater reliability, correcting for chance agreement. Summarizing their results, they concluded:

There are no diagnostic categories for which reliability is uniformly high. Reliability appears to be only satisfactory for three categories: mental deficiency, organic brain syndrome (but not its subtypes), and alcoholism. The level of reliability is no better than fair for psychosis and schizophrenia and is poor for the remaining categories.²⁰¹

The authors also observed that in five of the six studies the diagnosticians were of similar background, and in some instances, special efforts were made to have the participants arrive at some consensus on diagnostic principles prior to beginning the research — factors that should have increased interrater reliability. Contrary to their expectations, however, these elements did not significantly contribute to high reliability. They theorized: "One can only assume . . . that agreement between heterogeneous diagnosticians of different orientations and backgrounds, as they act in routine clinical settings, is even poorer than is indicated in this review."²⁰² Their study also revealed no essential change in diagnostic reliability over time.²⁰³ The authors' conclusion was less than sanguine about the reliability of psychiatric diagnoses:

The reliability of psychiatric diagnosis as it has been practised since at least the late 1950's is not good. It is likely that the reasons for diagnostic unreliability are the same now as when Beck *et al.* (1962) studied them. They found that a significant amount of the variability among diagnosticians was due to differences in how they elicited and evaluated the necessary information, and that an even larger amount was due to inherent weakness and ambiguities in the nomenclature.²⁰⁴

201. Spitzer & Fleiss, *supra* note 197, at 344 (the major categories, excluding subtypes, were mental deficiency, organic brain syndrome, alcoholism, psychosis, affective disorder, personality disorder or neurosis [?], personality disorder, neurosis, and psychophysiological reaction).

202. *Id.* Ennis and Litwack observed that studies of diagnostic reliability under controlled conditions are more likely to produce higher rates of concordance than that obtained in actual practice because the lack of controls in the latter situation (inexperienced or incompetent psychiatrists, particularized interviewing techniques and conditions, definitional ambiguities and biases, semantic differences, etc.) contribute to lower diagnostic reliability. Ennis & Litwack, *supra* note 12, at 703-04.

203. Spitzer & Fleiss, *supra* note 197, at 344.

204. *Id.* at 345. See Beck, Ward, Mendelson, Mock & Erbaugh, *Reliability of Psychiatric Diagnoses: 2. A Study of Consistency of Clinical Judgments and Rates*, 119 AM. J. PSYCHIA. 351, 356 (1962); note 205 and accompanying text *infra*. Spitzer and Fleiss' observation that the inherent unreliability of psychiatric diagnosis may be due to the weakness and ambiguities of the nomenclature has been echoed in another study regarding sources of diagnostic disagreement. Ward *et al.* estimated that over sixty percent of the disagreements and inconsistencies of diagnosis was generated by the inadequacy of the nosological system with inconsistency on the part of diagnosticians and patients accounting for thirty percent and five percent, respectively. Ward, Beck, Mendelson, Mock & Erbaugh, *The Psychiatric Nomencla-*

Overall interrater reliability for specific diagnoses ranges from about thirty-two percent to sixty-three percent agreement, which means that psychiatrists tend to disagree on specific diagnoses a significant percentage of the time.²⁰⁵ To date, there are no studies that demonstrate that the rate of agreement among psychologists is any better or worse than that of psychiatrists. One danger arising from such a lack of reliability is that patients may be inappropriately classified; these classifications may then directly influence the type of treatment they receive.²⁰⁶

Despite a salutary trend toward the creation of an empirically based nomenclature,²⁰⁷ the accuracy of psychological diagnoses based thereon may

ture: Reasons for Diagnostic Disagreement, 7 ARCH. GEN. PSYCHIA. 198, 201 (1962). Thus, clinical diagnoses may be far more reliable than these studies suggest.

205. Ash, *The Reliability of Psychiatric Diagnoses*, 44 J. ABNORM. & SOC. PSYCHOL. 272, 276 (1949) (overall agreement rate for three psychiatrists was 20% for specific diagnostic categories, 45.7% for major categories); Beck *et al.*, *supra* note 204, at 352, 354 (54% agreement on specific diagnoses, 70% agreement for major divisions (i.e., neurosis, psychosis and character disorder)) (Beck *et al.* concluded: "It seems apparent that the rate of agreement of 54% for the refined diagnostic categories is not adequate for research. Moreover, it is questionable whether the rate of 70% for the major divisions . . . would be considered adequate for research." *Id.* at 355.); Hunt, Wittson & Hunt, *A Theoretical and Practical Analysis of the Diagnostic Process*, in CURRENT PROBLEMS IN PSYCHIATRIC DIAGNOSIS 60 (P. Hoch & J. Zubin eds. 1953) (54.1% agreement within broad categories, 32.6% agreement on specific categories); Kreitman, Sainsbury, Morrissey, Towers & Scrivener, *The Reliability of Psychiatric Assessment: An Analysis*, 107 J. MENT. SCI. 887, 903 (1961) (78% agreement on generic diagnoses, 63% agreement on specific diagnoses); Sandifer, Hordern, Timbury & Green, *Psychiatric Diagnosis: A Comparative Study in North Carolina, London and Glasgow*, 114 BRIT. J. PSYCHIA. 1, 3-4 (1968) (58% agreement amongst American psychiatrists based upon twelve major diagnostic categories); Schmidt & Fonda, *The Reliability of Psychiatric Diagnosis: A New Look*, 52 J. ABNORM. & SOC. PSYCHOL. 262, 265 (1956) (55% agreement on specific subtype, 84% agreement on major category). See Bartholomew & Milte, *The Reliability and Validity of Psychiatric Diagnoses in Courts of Law*, 50 AUST. L.J. 450 (1976); Spitzer & Fleiss, *supra* note 197.

206. Ennis & Litwack, *supra* note 12, at 707. Cf. *Merriken v. Cressman*, 364 F. Supp. 913, 920 (E.D. Pa. 1973) ("When a program talks about labeling someone as a particular type and such a label could remain with him for the remainder of his life, the margin of error must be almost nil"). See note 139 *supra*.

207. The existing studies strongly suggest that an empirically based diagnostic criterion is essential if interrater reliability is to be improved. Helzer, Clayton, Pambakian, Reich, Woodruff & Reveley, *Reliability of Psychiatric Diagnosis: II. The Test/Retest Reliability of Diagnostic Classification*, 34 ARCH. GEN. PSYCHIA. 136, 136 (1977) [hereinafter cited as Helzer II]; Helzer I, *supra* note 200, at 132; Spitzer & Fleiss, *supra* note 197, at 345-46; see Spitzer, *More on Pseudoscience in Science and the Case for Psychiatric Diagnosis*, 33 ARCH. GEN. PSYCHIA. 459, 466-68 (1976). Toward this end, the American Psychiatric Association is in the process of revising the *DSM-II*. See THE TASK FORCE ON NOMENCLATURE AND STATISTICS, AMERICAN PSYCHIATRIC ASSOCIATION, *DSM-III DRAFT: DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS* (3d ed., Jan. 15, 1978 Draft) [hereinafter cited as *DSM-III*]. See generally Morse, *supra* note 3, at 543 n.26. The *DSM-III* will include the usual comprehensive descriptions of categories as well as a new feature, specific diagnostic criteria that must be met before a patient may be given a particular diagnosis. The use of such diagnostic criteria is intended "to reduce the number of instances in which a single diagnostic label is used in vastly different ways by different mental health workers." Spitzer, *Foreword to DSM-III*, *supra*, at vii. The *DSM-III* also drops the general

still be suspect.²⁰⁸ If the specific criteria for inclusion in a particular diagnostic category remain too subjective, then their value as the basis for an operational nomenclature may be significantly diminished.²⁰⁹ For example, if one element for inclusion in a diagnostic category is evidence of memory impairment, the individual psychologist's concept of the degree of impairment necessary for inclusion may vary widely. Second, patients with a few, but not all, of the symptoms necessary for a particular diagnosis, or who manifest symptoms that are not discrete but overlap significantly, may

category of neurosis and, in a controversial move, has added "tobacco withdrawal" as a substance-induced mental disorder. *Id.* at A:75; NEWSWEEK, Jan. 8, 1979, at 68. For a brief history of the *DSM-III*, see Schacht & Nathan, *But Is It Good for the Psychologists? Appraisal and Status of DSM-III*, 32 AM. PSYCHOL. 1017, 1017-18 (1977).

The proposed *DSM-III* differs from the current *DSM-II* in two important respects. First, rather than a general clinical description, the criteria for each category would be precisely stated in terms of the symptoms required to establish a particular diagnosis. Ideally, objectively identifiable symptoms, with definitions if necessary, would be listed, and the minimum number of symptoms required to make an accurate diagnosis indicated. Exclusion criteria could also be included. Second, the nomenclature would include a residual category such as "undiagnosed psychiatric illness" for those patients who did not meet any of the diagnostic criteria. Rules for assignment to this category would be set forth in detail. The essential purpose of operationally based diagnostic criteria is to facilitate communication and research between mental health professionals by standardizing the classification system with reference to empirically demonstrable phenomena. The shortcomings of the *DSM-II* in this regard have been widely noted. The amorphous concept of schizophrenia, for example, illustrates the difficulty of creating comprehensive definitions for mental disorders. See, e.g., J. ZISKIN, *supra* note 12, at 112-16; Fitzgibbons & Shearn, *Concepts of Schizophrenia Among Mental Health Professionals: A Factor-Analytic Study*, 38 J. CONSULTING & CLINICAL PSYCHOL. 288 (1972); Kubie, *Multiple Fallacies in the Concept of Schizophrenia*, 153 J. NERV. & MENT. DIS. 331 (1971); Rieder, *The Origins of Our Confusion About Schizophrenia*, 37 PSYCHIA. 197 (1974) (historical overview); van Praag, *About The Impossible Concept of Schizophrenia*, 17 COMPREHENSIVE PSYCHIA. 481 (1976). Compare *DSM-II*, *supra* note 196, Schizophrenia, § 295, at 33-35 with *DSM-III*, *supra*, at C:1 to C:15.

208. See Schacht & Nathan, *supra* note 207. The authors also object to the apparent "medicalization" of psychological disorders in the *DSM-III* that would make physicians paramount in the diagnosis and treatment of such disorders and significantly encroach upon the domain of psychologists and other mental health professionals. *Id.* at 1023-24. They fear that legislators and insurers may come to view the treatment of mental disorders as a medical problem and require that they be evaluated first by physicians, who will then decide whether they or ancillary mental health professionals will treat the disorder. *Id.* For an alternative to the *DSM-III* diagnostic schema designed especially for psychologists, see McLemore & Benjamin, *Whatever Happened to Interpersonal Diagnosis? A Psychological Alternative to DSM-III*, 34 AM. PSYCHOL. 17 (1979).

209. Helzer *et al.*'s study offers some evidence that the use of a structured psychiatric interview technique in conjunction with operational diagnostic criteria will improve interrater reliability for those categories of disorder for which specific diagnostic criteria exist and which do not depend heavily upon interviewer judgment. For example, criteria for what constitutes impairment of orientation and memory or deterioration in mental functioning remain too subjective and are without a well-defined operational criteria. Helzer II, *supra* note 207, at 140.

be placed — temporarily or permanently depending upon the combination of symptoms observed — in the residual category of “undiagnosed psychiatric illness.” The implication is that an individual may be labeled mentally disordered, albeit tentatively, even though a specific diagnostic category does not exist. Such flexibility may lead to overinclusiveness. Finally, depending on how carefully the symptom criteria are drafted, they still may not account for the relative frequency of such behavior in “normal” populations.²¹⁰

(b) *Validity of Psychological Diagnoses*

In an article regarding the admissibility of psychiatric evidence in civil commitment proceedings, two commentators observed that “most specific diagnoses do not accurately describe even those symptoms perceived by the examiner, to say nothing of the actual symptom exhibited by the patient.”²¹¹ This discrepancy may be significantly reduced with the advent of operational diagnostic criteria such as the *DSM-III*,²¹² but at least one review of the literature has concluded that there is a lack of validity in the classification of behavior under the present system and challenges its usefulness for diagnosis.²¹³ Noting that “many clinicians are unable to make better than chance judgments,” another study concluded that we “can no longer take for granted the validity of any clinician’s judgment.”²¹⁴ If the validity of predictions of dangerousness by psychiatrists is any indication of the validity of psychological judgments in general, the prognosis is poor.²¹⁵

210. See text accompanying notes 228 to 229 *infra*.

211. Ennis & Litwack, *supra* note 12, at 709-10. See Nathan, Samaraweera, Andberg & Patch, *Syndromes of Psychosis and Psychoneurosis, A Clinical Validation Study*, 19 ARCH. GEN. PSYCHIA. 704 (1968).

212. See note 207 *supra*.

213. Frank, *Psychiatric Diagnosis: A Review of Research*, 81 J. GEN. PSYCHOL. 157, 164 (1969).

214. Thorne, *Clinical Judgment*, in CLINICAL ASSESSMENT IN COUNSELING AND PSYCHOTHERAPY 30-31 (R. Woody & J. Woody eds. 1972). See generally Ennis & Litwack, *supra* note 12, at 708-11.

215. *E.g.*, Ennis & Litwack, *supra* note 12, at 711-16; Morse, *supra* note 3, at 595; Steadman & Coccozza, *Psychiatry, Dangerousness and the Repetitively Violent Offender*, 69 J. CRIM. L. & CRIMINOLOGY 226 (1978). Steadman and Coccozza, who studied the accuracy of specific psychiatric predictions of dangerousness for a group of indicted felony defendants found incompetent to stand trial, concluded: “These data strongly suggest that under pretrial examination conditions psychiatrists show no abilities to predict accurately future violent behavior beyond that expected by chance. The primary criterion employed by the psychiatrists was the current alleged offense rather than anything specifically psychiatric.” *Id.* at 231. See Coccozza & Steadman, *The Failure of Psychiatric Predictions of Dangerousness: Clear and Convincing Evidence*, 29 RUTGERS L. REV. 1084, 1098-99 (1976) (“The findings of this study taken together with the other works reviewed in this paper would appear to represent clear and convincing evidence of the inability of psychiatrists or anyone else to predict dangerousness accurately.”); Diamond, *The Psychiatric Prediction of Dangerousness*, 123 U. PA. L. REV. 439, 451-52 (1974).

For a recent and thoughtful overview of the definitional and conceptual issues associated with the term “dangerousness,” see Shah, *Dangerousness: A Paradigm for*

Diagnoses based upon the administration of various psychological tests may be subject to error in cases in which the subject may have a reason to exaggerate pathology.²¹⁶ Consequently, until adequate empirical data are available, predictions by laypersons may be as accurate as "expert" predictions.²¹⁷

3. *Personal Bias and Psychological Judgments*

Aside from commenting on the lack of accuracy of polygraph evidence, the *Alexander* court observed that the technique may also be influenced by the potential bias of the expert and extrinsic or otherwise uncontrollable factors. A similar criticism is applicable to psychological expert testimony. The effect of the clinical interaction on psychological judgments in both experimental²¹⁸ and clinical²¹⁹ contexts is well documented. Perhaps the most crucial factors influencing psychological diagnoses are the clinician's own personality, value system, self-image, preferences, and attitudes.²²⁰

Exploring Some Issues in Law and Psychology, 33 AM. PSYCHOL. 224 (1978). The validity of psychiatric predictions of the need for hospitalization and treatment and the effect of such treatment is equally dubious. Ennis & Litwack, *supra* note 12, at 717-19.

216. Heaton, Smith, Lehman & Vogt, *Prospects for Faking Believable Deficits on Neuropsychological Testing*, 46 J. CONSULTING & CLINICAL PSYCHOL. 892, 898-900 (1978).

217. Morse, *supra* note 3, at 598.

218. *E.g.*, R. ROSENTHAL, EXPERIMENTER EFFECTS IN BEHAVIORAL RESEARCH (1966).

219. *E.g.*, Thorne, *supra* note 214, at 30. Differences in interpretation in the clinical context may be induced by external (*i.e.*, environmental) and internal (*i.e.*, examiner or subject biases and examiner-subject interactions) factors. J. ZISKIN, *supra* note 12, at 118.

220. Such factors as sex, race, socio-economic class, and personality characteristics may significantly affect the administration of psychological tests. *E.g.*, Arlett, Best & Little, *The Influence of Interviewer Self-Disclosure and Verbal Reinforcement on Personality Tests*, 32 J. CLINICAL PSYCHOL. 770 (1976); Barnard, *Interaction Effects among Certain Experimenter and Subject Characteristics on a Projective Test*, 32 J. CONSULTING & CLINICAL PSYCHOL. 514 (1968); Carkhuff & Pierce, *Differential Effects of Therapist Race and Social Class upon Patient Depth of Self-Exploration in the Initial Clinical Interview*, 31 J. CONSULTING PSYCHOL. 632 (1967); Gross, Herbert, Knatterud & Donner, *The Effect of Race and Sex on the Variation of Diagnosis and Disposition in a Psychiatric Emergency Room*, 148 J. NERV. & MENT. DIS. 638 (1969); Koscherak & Masling, *Noblesse Oblige Effect: The Interpretation of Rorschach Responses as a Function of Ascribed Social Class*, 39 J. CONSULTING & CLINICAL PSYCHOL. 415 (1972); Levy & Kahn, *Interpreter Bias on the Rorschach Test as a Function of Patients' Socioeconomic Status*, 34 J. PROJECTIVE TECHNIQUES & PERSONALITY ASSESSMENT 106 (1970); Masling, *Role-Related Behavior of the Subject and Psychologist and Its Effects upon Psychological Data*, 14 NEB. SYMP. MOTIVATION 67 (1966); Milner, *Administrator's Gender and Sexual Content in Projective Test Protocols*, 31 J. CLINICAL PSYCHOL. 540 (1975) (TAT test); Milner & Moses, *Effects of Administrator's Gender on Sexual Content and Productivity in the Rorschach*, 30 J. CLINICAL PSYCHOL. 159 (1974); Milner & Moses, *Sexual Responsivity as a Function of Test Administrator's Gender*, 39 J. CONSULTING & CLINICAL PSYCHOL. 515 (1972) (word association test); Stewart & Patterson, *Eliciting Effects of Verbal and Nonverbal Cues on Projective Test Responses*, 41 J. CONSULTING &

Psychologists may have a lower tolerance for abnormal behavior than laypersons and interpret ambiguous behavior as disordered depending upon their particular sensitivity to the apparent signs of psychopathology and personal theoretical orientation.²²¹ They may also be biased by the client's

CLINICAL PSYCHOL. 74 (1973); Trachtman, *Socio-Economic Class Bias in Rorschach Disagnosis: Contributing Psychosocial Attributes of the Clinician*, 35 J. PERSONALITY ASSESSMENT 229 (1971).

A number of studies suggest that clinical judgment may be biased by the physical attractiveness of the client as well as patient-clinician social class, race, sex and personal values. *E.g.*, Abramowitz & Abramowitz, *Should Prospective Women Clients Seek Out Women Practitioners? Intimations of a "Ding-Bat" Effect in Clinical Evaluation*, 8 PROC. 81st ANN. CONVENTION AM. PSYCHOL. A. 503 (1973); Abramowitz, Abramowitz, Jackson & Gomes, *The Politics of Clinical Judgment: What Nonliberal Examiners Infer about Women Who Do Not Stifle Themselves*, 41 J. CONSULTING PSYCHOL. 385 (1973); Abramowitz & Dokecki, *The Politics of Clinical Judgment: Early Empirical Returns*, 84 PSYCHOL. BULL. 460 (1977) (review of literature); Broverman, Broverman, Clarkson, Rosenkrantz & Vogel, *Sex-Role Stereotypes and Clinical Judgments of Mental Health*, 34 J. CONSULTING & CLINICAL PSYCHOL. 1 (1970); Broverman, Vogel, Broverman, Clarkson & Rosenkrantz, *Sex-Role Stereotypes: A Current Appraisal*, 28 J. SOC. ISSUES 59, 69-71 (Spring 1972); Haan & Livson, *Sex Differences in the Eyes of Expert Personality Assessors: Blind Spots?*, 37 J. PERSONALITY ASSESSMENT 486 (1973); Hobfall & Penner, *Effect of Physical Attractiveness on Therapist's Initial Judgments of a Person's Self-concept*, 46 J. CONSULTING & CLINICAL PSYCHOL. 200 (1978); Neulinger, *Perceptions of the Optimally Integrated Person: A Redefinition of Mental Health*, 3 PROC. 76th ANN. CONVENTION AM. PSYCHOL. A. 553 (1968). See also Allon, *Sex, Race, Socio-Economic Status, Social Mobility, and Process-Reactive Ratings of Schizophrenics*, 153 J. NERV. & MENT. DIS. 343 (1971); Dickes, Simons & Weisfogel, *Difficulties in Diagnosis Introduced by Unconscious Factors Present in the Interviewer*, 44 PSYCHIA. Q. 55 (1970); Ennis & Litwack, *supra* note 12, at 726; Grosz & Grossman, *The Sources of Observer Variation and Bias in Clinical Judgments: 1. The Item of Psychiatric History*, 138 J. NERV. & MENT. DIS. 105, 111 (1964); Katz, Cole & Lowery, *Studies of the Diagnostic Process: The Influence of Symptom Perception, Past Experience, and Ethnic Background on Diagnostic Decisions*, 125 AM. J. PSYCHIA. 937 (1969); Kubie, *The Ruby Case: Who or What was on Trial*, 1 J. PSYCHIA. & L. 475, 486 (1973); Mehlman, *The Reliability of Psychiatric Diagnosis*, 47 J. ABNORM. & SOC. PSYCHOL. 577 (1952); Pasamanick, Dinitz & Lefton, *Psychiatric Orientation and Its Relation to Diagnosis and Treatment in a Mental Hospital*, 116 AM. J. PSYCHIA. 127 (1959); Pugh, *The Insanity Defense in Operation: A Practicing Psychiatrist Views Durham and Brawner*, 1973 WASH. U.L.Q. 87. One review of the literature concludes that patient social class, and not race, sex, or personal values, has proven to be the only significant biasing factor influencing clinical judgments. Abramowitz & Dokecki, *supra*, at 473. Another recent study suggests that the emotional bearing of clients during clinical interviews — whether they are angry, sad, or depressed, for example — may affect a therapist's responses. Haccoun & Laviguer, *Effects of Clinical Experience and Client Emotion on Therapists' Responses*, 47 J. CONSULTING & CLINICAL PSYCHOL. 416 (1979) (study revealed that therapists judged angry clients less favorably than sad clients and that more experienced therapists showed greater tolerance of anger; therapists intervened less with angry clients than with depressed clients, and angry clients received less supportiveness, less directiveness, and fewer requests for factual or emotional information).

221. J. ZISKIN, *supra* note 12, at 130-33. There is some evidence that psychologists, in comparison with psychiatrists, may be more inclined to rate certain behavior as abnormal. Copeland, Kelleher, Gourlay & Smith, *Influence of Psychiatric Training, Medical Qualification, and Paramedical Training on the Rating of Abnormal*

attitude toward the profession, especially if it is hostile.²²² The self-fulfilling prophecy phenomenon is another source of error because the subject may be tacitly influenced by the expectations of the examiner.²²³ All of these problems may be compounded when the diagnostic judgments of several clinicians are discussed at clinical case conferences.²²⁴

Three common errors plague clinical judgments by psychologists. First, clinicians may think they observe a relationship between a certain behavior and a state, trait, process, or behavioral classification when in fact no such relationship can be shown to exist.²²⁵ This persistent subjective bias phenomenon is called "illusory correlation."²²⁶ Although clinicians may

Behaviour, 5 PSYCHOL. MED. 89, 94 (1975) (study hypothesized that psychiatrists, because they are most familiar with extremes of abnormal behavior, tended to compare subjects with severely disordered patients in evaluating behavior and thus were not as likely to view symptoms manifested as abnormal; in comparison, third year psychology students tended to compare subjects' behavior with their own concepts of normalcy, revealing a greater propensity for rating certain behavior as abnormal). See Wing, Henderson & Winckle, *The Rating of Symptoms by a Psychiatrist and a Non-Psychiatrist: A Study of Patients Referred from General Practice*, 7 PSYCHOL. MED. 713, 714 (1977). See also Brown, *Lawyer and Psychiatrists in Court: Afterword*, 32 MD. L. REV. 36, 39 (1972). One study indicates that these factors operating in the context of a psychiatric hospital make it impossible for mental health personnel to distinguish the sane from the insane. Rosenhan, *On Being Sane in Insane Places*, 179 SCI. 250 (1973). See note 239 *infra*.

222. Braginsky & Braginsky, *Psychologist: High Priests of the Middle Class*, 7 PSYCHOL. TODAY, Dec. 1973, at 139; Wallach & Strupp, *Psychotherapists' Clinical Judgments and Attitudes Towards Patients*, 24 J. CONSULTING PSYCHOL. 316 (1960).

223. J. ZISKIN, *supra* note 12, at 129; Felton, *The Experimenter Expectancy Effect Examined as a Function of Task Ambiguity and Internal-external Control*, 5 J. EXPERIMENTAL RESEARCH PERSONALITY 286 (1971); Hersen & Greaves, *Rorschach Productivity as Related to Verbal Reinforcement*, 35 J. PERSONALITY ASSESSMENT 436 (1971); Temerlin & Trousdale, *The Social Psychology of Clinical Diagnosis*, 6 PSYCHOTHERAPY: THEORY, RESEARCH & PRAC. 24 (1969).

224. P. MEEHL, *Why I Do Not Attend Case Conferences*, in PSYCHODIAGNOSIS: SELECTED PAPERS 225 (1973) [hereinafter cited as *Case Conferences*]. Meehl's engaging critique of clinical case conferences highlights the illogical thinking that frequently characterizes such meetings.

225. Such persuasive subjective biases may also influence clinicians' psychological test-use decisions. Wade & Baker, *supra* note 119, at 879-80.

226. Chapman & Chapman, *Genesis of Popular but Erroneous Psychodiagnostic Observations*, 72 J. ABNORMAL PSYCHOL. 193 (1967). The Chapmans conclude:

It . . . seems likely that in clinical practice the observer is reinforced in his observations of illusory correlates by the reports of his fellow clinicians who themselves are subject to the same illusions. Such consensual validation, especially among experts, is usually regarded as evidence of the validity of observation.

. . . .
 . . . The present findings indicate that illusory correlates reported by clinicians do not reflect personal defects as much as difficulties inherent in the clinician's task.

Id. at 203-04. See generally Chapman & Chapman, *The Basis of Illusory Correlation*, 84 J. ABNORMAL PSYCHOL. 574 (1975); Chapman & Chapman, *Illusory Correlation as an Obstacle to the Use of Valid Psychodiagnostic Signs*, 74 J. ABNORMAL PSYCHOL. 271 (1969); Rosen, *On the Persistence of Illusory Correlations Associated with the*

base their opinions on some behavior that in their own experience they consider to be rare in the normal population, the actual frequency of any particular behavior in the general population may not have been empirically determined.²²⁷ It is not surprising that most psychologists, by virtue of their professional interest, tend to have limited contact or experience with "normal" populations.²²⁸ Second, the clinician's personal ideology of adjustment, health, social role, and even religious and political beliefs and values may be correlated with freedom from a mental disorder so that a person who does not fit the psychologist's "healthy" stereotype is likely to be diagnosed as mentally disordered. This phenomenon has been termed the "sick-sick fallacy."²²⁹ Third, people are inclined to accept vague statements about their own personalities as highly accurate interpretations when they are made by a psychologist, despite the fact that such statements would be equally true for a broad segment of the population. This fallacy is called the "Barnum effect."²³⁰ Arguably, this effect may extend to the statements about the personalities of others made by psychological experts to the trier of fact and may result in unfair prejudice.²³¹

Rorschach, 84 J. ABNORMAL PSYCHOL. 571 (1975). Although these studies regarding illusory correlation focus on psychological testing, this concept may also be extended to psychological judgments in general. See Golding & Rorer, *Illusory Correlation and Subjective Judgment*, 80 J. ABNORMAL PSYCHOL. 249 (1972). Training specifically intended to eliminate or reduce the effects of such bias may be of limited value. Kurtz & Garfield, *Illusory Correlation: A Further Exploration of Chapman's Paradigm*, 46 J. CONSULTING & CLINICAL PSYCHOL. 1009 (1978).

227. Cf. Henn, Herjanic & Vanderpearl, *Forensic Psychiatry: Diagnosis and Criminal Responsibility*, 162 J. NERV. & MENT. DIS. 423, 427 (1976) ("[T]he prevalence of mental illness among violent criminal offenders and the general population is roughly comparable, with mental illness in fact being found somewhat less among offenders than in the general population.").

228. J. ZISKIN, *supra* note 12, at 52.

229. *Case Conferences*, *supra* note 224, at 237. The biasing effect of theoretical orientation is particularly pronounced in the diagnosis and treatment of schizophrenia. Fitzgibbons & Shearn, *supra* note 207.

230. P. MEEHL, *Wanted — A Good Cookbook*, in PSYCHODIAGNOSIS: SELECTED PAPERS 63 (1973). The term "Barnum effect" was first coined by Meehl, *id.* at 69, and is derived from the name of the famous showman, P. T. Barnum, whose circus attractions were noted for providing "a little something for everybody." Snyder, Shenkel & Lowery, *Acceptance of Personality Interpretations: The "Barnum Effect" and Beyond*, 45 J. CONSULTING & CLINICAL PSYCHOL. 104, 104 (1977).

The following are examples of such statements: "You have a great need for other people to like you and admire you." "While you have some personality weaknesses, you are generally able to compensate for them." "You pride yourself as being an independent thinker and do not accept others' statements without satisfactory proof." Snyder, Shenkel & Lowery, *supra*, at 106. All of these statements are more likely to be true than not about a majority of people. In psychology, such descriptions as "The patient is suffering from 'intrapsychic conflicts,' 'ambivalent object relations,' 'sexual inhibitions,' or 'damaged self-image'" are similarly equivocal. *Case Conferences*, *supra* note 224, at 237. These statements are analogous to those found in horoscopes. Compare Snyder, Shenkel & Lowery, *supra*, with Snyder, *Why Horoscopes are True: The Effects of Specificity on Acceptance of Astrological Interpretations*, 30 J. CLINICAL PSYCHOL. 577 (1974).

231. See p. 596 *infra*.

In connection with the "sick-sick fallacy," there is some evidence that psychologists have a greater tendency than do laypersons to perceive mental disorders and symptoms in ambiguous behavior.²³² Furthermore, evidence exists that psychological judgments may be influenced by different schools of thought and training.²³³ The literature also suggests that there may be little correlation between the amount of clinical training and experience in psychology and the degree of accuracy in clinical judgments.²³⁴ One explanation for this phenomenon is that adequate review to correct erroneous diagnoses rarely occurs during the course of psychological evaluation.²³⁵ Psychologists, whose individual judgments may be more reliable and valid than that of their colleagues, typically have not evaluated their own accuracy unless they have maintained a detailed record of their clients' progress and an independent, objective standard is used to evaluate the diagnoses. A number of other psychological studies indicate that the psychological judgments of experienced clinicians may not be superior to those of novices or even laypersons.²³⁶ Also, there is evidence that the

232. See note 221 *supra*.

233. J. ZISKIN, *supra* note 12, at 128-29; Ennis & Litwack, *supra* note 12, at 721 & n.91. See also Saghir, *A Comparison of Some Aspects of Structured and Unstructured Psychiatric Interviews*, 128 AM. J. PSYCHIA. 180 (1971).

234. J. WIGGINS, *supra* note 160, at 131-34; Goldberg, *The Effectiveness of Clinicians' Judgments: The Diagnosis of Organic Brain Damage from the Bender-Gestalt Test*, 23 J. CONSULTING PSYCHOL. 25 (1959); Hiler & Nesvig, *An Evaluation of Criteria Used by Clinicians to Infer Pathology from Figure Drawings*, 29 J. CONSULTING PSYCHOL. 520 (1965); Luft, *Implicit Hypotheses and Clinical Predictions*, 45 J. ABNORMAL SOC. PSYCHOL. 756 (1950); Oskamp, *The Relationship of Clinical Experience and Training Methods to Several Criteria of Clinical Prediction*, 76 PSYCHOL. MONOGRAPHS (No. 28, Whole No. 547) (1962); Schinka & Sines, *Correlates of Accuracy in Personality Assessment*, 30 J. CLINICAL PSYCHOL. 374 (1974).

235. J. ZISKIN, *supra* note 12, at 215. In Wade and Baker's study of psychological test usage, only 20.6% of the clinical psychologists responding indicated that they systematically collected and analyzed data regarding their own testing practices. Wade & Baker, *supra* note 119, at 878. See Graham, *Feedback and Accuracy of Clinical Judgments from the MMPI*, 36 J. CONSULTING & CLINICAL PSYCHOL. 286 (1971).

236. J. ZISKIN, *supra* note 12, at 217-18; Blankenhorn & Cerbus, *Clinical and "Actuarial" Evaluation of Organic Brain Damage by Psychologists and Non-Psychologists Using the Memory-for-Designs*, 40 PERCEPTUAL & MOTOR SKILLS 99 (1975) (no statistically significant differences in diagnostic accuracy of brain damage versus no brain damage on Memory-for-Designs test between psychologists and non-psychologists; no difference between clinical and objective evaluations of designs by judges of both groups regardless of amount of experience of members of psychologist group); Goldberg, *Simple Models or Simple Processes? Some Research on Clinical Judgments*, 23 AM. PSYCHOL. 483 (1968) (review of literature regarding clinical judgments concludes that amount of professional training and experience of judge does not relate to judgmental accuracy; amount of information available to judge is not related to accuracy of resulting inferences; such predictions are of low validity on an absolute basis); Goldberg, *supra* note 234 (results of Bender-Gestalt test given to experienced psychologists, psychological trainees and non-psychologists (hospital secretaries) to distinguish brain damaged patients from normals; study revealed no practical differences between groups in terms of accuracy); Goldberg & Werts, *The Reliability of Clinicians' Judgments: A Multitrait-Multimethod Approach*, 30 J.

diagnosis of mental disorders may be significantly influenced by the subject's socio-economic background to the extent that diagnostic judgments may differ depending upon the individual's history.²³⁷ Similarly, the race and sex of the patient may affect the ultimate diagnosis.²³⁸

4. Context and Timing of the Clinical Interview

Such factors as the setting in which a subject is observed, the appearance of the subject, and the expectations of the psychologist may

CONSULTING PSYCHOL. 199 (1966); Goldstein, Deysach & Kleinknecht, *Effect of Experience and Amount of Information on Identification of Cerebral Impairment*, 41 J. CONSULTING & CLINICAL PSYCHOL. 30 (1973) (study concludes that validated actuarial approach to assessment of physical impairment of brain is more accurate than clinical judgments of experienced psychologists even when test instrument was interpreted by inexperienced clinicians); Luft, *supra* note 234 (predictions by psychiatrists, social workers, advanced clinical psychologist trainees, and physical scientists (primarily physicists and some meteorologists) based upon diagnostic interview resulted in finding that no single group of judges was consistently superior; in one case scores of non-clinicians on objective prediction test were significantly higher); Oskamp, *supra* note 234 (experienced clinical psychologists demonstrated only small degree of superiority in terms of accuracy over inexperienced undergraduate psychology majors despite fact that prediction task involved apparently simple discrimination between two extreme groups using MMPI profiles); Plaut & Crannell, *The Ability of Clinical Psychologists to Discriminate between Drawings by Deteriorated Schizophrenics and Drawings by Normal Subjects*, 1 PSYCHOL. REP. 153 (1955) (small sample of college students and nonclinical faculty members were approximately as good as qualified clinical psychologists in discriminating drawings by schizophrenics with probable intellectual deterioration and normal control group); Sattler & Ryan, *Scoring Agreement on the Stanford-Binet*, 29 J. CLINICAL PSYCHOL. 35 (1973) (scoring accuracy of psychologists with doctoral degree and mean of 9.37 years of postdoctoral experience was similar to that of minimally trained group of graduate students and untrained group of graduate students); Soskin, *Bias in Postdiction from Projective Tests*, 49 J. ABNORMAL & SOC. PSYCHOL. 69 (1954) (experienced users of projective tests did not earn postdiction accuracy scores significantly different from those of novices nor did accuracy of novices improve significantly after completion of their training); Taft, *The Ability to Judge People*, 52 PSYCHOL. BULL. 1, 10-12 (1955) (review of studies conclude that non-psychologists (at least physical scientists and personnel workers) may be more capable of judging others accurately than are either psychology students or clinical psychologists); Walker & Linden, *Varying Degrees of Psychological Sophistication in the Interpretation of Sentence Completion Data*, 23 J. CLINICAL PSYCHOL. 229 (1967) (experienced psychologists with doctoral degrees were not necessarily more consistent or accurate than graduate and undergraduate students in psychology and undergraduate engineering students in drawing conclusions based upon completion test data).

237. Graff, Kenig & Radoff, *Prejudice of Upper Class Therapists Against Lower Class Patients*, 45 PSYCHIA. Q. 475 (1971); Katz, Cole & Lowery, *supra* note 220; Lee & Temerlin, *Social Class, Diagnosis, and Prognosis for Psychotherapy*, 7 PSYCHOTHERAPY: THEORY, RESEARCH & PRAC. 181 (1970); Phillips & Draguns, *Classifications of the Behavior Disorders*, 22 ANN. REV. PSYCHOL. 447, 467 (1971); Routh & King, *Social Class Bias in Clinical Judgment*, 38 J. CONSULTING & CLINICAL PSYCHOL. 202 (1972); Stein, Green & Stone, *Therapist Attitudes as Influenced by A-B Therapist Type, Patient Diagnosis, and Social Class*, 39 J. CONSULTING & CLINICAL PSYCHOL. 301 (1972).

238. See note 220 *supra*.

distort clinical perception and ultimately influence the diagnosis. At least one researcher has hypothesized that the examination of persons in mental hospitals may predispose mental health professionals to detect pathological behavior despite a relatively unremarkable life history and "normal" behavior following admission to the institution.²³⁹ There may be many possible explanations for the observation of "hostile" behavior during the course of a clinical interview. For example, the subject may be truly hostile as a result of a mental disorder, or the psychologist or the setting for the interview may have provoked such a response. Also, the hostility observed by the psychologist may be the result of a predisposition toward noticing that particular type of behavior to the exclusion of other less remarkable, and even "normal," behaviors.²⁴⁰

Another problem is that the behavior presented by a patient may not be uniform over time, and unless an adequate sample of behavior is observed, the resultant diagnosis will be of limited validity. One researcher concludes that the consistency over time of specific diagnoses of nonorganic conditions is quite low.²⁴¹ Thus, the subject may display consistent behavior over time but different aspects of this behavior may be observed at different times.²⁴² Another related explanation might be that the relative importance of the behaviors observed simply may have been interpreted differently at various historical times — the diagnosis itself may be related to the particular historical period in which it was made.²⁴³

5. *Education, Licensure, and Experience of Psychologists*

State licensure alone does not necessarily assure competency.²⁴⁴ Depending upon the jurisdiction, applicants may be required to meet minimal educational or experiential requirements, and a doctoral, or at least

239. Rosenhan, *supra* note 221. Rosenhan concluded:

It is clear that we cannot distinguish the sane from the insane in psychiatric hospitals. The hospital itself imposes a special environment in which the meanings of behavior can easily be misunderstood. The consequences to patients hospitalized in such an environment — the powerlessness, depersonalization, segregation, mortification, and self-labeling — seem undoubtedly countertherapeutic.

Id. at 257. See J. ZISKIN, *supra* note 12, at 130-33. Rosenhan's study has been severely criticized on the grounds that the unreliability and uselessness of any diagnostic method cannot be established by showing that insanity can be feigned and that psychiatrists are not able to accurately diagnose pseudopatients as opposed to those who are really mentally disordered. Farber, *Sane and Insane: Constructions and Misconstructions*, 84 J. ABNORMAL PSYCHOL. 589 (1975); Spitzer, *supra* note 207.

240. J. ZISKIN, *supra* note 12, at 120. See text accompanying notes 218 to 224 *supra*.

241. Zubin, *supra* note 196, at 386. See Ennis & Litwack, *supra* note 12, at 724 & n.103.

242. Ennis & Litwack, *supra* note 12, at 724.

243. Blum, *On Changes in Psychiatric Diagnosis Over Time*, 33 AM. PSYCHOL. 1017 (1978).

244. See Gross, *The Myth of Professional Licensing*, 33 AM. PSYCHOL. 1009, 1013-15 (1978).

a master's, degree is usually required for certification.²⁴⁵ In some states, psychologists without any formal advanced education or those who have received their postgraduate degrees from institutions not accredited by the American Psychological Association may be licensed under grandfather clauses.²⁴⁶ With respect to the psychologist's expertise based upon clinical experience, there is a significant body of literature that has failed to demonstrate a relationship between the amount of clinical training and experience and the level of accuracy in clinical judgments.²⁴⁷

In summary, the scientific literature regarding the accuracy of psychological techniques and diagnoses suggests that they are highly suspect and susceptible to a variety of significant sources of error. Psychological tests may have limited reliability and validity even in the hands of the most skilled clinician, and the interpretation of data derived from clinical examinations frequently results in divergent opinions largely due to the subjectivity of the evaluation process. As expert witnesses who are permitted to diagnose mental disorders and to express an opinion about their causal connection with the issue of ultimate fact, psychologists may have limited empirically validated expertise to offer the legal system. Even if the trier of law concludes that psychological evidence and judgments are reasonably accurate, they may still be excluded in light of the various evidentiary counterweights.

B. *Evidentiary Counterweights and the Exclusion of Logically Relevant Psychological Evidence and Expert Testimony*

Assuming that psychological evidence meets the *Frye* test as currently interpreted by the federal courts and is therefore relevant, it may be inadmissible because of one or more of the various evidentiary counterweights. It has been observed that scientific theories and techniques tend to create the unfounded impression of infallibility in the minds of laypersons.²⁴⁸ Consequently, the courts may reasonably exclude such evidence on

245. *E.g.*, MD. ANN. CODE art. 43, §§ 629(4)-(5) (Cum. Supp. 1979). The statute provides that applicants for certification must have received a "doctoral degree based on a program of studies whose content was primarily psychological from an accredited educational institution having an appropriate graduate program, or a program of studies judged by the Board to be equivalent in both subject matter and extent of training," *id.* § 629(4), and have at least two years of professional experience in psychology. See generally Hess, *supra* note 76, at 366; Morse, *supra* note 3, at 533 n.12.

246. *E.g.*, Berger v. Board of Psychologist Examiners, 521 F.2d 1056 (D.C. Cir. 1975); Whittle v. State Bd. of Examiners of Psychologists, 483 P.2d 328 (Okla. 1971); D.C. CODE ENCYCL. § 2-487 (West Cum. Supp. 1979). See generally Smith, *Psychology and the Courts: Some Implications of Recent Judicial Decisions for State Licensing Boards*, 9 PROF. PSYCHOL. 489, 489-95 (1978).

247. See text accompanying notes 234 to 236 *supra*.

248. See Reed v. State, 283 Md. 374, 386, 391 A.2d 364, 370 (1978) (quoting United States v. Addison, 498 F.2d 741, 744 (D.C. Cir. 1974)); McCORMICK, *supra* note 65, § 203 n.32 (citing cases); *Evolving Methods*, *supra* note 78, at 685.

the policy grounds of creating a substantial danger of undue prejudice, confusing the issues, or misleading the jury,²⁴⁹ or may require that the test be proven infallible, or nearly so.²⁵⁰

"Unfair prejudice" in this context means that the trier of fact is liable to give more weight to the evidence than it actually merits for reasons extrinsic to its actual probative value. As the court observed with regard to the admissibility of polygraph evidence in the paradigm case, *United States v. Alexander*²⁵¹:

When polygraph evidence is offered in evidence at trial, it is likely to be shrouded with an aura of near infallibility, akin to the ancient oracle of Delphi. . . . Based upon the presentment of this particular form of scientific evidence, present-day jurors, despite their sophistication and increased educational levels and intellectual capacities, are still likely to give significant, if not conclusive, weight to a polygraphist's opinion as to whether the defendant is being truthful or deceitful in his response to a question bearing on a dispositive issue in a criminal case. To the extent that the polygraph results are accepted as unimpeachable or conclusive by jurors, despite cautionary instructions by the trial judge, the jurors' traditional responsibility to collectively ascertain the facts and adjudge guilt or innocence is preempted.²⁵²

Psychological expert testimony is analogous to that offered in support of polygraph evidence,²⁵³ and the policy considerations regarding the admissi-

249. *Evolving Methods*, *supra* note 78, at 686. See FED. R. EVID. 403.

250. McCormick notes:

[T]he courts, when undertaking to pass on the question whether the evidence has sufficient probative value to assist the jury, mix that question with the one of effect on the jury, and seemingly require that the probative value be as great as the courts decide the jury will think it to be.

McCORMICK, *supra* note 65, § 203 n.32. The courts may require that those devices (e.g., polygraphs, voice spectrographs, truth serum drugs) or techniques (e.g., mathematical probabilities) that the courts have concluded the jury will consider infallible be proven so. *Id.* Psychological evidence and expert testimony may be considered just as infallible by juries.

251. 526 F.2d 161 (8th Cir. 1975). See text accompanying notes 113 to 117 *supra*.

252. *Id.* at 168 (footnote omitted). See Ennis & Litwack, *supra* note 12, at 735-38; cf. *United States v. Zeiger*, 350 F. Supp. 685, 691 (D.D.C.), *rev'd per curiam*, 475 F.2d 1280 (D.C. Cir. 1972) (granting of defendant's motion to admit results of polygraph examination during pretrial evidentiary hearing reversed on appeal even though trial court concluded that "the feared tendency of the jury to attach exaggerated significance to the examiner's testimony" could be adequately controlled and minimized by careful trial procedure).

253. Polygraph evidence at trial typically consists of physical evidence, the polygram of the subject's physiological responses, and the polygraph examiner's interpretation of this empirical data. Part of the jury's reliance on polygraph evidence may be due to the presumption that a machine measuring physiological responses is necessarily an objective technique, ignoring the highly subjective analysis of that data by the polygraphist. See Strong, *supra* note 74, at 13 n.48. Although not directly analogous to a polygram, psychological test results may be considered by laypersons to be the product of a wholly objective process, and jurors may ignore the critical

bility of scientific evidence are applicable to both. Of paramount importance, according to the *Alexander* court, is the public's interest in preserving the defendant's right to the "common sense and collective judgment of his peers, derived after weighing facts and considering the credibility of witnesses, which has been the hallmark of the jury tradition."²⁵⁴ Distinguishing polygraph evidence from other types of scientific evidence (*e.g.*, ballistics analysis, fingerprint comparison, handwriting analysis, spectrographic analysis), the *Alexander* court noted that the latter are elicited "solely for the purpose of identifying either an individual or an object allegedly involved in the perpetration of a criminal act" and added:

These scientific tests do not purport to indicate with any degree of conclusiveness that the defendant who is so identified or connected with the object actually committed the crime. . . .

The role of the jury after a polygraphist has testified that the results of a polygraph examination show that the defendant's denial of participation in the crime was fabricated is much more circumscribed. If the expert testimony is believed by the jury, a guilty verdict is usually mandated. The polygraphist's testimony often is not limited to mere identification or any other limited aspect of defendant's possible participation in the criminal act. Through the testimony of the polygraph expert relating to whether the defendant was being truthful in his responses concerning participation in the crime, the expert is thus proffering his opinion based on scientific evidence bearing upon the sole issue reserved for the jury — is the defendant innocent or guilty? Is this good or bad? . . . The resolution of this dilemma can await another day.²⁵⁵

The potential for unfairly prejudicing the jury has been recognized in several other cases involving the admission of scientific evidence. In *United States v. Amaral*,²⁵⁶ the accused attempted to introduce the expert testimony of a psychologist with a doctorate regarding the effect of stress upon perception and the general unreliability of eyewitness identification.²⁵⁷ The United States Court of Appeals for the Ninth Circuit held that the trial court did not err in excluding such testimony primarily on the grounds that the effect of stress could be fully appreciated by the jury in light of the other evidence presented without having that determination put before them in the context of expert witness testimony. Although the court did not

evaluative element supplied by the psychological expert. Even if psychologists do not present the trier of fact with such distracting physical evidence, a more subtle form of prejudice may be involved. It is hypothesized that the aura of scientific objectivity also encompasses the general techniques and principles underlying psychology and that this alone may be sufficient to unfairly prejudice the jury "on a dispositive issue in a criminal case." *United States v. Alexander*, 526 F.2d 161, 168 (8th Cir. 1975).

254. 526 F.2d at 168 (footnote omitted).

255. *Id.* at 169.

256. 488 F.2d 1148 (9th Cir. 1973).

257. See note 2 *supra*.

unequivocally state that the proffered expert testimony would be prejudicial, it did observe that scientific evidence, in general, may be especially prone to this risk:

The countervailing considerations most often noted to exclude what is relevant and material evidence are the risk that admission will . . . 2) create a substantial danger of undue prejudice or of confusing the issues or of misleading the jury Scientific or expert testimony particularly courts the second danger because of its aura of special reliability and trustworthiness.²⁵⁸

The Fourth Circuit made a similar observation in *United States v. Baller*,²⁵⁹ in which the defendant challenged the admissibility of expert testimony identifying his voice by means of spectrographic analysis, thereby linking him to a series of telephone bomb threats. In upholding the admissibility of such expert testimony, the court of appeals remarked: "There are good reasons why not every ostensibly scientific technique should be recognized as the basis for expert testimony. Because of its apparent objectivity, an opinion that claims a scientific basis is apt to carry undue weight with the trier of fact."²⁶⁰ In applying the logical relevancy theory of scientific evidence, however, the *Baller* court did offer the following caveat: "Unless an exaggerated popular opinion of the accuracy of a particular technique makes its use prejudicial or likely to mislead the jury, it is better to admit relevant scientific evidence in the same manner as other expert testimony" ²⁶¹ The courts' primary concern is that the jury's dependence upon a scientific expert's mistaken conclusion will result in a miscarriage of justice.²⁶² The role of polygraphic and psychological experts at trial seems virtually indistinguishable. Although the basic scientific principles involved may differ, both attempt to present to the trier of fact scientific evidence the accuracy of which may be unduly exaggerated.²⁶³

258. 488 F.2d at 1152. See *United States v. Green*, 548 F.2d 1261, 1268 (6th Cir. 1977).

259. 519 F.2d 463 (4th Cir.), *cert. denied*, 423 U.S. 1019 (1975).

260. *Id.* at 466. The *Baller* court also added the following requirement:

In order to prevent deception or mistake and to allow the possibility of effective response, there must be a demonstrable objective procedure for reaching the opinion and qualified persons who can either duplicate the result or criticize the means by which it was reached, drawing their own conclusions from the underlying facts.

Id.

261. *Id.*

262. *E.g.*, *United States v. Alexander*, 526 F.2d 161, 170 (8th Cir. 1975). See Ennis & Litwack, *supra* note 12, 735-38.

263. With regard to the public's tendency to exaggerate the value of psychological tests, see Flaughner, *The Many Definitions of Test Bias*, 33 AM. PSYCHOL. 671, 673 (1978). The mere fact that a disease-like label has been assigned to a mental disorder by a psychologist may prove prejudicial. See Farina, Fisher, Getter & Fischer, *Some Consequences of Changing People's Views Regarding the Nature of Mental Illness*, 87 J. ABNORMAL PSYCHOL. 272 (1978).

The courts' inconsistent treatment of psychological evidence and expert testimony, in comparison with some other forms of scientific evidence, is an anomaly. When the scientific evidence is relatively novel, as is polygraph analysis, the trier of law, as noted above, will subject it to a twofold test. Even if it fulfills *Frye's* "general scientific acceptance" standard, it must also meet a somewhat more objective accuracy requirement. Although psychology easily satisfies the first criterion, the courts seem to have skipped the accuracy analysis in the process of making psychology an indispensable part of certain criminal and civil proceedings. By concentrating on experts' qualifications instead of the evidence they present at trial, the courts bypass the issue central to their evaluation of other scientific evidence — the relative accuracy of the techniques involved. In effect, the court takes judicial notice of psychology, and an evidentiary lacuna results.²⁶⁴ An opportunity to challenge the underlying basis of psychological judgments in general, as opposed to those at issue in the particular case, simply does not arise at trial. Instead, the inquiry is immediately narrowed to the specific questions of fact, and scrutiny of the scientific underpinnings of the psychological evidence to be introduced, which would mark the introduction of polygraph or spectrograph evidence, is thereby obviated. The courts, under the guise of judicial notice, simply assume that the evidence derived by psychological methods will meet the logical relevancy threshold of accuracy greater than chance. The current scientific literature in psychology and related fields raises serious doubts about the soundness of such a supposition.

C. *The Prejudicial Effect of Generalizing Psychological Expertise*

The prejudicial effect of psychological expert testimony may be further exacerbated by the conflict between rules similar to Federal Rule of Evidence 704 and the courts' desire to avoid jury dependence upon psychologists to resolve the issue of ultimate fact. Whether psychologists should be permitted to offer such opinion testimony depends upon how the general question of the appropriate limits of expert testimony *vis-à-vis* the issue of ultimate fact is decided.²⁶⁵ A number of state jurisdictions are in

264. See note 108 *supra*.

265. Criminal statutes frequently require that the accused manifest a particular state of mind (e.g., willfully, knowingly, recklessly, negligently). *E.g.*, MD. ANN. CODE art. 27, § 21 (1976) (operation of boat in reckless manner); MD. ANN. CODE art. 27, § 156 (Cum. Supp. 1979) (knowingly giving false fire alarms); MD. ANN. CODE art. 27, § 388 (1976) (manslaughter by operation of motor vehicle, etc. in grossly negligent manner); *id.* § 407 (first degree murder; "wilful, deliberate and premeditated killing"). See MODEL PENAL CODE PROPOSED OFFICIAL DRAFT § 2.02 (1962). Any science devoted to the study of human behavior would be material because it *may* tend to prove the presence or absence of the requisite *mens rea*. See *United States v. Hearst*, 563 F.2d 1331, 1351 (9th Cir. 1977). At least one jurisdiction has held that the state of mind of a criminal defendant is a question of ultimate fact about which psychologists may not testify as experts unless the defense is based on insanity. *Smith v. State*, 564 P.2d 1194, 1199-1200 (Wyo. 1977). *Contra*, *United States v. Hearst*, 563 F.2d 1331, 1351 (9th

accord with Federal Rule of Evidence 704, which abolishes the ultimate facts proscription.²⁶⁶ The rationale for removing this distinction was fourfold: (1) in practice it was impossible to distinguish between ultimate and non-ultimate facts; (2) it was difficult for some witnesses to couch their testimony in anything but ultimate facts; (3) the express rationale for the rule made little sense, *i.e.*, invasion of the province of the jury; and (4) some courts attempted to distinguish between testimony on an ultimate fact and testimony on an issue of law allowing the former but barring the latter, which proved to be an equally untenable solution.²⁶⁷ A suggested rule of thumb is to consider how a particular witness' testimony will aid the trier of fact,²⁶⁸ but at least one commentator questions whether an opinion expressed in terms of some legal standard is ever truly helpful to the jury.²⁶⁹

Another way of characterizing this policy argument against permitting psychologists to testify in terms of the ultimate issue of fact is that it

Cir. 1977). In *Smith*, for example, the Wyoming Supreme Court observed that because the question of guilt or innocence involved legal principles upon which the court instructs the jury, the psychologist could only express his belief as to how the question of intent should be decided. Therefore, he would not be applying his special scientific expertise and would only be going through the same process the jury would follow to reach his conclusion. Significantly, the court noted that if an insanity defense had been raised, the state of mind of the accused would have become the proper subject for expert testimony, 564 P.2d at 1199-1200, implying that the generalization of psychological expertise to the legal standard is dependent upon how the court perceives the utility of psychology in the courtroom *vis-à-vis* the issue of ultimate fact. For a more thorough discussion of this generalization of expertise phenomenon, see text accompanying notes 270 to 284 *infra*.

Ironically, psychiatrists, in the federal courts at least, have been permitted to offer expert testimony regarding the motives of human conduct when criminal insanity is not in issue "if it is relevant to negative, or establish, the specific mental condition that is an element of the crime." *United States v. Brawner*, 471 F.2d 969, 1002 (D.C. Cir. 1972) (en banc). *See, e.g.*, *United States v. Bennett*, 539 F.2d 45, 53 (10th Cir.), *cert. denied*, 429 U.S. 925 (1976). The reason for this anomaly is unclear, particularly in light of the fact that psychiatrists do not employ the type of empirically based assessment techniques commonly used by psychologists for diagnosis. Psychiatric opinions appear to be no less subjective than psychological opinions and may even be less helpful to the trier of fact. *See* note 12 *supra*.

266. *E.g.*, CALIF. EVID. CODE § 805; MINN. CT. R. EVID. 704 (1979); N.J. EVID. R. 56(3); WIS. STAT. ANN. § 907.04 (1975). *See* 3 WEINSTEIN'S EVIDENCE, *supra* note 63, ¶ 704[01], at 704-3 to -4 & n.3, ¶ 704[02], at 195-97 (Cum. Supp. 1978); Stoebeck, *Opinions on Ultimate Facts: Status, Trends, and a Note of Caution*, 41 DEN. L. CENTER J. 226, 227-36 (1964).

267. 3 WEINSTEIN'S EVIDENCE, *supra* note 63, ¶ 704[01], at 704-4 to -5.

268. *Id.* at 704-5.

269. *Id.* at 704-8 ("Opinions which are expressed in terms of some legal standard will usually not suffice because they probably do not convey the same information to jurors as to lawyers."). *But cf.* Ladd, *Expert Testimony*, 5 VAND. L. REV. 414, 424 (1952) ("Because jurors realize that they are the final triers to determine the issues and are reluctant to part with that right, there isn't much danger in reality from the use of all-embracing questions [*i.e.*, those embracing all the elements of the legal standard]."). Ladd's assertion that such questions are, at worst, benign remains to be demonstrated.

constitutes an unwarranted "generalization of expertise,"²⁷⁰ resulting in confusion of the expert's scientific expertise for skill in evaluating social policy issues. Consider the following decision-making paradigm:

If conditions A, B, and C exist, then one should do X.
 Conditions do exist.
 Therefore, one should do X.²⁷¹

There are two premises. The major one is a prescriptive statement signaled by the word "should" and might be termed the policy judgment. The minor premise is a conclusion based upon the application of the empirical "science" deemed relevant to the inquiry.²⁷² The resultant observations are essentially objective and empirically demonstrable. The legal standard reflects social policy, and whether a party's conduct meets the elements of that standard is a determination relegated to the trier of fact by our judicial system.²⁷³ Assuming that the criterion of probative value which ensures accuracy has been met, the minor premise may be the proper domain of the scientific expert. The issue is whether psychological experts *qua* experts can meaningfully help the trier of fact in its search for truth by generalizing their expertise in the evaluation of the technical, nonmoral, empirical premise to the legal standard. Psychological judgments are sufficiently suspect to warrant greater scrutiny of the minor premise, but even if the

270. The "generalization of expertise" theory was first proposed by Veatch, *Generalization of Expertise*, 1 HASTINGS CENTER REP. NO. 2, at 29 (1973):

Generalization of expertise arises when, consciously or unconsciously, it is assumed that an individual with scientific expertise in a particular area also has expertise in the value judgments necessary to make policy recommendations simply because he has scientific expertise. . . .

The problem of generalizing expertise is essentially one of confusing expertise in technical knowledge of a given scientific area with knowledge of what is morally required in that area.

Id. at 29.

A similar phenomenon has been observed with regard to psychiatric expert testimony:

[P]sychiatrists have bitten off more than they can chew. The fault, however, is not theirs alone, for legislatures and courts, in an attempt to shift responsibility for making the determination of who shall remain free and who shall be confined, have turned to psychiatry, seeking easy answers where there are none.

. . . Subject to constitutional limitations, the decision to deprive another human of liberty is not a psychiatric judgment but a social judgment. We shall have to decide how much we value individual freedom; how much we care about privacy and self-determination; how much deviance we can tolerate — or how much suffering. There are no "experts" to make those decisions for us.

Ennis & Litwack, *supra* note 12, at 752. See Diamond & Louisell, *supra* note 82, 1342-43; Fleming & Maximov, *The Patient or His Victim: The Therapist's Dilemma*, 62 CALIF. L. REV. 1025 (1974).

271. Veatch, *supra* note 270, at 30.

272. See *id.* at 31.

273. *E.g.*, United States v. Alexander, 526 F.2d 161, 168-69 (8th Cir. 1975).

data gathered by a psychologist about a defendant's behavior and the resultant diagnosis are reasonably accurate, there is no evidence that expertise in observing psychological "facts" — the minor premise of the syllogism — can be directly equated with expertise in the evaluation of social policy questions — the major premise of the syllogism.²⁷⁴

Because psychologists are scientists, jurors may consider them to possess qualities that render them uniquely qualified to decide such questions or to permit them to make better decisions than laypersons.²⁷⁵ Juries may also fall prey to a "Barnum"-type effect — vague statements about a party's personality may be admitted at trial and accepted by the trier of fact as highly accurate simply because they were offered by a psychologist, even though such descriptions might be equally true of a broad segment of the population that would be considered "normal."²⁷⁶ It is theorized that when illness language is used to characterize behavior in a legal context, it reinforces the unproven assumption that the person described is not responsible for his or her behavior.²⁷⁷ In summary, there is little indication that a psychologist's opinion on the issue of ultimate fact offers the jury much more than the expression of another layperson's personal opinion and belief as to the applicability of the legal standard.

If "helpfulness" to the trier of fact is the essential criterion for the admissibility of an opinion regarding the issue of ultimate fact, then a psychologist's testimony should be excluded. The courts have recognized the potential prejudicial effect of such generalizations of expertise. In *United*

274. Veatch, *supra* note 270, at 31-32. A corollary argument is that while the two types of expertise are not identical, they are nevertheless correlated. This hypothesis lends itself to empirical validation, *id.* at 32: Groups of experts in psychology could be examined to determine if they uniquely possess the wisdom required to evaluate whether the applicable legal standard has been met. The hypothesis that ethical evaluation depends upon familiarity with and sensitivity to the issues that might be acquired through experience with the issues is subject to an alternative interpretation, *i.e.*, extensive experience with the same kind of complex problems could inure one to the personal dimensions of the issue and leave one insensitive to the unique moral requirements. *Id.* There is no evidence one way or the other demonstrating a correlation between expertise in psychology and skill superior to that of the layperson in assessing the ultimate issue of fact.

275. Two other arguments are frequently offered in support of generalizing scientific expertise to social policy issues. First, scientists are more rational or able to reason more logically than the ordinary person. Veatch observes that only rarely do differences in decision-making result from illogical conclusions drawn from premises. *Id.* at 33. He indicates that most differences are accounted for by disagreements about the major premise or the faulty construction of an argument so that a significant premise is suppressed. Second, those in a particular profession such as psychology have special ethical norms that they apply uniquely to their profession. If these ethical norms were contrary to what a layperson would accept, even as applying to individuals in the professional role, differences over the major evaluative premise would arise leading to differences in policy. If anything, this constitutes an argument *against* assigning responsibility for such decision-making to members of that profession. *Id.* at 34-35.

276. See note 230 *supra*.

277. Morse, *supra* note 3, at 553 n.43.

States v. Brawner,²⁷⁸ the District of Columbia Circuit abandoned the *Durham* "product" test²⁷⁹ for criminal insanity in favor of the American Law Institute's (ALI) standard.²⁸⁰ Criticizing the *Durham* test as relying too heavily on expert psychiatric and psychological witnesses, the court of appeals stated:

[T]he difficulty . . . is that the medical expert comes, by testimony given in terms of a non-medical construct ("product"), to express conclusions that in essence embody ethical and legal conclusions. There is, indeed, irony in a situation under which the *Durham* rule, which was adopted in large part to permit experts to testify in their own terms concerning matters within their domain which the jury should know, resulted in testimony by the experts in terms not their own to reflect unexpressed judgments in a domain that is properly not theirs but the jury's. The irony is heightened when the jurors, instructed under the esoteric "product" standard, are influenced significantly by "product" testimony of expert witnesses really reflecting ethical and legal judgments rather than a conclusion within the witnesses' particular expertise.²⁸¹

The dichotomy between the psychologist's domain and the jury's is evident. Chief Judge Bazelon in *Brawner* also expressed reservations about the ability of the ALI test to de-emphasize the role of psychological experts in determinations of legal sanity.²⁸² This conflict is further exacerbated by the fact that Federal Rule of Evidence 704 explicitly sanctions expert testimony that embraces the ultimate issue of fact.²⁸³ The opposing goals of *Brawner* and rule 704 regarding the limitations of psychological expert testimony

278. 471 F.2d 969 (D.C. Cir. 1972) (en banc).

279. Under the *Durham* "product" test, an accused is not criminally responsible if the unlawful act was the product of mental disease or mental defect. W. LAFAVE & A. SCOTT, *supra* note 52, § 38, at 286-92.

280. Under the ALI's "substantial capacity" test, a person is not responsible for criminal conduct if, as a result of mental disease or defect, he lacked substantial capacity either to appreciate the criminality (wrongfulness) of his conduct or conform his conduct to the requirements of law. *Id.* at 292-95.

281. 471 F.2d at 982-83; Schulman, *To Be or Not to Be an Expert*, 1973 WASH. U.L.Q. 57; Weihofen, *Detruding the Experts*, 1973 WASH. U.L.Q. 38. As early as 1954, the essayist C. S. Lewis foresaw the threat of domination by technical experts under the therapeutic, or humanitarian, model of punishment. Urging a return to the traditional retributive theory in the interests of the criminal, he observed: "The Humanitarian theory . . . removes sentences from the hands of jurists whom the public conscience is entitled to criticize and places them in the hands of technical experts whose special sciences do not even employ such categories as rights or justice." C. S. LEWIS, *The Humanitarian Theory of Punishment*, in *GOD IN THE DOCK: ESSAYS ON THEOLOGY AND ETHICS* 289 (W. Hooper ed. 1970).

282. 471 F.2d at 1023-27 (Bazelon, C. J., concurring in part, dissenting in part). *Cf.* *Washington v. United States*, 390 F.2d 444, 451-53 (D.C. Cir. 1967) (recognition of the court's dependence upon experts under the *Durham* "product" test).

283. See note 8 *supra*.

have not gone unnoticed by the courts.²⁸⁴ There is no evidence available that psychological experts possess greater expertise than jurors in evaluating whether the legal standard for criminal insanity has been met.

In summary, it is argued that expertise in psychology does not assure that psychologists can offer a more helpful, or any less subjective, opinion regarding the issue of ultimate fact than would be drawn by the trier of fact without such testimony. Consequently, psychological expert testimony ought to be excluded.

CONCLUSIONS AND RECOMMENDATIONS

The probative value and admissibility of each level of psychological testimony is suspect. Although psychological expert witnesses may be properly qualified in terms of their education and experience, these criteria do not assure that the scientific underpinnings of such testimony are valid. Psychological judgments are not as accurate as the courts presume them to be, and diagnoses based upon a psychologist's observations are, at the very least, questionable. For reasons that remain obscure, the courts have failed to apply to psychology the standard used to evaluate the admissibility of novel types of scientific evidence. Because the courts have tacitly taken judicial notice of psychology as a bona fide scientific discipline, there is no opportunity at trial to assail the underlying accuracy of such judgments in terms of their reliability and validity.

284. *E.g.*, *Suggs v. LaVallee*, 570 F.2d 1092, 1115 n.58 (2d Cir. 1978); *see* *United States v. Alexander*, 526 F.2d 161, 169 (8th Cir. 1975); *cf.* *United States v. Milne*, 487 F.2d 1232, 1235 (5th Cir. 1973), *cert. denied*, 419 U.S. 1123 (1975) (concerning admissibility of lay testimony to establish insanity, court concluded: "We must, of course, recognize that opinions as to sanity or insanity are distinct from opinions as to criminal capacity. Criminal capacity is a legal conclusion and even an expert, medical or legal, may not speak so as to employ a legal definition." (footnote omitted)).

The American Psychological Association's Task Force on the Role of Psychology in the Criminal Justice System has reached a similar conclusion. In its recent report, it states: "Since it is not within the professional competence of psychologists to offer conclusions on matters of law, psychologists should resist pressure to offer such conclusions." Task Force on the Role of Psychology in the Criminal Justice System, American Psychological Association, *Report on the Task Force on the Role of Psychology in the Criminal Justice System*, 33 AM. PSYCHOL. 1099, 1105 (1978) (Recommendation 5) (emphasis omitted) [hereinafter cited as *Task Force Report*]. The task force astutely noted that often the courts must share the blame because they pressure psychologists to answer legal questions for them "in an attempt to evade their responsibility to deal with difficult issues." *Id.* at 1106. *See also* TASK FORCE ON CLINICAL ASPECTS OF THE VIOLENT INDIVIDUAL, AMERICAN PSYCHIATRIC ASSOCIATION, CLINICAL ASPECTS OF THE VIOLENT INDIVIDUAL: TASK FORCE REPORT NO. 8, at 33 (1974) ("It has been noted that 'dangerousness' is neither a psychiatric nor a medical diagnosis, but involves issues of legal judgment and definition, as well as issues of social policy. Psychiatric expertise in the prediction of 'dangerousness' is not established and clinicians should avoid 'conclusory' judgments in this regard.").

Psychological expert testimony should be excluded or at least severely curtailed for two reasons.²⁸⁵ First, psychological diagnoses may not be reasonably accurate — accuracy greater than chance — and, consequently, cannot meet the prima facie showing of logical relevancy. Those judgments that are reasonably accurate should be admitted subject to the usual course of rigorous cross-examination. Second, even if psychological diagnoses are reasonably accurate, psychological expert testimony should be excluded because such evidence cannot meet the higher standard of accuracy required by the courts in light of the evidentiary counterweights, and the jury is likely to exaggerate its significance given its aura of scientific objectivity. Psychological opinion testimony regarding the causal connection between a mental disorder and criminal or tortious conduct — the issue of ultimate fact — should be excluded on similar grounds, at least until it can be satisfactorily demonstrated that psychologists possess special expertise in evaluating the relationship between the scientific “fact” of mental disorder and the applicable legal standard. The test should be whether such an opinion would be more helpful to the trier of fact than the thoughtful opinion of the average layperson.

These conclusions lead to the following recommendations, which are designed to place psychological evidence and expert testimony in its proper evidentiary perspective in light of the admissibility of other types of scientific evidence:

First, the courts should permit the introduction of evidence challenging the scientific accuracy of psychological techniques and diagnoses before taking judicial notice, tacit or otherwise, of psychology as a scientific discipline.

Second, if such psychological evidence is deemed prima facie admissible given its reliability and validity, courts should then weigh its probative value against the countervailing factors. In practice, the application of this second recommendation would probably result in the exclusion of all but the most accurate psychological evidence and the expert testimony based thereon.²⁸⁶

285. These arguments also apply to psychiatric evidence and expert testimony. Because the dogmatic medical-nonmedical distinction makes little evidentiary sense, see note 52 *supra*, there is no sound reason why psychiatric evidence and expert testimony should be preferred to that offered by psychologists — both are equally suspect. See generally J. ZISKIN, *supra* note 12; Ennis & Litwack, *supra* note 12. If the courts continue to accept psychiatric evidence and expert testimony without first assessing their scientific accuracy, psychologists should be accorded parity with psychiatrists.

286. Neither of these first two recommendations is intended to interfere with the psychologist's important role as a highly skilled observer of human behavior. Psychologists, like any other witnesses with firsthand knowledge, should be permitted to explain without jargon, see Morse, *supra* note 3, at 611, what they have observed about the behavior of the person in question. They may be particularly adept at noting disordered behaviors not apparent to the ordinary layperson, *id.* at 611-12; however, their testimony should be limited to those behaviors that can be empirically demonstrated to be indicators or predictors of a mental disorder, *id.* at 619-22. See

Third, opinions by psychologists regarding the relationship between a mental disorder and the issue of ultimate fact should be excluded unless the courts affirmatively find them more helpful than not to the trier of fact. Such opinions should be something more than just the expression of another layperson's belief about how the case should be resolved and should draw upon the psychological expert's particular skills as a scientist without generalizing that expertise to the issue of ultimate fact. The courts should resist the temptation to translate difficult social and moral judgments about mentally disordered persons into questions requiring scientific expertise.²⁸⁷ Because assertions of special expertise in matters of social policy may be empirically demonstrated, psychologists should not be permitted to generalize their expertise until evidence of their special qualifications as social policymakers is available. Conclusions about the issue of ultimate fact in this context should remain the province of the jury.

The reader cannot accept these conclusions without also considering the logical consequences of the position taken in this Comment. Although the issues raised are beyond its scope, the implications are twofold. First, if there are no psychological experts in the courtroom, then licensure, which usually is an indicator of special skill beyond what a layperson would be expected to possess, may be unwarranted. If the basis of psychology as a scientific discipline is questionable, then the prerequisites for licensure — education and experience — cannot create *ex nihilo* a field of psychological expertise. This result, however, does not necessarily follow. In the context of the psychologist's role in the courtroom, a different, and perhaps more stringent, standard of accuracy must be applied to psychologists than the one imposed by the legislature for the protection of the general public. Through licensure statutes, the states may be satisfied with psychologists whose skills are reasonably accurate, whereas the courts must carry the evaluation of psychological evidence and expert testimony one step further and determine whether its probative value to the trier of fact is outweighed by the various countervailing factors. Thus, the threshold of accuracy or skill required by the courts may exceed that required by the legislature for licensure. Therefore, the exclusion of psychological expert testimony from the courtroom does not necessarily imply that psychological "experts" cannot or do not exist in other contexts.

The second consequence of this analysis is that without psychological, and by implication psychiatric, expertise, the existence of the insanity

Task Force Report, supra note 284, at 1106 (Recommendation 6). Based upon the testimony of lay witnesses such as family, friends, and co-workers, and firsthand courtroom observations, jurors frequently will be able to decide for themselves whether there is a sufficient causal connection between the alleged disordered behavior and the issue of ultimate fact without the assistance of psychological experts. See Morse, *supra* note 3, at 554-60, 616. It has also been argued that psychological experts may be especially skilled at detecting malingering. This ability, however, has not been empirically demonstrated. *Id.* at 613-14. See text accompanying note 239 *supra*.

287. See note 284 *supra*. See generally Morse, *supra* note 3.

defense is jeopardized. If there are no experts in the field of mental disorders and their relationship to criminal conduct, then the ultimate arbiter of the existence of mental conditions that will exculpate criminal conduct is the trier of fact. If it is without a sound scientific basis, the insanity defense must be reevaluated and perhaps eliminated altogether. Exploration of these two complex issues, however, must await future articles.

288. This table includes only those cases in each jurisdiction in which psychologists have testified as experts concerning the presence or absence of a mental disorder in connection with prior criminal or tortious conduct. For cases concerning the admissibility of psychological expert testimony in other contexts, see note 10 *supra*.
289. A notation in either of these columns means that the court opinion referred by name to one or more of the psychological tests administered; otherwise, no entry was made. In many instances, the court simply noted that a psychological test battery was administered.
290. If the court opinion did not specifically mention any of these factors, no entry was made in these columns. A dash ("—") means that the court specifically noted that this experiential factor was missing.
291. Unless otherwise indicated, all notations in this column mean that expert psychological testimony was offered either to support or to rebut an insanity defense to one or more criminal acts.
292. A notation in this column means that the court permitted psychologists, qualified on the basis of their education and experience, to testify as expert witnesses without limiting the scope of their testimony concerning test results, the diagnosis of the mental disorder involved, or an opinion on the ultimate issue of fact. Those cases in which psychological expert testimony was excluded on the grounds that the proffered expert was not qualified on the basis of education or experience but whose testimony would have been freely admissible if properly qualified have been included in this column.
293. A notation in this column means that qualified psychologists were permitted to testify as experts but that the court substantially limited the scope of their testimony. Typically, psychologists would be permitted to discuss their test results, observations, and diagnoses of the party's present mental condition, but they were not allowed to offer an opinion concerning the causal connection between their diagnoses and the criminal or tortious conduct in question.
294. Member of the American Psychological Association.
295. Diplomate of the American Board of Examiners in Professional Psychology. This organization only grants diplomate status to qualified psychologists who pass a written and oral examination after five years of clinical practice. Rubin, *Medical and Paramedical Personnel in the Mental Health Field*, in READINGS, *supra* note 52, at 24.
296. Only the leading cases in each federal circuit are cited.
297. *Accord*, United States v. Brawner, 471 F.2d 969, 994 & n.44 (D.C. Cir. 1972) (en banc); United States v. McNeil, 434 F.2d 502, 504 (D.C. Cir. 1970) (per curiam).
298. Extent of influence of defendant over accused.
299. Lack of adequate factual basis for opinion sought, but psychologist otherwise qualified without medical training.
300. "Ph.D. Clin." means that the expert possessed a doctoral degree in the specialty of clinical psychology. If the court merely referred to the psychologist as "Dr. _____" without indicating whether he or she had received a doctoral degree, possession of such a degree was assumed.
301. Testimony admissible depending upon experience and probable probative value.
302. "Ph.D. Psychol." means that the expert possessed a doctoral degree in psychology but that the specialty was not specified in the opinion.
303. Testimony admissible depending upon nature and extent of psychologist's knowledge.
304. Prior experience as expert witness in other criminal trials.
305. Indemnity under disability clauses of insurance contract arising from alleged disabling nervous condition.
306. Psychologist held qualified to testify based upon training and experience.
307. No manifest error in exclusion by trial court of testimony of psychologist, who was preeminent authority on effects of sensory deprivation, on grounds that he did not have "background of independent responsible diagnosis of mental diseases" or qualifications to account "'for factors other than psychological factors in arrival at the ultimate question which might be helpful to the jury . . .'" 543 F.2d at 1157 (quoting trial court).
308. Psychologist was primarily an expert in the effects of sensory deprivation and not a clinical psychologist.

Jurisdiction and Cases	Nature of Action		Admissibility of Expert Testimony		Psychological Tests Administered		Expert Witness' Qualifications										
	Criminal	Civil	Liberal Admissibility	Limited Admissibility	Non-projective Tests	Projective Techniques	Experience										
							Education	Clinical Internship	State Licensure	APA	Diplomate	Teaching	Professionals Publications	Private Practice	Institutional Practice or Clinical Practice	Other	
United States v. Portis, 542 F.2d 414, 418-20 (7th Cir. 1976).	X		X ³⁰⁹				X									X ³¹⁰	X ³¹¹
Arizona ³¹² Kucko v. Indus. Comm'n, 116 Ariz. 530, 532 n.1, 570 P.2d 217, 219 n.1 (Ct. App. 1977).		X ³¹³		X ³¹⁴						X							
Bilbrey v. Indus. Comm'n, 27 Ariz. App. 473, ___ 556 P.2d 27, 28-29 (1976). ³¹⁷		X ³¹⁵		X ³¹⁶						X							
California ³¹⁸ People v. Pennington, 66 Cal. 2d 508, 519, 426 P.2d 942, 950, 58 Cal. Rptr. 374, 382 (1967) (en banc).		X ³¹⁹		X ³²⁰						X						X	X ³²²
People v. Davis, 62 Cal. 2d 791, 798-801, 402 P.2d 142, 147-48, 44 Cal. Rptr. 454, 459-60 (1965) (en banc).	X		X ³²³														X ³²⁴

309. No error in admitting testimony of qualified clinical psychologist concerning accused's sanity.
310. Staff psychologist at federal prison.
311. Served four years as psychiatric technician in Navy.
312. *Cf. Arizona State Welfare Dept v. Industrial Comm'n*, 25 Ariz. App. 6, 9, 540 P.2d 737, 740 (1975) (petition to reopen workmen's compensation claim on grounds of undiscovered psychiatric condition related to industrial injury held insufficient because written by psychologist and not physician as required by statute). The import of these decisions may be modified in part by a recent revision of the Arizona psychology practice statute. See ARIZ. REV. STAT. ANN. § 32-2084 (Cum. Supp. 1979); text accompanying notes 26 to 33 *supra*.
313. Workmen's compensation case; issue of petitioner's present mental capacity and ability.
314. Psychologist's testimony competent if not received for purpose of establishing causal connection between industrial accident and petitioner's mental condition.
315. Workmen's compensation case; causal connection between industrial accident and petitioner's mental condition. Consequently is beyond scope of psychologist licensing statute.
316. Opinion regarding causal connection constitutes "medical diagnosis" within ambit of medical practice statute and consequently is beyond scope of psychologist licensing statute.
317. *Cf. Reynolds Metals Co. v. Industrial Comm'n*, 119 Ariz. App. 566, 568, 582 P.2d 656, 658 (1978) (psychiatrist's review of report prepared by clinical psychology graduate student who had interviewed decedent ten months before his death was insufficient to support medical opinion about decedent's mental state at time of death).
318. *But cf. People v. Spigno*, 156 Cal. App. 2d 279, 283-91, 319 P.2d 458, 461-65 (1957) (psychologist who was also lie detector technician held not qualified to give expert opinion whether defendant charged under criminal sexual psychopath statute had "necessary lustful intent" to commit crime because state law required medical as well as psychological training); *People v. Villegas*, 29 Cal. App. 2d 658, 663, 85 P.2d 480, 482 (1938) (opinion testimony of psychologist concerning power of defendant to resist will of codefendant held incompetent, immaterial, and properly excluded by trial court).
319. Competency to stand trial.
320. Psychologist qualified, despite lack of medical training, based upon education and experience in abnormal psychology. Court stressed that psychologist's many years of experience compensated for his lack of doctoral degree.
321. "M.A. Psychol." means that the expert possessed a master's degree in psychology but the specialty was not specified in the opinion.
322. Ten years of practical experience in clinical psychology.
323. Reversible error to exclude psychological expert testimony because of lack of medical training.
324. Vice-chairman of psychology examining committee of state board of medical examiners.

325. Release of defendant committed to state hospital following acquittal by reason of insanity.
326. Rehearing required because psychologist was not required to give medical opinion about defendant's sanity but rather behavioral explanation within the statutory test for release that was based upon different standard.
327. "Clin. Psychol." means that the expert specialized in clinical psychology but the opinion did not specify the degree obtained.
328. Psychological testimony relating to claim by beneficiary under accidental death provisions of insurance policy.
329. No error committed because initial determination of qualifications and knowledge by trial judge not clearly erroneous.
330. "Psychol." means that the educational degree and specialty interest of the expert were not specified in the opinion.
331. *Cf. Seaboard Coast Line R.R. v. Hill*, 250 So. 2d 311, 314-15 (Fla. Dist. Ct. App. 1971) (psychologist who was expert in human perception and environmental factors that might adversely affect perception was qualified to give opinion whether average driver would have seen train at railroad crossing in time to have avoided collision; significance of and reaction of human beings to deceptive environmental factors might reasonably be considered beyond common knowledge of jurors and thus proper subject matter for expert opinion). *But cf. Lamazares v. Valdez*, 853 So. 2d 1257, 1258 (Fla. Dist. Ct. App. 1978) (admission of expert psychological testimony that "defendant was untruthful and that he was liable to make mistake or misjudgment in his driving ability to re-act to accident circumstances" constituted reversible error because clear invasion of province of jury); *Tremain v. State*, 336 So. 2d 705, 706-07 (Fla. Dist. Ct. App. 1976) (testimony of psychologist to further defense of entrapment that defendant was dependent on others and lacked will power where accused did not plead insanity was properly rejected by trial court because it would only confuse jury and create immaterial issues).
332. Negligence action, automobile accident; whether clinical psychologist was competent to express opinion about diagnosis, prognosis, and causation of plaintiff's mental disorder.
333. Once qualified as an expert based upon education and experience, a psychologist is competent testify about the diagnosis of a mental condition. In dictum, the *Reese* court noted that there may be a difference between the qualifications necessary for an expert to testify about the causal relationship between a trauma and a mental condition and those needed for expert testimony limited to the nature and extent of such a mental condition. Because the issue of the competence of a clinical psychologist to testify about the issue of causal connection between the mental disorder and the accident was not preserved at trial, the court refrained from ruling on it.
334. Exclusion of testimony by a clinical psychologist regarding the defendant's mental condition based upon the tests administered by a psychology technician was harmless error because the clinical psychologist was permitted to answer an exhaustive hypothetical question that incorporated the test results and case history. Furthermore, testimony by a psychology technician with a bachelor's degree in psychology and eleven months experience was properly excluded on the ground that he was not qualified as an expert in the interpretation of psychological tests based upon his education and experience even though he satisfied the state requirements for administering such tests, interviewing patients, and submitting evaluations to clinical psychologists for approval.
335. Negligence action, automobile accident; whether psychologist's expert testimony regarding the evaluation of psychological tests was improperly excluded because the actual testing was conducted by a graduate student possessing only a master's degree.
336. There was ample evidence to justify the psychologist's expert opinion drawn from tests administered by a student with a master's degree in psychology who qualified as an expert in the field.

337. See *People v. Jenko*, 410 Ill. 478, 483, 102 N.E.2d 783, 785-86 (1951) (per curiam) (because psychologist could only testify that on basis of psychological test administered defendant was "psychopathic person," testimony derived from administration of such test was properly excluded as cumulative; furthermore, it would not aid in defending against crime charged because opinion about defendant's subnormal mentality could have no legitimate bearing on issue unless it was offered to prove that accused met test for legal insanity); cf. *In re Wellington*, 34 Ill. App. 3d 515, 516-19, 340 N.E.2d 31, 33-35 (1975) (mental health specialist with bachelor's degree and forty hours of graduate work in clinical and experimental psychology improperly held qualified by trial court to give testimony on issue of mental competency in civil commitment proceeding; he was not qualified in terms of his education and experience nor did he meet psychologist licensing requirements).

338. Psychologist should be permitted to testify about nature of tests administered at the request of *psychiatrist*, the procedures followed in administering them, and the results thereof.

339. Psychologist's testimony properly excluded on grounds that she did not possess the requisite educational and experiential qualifications and because no *psychiatrist* was testifying who would use her testimony as a foundation for his opinions. Upon retrial, her testimony regarding the tests she administered and their results could be offered if they assisted proper psychiatric evidence of the defendant's sanity.

340. Five years experience as court psychologist.

341. Not reversible error to exclude psychological testimony regarding the ultimate issue of defendant's sanity because it required a medical judgment. Expression of an opinion about the presence of a mental disease at the time of the crime was permitted but not about the causal relationship between the disorder and the criminal conduct.

342. Only a qualified *psychiatrist* may give an opinion about the sanity of the accused. Testimony by a psychologist is irrelevant unless it formed the basis of a psychiatric opinion, which in this case was not offered at trial.

343. A psychologist's opinion about the sanity of a hypothetical person was not material because it would have no bearing on the defendant's sanity at the time of the offense and would not have been evidence with regard to the legal standard for insanity. Also, there was no medical evidence on which such testimony could rest.

344. Psychologist qualified as expert on sanity or insanity of a criminal defendant.

345. *Cf. Mosley v. Commonwealth*, 420 S.W.2d 679, 680-81 (Ky. 1967) (prejudicial error to exclude testimony of clinical psychologist with doctorate who was licensed by state and member of state and national psychological associations; testimony offered to impeach prosecuting witness' credibility in rape trial should have been admitted to show her mental condition at time of alleged rape).

346. Prejudicial error to exclude opinion testimony of qualified clinical psychologist about mental condition of accused. 347. See *Busby v. Martin*, 166 So. 2d 660, 662-63 (La. Ct. App. 1964) (clinical psychologist with doctorate who taught at university medical school properly permitted to offer opinion testimony in workmen's compensation case that petitioner could not return to job for psychological reasons possibly aggravated by accident; psychologist deemed "eminently qualified" as expert even though he did not possess medical degree).

348. Psychologist permitted to testify about psychological tests administered to the defendant and "other facts within his special competence," but he was not qualified to testify as an expert on the sanity of the accused at the time of the crime apparently because he possessed no qualifications as a psychiatrist.

349. Until 1978, the trend in Maryland was to restrict psychological expert testimony to mere descriptions of psychological tests and interpretations of their results. Any effort to relate these results to the legal issue in question was rejected primarily on the grounds that ultimate determinations of the presence or absence of a mental disorder was fundamentally a medical question about which psychologists, without such training, were unqualified to testify. This trend in the case law was reversed by the amendment of the Maryland rules of evidence expressly to permit qualified licensed psychologists to testify on ultimate legal issues, in general, and insanity and competency to stand trial, in particular. The legislation provides:

Notwithstanding the provisions of Article 59 or the provisions of any other law, a psychologist certified under the "Psychologists' Certification Act" [Md. ANN. CODE art. 43, §§ 618-644A (1971 & Cum. Supp. 1979)] and qualified as an expert witness may testify on ultimate issues, including insanity, competency to stand trial, and matters within the scope of that psychologist's special knowledge, in any case in any court or in any administrative hearing. Md. CTS. & JUD. PROC. CODE ANN. § 9-120 (Cum. Supp. 1979).

Prior to the enactment of this legislation, the trial courts excluded testimony by psychologists regarding the issue of ultimate fact because the diagnosis of mental conditions was perceived to be primarily a medical function because they were considered to be "diseases." The Court of Appeals in *Tull v. State*, 240 Md. 49, 53-58, 212 A.2d 729, 730-33 (1965) (dictum), laid the foundation for the Court of Special Appeals' subsequent restrictions on psychological testimony. The issue presented in *Tull* was whether the testimony of a clinical psychologist offered as new evidence following a murder conviction would prove a sufficient basis for post-conviction relief. The *Tull* court concluded that the clinical psychologist's evidence did not warrant post-conviction relief, and the tenor of its analysis strongly suggested that it favored psychiatric over psychological expert testimony regarding the issue of ultimate fact — the sanity of the accused.

The Maryland Court of Special Appeals transformed this dictum into an exclusionary rule as to the ultimate issue of sanity. In *Saul v. State*, 6 Md. App. 540, 252 A.2d 282 (1969), the court relied extensively upon the *Tull* dictum and the 1954 joint resolution cited in *Jenkins* to conclude that because the Maryland test for criminal responsibility was predicated on "mental disease or defect," Md. ANN. CODE art. 59, § 9(a) (1968) (current revised version at Md. ANN. CODE art. 59, § 25(a) (1972)), any determination of "the existence of a mental disease or defect" is first and foremost a *medical* problem," 6 Md. App. 540, 549, 252 A.2d 282, 286 (1969) (emphasis in original). This language is almost identical to that used by the dissent in *Jenkins* although it was not cited by the *Saul* court. See text accompanying note 52 *supra*. Once it was determined that opinions about the ultimate issue of a defendant's sanity were the exclusive province of medical practitioners, it was apparent that psychologists, who lacked the requisite medical

training, were not qualified to offer such opinion testimony. *Id.* at 550 n.1, 252 A.2d at 287 n.1. See note 52 *supra*. Compare Psychologists' Certification Act, MD. ANN. CODE art. 43, § 639 (1971) ("Nothing herein shall authorize any person to engage in the practice of medicine as defined by the laws of this State.") with Practitioners of Medicine, MD. ANN. CODE art. 43, § 119(f) (Cum. Supp. 1979) ("'Practice of medicine' means the exercise . . . of the art of science and medical diagnosis . . . and includes: (1) . . . diagnosing any physical, mental or emotional ailment or supposed ailment of another.'")

Dictum in Sherrill v. State, 14 Md. App. 146, 286 A.2d 528 (1972), clarified the reach of *Saul* somewhat by stressing that only a psychologist's observations of objective, demonstrable phenomena were admissible and not conclusions about what such objective data mean or, in other words, diagnoses. The *Saul* dictum was extended without elaboration in Colbert v. State, 18 Md. App. 632, 642, 308 A.2d 726, 732 (1973), to encompass the determination of competency to stand trial. In Spann v. Bees, 23 Md. App. 313, 316-23, 327 A.2d 801, 803-07 (1974), a civil action, a psychologist was permitted to give psychological test results but was precluded from expressing his opinion regarding the cause of plaintiff's mental condition. The *Spann* court noted that the psychologist was stopped far short of expressing an opinion about the ultimate cause of plaintiff's intellectual impairment and personality changes and concluded that the "holding" in *Saul* was generally applicable to the admissibility of a qualified psychologist's testimony in a civil case. Just prior to the effective date of the 1978 amendment permitting psychologists to testify about the issue of ultimate fact, the Court of Special Appeals reaffirmed the restrictive rule it had espoused in *Saul*. Carter v. State, No. 887, slip op. at 3-4 (Md. Ct. Spec. App. Apr. 7, 1978) (per curiam). Proceedings under Maryland's controversial, and now repealed, defective delinquency statute, Md. ANN. CODE art. 31B, §§ 1-19 (1976) (repealed and reenacted in substantially different form at MD. ANN. CODE art. 31B, §§ 1-16 (Cum. Supp. 1979)), led to similar limitations on psychological expert testimony. State v. Williams, 278 Md. 180, 187, 361 A.2d 122, 126-27 (1976) (4-3 decision); Wentworth v. State, 33 Md. App. 242, 243, 364 A.2d 81, 82 (1976). *But see* Richardson v. Director, 31 Md. App. 468, 476-77, 356 A.2d 624, 629 (1976); *cf.* State v. Burton, 26 Md. App. 591, 592-93, 338 A.2d 421, 422 (1975) (psychologist permitted to testify without objection that appellee was still defective delinquent).

350. In light of a new statute that expressly permits such opinion testimony, a clinical psychologist should be permitted upon retrial to express an opinion whether the accused was suffering from a mental disorder at the time of the crime or whether he was able to appreciate the criminality of his conduct. *See* Md. Cts. & Jud. Proc. CODE ANN. § 9-120 (Cum. Supp. 1979); note 349 *supra*; *cf.* Conn v. State, 41 Md. App. 238, 248-49, 396 A.2d 323, 329-30 (1979) (discussion of § 9-120 in context of whether lay witnesses may be included in class of physicians and psychologists competent to offer an opinion on mental illness or sanity of accused at criminal trial even if they may have had adequate opportunity to observe accused).

351. Medical training is not the *sine qua non* of competency to give opinion on matter of insanity. As long as adequate knowledge and veracity is assured, psychologists should be permitted to testify.

352. Competency to stand trial.

353. Psychologist qualified to evaluate defendant's competency and to give expert testimony on that issue.

354. Attempt to offer evidence of mental derangement short of insanity to prove lack of a deliberate or premeditated design in first degree murder case.

355. A properly qualified psychologist may give expert opinion about results of tests but should be limited based upon training or experience; admission of testimony by state psychologist in error because not adequately qualified.

356. Plea, *inter alia*, of self-defense to assault upon police officer with intent to kill.

357. Reversible error to exclude as irrelevant expert testimony of social psychologist that defendant would be likely to fear police in situation related at trial because it logically would have supported defendant's theory of self-defense.

358. "Social Psychol." means that the expert specialized in social psychology but that the opinion did not specify the degree obtained.

359. Plea of self-defense to voluntary manslaughter charge.
360. Error to exclude testimony by qualified psychologist about defendant's state of mind at time of crime based upon psychological tests and clinical interview and history.
361. Negligence action, automobile collision; whether a psychologist was qualified as expert and could testify whether a change in mental ability was caused by accident or whether plaintiff was unemployable as result of the accident.
362. Reversible error to exclude psychologist's testimony when licensed psychologist met requirements of training and experience discussed in *State v. Padilla*, 66 N.M. 289, 347 P.2d 312 (1959); proper to give opinion regarding results of tests, whether change in mental ability was caused by accident, and cause of any change in plaintiff's employment prospects.
363. Between *Padilla* and *Winder*, the New Mexico legislature enacted a certification statute for psychologists. N.M. STAT. ANN. §§ 67-30-1 to -18 (1963) (current version at N.M. STAT. ANN. §§ 61-9-1 to -18 (1978)).
364. Defense of unconsciousness at time of crime.
365. Psychologist competent to testify concerning evaluation of behavior patterns leading to conclusion whether certain behavioral conduct such as unconsciousness might have existed at time of accident based upon defendant's prior history of chronic brain syndrome.
366. Personal injury action; whether there was causal connection between plaintiff's depression and work-related head injury.
367. Psychologist is properly qualified to express opinion about causation of plaintiff's emotional disturbance.
368. Negligence action, child hit by automobile; whether there was causal connection between plaintiff's minimal organic brain damage and accident.
369. Clinical psychologist qualified to testify as expert on organic brain malfunctions; however, harmless error to permit him to testify that damage was caused by accident because no evidence was presented that methods used expose anything more than mere existence of defects. Medical testimony is not always necessary to make causal link.

Jurisdiction and Cases	Nature of Action		Admissibility of Expert Testimony		Psychological Tests Administered		Expert Witness' Qualifications											
	Criminal	Civil	Liberal Admissibility	Limited Admissibility	Non-projective Tests	Projective Techniques	Education	Clinical Internship	State licensure	APA	Diplomate	Teaching	Professional Publications	Employment				
														Private Practice	Institutional or Clinical Practice	Other		
<i>Rhode Island</i> State v. Robertson, 108 R.I. 656, 660-63, 278 A.2d 842, 845-46 (1971), <i>aff'g result on remand</i> , 111 R.I. 399, 401, 303 A.2d 360, 361 (1973).	X		X ³⁷⁰		X	X	Ph.D. Psychol.				-	X				X		
<i>South Dakota</i> State v. Bush, — S.D. —, —, 260 N.W.2d 226, 231 (1977).	X		X ³⁷¹				Ph.D. Clin.									X ³⁷²		
<i>Tennessee</i> Edwards v. State, 540 S.W.2d 641, 646-47 (Tenn. 1976), <i>cert. denied</i> , 429 U.S. 1061 (1977).	X		X ³⁷³				Psychol. Examiner ³⁷⁴		X									
<i>Texas</i> ³⁷⁵ Landreth v. Reed, 570 S.W.2d 486, 488-89 (Tex. Civ. App. 1978).		X ³⁷⁶	X ³⁷⁷				Ph.D. Clin.											X ³⁷⁸

370. A psychologist properly qualified on the basis of training and experience may testify regarding criminal responsibility. While trial court found the psychologist competent in the area of psychological testing, his limited post-graduate clinical experience did not qualify him to express an opinion whether defendant's conduct was attributable to mental illness. The trial court's ruling was held not to be an abuse of discretion.

371. Psychologist should have been permitted by trial court to give his opinion about the mental state of defendant at time of crime as well as defendant's mental state at time of his psychological examination; however, it was deemed harmless error.

372. Twenty years of experience.

373. Licensed psychological examiner permitted to express her opinion that accused was not psychotic or mentally deranged at the time of crime, that he did know right from wrong, and that he was feigning mental illness to avoid criminal responsibility. Court held jury is not required to accept testimony of a psychiatrist on the issue of sanity to the exclusion of lay testimony or to the exclusion of evidence of the actions of the petitioner inconsistent with sanity.

374. The scope of practice and the qualifications of a licensed psychological examiner are defined by statute. TENN. CODE ANN. §§ 63-1106-1111 (1976). In general, two years of graduate training in psychology including a master's degree from an accredited educational institution are required.

375. *Cf. Doherty v. Dean*, 337 S.W.2d 153, 158 (Tex. Ct. App. 1960) (psychologist with doctorate properly permitted to express his opinion in child custody case about mentality of child).

376. Negligence action, drowning of infant in swimming pool; whether nonmedical expert witness (clinical psychologist) may testify that drowned infant's sister, who witnessed the death, suffered physical injury.

377. Trial court properly permitted trained clinical psychologist to testify about child plaintiff's physical symptoms resulting from mental and emotional shock experienced as result of defendant's negligence.

378. Several years of experience.

Jurisdiction and Cases	Nature of Action		Admissibility of Expert Testimony		Psychological Tests Administered		Expert Witness' Qualifications									
	Criminal	Civil	Liberal Admissibility	Limited Admissibility	Non-projective Tests	Projective Techniques	Education	Clinical Internship	State Licensure	APA	Diplomate	Teaching	Professional Publications	Employment		
														Private Practice	Institutional or Clinical Practice	Other
Hogan v. State, 496 S.W.2d 594, 596-97 (Tex. Crim. App.), cert. denied, 414 U.S. 862 (1973).	X ³⁷⁹		X ³⁸⁰				Ph.D. Clin.	X	X					X	X ³⁸¹	
Knoepfel v. State, 382 S.W.2d 493, 495 (Tex. Crim. App. 1964).	X		X ³⁸²				Psychol. ³⁸³							X		
City of Austin v. Hoffman, 379 S.W.2d 103, 109-10 (Tex. Civ. App. 1964).		X ³⁸⁴	X ³⁸⁵		X		Ph.D. Ed. Psychol. & Speech Pathology				X	X				
Watson v. State, 161 Tex. Crim. 5, 7-8, 273 S.W.2d 879, 881-82 (1954).	X		X ³⁸⁶				Psychol. ³⁸⁷					X			X ³⁸⁸	
Virginia Landis v. Commonwealth, 218 Va. 797, 798-800, 241 S.E.2d 749, 750-51 (1978) (per curiam).	X		X ³⁸⁹				M.A. Counseling ³⁸⁰	X	-			X			X	X ³⁹¹

379. Whether trial court denied defendant due process and equal protection by not appointing practicing psychiatrist instead of clinical psychologist defendant had requested to examine him and to offer expert testimony regarding his sanity.
380. Practicing psychologist with extensive training and experience in analyzing motivation for human conduct should be classified as an expert. The psychologist in this case was adequately qualified to give expert testimony, and the failure to appoint a psychiatrist was not an error.
381. Consultant to guidance clinic.
382. Psychologist permitted to testify regarding defendant's sanity. The court noted that he was testifying as an expert witness.
383. The court at one point erroneously referred to the expert in question as a psychiatrist.
384. Negligence action, personal injury arising out of motor scooter-truck collision; whether psychological expert testimony was admissible regarding intelligence test results of plaintiff's child.
385. Psychologist qualified as expert to explain the purposes, results, and meaning of intelligence tests administered to plaintiff's child before and after accident.
386. While psychiatrist would be best qualified on issue of mental illness, practicing psychologists are also qualified as experts in this area.
387. Seven years of training in psychology.
388. Provided psychological counseling in various state and federal correctional institutions.
389. Psychologist's opinion properly excluded by trial court because he was not qualified based upon training, experience, and knowledge of defendant. Psychologist was ordained minister, and most of his knowledge about the defendant was obtained in pastoral, rather than psychological, setting. No psychological tests were administered to the defendant upon which an expert opinion could be based.
390. Doctoral candidate in counseling psychology.
391. Counseling service work and taped radio broadcasts regarding emotional and psychological problems.

392. Psychologist's training, experience, and knowledge about defendant based upon numerous tests and clinical interviews qualified him to express his opinion regarding defendant's mental condition.
393. Had completed all requirements for doctoral degree and was about to receive it.
394. Had testified as expert witness forty times before, and his opinion had formed part of final diagnosis in about 2,000 criminal cases.
395. Negligence action, automobile collision; whether accident contributed to plaintiff's preexisting, severe emotional problems.
396. Qualified psychologist may offer testimony to challenge accuracy of personality test relied upon by defense psychiatrist to form his medical diagnosis.
397. Psychological expert testimony properly admissible concerning mental condition of person examined because mental state of a person is not exclusively in the realm of medicine. The exclusion of such testimony, however, was held harmless error because it was cumulative to that of two physicians whose testimony was not accepted by the trier of fact.
398. Negligence action, automobile collision; whether clinical psychologist is capable of testifying about plaintiff's future pain and suffering due to her accident-related emotional disorder or whether expert medical testimony is required.
399. Despite the court's favorable discussion of the competency of psychologists to testify as experts, it held that the psychological testimony in this case was not sufficient to support an award for future pain and suffering because it did not show more than a mere possibility or conjecture of permanence and thus failed to meet the standard of medical certainty required by the court.

